



Morgan Hill 2035 DEIR

City of Morgan Hill





MORGAN HILL 2035 DEIR
CITY OF MORGAN HILL

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City of Morgan Hill

Table of Contents

1.	EXECUTIVE SUMMARY	1-1
1.1	Environmental Procedures	1-1
1.2	Summary of Proposed Project	1-4
1.3	Alternatives to the Proposed Project	1-4
1.4	Areas of Concern	1-4
1.5	Significant Impacts and Mitigation Measures	1-5
2.	INTRODUCTION	2-1
2.1	Proposed Project	2-1
2.2	EIR Scope	2-2
2.3	Environmental Review Process	2-3
3.	PROJECT DESCRIPTION	3-1
3.1	Overview	3-1
3.2	Location and Setting	3-2
3.3	Project Area	3-4
3.4	Proposed General Plan	3-6
3.5	General Plan Development Projections	3-20
3.6	Proposed Residential Development Control System	3-34
3.7	Intended Uses of the EIR and Proposed Project	3-42
4.	ENVIRONMENTAL ANALYSIS	4-1
4.1	Aesthetics	4.1-1
4.2	Agriculture and Forestry Resources	4.2-1
4.3	Air Quality	4.3-1
4.4	Biological Resources	4.4-1
4.5	Cultural Resources	4.5-1
4.6	Geology, Soils, and Seismicity	4.6-1
4.7	Greenhouse Gas Emissions	4.7-1
4.8	Hazards and Hazardous Materials	4.8-1
4.9	Hydrology and Water Quality	4.9-1
4.10	Land Use and Planning	4.10-1
4.11	Noise	4.11-1
4.12	Population and Housing	4.12-1
4.13	Public Services and Recreation	4.13-1
4.14	Traffic and Transportation	4.14-1
4.15	Utilities and Service Systems	4.15-1

TABLE OF CONTENTS

5.	SIGNIFICANT UNAVOIDABLE ADVERSE IMPACTS.....	5-1
5.1	Agriculture and Forestry Resources	5-1
5.2	Air Quality	5-2
5.3	Greenhouse Gas Emissions.....	5-4
5.4	Traffic and Transportation	5-4
6.	ALTERNATIVES TO THE PROPOSED PROJECT.....	6-1
6.1	Purpose	6-1
6.2	Potentially Significant Impacts	6-2
6.3	Project Objectives	6-3
6.4	Selection of a Reasonable Range of Alternatives	6-4
6.5	No Project Alternative	6-8
6.6	Low Growth Alternative	6-31
6.7	Compact Development Alternative.....	6-48
6.8	Ability to Meet Project Objectives.....	6-66
6.9	Environmentally Superior Alternative	6-67
7.	CEQA MANDATED SECTIONS.....	7-1
7.1	Impacts Found Not to be Significant	7-1
7.2	Significant Irreversible Changes.....	7-2
7.3	Growth-Inducing Impacts	7-3
8.	ORGANIZATIONS AND PERSONS CONSULTED	8-1

APPENDICES

- Appendix A: Notice of Preparation Comment Letters
- Appendix B: Air Quality and Greenhouse Gas Data
- Appendix C: Noise Data
- Appendix D: Transportation and Traffic Data

TABLE OF CONTENTS

LIST OF FIGURES

Figure 3-1	Regional and Local Context	3-3
Figure 3-2	Planning Boundaries.....	3-5
Figure 3-3	Opportunity Sites and Areas with Land Use Change	3-10
Figure 3-4	Proposed General Plan Land Use Map	3-13
Figure 3-5	Pipeline Projects	3-24
Figure 3-6	Areas with Capacity for Development Outside Opportunity Sites	3-25
Figure 3-7	Southeast Quadrant.....	3-29
Figure 4.1-1	Urban Design Building Blocks.....	4.1-6
Figure 4.2-1	Important Farmland	4.2-2
Figure 4.2-2	Williamson Act Contracts	4.2-4
Figure 4.2.3	Forestry Resources.....	4.2-12
Figure 4.2.4	Farmlands of Concern Conflicts	4.2-14
Figure 4.3-1	San Francisco Air Basin.....	4.3-7
Figure 4.3-2	Sources of Toxic Air Contaminants	4.3-47
Figure 4.4-1	Natural Communities	4.4-11
Figure 4.4-2	Sensitive Natural Communities.....	4.4-13
Figure 4.4-3	Fish Habitat.....	4.4-14
Figure 4.4-4	Special Status Species.....	4.4-16
Figure 4.8-1	Hazardous Material Sites.....	4.8-18
Figure 4.8-2	Fire Hazard Severity Zones.....	4.8-20
Figure 4.9-1	Watersheds.....	4.9-13
Figure 4.9-2	Storm Drainage Basins.....	4.9-15
Figure 4.9-3	Groundwater Subbasins	4.9-17
Figure 4.9-4	FEMA Flood Zones.....	4.9-22
Figure 4.9-5	Historic Flooding	4.9-24
Figure 4.9-6	Dam Inundation Areas.....	4.9-25
Figure 4.9-7	Potential Landslide Areas	4.9-29
Figure 4.10-1	Santa Clara County General Plan Land Use Designations.....	4.10-5
Figure 4.11-1	Noise Monitoring Locations.....	4.11-16
Figure 4.11-2	Existing Noise Contours	4.11-17
Figure 4.11-3	2035 Noise Contours.....	4.11-36
Figure 4.12-1	Priority Development Area in Morgan Hill	4.12-3
Figure 4.13-1	Existing Fire Stations.....	4.13-4

TABLE OF CONTENTS

Figure 4.14-1	Roadway Classifications.....	4.14-11
Figure 4.14-2	Existing Transit Services.....	4.14-25
Figure 4.14-3	Existing Bicycle Facilities.....	4.14-28
Figure 4.14-4	Study Area and Study Intersections	4.14-32
Figure 4.14-5	Study Roadway Segments	4.14-33
Figure 4.14-6	Planned 2035 Roadway Improvements	4.14-38
Figure 6-1	No Project Alternative General Plan Land Use Map	6-6
Figure 6-2	Low Growth Alternative General Plan Land Use Map	6-7
Figure 6-3	Compact Development Alternative General Plan Land Use Map	6-9

TABLE OF CONTENTS

LIST OF TABLES

Table 1-1	Summary of Impacts and Mitigation Measures	1-6
Table 3-1	Total Acreage for Each Land Use Designation Within the SOI.....	3-14
Table 3-2	2035 Horizon-Year Growth Projections Within SOI.....	3-21
Table 3-3	Full Buildout Growth Projections Within SOI.....	3-23
Table 3-4	Density and FAR Assumptions.....	3-31
Table 3-5	Planning Period Development	3-35
Table 4.2-1	Agricultural Mitigation In-Lieu Fee per Developed/Converted Acre	4.2-10
Table 4.2-2	Agricultural Lands within Morgan Hill SOI	4.2-11
Table 4.3-1	Ambient Air Quality Standards for Criteria Pollutants	4.3-11
Table 4.3-2	Attainment Status of Criteria Pollutants in the San Francisco Bay Area Air Basin.....	4.3-15
Table 4.3-3	Ambient Air Quality Monitoring Summary.....	4.3-18
Table 4.3-4	CARB Recommendations for Siting New Sensitive Land Uses.....	4.3-19
Table 4.3-5	Control Measures from the 2010 Bay Area Clean Air Plan	4.3-26
Table 4.3-6	Comparison of the Change in Population, Service Population, and VMT in the Project Area	4.3-33
Table 4.3-7	Net Increase in Community-Wide Criteria Air Pollutants Generated by Proposed Land Uses at the General Plan Horizon Year 2035	4.3-35
Table 4.3-8	BAAQMD Odor Screening Distances.....	4.3-49
Table 4.4-1	Special-Status Plant Species.....	4.4-17
Table 4.4-2	Special-Status Animal Species	4.4-18
Table 4.5-1	Historic Properties in Morgan Hill	4.5-12
Table 4.6-1	Morgan Hill General Plan Policies Relevant to Geology, Soils, and Seismicity.....	4.6-4
Table 4.7-1	GHG Emissions and their Relative Global Warming Potential Compared to CO ₂	4.7-4
Table 4.7-2	Scoping Plan GHG Reduction Measures and Reductions toward 2020 Target	4.7-8
Table 4.7-3	State BAU Forecast in the First Update to the Scoping Plan	4.7-9
Table 4.7-4	Morgan Hill Sustainable Development Regulations.....	4.7-17
Table 4.7-5	Summary of GHG Emissions Risks to California	4.7-21
Table 4.7-6	City of Morgan Hill Baseline Year GHG Emissions	4.7-22
Table 4.7-7	Proposed General Plan GHG Emissions 2020 Forecast.....	4.7-26
Table 4.7-8	Proposed General Plan GHG Emissions 2035 Forecast and Post-2035 Estimate.....	4.7-27
Table 4.7-9	GHG Reduction Measures and Quantified Reductions.....	4.7-28

TABLE OF CONTENTS

Table 4.7-10	Statewide Trajectory to Achieve Interim Goal under Executive Orders B-30-15 and S-03-05	4.7-30
Table 4.8-1	Santa Clara County General Plan Policies Relevant to Hazards and Hazardous Materials	4.8-9
Table 4.8-2	Hazardous Material Sites in the Bay Area	4.8-12
Table 4.9-1	Santa Clara County General Plan Policies Relevant to Hydrology and Water Quality	4.9-8
Table 4.9-2	Designated Beneficial Uses of Water Bodies in Morgan Hill and SOI	4.9-19
Table 4.9-3	303(d) List of Impaired Water Bodies in Morgan Hill	4.9-20
Table 4.10-1	Santa Clara County General Plan Policies Relevant to Land Use and Planning	4.10-7
Table 4.11-1	Change in Apparent Loudness	4.11-3
Table 4.11-2	Typical Noise Levels	4.11-4
Table 4.11-3	Human Reaction to Typical Vibration Levels	4.11-6
Table 4.11-4	Land Use Compatibility for Community Noise Environments	4.11-8
Table 4.11-5	Noise Monitoring Summary	4.11-18
Table 4.11-6	Groundborne Vibration Levels for Construction Equipment	4.11-26
Table 4.11-7	Increases to Ambient Noise Levels Along Major Roadway Segments – Proposed Project	4.11-31
Table 4.11-8	Increases to Ambient Noise Levels Along Highway 101 Segments – Proposed Project	4.11-35
Table 4.11-9	Construction Equipment Noise Emission Levels	4.11-39
Table 4.12-1	Housing Element Policies Relevant to Population and Housing	4.12-4
Table 4.12-2	Population Trends, 2000-2015	4.12-5
Table 4.12-3	Housing Unit Trends, 2000-2015	4.12-5
Table 4.12-4	Regional Housing Need Allocation (2014 – 2022) – Morgan Hill	4.12-6
Table 4.12-5	ABAG Projections 2013 – Household and Population Growth - 2015 to 2035	4.12-6
Table 4.12-6	Employed Residents, October 2015	4.12-6
Table 4.12-7	Projected Buildout	4.12-10
Table 4.13-1	Current Enrollment and Capacity for Morgan Hill Unified School District	4.13-18
Table 4.13-2	Enrollment and Capacity Forecasts for Morgan Hill Unified School District, through 2020-2021	4.13-19
Table 4.13-3	Student Generation Rates	4.13-20
Table 4.13-4	Projected MHUSD Enrollment MHUSD Resulting from Proposed General Plan 2035 Horizon Development (based on higher rates from 2015 demographic study)	4.13-21
Table 4.13-5	Projected MHUSD Enrollment MHUSD Resulting from Proposed General Plan 2035 Horizon Development	4.13-22
Table 4.13-6	Existing Parkland Inventory	4.13-33
Table 4.13-7	Existing Recreational Facilities Inventory	4.13-35

TABLE OF CONTENTS

Table 4.14-1	Signalized Intersection Level of Service Definitions Based on Control Delay	4.14-15
Table 4.14-2	Unsignalized Intersection Level of Service Definitions Based on Control Delay	4.14-15
Table 4.14-3	Maximum ADT Thresholds by Roadway Classification.....	4.14-17
Table 4.14-4	Existing Intersection Levels of Service	4.14-18
Table 4.14-5	Existing Roadway Segment Analysis	4.14-22
Table 4.14-6	Existing Freeway Segment Levels of Service.....	4.14-26
Table 4.14-7	2035 Roadway Improvements	4.14-39
Table 4.14-8	Existing and Year 2035 General Plan VMT Comparison	4.14-41
Table 4.14-9	Existing and 2035 General Plan Intersection Level of Service	4.14-43
Table 4.14-10	2035 Roadway Segment Level of Service.....	4.14-47
Table 4.14-11	2035 Freeway Segment Level of Service	4.14-49
Table 4.15-1	Supply and Demand Comparison – Normal Year.....	4.15-11
Table 4.15-2	Supply and Demand Comparison – Single Dry Year	4.15-11
Table 4.15-3	Supply and Demand Comparison – Multiple Dry Years.....	4.15-12
Table 4.15-4	Potential Environmental Impacts from New or Expanded Groundwater Supply and Wastewater Facility Projects	4.15-22
Table 6-1	Comparison of Estimated Buildout of Alternatives and Proposed Plan (Net + Pipeline New Growth, 2015-2035).....	6-8
Table 6-2	Comparison of Alternatives to the Proposed Project	6-10
Table 6-3	No Project Alternative and Draft General Plan Land Uses	6-11

TABLE OF CONTENTS

1. Executive Summary

This chapter presents an overview of the proposed Project, identifies areas of concern, and conclusions of the analysis contained in Chapters 4.0 through 4.15 of this Draft EIR. For a complete description of the proposed Project, please see Chapter 3, Project Description, of this Draft EIR. For a discussion of alternatives to the proposed Project, please see Chapter 6.0, Alternatives to the Proposed Project, of this Draft EIR.

This Draft EIR addresses the significant environmental effects associated with implementation of the proposed Project. CEQA requires that local government agencies consider the environmental consequences of projects over which they have discretionary approval authority prior to taking action. An EIR is a public document designed to provide the public, and local and state governmental agency decision-makers with an analysis of potential environmental consequences to support informed decision-making.

This Draft EIR has been prepared pursuant to the requirements of CEQA¹ (and the CEQA Guidelines²) to determine if approval of the identified discretionary actions and related subsequent development could have a significant effect on the environment (i.e., significant impact). The City of Morgan Hill, as the Lead Agency, has reviewed and revised as necessary all submitted drafts, technical studies, and reports to reflect its own independent judgment, including reliance on applicable City technical personnel and review of all technical subconsultant reports. Information for this Draft EIR was obtained from on-site field observations; discussions with affected agencies; analysis of adopted plans and policies; review of available studies, reports, data, and similar literature in the public domain; and specialized environmental assessments (e.g., air quality, hazards and hazardous materials, hydrology and water quality, noise, and transportation and traffic).

1.1 ENVIRONMENTAL PROCEDURES

The six main purposes of this document as established by CEQA are:

- To disclose to decision-makers and the public the significant environmental effects of proposed activities.
- To identify ways to avoid or reduce environmental damage.

¹ The CEQA Statute is found at California Public Resources Code, Division 13, Sections 21000-21177.

² The CEQA Guidelines are found at California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000-15387.

EXECUTIVE SUMMARY

- To prevent environmental damage by requiring implementation of feasible alternatives or mitigation measures.
- To disclose to the public the reasons for agency approval of projects with significant environmental effects.
- To foster interagency coordination in the review of projects.
- To enhance public participation in the planning process.

An EIR is the most comprehensive form of environmental documentation identified in CEQA and the CEQA Guidelines. It provides the information needed to assess the environmental consequences of a proposed Project, to the extent feasible. EIRs are intended to provide an objective, factually supported, full-disclosure analysis of the environmental consequences associated with a proposed Project that has the potential to result in significant adverse environmental impacts. An EIR is also one of various decision-making tools used by a lead agency to consider the environmental merits and disadvantages of a project that is subject to its discretionary authority. Prior to approving a proposed Project, the lead agency must consider the information contained in the EIR, determine whether the EIR was properly prepared in accordance with CEQA and the CEQA Guidelines, determine that it reflects the independent judgment of the lead agency, adopt findings concerning the project's significant environmental impacts, mitigation measures and Alternatives, and must adopt a Statement of Overriding Considerations if the proposed Project would result in significant impacts that cannot be avoided.

1.1.1 REPORT ORGANIZATION

This Draft EIR is organized into the following chapters:

- **Chapter 1: Executive Summary.** Summarizes the environmental consequences that would result from implementation of the proposed Project the alternatives to the proposed Project, the recommended mitigation measures, and indicates the level of significance of environmental impacts with and without mitigation.
- **Chapter 2: Introduction.** Provides an overview describing the Draft EIR document.
- **Chapter 3: Project Description.** Describes the proposed Project in detail, including the characteristics, objectives, and the structural and technical elements of the proposed action.
- **Chapter 4: Environmental Evaluation.** Organized into 15 sub-chapters corresponding to the environmental resource categories identified in Appendix G, Environmental Checklist, of the CEQA Guidelines, this chapter provides a description of the physical environmental conditions in the City of Morgan Hill as they existed at the time the Notice of Preparation was published, from both a local and regional perspective, as well as an analysis of the potential environmental impacts of the proposed Project, and recommended mitigation measures, if required, to reduce their significance. The environmental setting included in each sub-chapter provides baseline physical conditions from which

EXECUTIVE SUMMARY

the Lead Agency determines the significance of environmental impacts resulting from the proposed Project. Each sub-chapter also includes a description of the thresholds used to determine if a significant impact would occur; the methodology to identify and evaluate the potential impacts of the proposed Project; and the potential cumulative impacts associated with the proposed Project.

- **Chapter 5: Significant Unavoidable Adverse Impacts.** Identifies the direct and indirect significant effects of the proposed Project on the environment..
- **Chapter 6: Alternatives to the Proposed Project.** Organized into three sub-chapters, this chapter considers three alternatives to the proposed Project, which are the CEQA-required “No Project” Alternative, Low Growth Alternative, and Compact Development Alternative.
- **Chapter 7: CEQA Mandated Sections.** Discusses growth inducement, cumulative impacts, significant unavoidable effects, and significant irreversible changes as a result of the proposed Project. Additionally, this chapter identifies environmental issues that were determined not to require further environmental review during the scoping process pursuant to CEQA Guidelines Section 15128.
- **Chapter 8: Organizations and Persons Consulted.** Lists the people and organizations that were contacted during the preparation of this EIR for the proposed Project.
- **Appendices:** The appendices for this document (presented in PDF format on a CD attached to the back cover) contain the following supporting documents:
 - Appendix A: Notice of Preparation Comment Letters
 - Appendix B: Air Quality and Greenhouse Gas Data
 - Appendix C: Noise Data
 - Appendix D: Transportation and Traffic Data

1.1.2 TYPE AND PURPOSE OF THIS DRAFT EIR

According to Section 15121(a) of the CEQA Guidelines, the purpose of an EIR is to:

Inform public agency decision-makers and the public generally of the significant environmental effects of a project, identify possible ways to minimize the significant effects, and describe reasonable alternatives to the project.

Because of the long-term planning horizon of the proposed Project and the permitting, planning, and development actions that are related both geographically and as logical parts in the chain of contemplated actions for implementation, this Draft EIR has been prepared as a program EIR for the proposed Project, pursuant to Section 15168 of the CEQA Guidelines.

Once a program EIR has been certified, subsequent activities within the program must be evaluated to determine whether additional CEQA review needs to be prepared. However, if the program EIR addresses the program’s effects as specifically and comprehensively as possible, subsequent activities could be found to be within the program EIR scope, and additional environmental review may not be required (CEQA Guidelines Section 15168[c]). When a program EIR is relied on for a subsequent activity, the lead agency

EXECUTIVE SUMMARY

must incorporate feasible mitigation measures and Alternatives developed in the program EIR into the subsequent activities (CEQA Guidelines Section 15168[c][3]). If a subsequent activity would have effects that are not within the scope of a program EIR, the lead agency must prepare a new Initial Study leading to a Negative Declaration, a Mitigated Negative Declaration, or an EIR. For these subsequent environmental review documents, this Program EIR will serve as the first-tier environmental analysis.

1.2 SUMMARY OF PROPOSED PROJECT

The proposed Project evaluated in this Draft EIR is the adoption and implementation of the proposed General Plan and proposed Residential Development Control System (RDCS). The proposed General Plan includes land use, urban design, circulation, public services, natural resources, and safety goals, policies, and actions to guide investment and development in the Project Area over the next 20 years. The proposed RDCS would regulate population growth through the provision of residential building allotments on a yearly or bi-annual basis. The proposed Project is described in more detail in Chapter 3, Project Description.

1.3 ALTERNATIVES TO THE PROPOSED PROJECT

This Draft EIR analyzes alternatives to the proposed Project that are designed to reduce the significant environmental impacts of the proposed Project and feasibly attain most of the basic objectives of the proposed Project. There is no set methodology for comparing the alternatives or determining the environmentally superior alternative under CEQA. Identification of the environmentally superior alternative involves comparing the environmental effects of the alternatives with the environmental effects of the proposed Project. The following three alternatives to the proposed Project were considered and analyzed in detail in Chapter 6, of this Draft EIR.

- No Project Alternative
- Low Growth Alternative
- Compact Development Alternative

1.4 AREAS OF CONCERN

The City issued a Notice of Preparation (NOP) on February 23, 2015, and held a scoping meeting on March 12, 2015. The scoping period for this EIR was between February 23 and March 25, 2015, during which interested agencies and the public could submit comments about the proposed Project. During this time, the City received two comment letters from the following agencies:

- California Department of Transportation (Caltrans)
- Santa Clara Valley Transportation Authority (VTA)

The following is a discussion of issues that are likely to be of particular concern to agencies and interested members of the public during the environmental review process. While every environmental concern applicable to the CEQA process is addressed in this Draft EIR, this list is not necessarily exhaustive; rather,

EXECUTIVE SUMMARY

it attempts to capture those concerns that are likely to generate the greatest interest based on the input received during the scoping process.

- Traffic operations and trip reduction
- Water supply and service
- Statewide drought conditions
- Downtown flooding
- Future school needs
- Police and fire service calls

1.5 SIGNIFICANT IMPACTS AND MITIGATION MEASURES

Under CEQA, a significant effect on the environment (i.e., significant impact) is defined as a substantial, or potentially substantial, adverse change in any of the physical conditions within the Project Area, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic and aesthetic significance.

The proposed Project has the potential to generate significant environmental impacts in a number of areas. As shown in Table 1-1, some significant impacts would be reduced to a less-than-significant level if the mitigation measures identified in this Draft EIR are adopted and implemented. However, pursuant to Section 15126.2(b) of the CEQA Guidelines, which requires that an EIR describe any significant impacts that cannot be avoided, even with the implementation of feasible mitigation measures, as shown in Table 1-1, significant unavoidable impacts were identified in the areas of air quality, noise and transportation and traffic. For a complete summary of the significant and unavoidable impacts, please see Chapter 5.0, Significant Unavoidable Adverse Impacts, of this Draft EIR. As described in detail in Chapter 7.0, the proposed Project would have no significant impact on mineral resources due to existing conditions in the City of Morgan Hill. Accordingly, this topic has not been analyzed further in this Draft EIR.

Table 1-1 summarizes the conclusions of the environmental analysis contained in this Draft EIR and presents a summary of impacts and mitigation measures identified. It is organized to correspond with the environmental issues discussed in Chapters 4.1 through 4.15. The table is arranged in four columns: 1) environmental impacts; 2) significance without mitigation; 3) mitigation measures; and 4) significance with mitigation. For a complete description of potential impacts, please refer to the specific discussions in Chapters 4.1 through 4.15.

EXECUTIVE SUMMARY

TABLE 1-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Significant Impact	Significance Before Mitigation (GP/RDCS)	Mitigation Measures	Significance After Mitigation (GP/RDCS)
AESTHETICS			
AES-1: Implementation of the proposed Project would not have a substantial adverse effect on a scenic vista.	LTS/None	N/A	N/A
AES-2: Implementation of the proposed Project would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings, within a state scenic highway.	None/None	N/A	N/A
AES-3: Implementation of the proposed Project would not substantially degrade the existing visual character or quality of the site and its surroundings.	LTS/None	N/A	N/A
AES-4: Implementation of the proposed Project would not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.	LTS/None	N/A	N/A
AES-5: Implementation of the proposed Project would not contribute to cumulative aesthetics impacts in the area.	LTS	N/A	N/A
AGRICULTURE AND FORESTRY RESOURCES			
AG-1: Implementation of the proposed Project would convert Prime Farmland, Unique Farmland, or Farmland of statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use.	S/LTS	<i>There are no additional mitigation measures available to mitigate this impact.</i>	SU
AG-2: Implementation of the proposed Project would conflict with existing zoning for agricultural use, or a Williamson Act contract.	S/LTS	<i>There are no additional mitigation measures available to mitigate this impact.</i>	SU

LTS = Less Than Significant S = Significant SU = Significant Unavoidable Impact

EXECUTIVE SUMMARY**TABLE 1-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Significant Impact	Significance Before Mitigation (GP/RDCS)	Mitigation Measures	Significance After Mitigation (GP/RDCS)
AG-3: Implementation of the proposed Project would not conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g)).	None/None	N/A	N/A
AG-4: Implementation of the proposed Project would not result in the loss of forest land or conversion of forest land to non-forest use.	LTS/LTS	N/A	N/A
AG-5: Implementation of the proposed Project would not involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use.	LTS/LTS	N/A	N/A
AG-6: Implementation of the proposed Project would contribute to cumulative impacts to agriculture resources in the area.	S	<i>There are no additional mitigation measures available to mitigate this impact.</i>	SU
AIR QUALITY			
AQ-1: Implementation of the proposed Project would not conflict with or obstruct implementation of the applicable air quality plan.	LTS/None	N/A	N/A
AQ-2: Implementation of the proposed General Plan would violate an air quality standard or contribute substantially to an existing or projected air quality violation.	S/None	AQ-2a-1: As part of the City's development approval process, the City shall require applicants for future development projects to comply with the current Bay Area Air Quality Management District's basic control measures for reducing construction emissions of PM₁₀ (Table 8-1, <i>Basic Construction Mitigation Measures Recommended for All Proposed Projects</i>, of the BAAQMD CEQA Guidelines). AQ-2a-2: Prior to issuance of construction permits, development project applicants that are subject to CEQA shall prepare and submit to the City of Morgan Hill a technical assessment evaluating potential project construction-related air quality impacts. The evaluation shall be prepared in conformance with the Bay Area Air	SU

LTS = Less Than Significant S = Significant SU = Significant Unavoidable Impact

EXECUTIVE SUMMARY

TABLE 1-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Significant Impact	Significance Before Mitigation (GP/RDCS)	Mitigation Measures	Significance After Mitigation (GP/RDCS)
		Quality Management District (BAAQMD) methodology in assessing air quality impacts. If construction-related criteria air pollutants are determined to have the potential to exceed the BAAQMD thresholds of significance, as identified in the BAAQMD CEQA Guidelines, the City of Morgan Hill shall require that applicants for new development projects incorporate mitigation measures to reduce air pollutant emissions during construction activities to below these thresholds (Table 8-2, <i>Additional Construction Mitigation Measures Recommended for Projects with Construction Emissions Above the Threshold</i> of the BAAQMD CEQA Guidelines, or applicable construction mitigation measures subsequently approved by BAAQMD). These identified measures shall be incorporated into all appropriate construction documents (e.g. construction management plans) submitted to the City and shall be verified by the City's Community Development Department.	
		AQ-2b Prior to issuance of construction permits, development project applicants that are subject to CEQA shall prepare and submit to the City of Morgan Hill a technical assessment evaluating potential project operation-phase-related air quality impacts. The evaluation shall be prepared in conformance with the Bay Area Air Quality Management District's (BAAQMD) methodology in assessing air quality impacts. If operational-related criteria air pollutants are determined to have the potential to exceed the BAAQMD thresholds of significance, as identified in BAAQMD's CEQA Guidelines, the City of Morgan Hill Community Development Department, Planning Division, shall require that applicants for new development projects incorporate mitigation measures to reduce air pollutant emissions during operational activities.	SU
AQ-3: Implementation of the proposed General Plan would result in a cumulatively considerable net increase of criteria pollutants for which the project region is in nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors).	S/None	<i>There are no additional mitigation measures available to mitigate this impact.</i>	SU

LTS = Less Than Significant S = Significant SU = Significant Unavoidable Impact

EXECUTIVE SUMMARY**TABLE 1-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Significant Impact	Significance Before Mitigation (GP/RDCS)	Mitigation Measures	Significance After Mitigation (GP/RDCS)
AQ-4: Implementation of the proposed General Plan would expose sensitive receptors to substantial concentrations of air pollution.	S/None	AQ-4a Applicants for future non-residential land uses within the City that: 1) have the potential to generate 100 or more diesel truck trips per day or have 40 or more trucks with operating diesel-powered TRUs, and 2) are within 1,000 feet of a sensitive land use (e.g., residential, schools, hospitals, nursing homes), as measured from the property line of the proposed Project to the property line of the nearest sensitive use, shall submit a health risk assessment (HRA) to the City of Morgan Hill prior to future discretionary Project approval. The HRA shall be prepared in accordance with policies and procedures of the State Office of Environmental Health Hazard Assessment and the Bay Area Air Quality Management District. If the HRA shows that the incremental cancer risk exceeds ten in one million (10E-06), PM_{2.5} concentrations exceed 0.3 µg/m³, or the appropriate noncancer hazard index exceeds 1.0, the applicant will be required to identify and demonstrate that mitigation measures are capable of reducing potential cancer and noncancer risks to an acceptable level, including appropriate enforcement mechanisms. Mitigation measures may include but are not limited to: ▪ Restricting idling on-site beyond Air Toxic Control Measures idling restrictions, as feasible. ▪ Electrifying warehousing docks. ▪ Requiring use of newer equipment and/or vehicles. ▪ Restricting off-site truck travel through the creation of truck routes. Mitigation measures identified in the project-specific HRA shall be identified as mitigation measures in the environmental document and/or incorporated into the site development plan as a component of the proposed project.	LTS
		AQ-4b: Applicants for residential and other sensitive land use projects (e.g., hospitals, nursing homes, day care centers) in Morgan Hill within 1,000 feet of a major sources of TACs (e.g., warehouses, industrial areas, freeways, and roadways with traffic volumes over 10,000 vehicle per day), as measured from the property line of the a project to the property line of the source/edge of the nearest travel lane, shall submit a health risk assessment (HRA) to the City of Morgan Hill prior to future discretionary Project approval. The HRA shall be prepared in accordance with policies and procedures of the State Office of Environmental Health Hazard Assessment (OEHHA) and the Bay Area Air Quality Management District. The latest	LTS

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EXECUTIVE SUMMARY

TABLE 1-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Significant Impact	Significance Before Mitigation (GP/RDCS)	Mitigation Measures	Significance After Mitigation (GP/RDCS)
		OEHHA guidelines shall be used for the analysis, including age sensitivity factors, breathing rates, and body weights appropriate for children ages 0 to 16 years. If the HRA shows that the incremental cancer risk exceeds ten in one million (10E-06), PM_{2.5} concentrations exceed 0.3 µg/m³, or the appropriate noncancer hazard index exceeds 1.0, the applicant will be required to identify and demonstrate that mitigation measures are capable of reducing potential cancer and non-cancer risks to an acceptable level (i.e., below ten in one million or a hazard index of 1.0), including appropriate enforcement mechanisms. Measures to reduce risk may include but are not limited to: ▪ Air intakes located away from high volume roadways and/or truck loading zones. ▪ Heating, ventilation, and air conditioning systems of the buildings provided with appropriately sized maximum efficiency rating value (MERV) filters. Mitigation measures identified in the HRA shall be included as mitigation measures in the environmental document and/or incorporated into the site development plan as a component of the proposed Project. The air intake design and MERV filter requirements shall be noted and/or reflected on all building plans submitted to the City and shall be verified by the City's Community Development Department.	
AQ-5: Implementation of the proposed Project would not create or expose a substantial number of people to objectionable odors.	LTS/None	N/A	N/A
AQ-6: Implementation of the proposed General Plan would cumulatively contribute to air quality impacts in the San Francisco Bay Area Air Basin.	S	<i>There are no additional mitigation measures available to mitigate this impact.</i>	SU
BIOLOGICAL RESOURCES			
BIO-1: Implementation of the proposed Project would not have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.	LTS/None	N/A	N/A

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EXECUTIVE SUMMARY**TABLE 1-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Significant Impact	Significance Before Mitigation (GP/RDCS)	Mitigation Measures	Significance After Mitigation (GP/RDCS)
BIO-2: Implementation of the proposed Project would not have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or US Fish and Wildlife Service.	LTS/None	N/A	N/A
BIO-3: Implementation of the proposed Project would not have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.	LTS/None	N/A	N/A
BIO-4: Implementation of the proposed Project would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.	LTS/None	N/A	N/A
BIO-5: Implementation of the proposed Project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.	LTS/None	N/A	N/A
BIO-6: Implementation of the proposed Project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.	LTS/None	N/A	N/A
BIO-7: Implementation of the proposed Project would not contribute to cumulative biological resource impacts in the area.	LTS	N/A	N/A

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EXECUTIVE SUMMARY

TABLE 1-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Significant Impact	Significance Before Mitigation (GP/RDCS)	Mitigation Measures	Significance After Mitigation (GP/RDCS)
CULTURAL RESOURCES			
CULT-1: Implementation of the proposed Project would not cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5.	LTS/LTS	N/A	N/A
CULT-2: Implementation of the proposed Project would not cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5.	LTS/LTS	N/A	N/A
CULT-3: Implementation of the proposed Project would not directly or indirectly destroy a unique paleontological resource, site or unique geologic feature.	LTS/LTS	N/A	N/A
CULT-4: Implementation of the proposed Project would not disturb any human remains, including those interred outside of formal cemeteries.	LTS/LTS	N/A	N/A
CULT-5: Implementation of the proposed Project would not contribute to cumulative cultural resource impacts in the area.	LTS	N/A	N/A
GEOLOGY, SOILS, AND SEISMICITY			
GEO-1A: Implementation of the proposed Project would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault.	LTS/LTS	N/A	N/A

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Significant Impact	Significance Before Mitigation (GP/RDCS)	Mitigation Measures	Significance After Mitigation (GP/RDCS)
GEO-1B: Implementation of the proposed Project would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking.	LTS/LTS	N/A	N/A
GEO-1C: Implementation of the proposed Project would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction.	LTS/LTS	N/A	N/A
GEO-1D: Implementation of the proposed Project would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related landslides.	LTS/LTS	N/A	N/A
GEO-2: Implementation of the proposed Project would not result in substantial soil erosion or the loss of topsoil.	LTS/LTS	N/A	N/A
GEO-3: Implementation of the proposed Project would not be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.	LTS/LTS	N/A	N/A
GEO-4: Implementation of the proposed Project would not be located on expansive soil, as defined in Table 18-1-b of the Uniform Building Code (1994), creating substantial risks to life or property.	LTS/LTS	N/A	N/A
GEO-5: Implementation of the proposed Project would not be located on soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater.	LTS/LTS	N/A	N/A

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EXECUTIVE SUMMARY

TABLE 1-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Significant Impact	Significance Before Mitigation (GP/RDCS)	Mitigation Measures	Significance After Mitigation (GP/RDCS)
GEO-6: Implementation of the proposed Project would not contribute to cumulative geology and soils impacts in the area.	LTS	N/A	N/A
HAZARDS AND HAZARDOUS MATERIALS			
HAZ-1: Implementation of the proposed Project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.	LTS/LTS	N/A	N/A
HAZ-2: Implementation of the proposed Project would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.	LTS/LTS	N/A	N/A
HAZ-3: Implementation of the proposed Project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within ¼-mile of an existing or proposed school.	LTS/LTS	N/A	N/A
HAZ-4: Implementation of the proposed Project would be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment.	LTS/LTS	N/A	N/A
HAZ-5: Implementation of the proposed Project would not result in a safety hazard for people residing or working in the project area within an airport land use plan or within 2 miles of a public airport or public use airport.	LTS/LTS	N/A	N/A

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Significant Impact	Significance Before Mitigation (GP/RDCS)	Mitigation Measures	Significance After Mitigation (GP/RDCS)
HAZ-6: Implementation of the proposed Project would not result in a safety hazard for people residing or working in the project area within the vicinity of a private airstrip.	LTS/LTS	N/A	N/A
HAZ-7: Implementation of the proposed Project would not impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan.	LTS/LTS	N/A	N/A
HAZ-8: Implementation of the proposed Project would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.	LTS/LTS	N/A	N/A
HAZ-9: Implementation of the proposed Project would not contribute to cumulative hazards and hazardous materials impacts in the area.	LTS	N/A	N/A
HYDROLOGY AND WATER QUALITY			
HYDRO-1: Implementation of the proposed Project would not violate any water quality standards or waste discharge requirements.	LTS/LTS	N/A	N/A
HYDRO-2: Implementation of the proposed Project would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level.	LTS/LTS	N/A	N/A

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EXECUTIVE SUMMARY

TABLE 1-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Significant Impact	Significance Before Mitigation (GP/RDCS)	Mitigation Measures	Significance After Mitigation (GP/RDCS)
HYDRO-3: Implementation of the proposed Project would not substantially alter the existing drainage pattern of the area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site.	LTS/LTS	N/A	N/A
HYDRO-4: Implementation of the proposed Project would not substantially alter the existing drainage pattern of the area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site.	LTS/LTS	N/A	N/A
HYDRO-5: Implementation of the proposed Project would not create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.	LTS/LTS	N/A	N/A
HYDRO-6: Implementation of the proposed Project would not otherwise substantially degrade water quality.	LTS/LTS	N/A	N/A
HYDRO-7: Implementation of the proposed Project could place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map. Implementation of the proposed Project could place within a 100-year flood hazard area structures which would impede or redirect flood flows.	LTS/LTS	N/A	N/A
HYDRO-8: Implementation of the proposed Project would not expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam.	LTS/LTS	N/A	N/A

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Significant Impact	Significance Before Mitigation (GP/RDCS)	Mitigation Measures	Significance After Mitigation (GP/RDCS)
HYDRO-9: Implementation of the proposed Project would not expose people or structures to a significant risk of inundation by seiche, tsunami, or mudflow.	LTS/LTS	N/A	N/A
HYDRO-10: Implementation of the proposed Project would not contribute to cumulative hydrology and water quality impacts in the area.	LTS	N/A	N/A
LAND USE AND PLANNING			
LU-1: Implementation of the proposed Project would not physically divide an established community.	LTS/LTS	N/A	N/A
LU-2: Implementation of the proposed Project would not conflict with any applicable plan, policy or regulation of an agency with jurisdiction over the project (including, but not limited to, the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.	LTS/LTS	N/A	N/A
LU-3: Implementation of the proposed Project would not conflict with any applicable habitat conservation plan or natural community conservation plan.	LTS/None	N/A	N/A
LU-4: Implementation of the proposed Project would not contribute to cumulative land use and planning impacts in the area.	LTS	N/A	N/A
NOISE			
NOISE-1: Implementation of the proposed Project would not result in the exposure of persons to or generation of noise levels in excess of standards established in the local General Plan or noise ordinance, or applicable standards of other agencies.	LTS/LTS	N/A	N/A
NOISE-2: Implementation of the proposed Project would not expose persons to or generate excessive ground-borne vibration or ground-borne noise levels.	LTS/LTS	N/A	N/A

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EXECUTIVE SUMMARY

TABLE 1-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Significant Impact	Significance Before Mitigation (GP/RDCS)	Mitigation Measures	Significance After Mitigation (GP/RDCS)
NOISE-3: Implementation of the proposed Project would result in a substantial permanent increase in ambient noise levels in the Project vicinity above levels existing without the Project.	SU/LTS	<i>There are no additional mitigation measures available to mitigate this impact.</i>	SU
NOISE-4: Implementation of the proposed Project would result in a substantial temporary or periodic increase in ambient noise levels in the Project vicinity above levels existing without the Project.	LTS/LTS	N/A	N/A
NOISE-5: Implementation of the proposed Project, in combination with past, present, and reasonably foreseeable projects, would result in significant cumulative impacts with respect to noise.	SU	<i>There are no additional mitigation measures available to mitigate this impact.</i>	SU
POPULATION AND HOUSING			
POP-1: Implementation of the proposed Project would not induce substantial unexpected population growth, or growth for which inadequate planning has occurred, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure).	LTS/LTS	N/A	N/A
POP-2: Implementation of the proposed Project would not displace substantial numbers of existing housing units, necessitating the construction of replacement housing elsewhere.	LTS/LTS	N/A	N/A
POP-3: Implementation of the proposed Project would not displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.	LTS/LTS	N/A	N/A
POP-4: Implementation of the proposed Project would not contribute to cumulative population and housing impacts in the area.	LTS	N/A	N/A

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Significant Impact	Significance Before Mitigation (GP/RDCS)	Mitigation Measures	Significance After Mitigation (GP/RDCS)
PUBLIC SERVICES AND RECREATION			
PS-1: Implementation of the proposed Project would not result in the provision of or need for new or physically altered fire protection facilities, the construction or operation of which could cause significant environmental impacts.	LTS/None	N/A	N/A
PS-2: Implementation of the proposed Project, in combination with past, present, and reasonably foreseeable projects, would not result in significant cumulative impacts with respect to fire protection service.	LTS	N/A	N/A
PS-3: Implementation of the proposed Project would not result in the provision of or need for new or physically altered police protection facilities, the construction or operation of which could cause significant environmental impacts.	LTS/None	N/A	N/A
PS-4: Implementation of the proposed Project, in combination with past, present, and reasonably foreseeable projects, would not result in significant cumulative impacts with respect to police protection services.	LTS	N/A	N/A
PS-5: Implementation of the proposed Project would not result in the provision of or need for new or physically altered school facilities, the construction or operation of which could cause significant environmental impacts.	LTS/None	N/A	N/A
PS-6: Implementation of the proposed Project, in combination with past, present, and reasonably foreseeable projects, would not result in significant cumulative impacts with respect to schools.	LTS	N/A	N/A

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EXECUTIVE SUMMARY

TABLE 1-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Significant Impact	Significance Before Mitigation (GP/RDCS)	Mitigation Measures	Significance After Mitigation (GP/RDCS)
PS-7: Implementation of the proposed Project would not result in the provision of or need for new or physically altered library facilities, the construction or operation of which could cause significant environmental impacts.	LTS/None	N/A	N/A
PS-8: Implementation of the proposed Project would not contribute to cumulative library impacts in the area.	LTS	N/A	N/A
PS-9: Implementation of the proposed Project would not result in substantial adverse physical impacts associated with the provision of new or physically altered parks or recreational facilities in order to maintain the City's adopted parkland service ratio.	LTS/None	N/A	N/A
PS-10: Implementation of the proposed Project would not increase the use of existing neighborhood and regional parks or other recreational facilities, such that substantial physical deterioration of the facility would occur, or be accelerated.	LTS/None	N/A	N/A
PS-11: Implementation of the proposed Project would not include or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.	LTS/LTS	N/A	N/A
PS-12: Implementation of the proposed Project would not contribute to cumulative parks and recreation impacts in the area.	LTS	N/A	N/A
TRANSPORTATION AND TRAFFIC			
TRAF-1A: The intersection of Monterey Road and Central Avenue (Intersection #10) would degrade to LOS F during the AM peak hour.	S/None	TRAF-1A: The City of Morgan Hill shall install a signal at the intersection of Monterey Road and Central Avenue or install a different, equally effective measure to reduce delays at the intersection. With this improvement, the project impact is <i>less than significant</i> .	LTS

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EXECUTIVE SUMMARY**TABLE 1-1 SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Significant Impact	Significance Before Mitigation (GP/RDCS)	Mitigation Measures	Significance After Mitigation (GP/RDCS)
TRAF-1B: The intersection of Tennant Avenue and Murphy Avenue (Intersection #40) would degrade to LOS F during both the AM and PM peak hours.	S/None	TRAF-1B: The City of Morgan Hill shall install a signal at the intersection of Tennant Avenue and Murphy Avenue or install a different, equally effective measure to reduce delays at the intersection. With this improvement, the project impact is <i>less than significant</i> .	LTS
TRAF-2: The freeway segments along US 101 through the City are currently operating at LOS F and each of the segments would continue to operate at LOS F and the addition of traffic that would result from implementation of the proposed General Plan would constitute more than 1 percent of freeway capacity under 2035 buildout conditions.	S/None	TRAF-2: Full mitigation of significant impacts on freeway segments would require freeway widening to construct five lanes through Morgan Hill, thereby increasing freeway capacity. Ultimately, the VTA and Caltrans are the responsible agencies for planning for and implementing improvements within the US 101 corridor. A fair share contribution from the City of Morgan Hill towards freeway improvement costs is an acceptable mitigation measure. However, the City of Morgan Hill does not have a funding strategy in place to contribute towards regional improvements. City representatives should work collaboratively with San Jose, Gilroy, Santa Clara County, counties to the south (Monterey, San Benito, and Merced Counties), the Valley Transportation Authority, and Caltrans to prepare and develop a funding strategy for South County roadway improvements. Payment of traffic impact fees or a fair share contribution is expected to fulfill the City's obligations for mitigating regional traffic impacts; however, unless other funding sources such as a new regional impact fee, additional sales tax measures, contributions from other developers, or state funds are made available, feasible roadway improvements will not be implemented, and the identified freeway impacts will remain significant and unavoidable.	SU
TRAF-3: Implementation of the proposed Project would not substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).	LTS/None	N/A	N/A
TRAF-4: Implementation of the proposed Project would not result in inadequate emergency access.	LTS/None	N/A	N/A

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EXECUTIVE SUMMARY

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Significant Impact	Significance Before Mitigation (GP/RDCS)	Mitigation Measures	Significance After Mitigation (GP/RDCS)
TRAF-5: Implementation of the proposed Project would not conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.	LTS/None	N/A	N/A
TRAF-6: Implementation of the proposed Project would not result in a change in air traffic patterns, including either an increase in traffic levels or a change in location, which would result in substantial safety risks.	LTS/None	N/A	N/A
UTILITIES AND SERVICE SYSTEMS			
UTIL-1: Sufficient water supplies would be available to serve the proposed Project from existing entitlements and resources and new or expanded entitlements would not be required.	LTS/LTS	N/A	N/A
UTIL-2: Implementation of the proposed Project would not require or result in the construction of new water facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.	LTS/LTS	N/A	N/A
UTIL-3: Implementation of the proposed Project, in combination with past, present, and reasonably foreseeable projects, would not result in significant cumulative impacts with respect to water supply.	LTS	N/A	N/A
UTIL-4: The proposed Project would not exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board.	LTS/LTS	N/A	N/A
UTIL-5: Implementation of the proposed Project would not require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.	LTS/LTS	N/A	N/A

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Significant Impact	Significance Before Mitigation (GP/RDCS)	Mitigation Measures	Significance After Mitigation (GP/RDCS)
UTIL-6: Implementation of the proposed Project would not result in a determination by the wastewater treatment provider, which serves or may serve the proposed Project that it does not have adequate capacity to serve the proposed Project's projected demand in addition to the provider's existing commitments.	LTS/LTS	N/A	N/A
UTIL-7: Implementation of the proposed Project, in combination with past, present, and reasonably foreseeable projects, would result in less-than-significant cumulative impacts with respect to wastewater.	LTS	N/A	N/A
UTIL-8: Implementation of the proposed Project would be served by a landfill with sufficient permitted capacity to accommodate the proposed Project's solid waste disposal needs.	LTS/LTS	N/A	N/A
UTIL-9: The proposed Project would comply with federal, state, and local statutes and regulations related to solid waste.	None/None	N/A	N/A
UTIL-10: The proposed Project, in combination with past, present, and reasonably foreseeable projects, would result in less-than-significant cumulative impacts with respect to solid waste.	LTS	N/A	N/A
UTIL-11: The proposed Project would result in a substantial increase in natural gas and electrical service demands, would use appropriate energy conservation and efficiency measures, and would not require new energy supply facilities and distribution infrastructure or capacity enhancing alterations to existing facilities.	LTS/LTS	N/A	N/A

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EXECUTIVE SUMMARY

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2. Introduction

A thorough examination of the existing regulatory and environmental setting in the City of Morgan Hill is a critical initial step in the adoption and implementation of the proposed General Plan and proposed Residential Development Control System (RDCS), herein referred to as the “proposed Project” or “Project,” and the certification of the Environmental Impact Report (EIR) process. Therefore, this report is intended to analyze the significant environmental effects (“impacts”) of the proposed Project. The information in this report will serve as a resource throughout the proposed Project approval and environmental review process for the community, City staff, and decision-makers.

Pursuant to Section 21080(d) of the California Environmental Quality Act (CEQA)¹ and Section 15378[a] of the CEQA Guidelines,² the proposed General Plan Amendment and RDCS is considered a “project” subject to environmental review because it is “an action [undertaken by a public agency] which has the potential for resulting in either a direct physical change in the environment or a reasonably foreseeable indirect physical change in the environment.” This Draft Environmental Impact Report (Draft EIR) provides an assessment of the potential environmental consequences of adoption and implementation of the proposed Project. Additionally, this Draft EIR identifies mitigation measures and alternatives to the proposed Project that would avoid or reduce significant impacts. This Draft EIR compares the buildout potential³ for the proposed Project with the existing baseline condition, described in detail in each resource section of Chapter 4.0, Environmental Analysis. The City of Morgan Hill (City) is the Lead Agency for the proposed Project. This assessment is intended to inform the City’s decision-makers, other responsible agencies, and the public-at-large of the nature of the proposed Project and its effect on the environment.

2.1 PROPOSED PROJECT

The proposed Project evaluated in this Draft EIR is the adoption and implementation of the proposed General Plan and proposed RDCS. The proposed General Plan includes land use, urban design, circulation, public services, natural resources, and safety goals, policies, and actions to guide investment and development in the Project Area over the next 20 years. The proposed RDCS would regulate population growth through the provision of residential building allotments on a yearly or bi-annual basis. The proposed Project is described in more detail in Chapter 3, Project Description.

¹ The CEQA Statute is found at California Public Resources Code, Division 13, Sections 21000-21177.

² The CEQA Guidelines are found at California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000-15387.

³ Defined as the maximum theoretical amount of development that could occur within the 26-year horizon of the General Plan.

INTRODUCTION

2.2 EIR SCOPE

This Draft EIR is a Program EIR that analyzes the adoption and implementation of the proposed General Plan and proposed RDCS. CEQA and the CEQA Guidelines allow lead agencies to prepare, a number of types of EIRs. Different types of EIRs are used for varying situations and intended uses. As described in Section 15161 of the CEQA Guidelines, the most common type of EIR is a *project* EIR, which examines the environmental impacts of a specific development project. As described in Section 15168 of the CEQA Guidelines, *program* EIRs are appropriate when a project consists of a series of actions related to the issuance of rules, regulations, and other planning criteria.

In this case, the proposed Project that is the subject of this EIR consists of long-term plans that will be implemented over time as policy documents guiding future development activities and City actions. No specific development projects are proposed as part of the proposed Project. Therefore, this EIR is a program-level EIR that analyzes the potential significant environmental effects of the adoption of the proposed Project. As a program EIR, it is not project-specific, and does not evaluate the impacts of individual projects that may be proposed under the General Plan. Such subsequent projects will require a separate environmental review, when applicable as required by CEQA, which could be in the form of a Negative Declaration, Mitigated Negative Declaration, or a Subsequent EIR, to secure the necessary development permits. Therefore, while subsequent environmental review may be tiered from this EIR, this EIR is not intended to address project-specific impacts of individual projects.

The scope of this EIR was established by the City of Morgan Hill through the EIR scoping process and includes an analysis of both the proposed Project's impact and the cumulative impacts in the following issue areas:

- Aesthetics
- Agricultural and Forestry Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Geology, Soils, and Seismicity
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Noise
- Population and Housing
- Public Services and Recreation
- Transportation and Traffic
- Utilities and Service Systems
- CEQA Required Assessment Conclusions

INTRODUCTION

The implementation of the proposed Project was found to have no impacts related to Mineral Resources. A complete discussion of the impacts to Mineral Resources is provided in Chapter 5, CEQA-Required Assessment, of this Draft EIR.

2.3 ENVIRONMENTAL REVIEW PROCESS

2.3.1 DRAFT EIR

Pursuant to CEQA Section 21080(d) and CEQA Guidelines Section 15063, the City of Morgan Hill determined that the proposed Project could result in potentially significant environmental impacts and that an EIR would be required. In compliance with Section 21080.4 of the California Public Resources Code, the City circulated a Notice of Preparation (NOP) of an EIR for the proposed Project to the Office of Planning and Research (OPR) State Clearinghouse and interested agencies and persons on February 23, 2015 for a 30-day review period. A public Scoping Meeting was held on March 12, 2015 at 6:00 p.m. at the Morgan Hill City Council Chambers (17555 Peak Avenue). The NOP and scoping process solicited comments from responsible and trustee agencies, as well as interested parties regarding the scope of the Draft EIR. Appendix A, Notice of Preparation Comment Letters, of this Draft EIR contains the NOP as well as the comments received by the City in response to the NOP.

This Draft EIR will be available for review by the public and interested parties, agencies, and organizations for a 60-day comment period starting January 13, 2016 and ending March 14, 2016. During the comment period, the public is invited to submit written comments via mail or e-mail on the Draft EIR to the City of Morgan Hill Community Development Department by 5:00 p.m. on March 14, 2016.

Written comments should be submitted to:

John Baty, Senior Planner
Community Development Department – Planning Division
City of Morgan Hill
17575 Peak Avenue
Morgan Hill, CA 95037
Email: John.Baty@MorganHill.ca.gov

2.3.2 FINAL EIR

Upon completion of the 60-day review period for the Draft EIR, the City of Morgan Hill will review all written comments received and prepare written responses to each comment on the adequacy of the EIR. A Final EIR will then be prepared, which contains all of the comments received, responses to comments raising environmental issues, and any changes to the Draft EIR. The Final EIR will then be presented to the City of Morgan Hill for certification as the environmental document for the proposed Project. All persons

INTRODUCTION

who commented on the Draft EIR will be notified of the availability of the Final EIR and the date of the public hearing before the City.

All responses to comments submitted on the Draft EIR by agencies will be provided to those agencies at least 10 days prior to certification of the EIR. The City Council will make findings regarding the extent and nature of the impacts as presented in the Final EIR. The Final EIR will need to be certified as having been prepared in compliance with CEQA by the City prior to making a decision to approve or deny the proposed Project. Public input is encouraged at all public hearings before the City.

After the City Council certifies the Final EIR, it may then consider the proposed General Plan and proposed RDCS. The City Council will adopt and incorporate into the project all feasible mitigation measures identified in the EIR and it may also require other feasible mitigation measures.

In some cases, the City Council may find that certain mitigation measures are outside the jurisdiction of the City to implement, or that no feasible mitigation measures have been identified for a given significant impact. In that case, the City Council may nonetheless determine that economic, legal, social, technological, or other benefits of the proposed Project outweigh the unavoidable, significant effects on the environment.

2.3.3 MITIGATION MONITORING

Public Resources Code Section 21081.6 requires that the lead agency adopt a monitoring or reporting program for any project for which it has made findings pursuant to Public Resources Code 21081 or adopted a Negative Declaration pursuant to Public Resources Code Section 21080(c). Such a program is intended to ensure the implementation of all mitigation measures adopted through the preparation of an EIR or Negative Declaration. The Mitigation Monitoring and Reporting Program (MMRP) for the proposed Project will be completed as part of the environmental review process.

3. Project Description

This Draft Environmental Impact Report (EIR) provides an assessment of the proposed update to the City’s General Plan and Residential Development Control System, or RDCS (together referred to as the “proposed Project” or “Project”).

The Draft EIR has been completed in accordance with the California Environmental Quality Act (CEQA). CEQA requires that state and local public agencies analyze proposed projects to determine potential impacts on the environment and disclose any such impacts.¹ As described in more detail in Chapter 1, Introduction, of this Draft EIR, consistent with Section 15168 of the CEQA Guidelines, this Draft EIR provides a programmatic analysis of the environmental impacts associated with projected buildout of the General Plan.² This Draft EIR is also intended to be used for purposes of tiering, pursuant to Section 15152 of the CEQA Guidelines and other tiering and streamlining provisions of CEQA and the CEQA Guidelines. The City of Morgan Hill is the Lead Agency for the environmental review of the proposed Project.

This project description provides general background about the City of Morgan Hill and the proposed Project, and provides detailed descriptions of the following two distinct Project Components:

1. General Plan
2. Residential Development Control System

3.1 OVERVIEW

The Morgan Hill General Plan was published as a Draft for Public Review on November 5, 2015. The proposed General Plan replaces the City’s existing General Plan, which had its last comprehensive update in 2001, with the exception of the Circulation Element, which was updated in 2010. The proposed General Plan is intended to guide development and conservation in the City through 2035.

The City’s Housing Element was updated in February 2015 and is incorporated into the proposed General Plan by reference. The Housing Element has already undergone separate environmental review as part of its adoption process; however, the residential development allowed under the Housing Element is incorporated into the residential development analyzed as part of this EIR.

¹ CEQA Guidelines, Section 15002(a).

² As described in Section 15168 of the CEQA Guidelines, *program-level* environmental review documents are appropriate when a project consists of a series of actions related to the issuance of rules, regulations, and other planning criteria. The project that is the subject of this EIR consists of long-term plans that will be implemented as policy documents guiding future development activities and City actions. Because this is a program-level EIR, this document does not evaluate the impacts of specific, individual developments that may be allowed under the General Plan. Future specific projects may require separate environmental review.

PROJECT DESCRIPTION

The Morgan Hill 2035 project also includes amendments to the City's RDCS. Established in 1977, the City of Morgan Hill's unique growth management system regulates population growth through the provision of residential building allotments. The updated RDCS will preserve the components of the existing system that meter growth, encourage high quality residential development, and provide a high level of community amenities.

3.2 LOCATION AND SETTING

3.2.1 LOCATION

Morgan Hill is a City of 13 square miles located in the southern part of Santa Clara County. The City is located approximately 20 miles south of downtown San Jose and approximately 13 miles north of Gilroy, as shown in Figure 3-1.

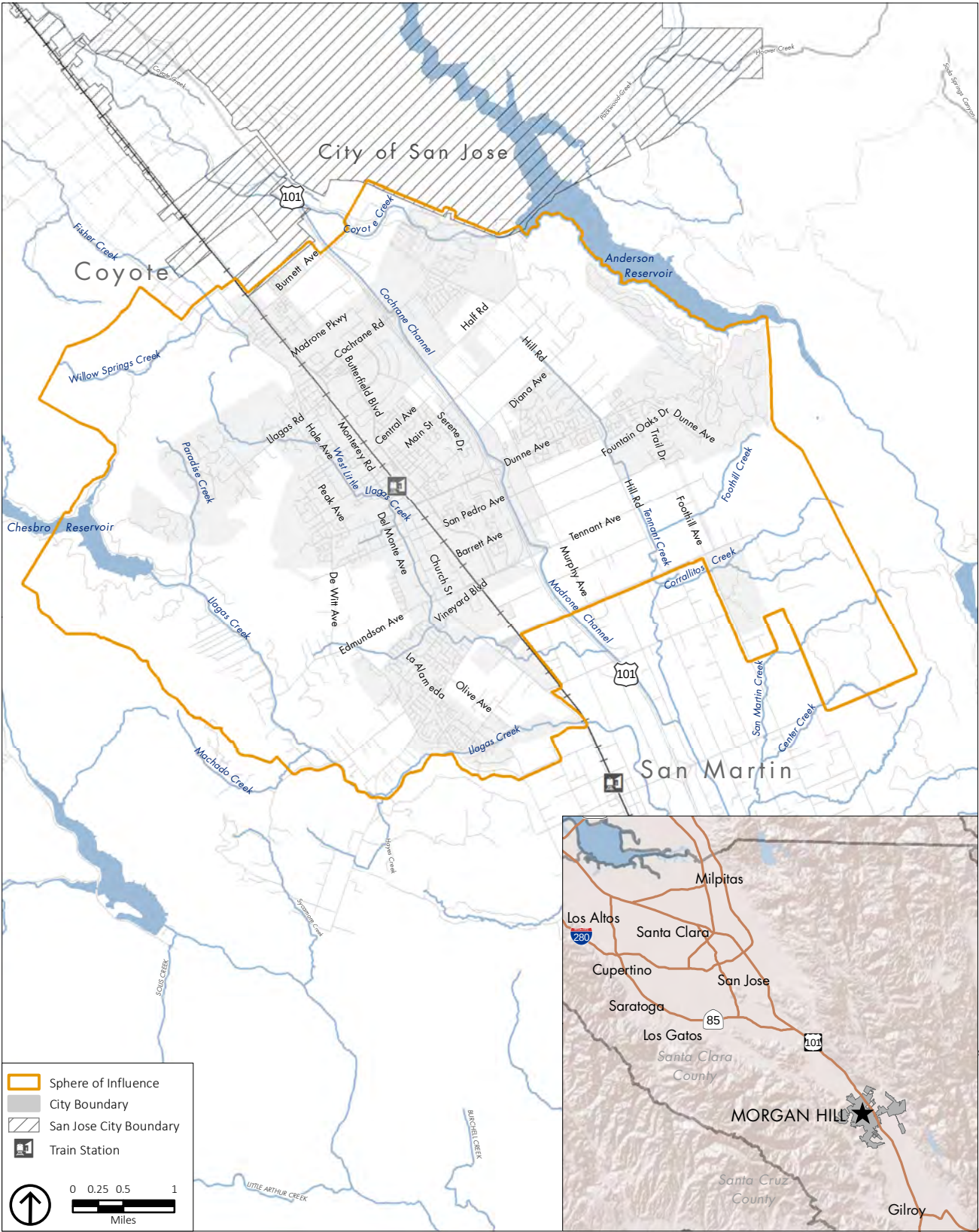
Highway 101 provides north-south access to San Jose to the north and Gilroy to the south. The Santa Clara Valley Transportation Authority (VTA) provides local bus service with regional connections to destinations north and south of Morgan Hill. Morgan Hill is also served by a Caltrain Station located along Depot Street between 2nd and 4th Street. Additional access is provided by the Monterey-Salinas Transit (MST) Bus Service, which provides bus service between the Morgan Hill Caltrain Station and the Monterey Transit Plaza in Monterey.

3.2.2 EXISTING LAND USE

Single-family residential neighborhoods are the largest individual land use in Morgan Hill. In addition, multi-family residential uses, such as condominiums and apartments, are dispersed around the area west of Butterfield Boulevard between Cochrane Road and south of Watsonville Road, and east along Monterey Road. Commercial and mixed-use developments line major transportation corridors throughout the City, including Morgan Hill's Downtown, along Monterey Road roughly between Main Avenue and Vineyard Boulevard, and along Cochrane, Tennant, and East Dunne Avenues. There are also two main industrial and office areas: 1) the Cochrane Road area, which includes the Morgan Hill Ranch Business Park, the Sutter Business Park, and the Madrone Industrial Park, located between Monterey Road and Highway 101 north and south of Cochrane Road and 2) an area south of Dunne Avenue, east of Church Street, west of Butterfield Boulevard, and north of Tennant Avenue.

Significant parts of the City may appear vacant, including large parcels in the industrial areas of the City. However, most Research & Development (R&D) land is part of a Planned Unit Development (PUD). These parcels may not have buildings, but the infrastructure, financed as part of an assessment district, has already been installed on this land. Therefore, these parcels are considered partially developed. Similarly, many residential parcels that have received RDCS allocations may appear vacant, but in fact have pending development. For more detail, see the discussion of "pipeline projects" in Section 3.5, below.

PROJECT DESCRIPTION



Sources: City of Morgan Hill, 2015; PlaceWorks, 2015.

Figure 3-1
Regional and Local Context

PROJECT DESCRIPTION

Outside the City limits, the Sphere of Influence (SOI) is dominated by agricultural and single-family residential uses on hillsides or in rural neighborhoods.

3.2.3 SURROUNDING LAND USE

Land uses surrounding the Morgan Hill SOI primarily consist of open space, agricultural, and vacant land within unincorporated Santa Clara County providing a buffer between San Jose to the north and Gilroy to the south. Areas east and west of the Morgan Hill SOI primarily consist of open space, including Anderson Lake and Anderson Lake County Park to the east and Chesbro Reservoir County Park to the west.

3.3 PROJECT AREA

The State of California encourages cities to look beyond their borders when undertaking the sort of comprehensive planning required of a General Plan. The City only has jurisdiction over land that is within the City limits. However, it is probable that some of the land within the SOI will be annexed by the City of Morgan Hill within the horizon of the proposed General Plan, and would therefore be under Morgan Hill's jurisdiction in the future. Therefore, this EIR focuses on the analysis of potential changes within the City limits and SOI. These areas are collectively called the Project Area.

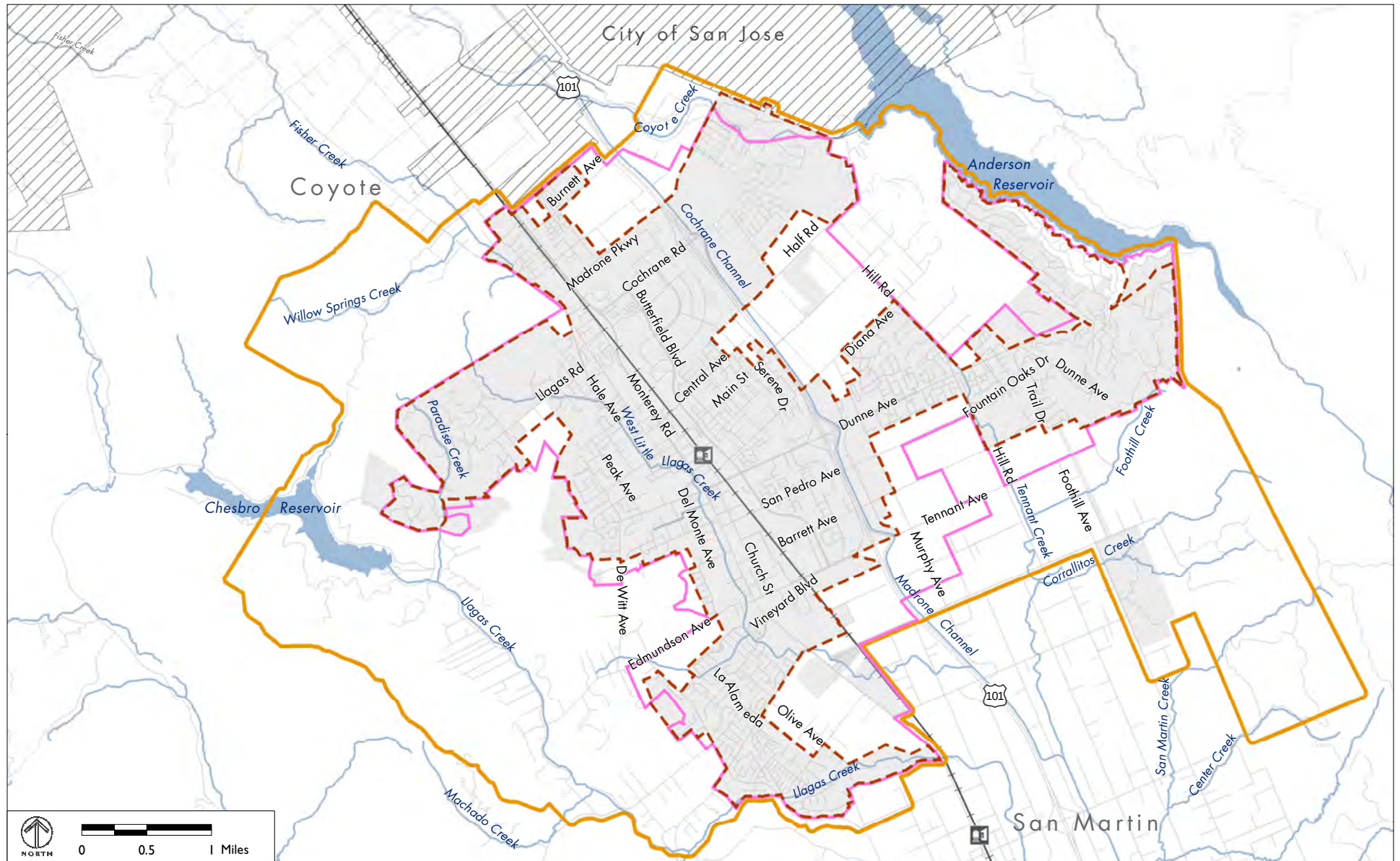
Growth in Morgan Hill is guided by the following planning boundaries: Sphere of Influence (SOI), Urban Limit Line, Urban Growth Boundary, Urban Service Area, and City limit. The SOI encompasses all other aforementioned planning boundaries, as shown in Figure 3-2. The planning boundaries are described below.

3.3.1 SPHERE OF INFLUENCE

The Sphere of Influence is a boundary that identifies land that the City may annex in the future, and for which urban services, if available, could be provided. Under state law, the SOI is established by the Santa Clara County Local Agency Formation Commission (LAFCO) with input from the City, and its purpose is to identify areas where future urban development can be best accommodated in an orderly and efficient manner. The current SOI is approximately 31 square miles in size.

3.3.2 URBAN LIMIT LINE

The Urban Limit Line (ULL) was established in 2005 and includes lands outside of the Urban Growth Boundary that may be needed for City growth beyond the next 20 years. The purpose of the ULL was to ensure that areas that are planned to become part of the City's Greenbelt are protected from future City growth. Some, but not all, of the lands outside the ULL have been identified as Greenbelt areas. There is no timeline for annexing unincorporated land that is inside the ULL to the City. The proposed General Plan would eliminate the ULL because it has become redundant with the Urban Growth Boundary (UGB). See Section 3.4.4, Major Changes from the Existing General Plan, for more information.



- Sphere of Influence
- Urban Service Area
- Urban Growth Boundary
- City Boundary
- San Jose City Boundary
- Train Station

Source: City of Morgan Hill, 2015.

Figure 3-2

Planning Boundaries

PROJECT DESCRIPTION

3.3.3 URBAN GROWTH BOUNDARY

In 1996, Morgan Hill and Santa Clara County jointly adopted a long-term UGB and associated policies. The UGB is encompassed within the SOI, and it differentiates land intended for future urbanization from land intended to remain rural and unincorporated for the next 20 years. Prior to urbanization, large-parcel uses, including farming, are encouraged on land inside the UGB but outside the City limits. Existing and limited new rural residential uses, as well as agricultural and open space uses, are appropriate for lands outside of the UGB. The UGB encompasses approximately 14 square miles. The General Plan Update proposes changes to the UGB. See Section 3.4.4, Major Changes from the Existing General Plan, for more information.

3.3.4 URBAN SERVICE AREA BOUNDARY

The Urban Service Area (USA) refers to the area within the UGB where utilities, such as gas, water, sewer, and electricity, and public services, such as police, fire, schools, and parks and recreation, are and will be provided by the City or other service provider agencies. Currently, the extension of urban services beyond the Urban Service Area is not allowed, except in the event that 1) the City has entered into a mutual aid or reciprocal emergency agreement for police, fire, or other emergency services to be provided by the City on County land; or 2) the extension is to address the failure of an existing septic system or well that would have a direct adverse impact on public health and safety without the expansion of the service.

The existing General Plan calls for the City to consider land available for urban development only if it is within both the Urban Service Area and the Urban Growth Boundary.³ In addition to delineating areas that are currently provided with urban services, facilities, and utilities, the Urban Service Area includes areas proposed to be annexed into the City within the next five years in order to be developed and receive such services. Proposed revisions are subject to LAFCO review and approval. The Urban Service Area encompasses approximately 12 square miles.

3.3.5 CITY LIMITS

The City limit boundary encompasses the land over which the City of Morgan Hill has jurisdictional authority. The current City limit covers approximately 13 square miles. As shown in Figure 3-2, Morgan Hill's northern boundary extends in close proximity to the City limit boundary of San Jose.

3.4 PROPOSED GENERAL PLAN

3.4.1 PROPOSED GENERAL PLAN OBJECTIVES

The proposed General Plan is based on the overarching goal of the General Plan Vision, which aims to maintain Morgan Hill's family-friendly character and strong sense of community while the community

³ City of Morgan Hill General Plan, Community Development Element, Development Patterns Policy 2c.

PROJECT DESCRIPTION

grows and prospers. Building upon the General Plan Vision, the following 13 Guiding Principles outline the objectives of the proposed General Plan.

1. Provide a mix of housing types and sizes, including universal design concepts, while maintaining the 70 percent single-family to 30 percent multi-family housing ratio.
2. Offer and improve services, amenities, educational opportunities, and improvements that encourage an active, healthy lifestyle.
3. Regulate development through a clear, fair, flexible, and streamlined growth management system.
4. Preserve viable agricultural land, important habitat areas, and recreational open space.
5. Support and connect all modes of transportation.
6. Support a diverse local economy and an expanded tax base by preserving our existing job-generating land.
7. Provide high-quality internet connectivity.
8. Protect environmental resources for future generations.
9. Require high-quality design in all development.
10. Allow some residential growth on undeveloped land to fill in the gaps in our boundaries.
11. Focus more intensive, mixed-use development in and near downtown.
12. Transform Monterey Road into a mixed-use corridor.
13. Provide open space in new developments.

3.4.2 GENERAL PLAN UPDATE PROCESS

The process to update the existing General Plan began in January 2013 and is scheduled to be completed with the adoption of the proposed General Plan by the City Council in 2016.

The proposed General Plan was developed with extensive community input. Widely-publicized community workshops were held to inform community members about the update and to invite feedback on the process. To help guide the work of the consultant team and City staff, a 17-member General Plan Advisory Committee (GPAC) was formed. A total of eight City Council/Planning Commission study sessions, a series of stakeholder interviews, an Economic Development Symposium, a Growth Management Symposium, more than 20 GPAC meetings, and four community workshops have been held during the planning process, all of which were open to the public and included public comment periods.

In addition to holding public meetings, the City conducted the following outreach efforts to raise awareness of the General Plan Update and to encourage community members to participate in the project process:

- Staffed an information booth at the Taste of Morgan Hill and the 4th of July Freedom Fest.

PROJECT DESCRIPTION

- Hosted community outreach meetings with community groups, including the St. Catherine's Church group, the South County Business Council, and Leadership Morgan Hill.
- Featured an advertisement on the Summer/Fall 2013 Recreation Guide, utility bill inserts, and the Morgan Hill Unified School District flier.
- Published a newsletter in May 2013 and distributed to over 13,000 residents.
- Sent out e-blast, including a Community Outreach Letter and meeting invitations.

This input and direction from the public was then incorporated into the General Plan by City staff and the General Plan consultant team.

The City created a General Plan website at www.morganhill2035.org, a Facebook page, and a Twitter account to enhance and inform the public process. The website provides all maps and documents, meeting summaries, meeting announcements, and other project information. The website also includes an online discussion forum in which members of the public can post and discuss comments about Morgan Hill and the General Plan.

The process to update the General Plan included the phases discussed below.

3.4.2.1 EXISTING CONDITIONS

The first phase of the General Plan Update process was devoted to researching and documenting baseline environmental conditions in Morgan Hill. This effort resulted in a series of white papers covering the following topics: economics; population and housing; growth management; environmental resources and hazards; land use and urban design; and transportation and public infrastructure. These white papers inform the development of land use alternatives, and they provide some of the foundation of baseline conditions for this EIR.

3.4.2.2 VISION AND GOALS

Following the completion of the white papers, the existing Vision Statement and Goals were reviewed and refined. Most of the existing vision statement and goals were considered viable and therefore carried forward. New ideas with emphasis on sustainability and economic development were added based on key inputs, including the feedback of stakeholders, community members, and City staff; ideas from the Economic Development and Growth Management symposia; and implications from the existing conditions White Papers. During this phase, the City held a community workshop, a GPAC meeting, a staff workshop, and a City Council/Planning Commission study sessions to review and revise the Vision Statement and Goals.

PROJECT DESCRIPTION**3.4.2.3 ALTERNATIVES DEVELOPMENT AND SELECTION**

This highly interactive and participatory phase involved crafting alternative land use scenarios based on “opportunity sites” – areas identified by City staff, community members, and decision-makers where land uses in 2035 are likely to be or desired to be different than the current General Plan designation. Many opportunity sites include a substantial number of vacant or underutilized parcels and are therefore likely to be strongly influenced by the land use designations and policies of the proposed General Plan. Opportunity sites are shown on Figure 3-3, below.

Land use alternatives were then evaluated and compared in relation to market and financing feasibility, utilities and transportation infrastructure needs, public service needs, and impacts on environmental resources. The land use alternatives evaluation informed the development of the Preferred Land Use Plan. The Preferred Land Use Plan became the General Plan Land Use Map, which will guide the nature, pattern, and location of land development and conservation in the City. During this phase, a community workshop was held, and the GPAC, Planning Commission, and City Council held numerous meetings to develop the alternatives and select the Preferred Land Use Plan.

3.4.2.4 POLICY DEVELOPMENT

Following the development of the Preferred Land Use Plan, the project team developed the goals, policies, and actions for each element of the General Plan. Policies were designed to support the Preferred Land Use Plan and reflect community input provided throughout the process. Many policies from the prior General Plan were carried forward. In addition, a number of other policies were included in order to respond to specific environmental concerns and avoid common environmental impacts associated with new development under the General Plan. Three GPAC meetings provided community guidance on the major policy issues for this General Plan.

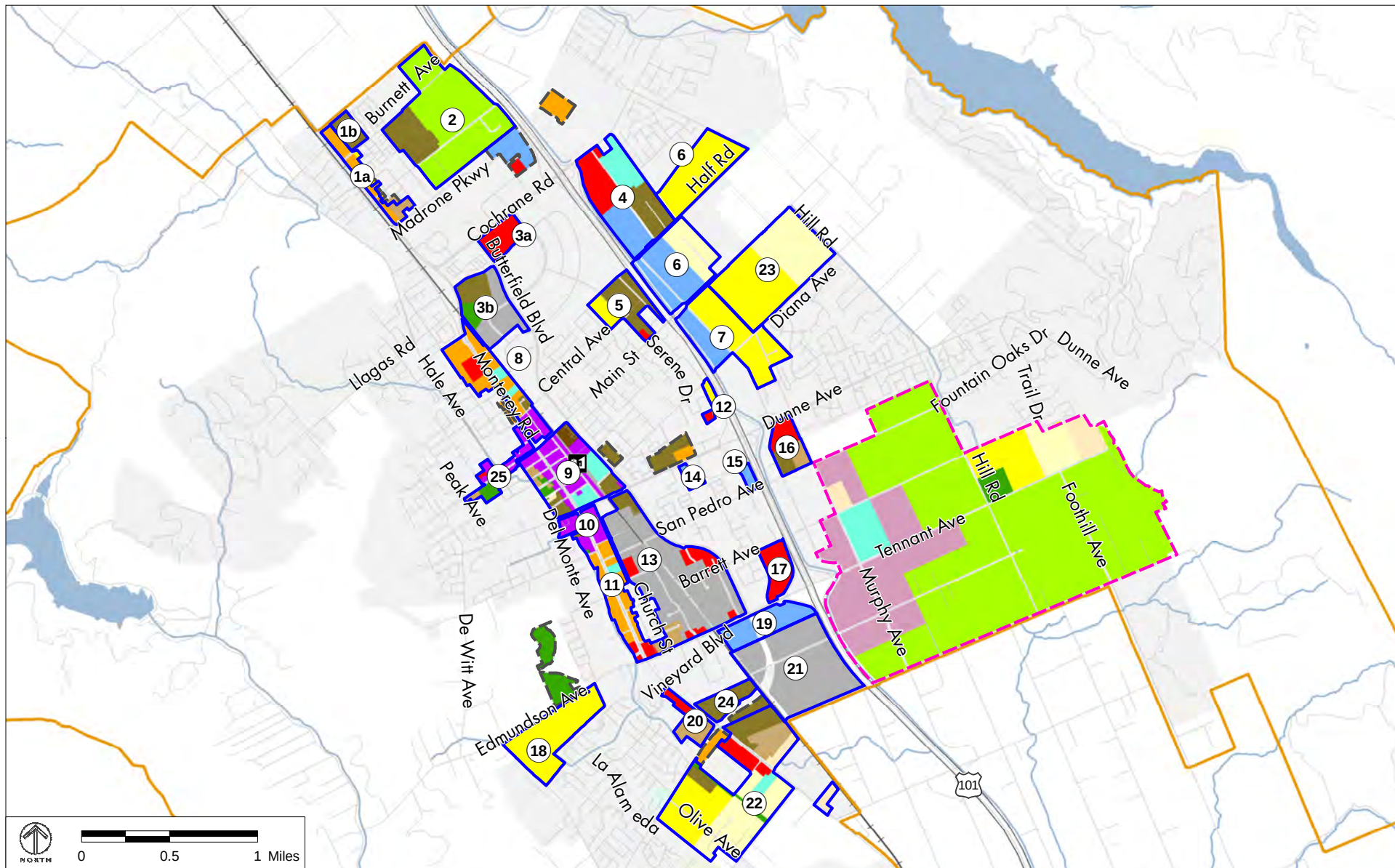
3.4.2.5 DRAFT GENERAL PLAN

In November 2015, the City published a draft version of the General Plan for public review and comment. The Draft General Plan is based upon the Preferred Land Use Plan and the goals and policies developed through the prior phases, integrated with feedback collected during community participation processes.

3.4.2.6 PUBLIC REVIEW AND ADOPTION

The remaining tasks of the General Plan Update process will include the review and adoption of final documents and the certification of this EIR. This phase includes the 60-day public review period of this EIR,

PROJECT DESCRIPTION



Source: City of Morgan Hill and PlaceWorks, 2015.

Residential Estate (0-1 du/ac)	Residential Downtown (21-40 du/ac)	Commercial/Industrial
Residential Detached Low (1-3 du/ac)	Mixed Use	Industrial
Residential Detached Medium (3-6 du/ac)	Mixed Use Flex	Public Facilities
Residential Attached Low (5-14 du/ac)	Commercial	Sports Recreation Leisure
Residential Attached Medium (14-21 du/ac)	General Commercial	Open Space
		Rural County

- Opportunity Sites
- Southeast Quadrant Project Area
- Sphere of Influence
- City Boundary

Figure 3-3

Opportunity Sites and Areas with Land Use Change

PROJECT DESCRIPTION

followed by revision of this Draft EIR based on the public comments received, and completion of a Final EIR. In addition, a series of City Council and Planning Commission hearings will be held to consider certification and adoption of the Final EIR and General Plan.

3.4.3 MAJOR COMPONENTS OF THE GENERAL PLAN

This section provides a summary of the major components of the proposed General Plan.

3.4.3.1 GENERAL PLAN CONTENTS AND ORGANIZATION

The proposed General Plan includes an introductory chapter, a glossary, and nine separate elements that establish goals, policies, and actions for each given topic. The elements cover the topics required by California State Government Code Section 65302 as well as topics of particular interest to Morgan Hill. A brief explanation of each General Plan element is provided below:

- **City and Neighborhood Form Element.** The City and Neighborhood Form Element discusses growth management, land use, and urban design. The purpose of the element is to ensure that Morgan Hill retains its rural atmosphere while accommodating sensible, orderly growth that will promote the local economy and fit within the City's ability to provide adequate public services.
- **Economic Development Element.** The Economic Development Element establishes policy guidance to support the community's economic well-being. Its strategies include diversifying the local economy, increasing the quality and quantity of available job opportunities, decreasing the need for commuting, creating a thriving Downtown, and enhancing Morgan Hill's appeal as a tourist destination.
- **Healthy Community Element.** The Healthy Community Element addresses the elements of Morgan Hill's built environment that contribute to the overall health and well-being of Morgan Hill's residents. These include access to services and recreation, and an urban form that supports healthy lifestyles.
- **Transportation Element.** The Transportation Element offers mechanisms to make Morgan Hill a safe and efficient place to travel, whether by train, bus, car, bike, or foot. It aims to ensure safe and appropriate operation of the transportation system, solve existing traffic and parking problems, and expand transit and non-motorized travel opportunities.
- **Natural Resources and Environment Element.** The Natural Resources and Environment element advocates preserving open space, agricultural uses, hillsides, riparian areas, wildlife habitat and other natural features. Policies seek to establish a greenbelt around the City, preserve El Toro, conserve resources and protect the City's cultural heritage to help Morgan Hill retain its rural atmosphere as it continues to grow.
- **Safety, Services, and Infrastructure Element.** The Safety, Services, and Infrastructure Element intends to protect people from detrimental impacts associated with development, including noise impacts, by requiring new construction to avoid hazardous areas and materials and/or provide adequate mitigation.

PROJECT DESCRIPTION

3.4.3.2 GENERAL PLAN GOALS, POLICIES, AND ACTIONS

Each element of the proposed General Plan contains background information and a series of goals, policies, and actions. Policies and actions are at the same level of importance, and are both intended to support goals. In most cases, goals have both policies and actions. However, it is also possible for a goal to be supported exclusively by policies or actions. The following provides a description of goals, policies, and actions and explains the relationship between them:

- A *goal* is a description of the general desired result that the City seeks to create through the implementation of its General Plan.
- A *policy* is a specific statement that regulates activities in the City, guides decision-making and directs on-going efforts as the City works to achieve a goal. A policy is on-going and requires no further implementation. The General Plan's policies set out the standards that will be used by City staff and the Planning Commission in their review of land development projects and in decision-making about City actions.
- An *action* is a measure, procedure, or technique intended to help reach a specified goal. The City must take additional steps to implement each action in the General Plan. An action is something that can and will be completed.

These goals, policies and actions provide guidance to the City on how to direct change and manage its resources over the next 20 years.

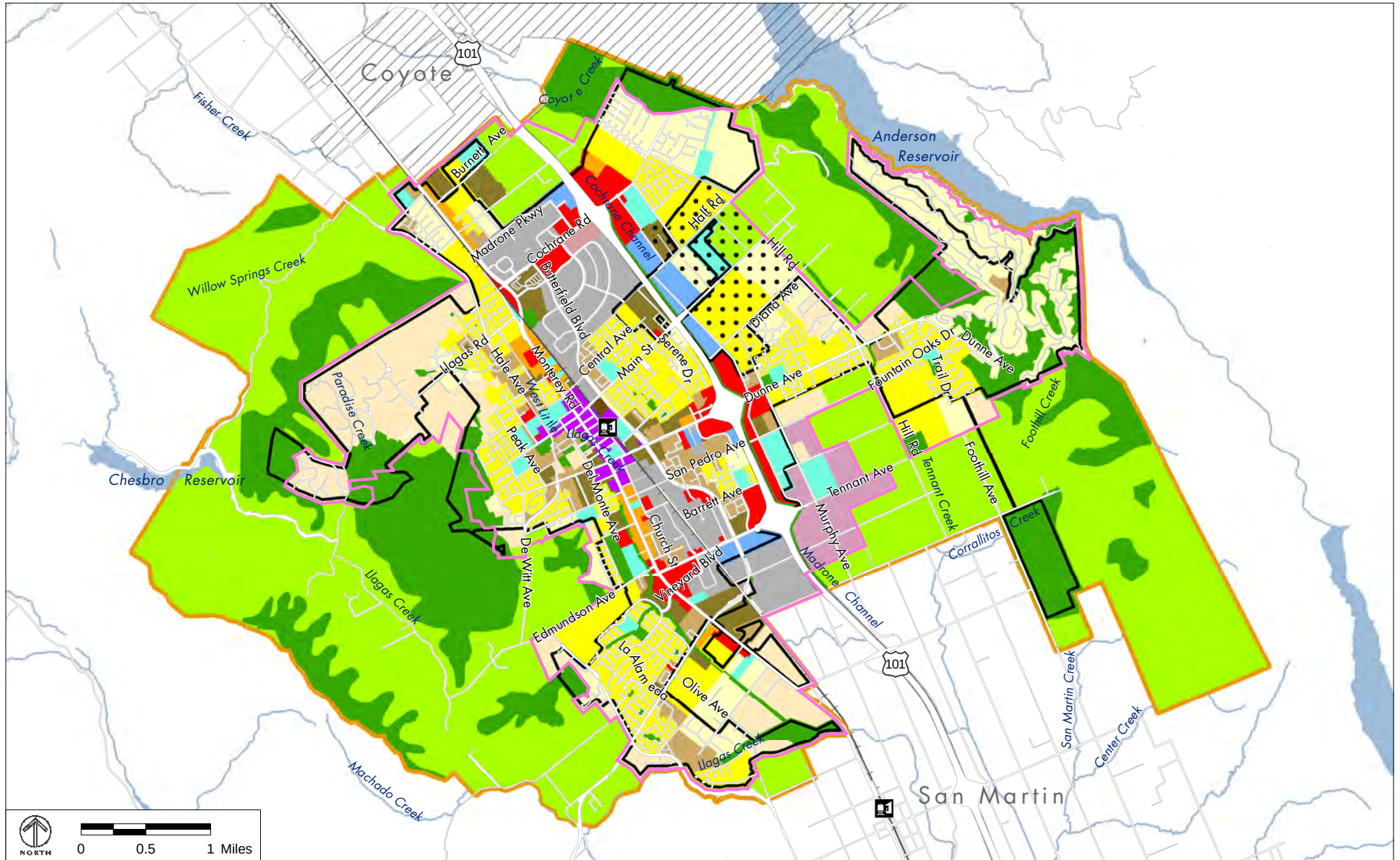
3.4.3.3 GENERAL PLAN LAND USE DESIGNATIONS

The proposed General Plan land use map is shown in Figure 3-4. The General Plan would define various land use designations by their allowable uses, density ranges, and development intensities allowed on each parcel of land. In general, standards of building intensity for residential uses are stated as the allowable range of dwelling units per net acre. The number of units permitted will be further modified by the zoning district, a policy plan, and any applicable overlay district.

Standards of building intensity for non-residential uses are stated as maximum floor-area ratios (FAR) based on net acreage. FAR is a ratio of the building square footage permitted on a lot to the net square footage of the lot. For example, on a site with 10,000 square feet of net land area, a FAR of 1.0 will allow 10,000 square feet of building floor area to be built. On the same site, a FAR of 2.0 would allow 20,000 square feet of floor area. This could take the form of a two-story building with 100 percent lot coverage, or a four-story building with 50 percent lot coverage. A FAR of 0.4 would allow 4,000 square feet of floor area.

Table 3-1 provides the total acreage for each land use designation within the Project Area.

PROJECT DESCRIPTION



Source: City of Morgan Hill and PlaceWorks, 2015.

- Residential Estate (0-1 du/ac)
- Residential Detached Low (1-3 du/ac)
- Residential Detached Medium (3-6 du/ac)
- Residential Attached Low (5-14 du/ac)
- Residential Attached Medium (14-21 du/ac)

- Residential Downtown (21-40 du/ac)
- Mixed Use
- Mixed Use Flex
- Commercial
- General Commercial

- Commercial/Industrial
- Industrial
- Public Facilities
- Sports Recreation/Leisure
- Open Space
- Rural County

- • • East 101 Area Plan Overlay
- Orange Outline Sphere of Influence
- Pink Outline Urban Growth Boundary
- Black Outline City Boundary
- Diagonal Lines San Jose City Boundary

Figure 3-4
Proposed
General Plan
Land Use Map

PROJECT DESCRIPTION

TABLE 3-1 TOTAL ACREAGE FOR EACH LAND USE DESIGNATION WITHIN THE SOI

Preferred Land Use	Acres
<i>Rural</i>	
Rural County (RC)	6,829
Open Space (OS)	3,505
<i>Residential</i>	
Residential Estate (RE)	1,194
Residential Detached Low (RDL)	1,419
Residential Detached Medium (RDM)	1,934
Residential Attached Low (RAL)	488
Residential Attached Medium (RAM)	346
Residential Attached High (RAH)	6
<i>Non-Residential</i>	
Commercial (C)	385
Commercial/Industrial (C/I)	179
General Commercial (GC)	24
Mixed-Use (MU)	93
Mixed-Use Flex (MUF)	127
Industrial (I)	757
Sports-Recreation-Leisure (SRL)	251
Public Facilities (PF)	375
Total	17,913

Source: PlaceWorks, 2015.

PROJECT DESCRIPTION

The following sections describe the proposed land use designations for the Morgan Hill General Plan.

Rural Designations



Rural County. This designation applies to land outside the City limit, but in the SOI. Lots with the Rural County designation are generally 5 to 20 acres in size with one single-family home and/or agricultural operation per parcel. The minimum acceptable lot size for new development is generally 5 acres.



Open Space. This designation applies to land in the City limits and SOI, and includes public parks, private golf courses, and large parcels of land generally 50 acres or more in size. Land designated Open Space is generally meant to remain unimproved and devoted to the preservation of natural resources, managed production of resources, or public health and safety, as well as to complement adjacent, higher density residential and commercial development. Allowed uses include agriculture, outdoor recreation, and secondary dwelling units. One single-family home per parcel is allowed, with appropriate permit. The Residential Development Control System requires that lands within the City that are designated Open Space maintain this designation through fiscal year 2019/2020. This provision does not prevent the City Council from designating additional lands as Open Space.



Agriculture. The Agriculture designation identifies lands intended for long-term preservation for agricultural use and intended for a variety of agricultural uses, including grazing, dairying, raising of livestock, orchards, row crops, nursery stock, flower growing, ancillary residential uses, ancillary commercial uses such as fruit stands, agricultural research and the storage and processing of agricultural products. This designation supports open space uses such as preservation of natural resources, outdoor recreation and public health and safety, including infrastructure (such as infiltration ponds) that is similar to other open space uses. The designation also supports agricultural commercial uses such as roadside stands, wineries, farm-based tourism, u-pick, rodeos, farmers markets and crop-based seasonal events. Building intensity in this designation will be greatly limited. The minimum parcel size in areas designated as Agriculture is generally 20 acres; the designation however supports the clustering of existing development potential in order to preserve larger agricultural sites. The proposed General Plan does not designate any parcels with the Agriculture land use designation.

Residential Designations

Definitions of the specific housing types described in these designations can be found in the Glossary at the back of this General Plan.



Residential Estate. This designation is intended to promote and encourage a suitable environment for family living on relatively large parcels of land. Concentrated along the western and southern City borders, the Residential Estate designation allows single-family homes, secondary dwelling units, appropriate agricultural uses, and appurtenant community services and facilities. The minimum acceptable parcel size for new development is generally 1 unit per acre.

PROJECT DESCRIPTION

 **Residential Detached Low.** The Residential Detached Low designation is intended to accommodate families in suburban single-family homes, including manufactured homes, on medium-sized parcels. Secondary dwelling units are allowed under this designation. The highest concentrations of the Residential Detached Low designation are at the eastern City limit, especially in the hills near the Anderson Reservoir. This designation allows up to 3 units per acre.

 **Residential Detached Medium.** Residential Detached Medium areas allow detached homes on smaller lots, including courtyard homes, manufactured homes, and small-lot single-family homes. Secondary dwelling units are allowed under this designation. The Residential Detached Medium designation is dispersed throughout the City, often providing a transition from non-residential areas to lower-density neighborhoods. The largest areas with this designation are centered around East Dunne Avenue and West Main Avenue between Highway 101 and the railroad. This designation allows 3 to 6 units per acre.

 **Residential Attached Low.** The Residential Attached Low designation is primarily meant to accommodate attached homes, including duplexes/duets, courtyard homes, townhomes, and garden apartments. Up to 25 percent of a Residential Attached Low site may include small-lot single-family detached homes when those units are located adjacent to an existing single-family detached neighborhood. Residential Attached Low areas generally are located in or next to existing residential neighborhoods and close to commercial corridors, including West Dunne Avenue and Monterey Road. This designation allows 5 to 14 units per acre.

 **Residential Attached Medium.** This designation allows attached housing types including townhomes, garden apartments, and stacked flats. Pockets of Residential Attached Medium are primarily centered around Downtown Morgan Hill. Frequently found near commercial areas that in part serve the adjacent residents, this designation accommodates 14 to 21 units per acre, most of which are townhomes, apartments, or condominiums.

 **Residential Downtown.** Small pockets of Residential Downtown, the highest-density residential designation is centered around Downtown Morgan Hill and the commuter rail station. Development within this area must be supportive of transit oriented design. This designation allows 21 to 40 units per acre, most of which are apartments or condominiums.

Mixed-Use Designations

 **Mixed-Use.** Applied in accordance with the Downtown Specific Plan, this designation applies to the majority of the parcels in and around the core of the Downtown area, especially parcels along Monterey Road and all the parcels between Monterey Road and Depot Street. It is intended to encourage a mixture of retail uses and residences. Consistent with the adopted Downtown Specific Plan, the Mixed-Use designation does not have a maximum or minimum density.

PROJECT DESCRIPTION

 **Mixed-Use Flex.** The Mixed-Use Flex designation, which is primarily applied to properties along the Monterey Road corridor north and south of downtown, allows for a mix of residential, commercial, and office uses applied either vertically (i.e., one structure with multiple uses) or horizontally (i.e., structures with different land uses located adjacent to one another). Density should transition from higher to lower at the ends of Monterey corridor. The Mixed-Use Flex designation allows 18 to 26 units per acre and a maximum FAR of 0.5 and a maximum commercial building height of 35 feet. Projects with a Mixed-Use Flex designation are required to prepare block level master plans to show how they will be connected to each other.

Non-Residential Designations

 **Commercial.** The Commercial designation is primarily located along arterial roadways west of Highway 101 and along the eastern freeway frontage. This designation is intended to allow a wide range of retail businesses, administrative and executive office uses, and professional services, either in stand-alone buildings or as part of shopping centers. The largest concentrations of this designation are found along Monterey Road and at the freeway interchanges, where retail stores are emphasized. The Service Commercial overlay along Monterey Road north of Wright Avenue allows auto-related uses, except for sales. The Commercial designation allows a maximum FAR of 0.5 and a maximum building height of 30 feet.

 **General Commercial.** This designation is applied to Cochrane Plaza on the south side of Cochrane Road at the freeway. The General Commercial designation is intended to allow a variety of commercial uses. It was established by voter initiative and cannot be changed without a public vote. This designation allows a maximum FAR of 0.5 and a maximum building height of 35 feet.

 **Commercial/Industrial.** The purpose of the Commercial/Industrial designation is to promote job-generating development of lands, generally located along Highway 101, by allowing greater flexibility in terms of allowing a varied mix of industrial, office, and commercial uses that are compatible with existing development. Specifically, this designation would allow office, research and development, light industrial uses, and similar uses, and would also allow amenities, such as retail services, restaurants, and lodging to support the primary job-generating uses within business park settings. In order to maintain an industrial character, small, suburban strip centers are discouraged in this designation, although larger big-box type developments may be allowed because they mix elements of retail commercial and warehouse forms and uses. This designation allows a maximum FAR of 0.5 and a maximum building height of 30 feet for commercial uses and a maximum FAR of 0.6 and a maximum building height of 50 feet for industrial uses.

 **Industrial.** The Industrial designation allows a variety of research, warehouse, manufacturing, service commercial, and other job-generating uses. This designation allows a maximum FAR of 0.6 and a maximum building height of 50 feet.

PROJECT DESCRIPTION

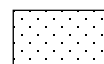


Public Facilities. The Public Facilities designation is applied to land used by public or quasi-public agencies and organizations including the City, hospitals, utility companies, and the Morgan Hill Unified School District. This designation allows a maximum FAR of 0.5 and a maximum building height of 35 feet.



Sports Recreation Leisure. The Sports-Recreation Leisure designation allows a wide range of private commercial, retail, and public/quasi-public sports-recreation leisure themed uses, at a scale that creates a destination area for both regional and local users, and offers a high-quality attractive, health-oriented, fun destination for regional and local users in a manner that supports the City's economic development, City identity, and greenbelt goals. This designation is intended to support local agriculture and sustainable economic development providing jobs for local residents and markets for locally produced goods. This designation allows a maximum FAR of 0.4 and a maximum building height of 40 feet.

Overlay



East of 101 Area Plan Overlay. The East of 101 Area Plan Overlay applies to the area roughly between Half Road and Diana Avenue to the north and south and Condit Road and Hill Road to the west and east. The purpose of this overlay is to require the preparation of a single Master Plan, Area Plan, or Specific Plan prior to initiation of new residential development to create well-planned, cohesive neighborhoods. Development within the East of 101 Area Plan Overlay shall:

- Include a variety of residential housing types as permitted by the underlying General Plan land use designation.
- Include services and amenities to serve new residents so daily needs can be met close to home.
- Employ high-quality site planning, architecture, and design that reflects the rural and agricultural history of the area, following traditional town design principles, and support green building methods that reduce the environmental impact of new development.
- Provide an easily accessible, fully connected street and trail network that encourages walking and biking and provides access to existing community amenities such as Live Oak High School and Nordstrom Elementary School.
- Explore the thoughtful and sustainable incorporation of the historic agricultural uses in the area.

3.4.4 MAJOR CHANGES FROM THE EXISTING GENERAL PLAN

The General Plan Update proposes a number of changes to the land use designations from the existing General Plan land use map. This section describes the major changes. This section is provided for informational purposes only. This EIR does not evaluate the changes in the General Plan relative to the existing General Plan, but rather evaluates the impacts of the proposed General Plan relative to existing conditions, as required by CEQA Guidelines Section 15126.2.

PROJECT DESCRIPTION

For most of Morgan Hill, including single-family residential neighborhoods and the Downtown area, the current land use designations established by the 2001 General Plan, will remain unchanged. The primary locations where land use designations would change from the existing General Plan are within “opportunity sites,” a term developed through the land use alternatives process for the General Plan Update. While the Downtown area is listed as one of the opportunity sites, the land use designations remain the same as established in the Downtown Specific Plan, adopted in 2009. In addition, as described in detail below, new land use designations have been created and assigned to parcels that these new designations suit better than current designations. Several parcels on which existing parks are located or that have been dedicated as open space have been redesignated to Open Space from residential land use designations so that the designations accurately reflect actual uses. Figure 3-4 shows the proposed General Plan Land Use Map, which also identifies parcels of which land use designations would be changed.

3.4.4.1 REVISED AND NEW GENERAL PLAN LAND USE DESIGNATIONS

During the General Plan Update process, two land use designations were removed, six land use designations were revised, and two new designations and one overlay designation were developed:

- Non-Retail Commercial (NRC) and Office Industrial (OI) designations were removed.
- **Changes to the names of Residential designations:** As described in Section 3.4.3.3, General Plan Land Use Designations, the following designations are renamed so that the name of the designation clearly describes the predominant type of housing appropriate in each area.
 - Single-Family Low to Residential Detached Low
 - Single-Family Medium to Residential Detached Medium
 - Single-Family High to Residential Attached Low
 - Multi-Family Low to Residential Attached Low
 - Multi-Family Medium to Residential Attached Medium
 - Multi-Family High to Residential Downtown
- **Mixed-Use Flex:** As described in Section 3.4.3.3, General Plan Land Use Designations, this new designation allows a mix of residential, commercial, and office uses, primarily along the Monterey Road corridor north and south of Downtown.
- **Commercial/Industrial:** As described in Section 3.4.3.3, General Plan Land Use Designations, this new designation promotes development of lands, generally located along Highway 101, by allowing greater flexibility in terms of allowing a varied mix of industrial, office, and commercial uses that would be compatible with existing development.
- **East of 101 Area Plan Overlay.** As described in Section 3.4.3.3, General Plan Land Use Designations, this new overlay applies to the area roughly between Half Road and Diana Avenue to the north and south and Condit Road and Hill Road to the west and east. The purpose of this overlay is to create well-planned, cohesive neighborhoods by requiring the preparation of a Master Plan, Area Plan, or Specific Plan prior to initiation of new residential development.

PROJECT DESCRIPTION

3.4.4.2 PROPOSED PLANNING BOUNDARY CHANGES

The General Plan Update proposes changes to two of the planning boundaries:

- The ULL would be removed because it is redundant with the UGB.
- The UGB would be expanded to include land designated for residential uses south of the City limit and east of Hill road within the South East Quadrant (SEQ) area and the East of 101 Area Plan Overlay area to reflect that these are areas of future City-served development.

3.5 GENERAL PLAN DEVELOPMENT PROJECTIONS

This EIR evaluates the projected development that will occur under the proposed General Plan through its horizon year of 2035, consistent with CEQA requirements that an EIR evaluate the “reasonably foreseeable” direct and indirect impacts of a proposed project.

The “full buildout” of the proposed General Plan, discussed below in Section 3.5.1.3, Full Buildout Methodology, would be the development of underutilized and vacant parcels at the mid-point of the maximum allowed density under the General Plan, based on the past and projected development patterns in Morgan Hill. The full buildout would result in 2.6 times more new non-residential development in Morgan Hill in 2035 compared to the 2035 horizon buildout, which is based on past development history. Therefore, it is extremely unlikely that the full buildout of non-residential development would occur by the year 2035.

However, for residential development, market demand for housing in Morgan Hill is strong enough that it is possible that full buildout of residential development capacity would occur unless existing or similar RDCS policies continue to cap annual residential growth. The existing RDCS will sunset in 2020 if no replacement measure is approved by voters. The Morgan Hill 2035 project includes an update to the RDCS that will be placed on the ballot for voter approval. Since it is not possible to guarantee that voters will extend the existing RDCS, or approve an updated RDCS, to analyze the most conservative scenario, this EIR assumes full buildout for residential development through the horizon year of 2035.

By or before 2035, it is probable that Morgan Hill will have adopted an update to the General Plan, in keeping with past decisions in the California courts, which dictate that local jurisdictions should update General Plans regularly.⁴ Therefore, development after 2035 is expected to take place under a revised General Plan, rather than under the proposed General Plan. Consistent with CEQA statutes, this Draft EIR considers the “reasonably foreseeable” effects of adopting the proposed General Plan, which would result from development allowed between the adoption of the document and its horizon year of 2035. For the purposes of this EIR, this is termed the “horizon-year projection.” The horizon-year projection is based on an estimate of the amount of development that would occur by 2035.

⁴ Citizens of Goleta Valley v. Board of Supervisors (1990) 52 Cal.3d 553, 572, 276 Cal.Rptr. 410, 801 P.2d 1161.

PROJECT DESCRIPTION

Based on the methodology described in this section and as shown in Table 3-2, the horizon-year projection for net growth plus pipeline projects includes the following:⁵

- 2,360 new single-family residential units
- 5,070 new multi-family residential units
- 22,888 new residents
- 755,550 square feet of new retail space
- 628,700 square feet of new office space
- 1,777,400 square feet of new industrial space
- 417,600 square feet of new service space
- 287,400 square feet of new public facilities space
- 9,300 new jobs

TABLE 3-2 2035 HORIZON-YEAR GROWTH PROJECTIONS WITHIN SOI

Categories	Existing Development ^a	Pipeline Projects	Horizon-Year Net Growth (2035 Minus Existing and Pipeline)	Total Horizon-Year Projection
Housing Units				
Single-Family	10,821	505	1,855	13,181
Multi-Family	4,148	65	5,006	9,219
Residents ^b	45,171	1,756	21,130	68,057
Non-Residential Square Footage				
Retail	1,744,825	0	755,548	2,500,373
Office	521,788	0	628,698	1,150,486
Industrial	5,935,000	25,000	1,752,385	7,712,385
Service	985,000	88,000	329,557	1,402,557
Public Facilities	463,000	0	287,377	750,377

a. City of Morgan Hill, Traffic Analysis Zone database 2015; State of California, Department of Finance, 2015. *E-5 Population and Housing Estimates for Cities, Counties, and the State, 2011-2015, with 2010 Benchmark*.

b. Based on a persons per household rate of 3.08 for both single-family and multi-family units, per Department of Finance statistics.
Source: PlaceWorks, 2015

⁵ Numbers rounded to avoid giving a false sense of precision.

PROJECT DESCRIPTION

3.5.1.1 KEY POINTS ABOUT DEVELOPMENT PROJECTIONS

This section provides a detailed explanation of the process used to estimate the horizon-year projection. By way of introduction, it is important to understand several overall points about the estimation process and its meaning:

- The horizon-year projection assumes that certain areas with development potential are likely to develop by 2035, while others are not.
- As described below, the horizon-year projection was estimated based on the best available information. Since this projection covers a relatively long timeframe of over 20 years, it is likely that there will be deviations from the development projections. However, deviations from the horizon-year projection are not in themselves a basis for finding inadequacy of the proposed General Plan or this EIR, since these projections represent Morgan Hill's best estimate of "reasonably foreseeable" development under the General Plan.
- The horizon-year projection is used as a basis for the environmental assessment, but it does not restrict or specify the actual physical location of future development that will be permitted under the proposed General Plan. Even if this EIR does not quantify an estimated amount of new development in a given area by 2035, that area can still accommodate new development in keeping with the General Plan's policies and land use designations. Conversely, geographic areas or potential development projects for which development is assumed in this EIR are not in any way "pre-cleared" for development or privileged for special consideration by City staff or the City Council; development in those areas still requires normal review under CEQA and under regular City policies that are spelled out in the proposed General Plan, the Morgan Hill Zoning Code, and other City regulations.

3.5.1.2 EXISTING DEVELOPMENT POTENTIAL

There is vacant land in Morgan Hill that could be developed under the existing General Plan. Some of these vacant areas have been approved for development, but the project has not yet been constructed. Others have pending development applications that are currently under review; such areas are called "pipeline projects," in this EIR, which includes both entitled projects and projects pending approval. These areas are shown on Figure 3-5. Other areas have no pending or approved development applications, but are designated for a residential, commercial, office, or industrial use, so there is still the potential for future development. These areas are called "other existing capacity areas" in this EIR. In total, the pipeline projects and other existing capacity areas provide a significant amount of development potential under the existing General Plan, development that would be expected to occur even if the proposed General Plan was not adopted.

3.5.1.3 FULL BUILDOUT METHODOLOGY

Determining the full buildout is the first step towards projecting horizon-year development. This section describes the methods used to calculate the full buildout potential of the opportunity sites and other areas with land use change.

PROJECT DESCRIPTION

This section also describes the methods used to calculate the full buildout potential of the other areas in the City and SOI with capacity for development under the existing General Plan (i.e., the pipeline projects and other existing capacity areas described above).

The opportunity sites and other areas with land use change are shown in Figure 3-3; the approved pipeline projects and other areas with capacity for development are shown in Figures 3-5 and 3-6, respectively.

As shown in Table 3-3, the results of the full buildout analysis are as follows:

- 13,181 total single-family residential units
- 9,219 total multi-family residential units
- 68,057 total residents
- 2.70 million square feet of total retail space
- 1.89 million square feet of total office space
- 10.33 million square feet of total industrial space
- 1.15 million square feet of total service space
- 652,377 square feet of total public facilities space

TABLE 3-3 FULL BUILDOUT GROWTH PROJECTIONS WITHIN SOI

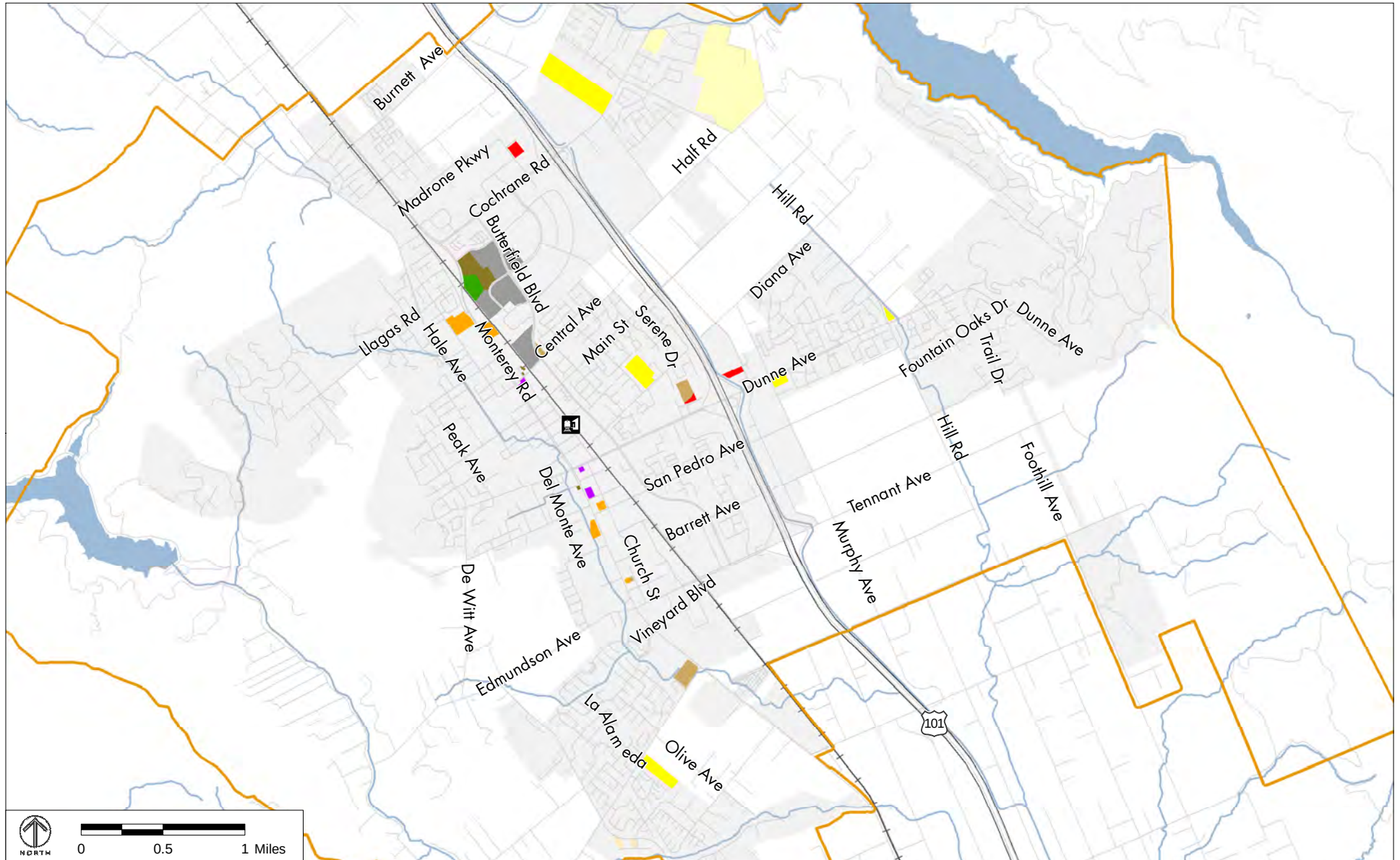
Categories	Existing Development ^a	Pipeline Projects	Net Growth	Total Full Buildout Projection
Housing Units				
Single-Family	10,821	505	1,855	13,181
Multi-Family	4,148	65	5,006	9,219
Residents ^c	45,171	1,756	21,130	68,057
Non-Residential Square Footage				
Retail	1,744,825	0	963,545	2,708,370
Office	521,788	0	1,371,228	1,893,016
Industrial	5,935,000	25,000	4,372,643	10,332,643
Service	985,000	88,000	72,019	1,145,019
Public Facilities	463,000	0	189,218	652,377

a. City of Morgan Hill, Traffic Analysis Zone database 2015; State of California, Department of Finance, 2015. *E-5 Population and Housing Estimates for Cities, Counties, and the State, 2011-2015, with 2010 Benchmark*.

b. Based on a persons per household rate of 3.08

Source: PlaceWorks, 2015.

PROJECT DESCRIPTION



Residential Estate (0-1 du/ac)
Residential Detached Low (1-3 du/ac)
Residential Detached Medium (3-6 du/ac)

Residential Attached Low (5-14 du/ac)
Residential Attached Medium (14-21 du/ac)
Mixed Use

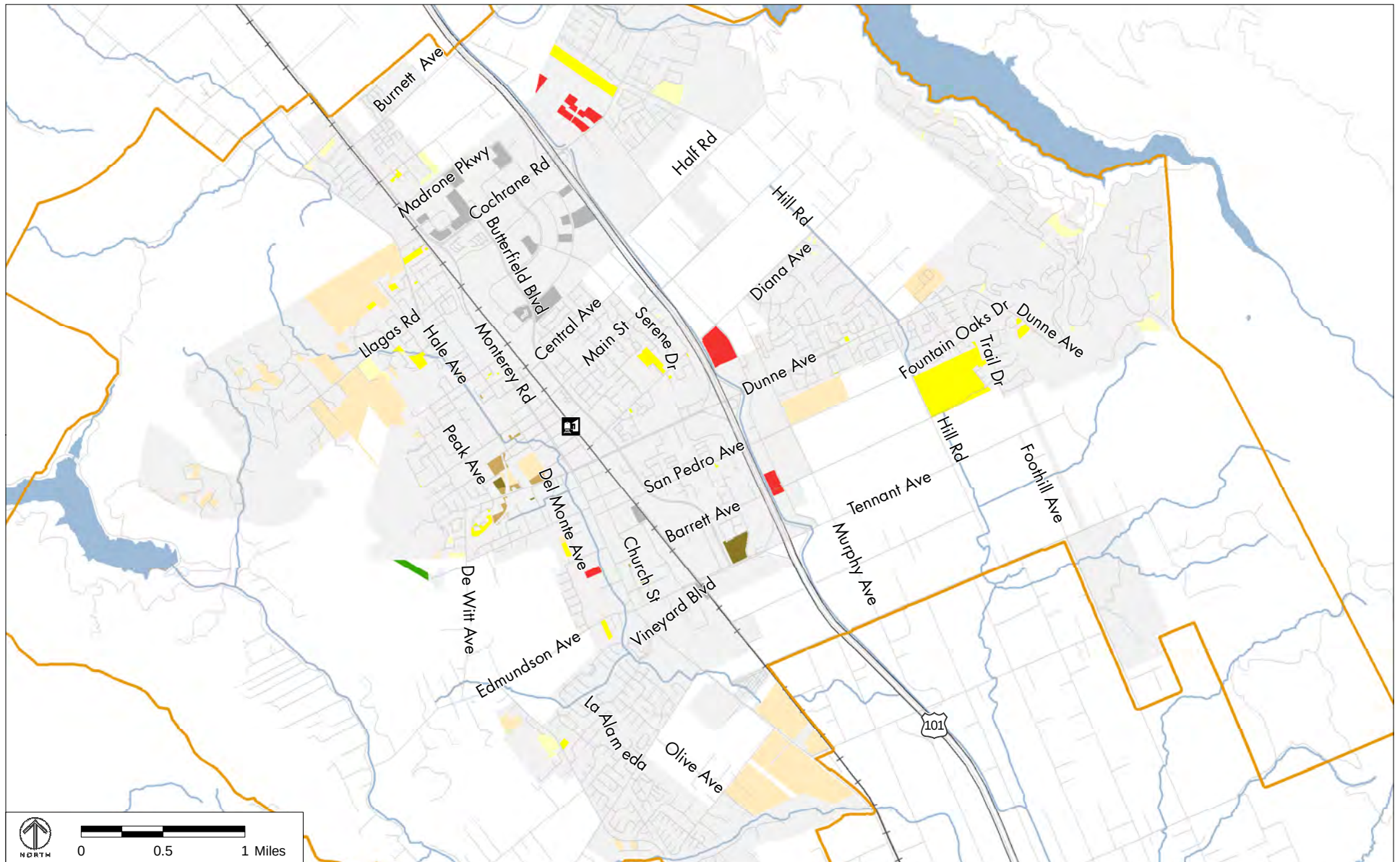
Mixed Use Flex
Commercial
Industrial
Open Space

Sphere of Influence
City Boundary

Source: City of Morgan Hill and PlaceWorks, 2015.

Figure 3-5
Pipeline Projects

PROJECT DESCRIPTION



 Residential Estate (0-1 du/ac)	 Residential Attached Medium (14-21 du/ac)	 Sphere of Influence
 Residential Detached Low (1-3 du/ac)	 Commercial	 City Boundary
 Residential Detached Medium (3-5 du/ac)	 Industrial	
 Residential Attached Low (5-14 du/ac)	 Open Space	

Source: City of Morgan Hill and PlaceWorks, 2015.

Figure 3-6

Areas with Capacity for Development
Outside Opportunity Sites

PROJECT DESCRIPTION

3.5.1.4 OPPORTUNITY SITES AND AREAS WITH LAND USE CHANGE

The full buildout of the opportunity sites and other areas with land use change was estimated based on the two-step process described below, including:

1. Identify opportunity sites and land use change areas where development could occur.
2. Estimate buildout of the opportunity sites and land use change areas.

Identify Opportunity Sites and Areas with Land Use Change

While many of the parcels in Morgan Hill are either vacant or underutilized, other parcels have existing development that is not likely to change. During the alternatives development process, the City identified areas where many vacant or underutilized parcels are clustered and are therefore more likely to be developed or redeveloped within the planning horizon. These areas are called “opportunity sites.” Throughout the Preferred Land Use Plan development process, the locations and boundaries of the opportunity sites were refined based on input from the Technical Advisory Committee (TAC), General Plan Advisory Committee (GPAC), City Council, Planning Commission, and other community members. A total of 25 opportunity sites were identified as part of the final set of land use alternatives.

In addition, during the General Plan Update process, City staff and decision makers identified more areas outside the opportunity sites where land use change would be appropriate. The areas with land use change were presented and discussed at the City Council and Planning Commission hearings on the Preferred Land Use Plan. The following describes the areas with land use changes:

- **Mixed-Use Flex:** This new land use designation was assigned to parcels along Monterey Road north and south of the Downtown, the vacant portion of the northeast corner of the Cochrane Commons Shopping Center, and a vacant parcel on Dunne Avenue west of Trader Joe’s.
- **Commercial/Industrial:** This new land use designation was assigned to the industrial land between Madrone Parkway and Highway 101, to the industrial land on the east side of Highway 101 between Cochrane Road and Diana Avenue, and to the industrial land on the south side of Tennant Avenue, west of Highway 101.
- **Multi-Family Medium:** A few vacant parcels east of Downtown and along Monterey Road were changed to a multi-family housing land use designation.
- **Open Space:** The following parks are located in residential designations. To ensure the consistency between existing uses and General Plan Land Use Designations, the Open Space designation was assigned to these parks.
 - Stone Creek Park
 - Belle Estates Park
 - Diana Estates Park
 - Mill Creek Park

PROJECT DESCRIPTION

- Howard Wiechert Park
- Hamilton Square Park
- Oak Creek Park
- Conte Gardens
- Murphy Springs Park
- Fox Hollow Park

Southeast Quadrant

The Southeast Quadrant (SEQ) is approximately 1,300 acres, generally bounded by Condit Road and Highway 101 to the west, San Pedro Avenue to the north, Carey Avenue to the east, and Maple Avenue to the south, as shown in Figure 3-7. The SEQ is planned to include long-term agricultural uses; sports- and recreation-related uses, including retail and dining establishments; a private high school; and residential uses. As part of the project, the City has adopted an Agricultural Lands Preservation Program to permanently preserve agricultural lands with the SEQ and Citywide. The SEQ project also includes changes to the City limits, Urban Service Area, and UGB.

An EIR on the Citywide Agriculture Preservation Program and Southeast Quadrant Land Use Plan was published in 2013 (State Clearinghouse No. 2010102010) and certified on November 5, 2014. That EIR analyzed and provided feasible mitigation for the impacts from the SEQ project. However, CEQA requires a comparison of the proposed project to existing conditions on the ground rather than a comparison to what would be allowed by an existing plan. Even though the proposed General Plan does not change any approved components of the SEQ Land Use Plan, this EIR must consider the impacts of implementation of the Morgan Hill 2035 project on the existing conditions. Therefore, future development in the SEQ area is included in the 2035 horizon development projections, as shown in Table 3-5, and any impacts that would result from development in the SEQ area are evaluated in this Morgan Hill 2035 EIR.

In addition to the SEQ project approved by the City Council, the City is also considering a development proposal for the Chiala property, located within the SEQ roughly between Hill Road and Carey Avenue to the west and east and Barrett Avenue and Maple Avenue to the north and south. This development proposal was not part of the SEQ project approved by City Council in November 2014. Approximately 50 acres of the 284-acre Chiala property is proposed to be redesignated from Rural County to a combination of Residential Estate, Residential Detached Low, Residential Detached Medium, and Open Space uses, as reflected on the Draft General Plan land use map. This area is labeled “Agricultural TDR Receiving Area” on Figure 3-7. This 50 acres would have capacity for approximately 170 housing units. Through the creation of a new Transfer of Development Rights (TDR) system, a portion of the sale price of each of these units would fund the purchase of permanent agricultural conservation easements on approximately 211 acres of the Chiala property, shown on Figure 3-7 as “Proposed Chiala Agricultural TDR Preservation Area.” An agricultural conservation easement is a voluntary, legally recorded deed restriction that goes with the land, regardless of owner, and removes the development capacity from the land in order to ensure it can remain

PROJECT DESCRIPTION

in agricultural use. The owner is compensated for the loss of the value of the property's development capacity through the purchase price of the easement.

All agricultural land that is part of the TDR program would remain in County jurisdiction in perpetuity, but the permanent agricultural conservation easement would preclude development that would otherwise be allowed by County land use designations. Current County land use designations and parcel sizes within the SEQ area would allow approximately 100 new low density residential units spread throughout the SEQ area. Implementing the proposed TDR system would concentrate allowed residential growth in one area of the SEQ to preserve viable agricultural areas on the remaining lands.

At the time of publication of this EIR, the City Council has directed staff to explore the proposed TDR program but no final decisions have been made. In order to analyze the potential impacts of the Chiala proposal, should the Council decide to move forward with it, this EIR analyzes the Residential Estate, Residential Detached Low, and Residential Detached Medium designations on the Chiala property, as shown on the Draft General Plan Land Use map in Figure 3-4, and includes the development of up to 241 units within the SEQ area, including the 170 TDR units, as shown in Table 3-5. In addition, to implement the proposed TDR system, the proposed RDCS would include a new set-aside for agricultural preservation, as mentioned in Section 3.6.4, below. Once established, the TDR system could potentially also be used to fund future agricultural preservation on other sites in the SEQ and in Morgan Hill's SOI, but this EIR does not analyze its specific application outside of the SEQ area.

Estimate Buildout of Opportunity Sites and Areas with Land Use Changes

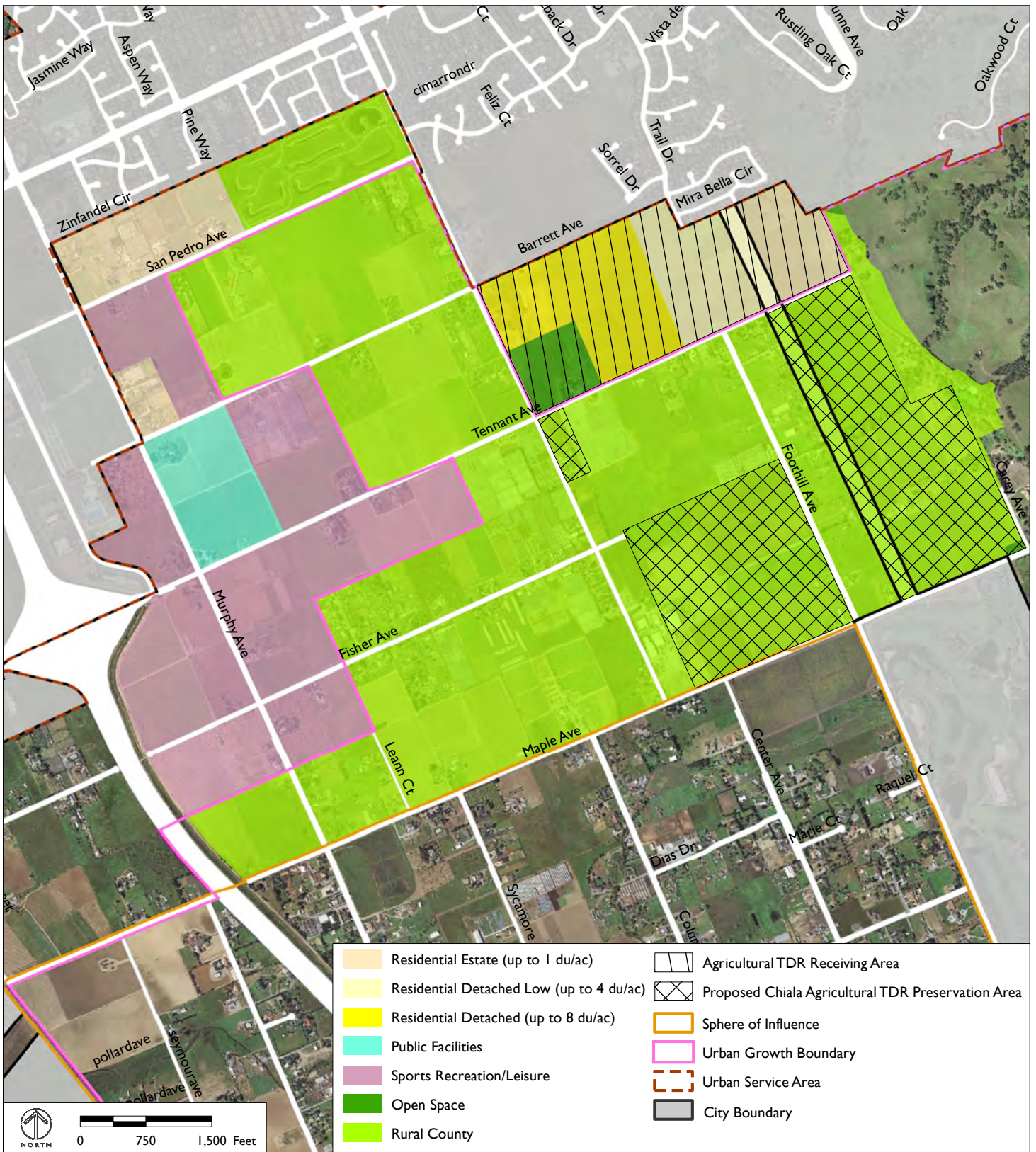
For each opportunity site, the potential buildout was estimated using the following assumptions. For the full buildout projection, it is assumed that the Opportunity Sites and areas with land use change will be completely redeveloped in order to provide the most conservative analysis.

Developable Area

For most parcels, 80 percent of the gross area was assumed to be developable. For example, if a vacant parcel's gross area was 10 acres, 8 acres of the land was counted as the net developable area, and a corresponding development density and/or FAR to the land use designation in which the parcel was located was applied to the net area. The following section describes the development densities and FARs used in the buildout calculation.

For vacant but constrained parcels, which are identified in the City's vacant land database, 50 percent of the gross area was assumed to be developable.

PROJECT DESCRIPTION



Source: City of Morgan Hill, 2015.

Figure 3-7
Southeast Quadrant

PROJECT DESCRIPTION

Intensity Range

Each land use designation allows different ranges of residential densities and/or FARs. Based on existing development patterns and the development trends in Morgan Hill, a development density and/or FAR was identified to estimate potential development in each land use designation. Table 3-4 shows the residential densities and FARs used for buildout calculation.

For most residential development, half of the allowed residential density range, or the “mid-point,” was used. For example, if the allowed density on a parcel is between 8 and 14 units per acre, a development density of 11 units per acre was assumed. This is consistent with the density ranges of residential projects approved and built in Morgan Hill over the past few years. In the Downtown area, the high end of the allowed residential density range was used. For non-residential development, “average” FARs of existing developments were assumed. This average FAR is based on an examination of a sample of existing non-residential development. A few existing developments were examined to find the “average” FARs in each non-residential land use designation.

Development Calculation

The amount of potential development was estimated by using the following equations:

- Residential: Acres x Units Per Acre x 0.8
- Non-residential: Acres x 43,560 (square feet per acre) x FAR x 0.8

Then, the calculated development amount from each land use designation was divided into more detailed categories of development types. The following assumptions were used to categorize development types.

- All residential development from rural and single-family residential designations would be single-family units.
- All residential development from mixed-use and multi-family residential designations would be multi-family units.
- In the mixed-use designations, including MU and MU Flex, 50 percent of potential development would be retail, 45 percent would be office, and 5 percent would be service use.
- In the Commercial designation, 55 percent of potential development would be retail, 40 percent would be office, and 5 percent would be service use.
- In the Commercial/Industrial designation, 10 percent of potential development would be retail, 10 percent would be office, and 80 percent would be industrial.
- In the Industrial designation, 10 percent of potential development would be office and 90 percent would be industrial use.

PROJECT DESCRIPTION**TABLE 3-4 DENSITY AND FAR ASSUMPTIONS**

Land Use Designation	Assumed Residential Density (DU/AC)	Assumed FAR	Notes
Residential			
Rural County	0.10	-	
Residential Estate	0.50	-	
Residential Detached Low	2	-	
Residential Detached Medium	4 (	-	
Residential Attached Low	6-11 (10-14 in Downtown)	-	
Residential Attached Medium	18 (21 in Downtown)	-	
Residential Attached Downtown	24 (40 in Downtown)	-	
Mixed-Use			
Mixed-Use	18 (20 in Downtown)	0.15	Assumes that a portion of the floor area would be devoted to residential uses.
Mixed-Use Flex	14	0.04	Assumes that a portion of the floor area would be devoted to residential uses.
Non-Residential*			
Commercial	-	0.22	
Industrial	-	0.30	
Commercial/Industrial	-	0.35	
Sports Recreation Leisure	-	0.2*	
Public Facilities	-	0.15	

*Note: For Commercial and office uses allowed within the Sports Recreation Leisure designation, the buildout assumptions assumed an FAR of 0.02 for uses such as batting cages and equestrian centers that use a lot of land but have few buildings, and 0.2 for commercially-oriented areas closer to Highway 101.

Source: PlaceWorks, 2015.

- In the Sports Recreation Leisure designation, Subdistrict A, 75 percent of potential development would be service use, 20 percent would be retail, and 5 percent would be office. Within Subdistrict B, 50 percent of potential development would be service use, 40 percent would be retail, and 10 percent would be office.
- All development from the Public Facilities designation would be public facility use.

3.5.1.5 OTHER AREAS WITH CAPACITY FOR DEVELOPMENT

Other areas in the City and its SOI that are not included in the opportunity sites are currently vacant and have capacity for development under the General Plan. Because the proposed General Plan would not change the existing General Plan designations on these parcels, it is assumed that the buildout potential

PROJECT DESCRIPTION

established by the existing General Plan will remain on these parcels. The buildout potential was estimated using the same assumptions as those used to project the buildout potential for the opportunity sites.

Pipeline project projections are based on the approved or proposed project information.

3.5.2 HORIZON-YEAR PROJECTIONS METHODOLOGY

This section describes the methods used to calculate the 2035 horizon-year development projection for the opportunity sites, land use change areas, and other areas in the City and SOI with capacity for development under the existing General Plan.

3.5.2.1 DETERMINE PROBABLE PLANNING PERIOD DEVELOPMENT

Past development trends and other growth projections were consulted to determine the amount of new development that is likely to occur in Morgan Hill by 2035, or “planning period development.”

Residential

As described above, the City believes that all vacant or underutilized residential parcels can be developed in the next 20 years if there was no population cap. Since it is possible that the existing RDCS could sunset in 2020 without being replaced, full buildout could occur by 2035. Therefore, this EIR assumes full buildout for residential development.

Retail and Service

Retail and service development is closely linked to residential growth. The market for retail and service development depends on the population base. Therefore, the retail and service development projection was based in part on the anticipated population growth.

It was assumed that the City’s 2012 average of 29.2 square feet of occupied shopping center space per capita will continue to apply as the City’s population grows; thus, retail and service development potential increases in line with the population increase.⁶ It was assumed that 85 percent of the development potential would be from the retail industry and 15 percent from the service industry based on current commercial development trends in Morgan Hill. With a population increase of 22,887, as shown in Table 3- 2, the amount of supportable development by 2035 would be 568,055 square feet of retail space and 100,245 square feet of service space.

⁶ Long-term structural changes in the retail industry, such as increases in online shopping, could lead to a reduction in the per capita quantity of brick and mortar retail space needed. If this occurs, retail absorption could be reduced below the assumptions used for this analysis.

PROJECT DESCRIPTION

Industrial

For the probable industrial development by 2035, this EIR assumes the high-end estimates from the City's 2015 Industrial Land Study for research and development (R&D), warehouse, and industrial buildings in order to provide a conservative analysis. The high-end estimate of the study equals approximately 1.744 million square feet of industrial space. Because the proposed General Plan would designate more parcels suitable for industrial development, such as large parcels in proximity to Highway 101, this EIR anticipates additional demand than the high-end estimates from the Industrial Land Study. A total of approximately 1.777 million square feet of industrial space is assumed to be developed by 2035.

Office

This EIR assumes the Industrial Land Study's high-end estimate of office space plus locally based demand for office space, which is linked to residential growth. It was assumed that 35 percent of this development potential is due to offices that serve local population growth, and 65 percent of this development is due to capture of a share of regional office employment growth. While potential office market demand may be relatively fixed at the regional level, local residential growth could create increased locally based demand for office space (e.g., offices for medical practitioners and other professionals who serve the local household population).

Public Facilities

This EIR assumes that all vacant or underutilized public facility parcels can be developed in the next 20 years. Therefore, full buildout for public facilities was assumed for the horizon year.

3.5.2.2 DISTRIBUTE PLANNING PERIOD DEVELOPMENT

Once the planning period development was projected, that development was then distributed throughout the General Plan area. The distribution of this development was based on a number of factors, including development entitlements and site characteristics.

City staff identified several parcels that are vacant or underutilized and are therefore more likely to be developed within the next 20 years. In addition, based on parcel conditions, such as size and location, the likelihood of development was determined. The likelihood of development was determined based on whether there are existing development entitlements (e.g., approved pipeline projects), developer interest in the site, and site characteristics (e.g., access to transportation and infrastructure, local competition, and market demand). For example, if a vacant parcel is located next to Highway 101 and a developer showed interest, the likelihood of development was assumed 100 percent. The likelihood and its reasoning for each parcel are listed in Table 3-3. Potential buildout of those parcels was calculated using the same FAR assumptions used for the opportunity sites as described in Section 3.5.1.4.

PROJECT DESCRIPTION

The likelihood and the associated factors reduced the full buildout projections to the expected amount of new development in Morgan Hill by the General Plan horizon year of 2035. The results of this process and the detailed assumptions about the likelihood of development are documented in Table 3-5.

3.5.3 EVALUATION OF THE GENERAL PLAN AND ITS HORIZON-YEAR PROJECTIONS

All of the analyses in this EIR are based on a consistent interpretation of the proposed General Plan land use map and policies, and the type and amount of growth that the General Plan would allow. However, the various analyses in this EIR require two different types of data inputs: some analyses require spatial inputs only and some require both quantitative and spatial inputs. In each case, the required analysis is determined by the standard of significance used for the impact discussion.

- Analyses that require a quantitative estimate of growth include traffic generation, air pollution emissions, greenhouse gas emissions, noise generation, population growth, impacts on public services and utilities, and recreation. Impacts in these areas are generated by an increase in the number of people living and working in Morgan Hill, which generates consequent increases in traffic, noise, emissions, and use of services. Therefore, a reliable analysis depends on a reasonable, quantitative estimate of new population and employment. For these analyses, the horizon-year projection was considered “reasonably foreseeable” and was used in the analysis.
- Analyses that are based on spatial location only include aesthetics, agriculture, exposure to localized air pollution and noise, biological resources, cultural resources, geology, hazards and safety, hydrology and water quality, and land use. These analyses must consider whether the proposed General Plan would allow *any* development in a geographic area, such as a fire hazard severity zone or an area with prime agricultural soils, which could trigger potential impacts. For these analyses, the question is not *how much* development the General Plan would allow, but *where* that development could potentially be located. Therefore, all potential development allowed by the land use map of the proposed General Plan was evaluated to assess impacts in these topics.

3.6 PROPOSED RESIDENTIAL DEVELOPMENT CONTROL SYSTEM

The Morgan Hill 2035 project includes amendments to the City’s existing Residential Development Control System (RDCS). Established in 1977, the City of Morgan Hill’s unique growth management system regulates population growth through the provision of residential building allotments. The current growth management system permits a 2020 population ceiling of 48,000. The proposed RDCS maintains many aspects of the current RDCS but changes some requirements and procedures to make the system more efficient, transparent, and effective.

PROJECT DESCRIPTION

TABLE 3-5 PLANNING PERIOD DEVELOPMENT

		Full Buildout (Total)							Percent Built By Horizon Year			Horizon (2035, Net Increase)							Reasoning
		Single-Family Units	Multi-Family Units	Retail SF	Office SF	Industrial SF	Service SF	Public Facilities SF	Vacant Land	Redev.	Public Facilities	Single-Family Units	Multi-Family Units	Retail SF	Office SF	Industrial SF	Service SF	Public Facilities SF	
Opportunity Site																			
1	North Monterey/ Madrone	3	519	27,686	24,918	–	2,769		25%	0%		2	247*	1,674	1,506	–	167		Blighted area, far from Downtown and Hwy 101.
2	Sobrato High School	12	508							–		5	422						
3A	Morgan Hill Ranch		–	102,772	140,742	593,989	9,343		100%	0%			–	85,631	62,277	–	7,785		Developer interest.
4	De Paul Health Center	–	414	170,482	134,286	302,084	12,066	133,160	25%	0%	100%	–	344	41,158	32,508	75,521	2,883	133,160	For commercial land, good access, but land may not be sold soon. For industrial land, poor access.
5	Central Ave/west of 101	36	487	7,925	5,763	–	720		0%	0%	–	23	404						
6&7	Half Road/Diana Ave/east of 101	510	–	88,588	88,588	708,707	–		10%	10%		347	–	8,859	8,859	70,871	–		Outside of the City limits, poor access.
8	Mid–Monterey	–	445	84,248	70,831	–	8,162	30,374	100%	25%	100%	–	251	11,759	10,584	–	1,176	30,374	Developer interest; Good access to DT.
9&10	Downtown	1	982	130,633	117,569	–	13,063	88,066	100%	100%	100%	(68)	700	20,713	18,681		2,081	64,065	Full buildout assumed.
11	Monterey Ave south	–	597	101,770	87,139	–	9,943	13,961	100%	25%	100%	–	281	11,921	10,729	–	1,193	13,961	Developer interest, good access to DT.
12	Vacant near Honda	15	–	8,360	6,080	–	760		0%	0%		–	–						Not vacant.
13	Butterfield Blvd south	–	182	74,057	207,278	1,380,763	6,732		30%	0%		–	17	23,433	27,610	95,107	2,130		Good access but limited site selection.
14	Dunne/Joleen (west. of Home Depot)	–	–	8,857	8,857	70,856	–												Not vacant.
15	South of Home Depot		–	7,132	7,132	57,054	–		100%				–	7,132	7,132	57,054	–		Developer interest.
16	Dunne/Condit (east of 101)	–	203	58,710	42,698	–	5,337		100%			–	169	44,033	32,024	–	4,003		Proximity to 101, developer interest.
17	Juan Hernandez Drive		–	111,595	81,160	–	10,145		100%	0%			–	82,070	59,687	–	7,461		Proximity to 101, developer interest.
18	W. Edmundson/Sunnyside	256	–									172	–						
19	Johnson garden and lumber center		–	50,626	50,626	405,009	–		75%	50%			–	34,626	34,626	277,011	–		Proximity to Highway 101, site size.
20	Monterey south of Vineyard, north of Watsonville	–	78	9,940	7,229	–	904		–	30%		–	–	4,970	3,615	–	452		Small lot size.
21	South Vineyard		–	–	140,908	1,268,169	–		10%	10%			–	–	13,998	125,982	–		Outside of the City limits.
22	Olive Ave/Middle Ave	454	419					45,816			100%	329	350					45,816	
23	Diana Ave/Hill Rd	376	–									265	–						
24	Butterfield Blvd/Monterey	–	329									–	274						
25	Main Avenue Corridor	–	216	39,731	35,080	–	3,937	–	100%	0%		–	139	4,967	4,430		487	–	
Opportunity Site Total		1,663	5,379	1,083,112	1,256,885	4,786,631	83,882	311,377				1,075	3,598	382,945	328,265	701,545	29,818	287,376	

PROJECT DESCRIPTION

TABLE 3-5 PLANNING PERIOD DEVELOPMENT

	Full Buildout (Total)							Percent Built By Horizon Year			Horizon (2035, Net Increase)							Reasoning
	Single-Family Units	Multi-Family Units	Retail SF	Office SF	Industrial SF	Service SF	Public Facilities SF	Vacant Land	Redev.	Public Facilities	Single-Family Units	Multi-Family Units	Retail SF	Office SF	Industrial SF	Service SF	Public Facilities SF	
Pipeline Projects																		
MC-14-16	65										65							
Diana b	36										36							
Monterey C	14										14							
MMC-13-08	5										5							
Monterey – UCP	58										58							
Butterfield – Dividend	41										41							
MMC-14-09		6										6						
Leung	6										6							
Ventural – Dividend	14										14							
San Sabastian	40										40							
Cochrane – Standard Pacific	27										27							
Cochrane – UCP	44										44							
Monterey – City Ventures	75										75							
MC-14-07		8										8						
Red Jasper		11										11						
Monterey – Presidio	45										45							
MMC-14-02	2										2							
MC-10-01	12										12							
MC-14-08	8										8							
MC-14-05		14										14						
MC-14-06		19										19						
Dunne – MDMH	13										13							
MC-14-17		7										7						
Warehousing Expansion					25,000										25,000			
75-Room Hotel						30,000										30,000		
104-Room Hotel						58,000										58,000		
MWest		409		60,000	540,000							409		60,000	540,000			
Pipeline Project Total	505	474	–	60,000	565,000	88,000	–				50	474	–	60,000	565,000	88,000	–	

PROJECT DESCRIPTION

TABLE 3-5 PLANNING PERIOD DEVELOPMENT

	Full Buildout (Total)							Percent Built By Horizon Year			Horizon (2035, Net Increase)							Reasoning
	Single-Family Units	Multi-Family Units	Retail SF	Office SF	Industrial SF	Service SF	Public Facilities SF	Vacant Land	Redev.	Public Facilities	Single-Family Units	Multi-Family Units	Retail SF	Office SF	Industrial SF	Service SF	Public Facilities SF	
Change Areas																		
SEQ	241	–	186,925	46,731		283,140					241	–	186,925	46,731		283,140		
Outside Opportunity Sites with LU Change	5	725	55,832	52,789	203,241	3,043			0% to 100%		5	725	39,052	35,797	52,000	2,953		
Change Area Total	246	725	242,757	99,520	203,241	286,183	–				246	725	225,977	82,528	52,000	286,093	–	
Other Existing Capacity Areas																		
Miscellaneous Non-Residential Inside City Limits			186,501	203,611	611,771	16,955			0% to 100%				146,626	157,904	458,840	13,646		
Miscellaneous Residential Inside City Limits	432	274									432	274						
Miscellaneous Residential Outside City Limits	102	–									102	–						
Other Capacity Total	534	274	186,501	203,611	611,771	16,955	–				534	274	146,626	157,904	458,840	13,646	–	
Grand Total	2,702	6,127	1,512,370	1,620,016	6,166,643	475,019	311,377				2,360	5,071	755,548	628,697	1,777,385	417,557	287,376	

PROJECT DESCRIPTION

PROJECT DESCRIPTION

3.6.1 PROPOSED RDCS OBJECTIVES

The purpose of the Residential Development Control System (RDCS) is to establish a limit on the amount and rate of residential growth in Morgan Hill through 2035. The RDCS aims to encourage high quality residential development that enhances residents' quality of life and to ensure that new residential development does not adversely impact the level of public services and infrastructure for current and future residents. The RDCS promotes a diverse stock of high quality housing to meet the full range of housing needs within the community and encourages new residential development to contribute community benefits that enhance the public health, safety, and welfare. Overall, the RDCS promotes an orderly, efficient, and sustainable residential development pattern and provides certainty to residents that residential development patterns will reflect local goals and values.

3.6.2 RDCS UPDATE PROCESS

The process to prepare the updated RDCS primarily occurred from May 2015 to December 2015. Preparation of the updated RDCS will be guided by input and direction from the RDCS Working Group, the Planning Commission, and City Council. The RDCS Working Group was appointed by the City Council on April 23, 2015 to help guide the preparation of the updated RDCS. The Working Group consisted of 20 members representing the City Council, the Planning Commission, the General Plan Advisory Committee, local architects, the local housing industry and homebuilders, and the Morgan Hill Unified School District/Board. Key meetings on the RDCS Update include the following:

- **GPAC Meetings.** On April 23, 2015 the GPAC provided input on the general approach to the updated RDCS and nominated RDCS Update Working Group representatives.
- **City Council Meetings.** The City Council provided direction on the general approach to the RDCS on May 6, 2015 and appointed members of the RDCS Update Working Group. The City Council also received updates on the RDCS Working Group following each Working Group meeting.
- **City Council/Planning Commission Study Sessions.** The City Council and Planning Commission held four joint study sessions to guide the preparation of the Public Review Draft RDCS. On April 15, 2015, Council members and Planning Commissioners commented on eight questions relating to the basic parameters of the updated RDCS. On September 16 and October 7, Council members and Planning Commissioners provided feedback on the Working Draft RDCS. On November 18, 2015, Council members and Planning Commissioners provided feedback on the Preliminary Review Draft RDCS.
- **RDCS Working Group.** The RDCS Working Group met 11 times from May 2015 through October 2015 to provide input and direction on the RDCS Update. At meetings in May, June, and July 2015 the Working Group gave input on the general RDCS Update approach and options for how to address specific issues. At meetings in August and September the Working Group commented on the Working Draft RDCS. The Working Group discussed and commented on the Preliminary Draft RDCS at meetings in October 2015.

PROJECT DESCRIPTION

3.6.3 MAJOR COMPONENTS OF THE PROPOSED RDCS

The proposed RDCS establishes a population limit of 64,600 in 2035. Each year the City Council must establish a maximum number of residential allotments available each year such that the population in Morgan Hill does not exceed this population limit. No residential units may be developed without first obtaining an allotment, except for exempt units specified in the proposed RDCS. Projects receive allotments by participating in a competition for allotments. The City awards allotments to projects receiving the highest scores using criteria established by the City Council.

Other components of the proposed RDCS include the following:

- **Number of Available Allotments.** The City Council may award a maximum of 300 allotments each year. The City Council may lower this number to respond to unique constraints or to ensure that the population does not exceed 64,600 in 2035.
- **Set Asides.** Each year the City Council may identify a number of allotments set aside for projects in certain locations (e.g., Downtown and Monterey Road Corridor) or for certain types of projects (e.g., small, mixed-use, and rental projects).
- **Competition Standards.** The City Council establishes specific competition criteria and point values for nine categories of competition categories that advance all of the key City goals.
- **Exemptions.** The proposed RDCS identifies certain types of housing that are exempt from the requirement to obtain allotments.
- **RDCS Procedures.** The proposed RDCS identifies the process for Application Submittal and Review, Project Scoring, and Award of Allotments
- **Urban Service Area Boundaries.** The proposed RDCS states that the City may approve allotments only for projects located within the City's Urban Service Area boundaries, and establishes limitations on when the City's Urban Service Area boundaries may be expanded.
- **Expiration of Allotments.** The proposed RDCS states awarded allotments expire if they are not exercised by a date specified in the Development Agreement.
- **Extensions.** The proposed RDCS allows for the Community Development Director to approve a one-time extension to the date by which an allotment must be exercised and for the City Council to approve exceptions to the loss of building allotments.

3.6.4 MAJOR CHANGES FROM THE EXISTING RDCS

Major Changes from the existing RDCS include the following:

- **Population Limit.** Changes population limit in Section 18.78.030 from 48,000 in 2020 to 64,600 in 2035.

PROJECT DESCRIPTION

- **Number of Allotments.** Replaces existing formula for calculating number of available allotments (Section 18.78.030) with a set number.
- **Adjustments to Available Allotments.** Number of allotments may be reduced with Council finding that public services and infrastructure will be inadequate to serve new development, replacing requirement for the Council to declare an emergency situation (18.78.140). Adds new ability to allow Council to increase number of available allotments to accommodate proposed new development of exceptional merit
- **Set-Asides.** Except for Downtown Set-Asides, details of the types of set asides and number of set aside allotments (18.78.040.C and E) are removed. Specifically authorizes a new type of set-aside for Monterrey Corridor and agricultural preservation.
- **Downtown Set-Asides.** Consolidates two Downtown exemption provisions (Measure F and Measure A) into a single Downtown Set-Aside. Single Downtown Set-Aside applies to Downtown Specific Plan boundaries.
- **Single-Family Homes.** Allows for less than 30 percent of allotments to go to single-family homes provided that overall 70/30 split is maintained.
- **Competition for Allotments.** Adds new requirement to award points only for projects with excellent design or that provides a community benefit that exceeds minimum requirements of the City or other governmental agency. Details of competition rules and procedures are removed from voter approved measure. Eliminates “Part 1” competition points
- **Establishment of Competition Criteria.** Point values for categories of standards removed from voter approved portion. Specific competition standards and their point values are removed from the ordinance. Specifically limits the frequency by which competition standards and point values may be adjusted
- **Competition Criteria Categories.** Design-related categories listed in 18.78.120 are addressed in new “project quality” category. Points available under each goal removed from ordinance.
- **Exemptions.** Adds exemption for assisted living/nursing homes, and the conversion of an existing single-family home into a duplex.
- **Pre-Application Review.** Existing RDCS (18.78.184) calls for a voluntary preliminary review process. New RDCS makes this review mandatory; focuses review on overall project quality and consistency with City goals, policies, and regulations; specifies submittal requirements; specifies staff involvement; and strengthens connection of review to award of allotments
- **RDCS Procedures.** Removes from voter approved portion details on application submittal and review, project scoring, and award of allotments.
- **Urban Service Area Boundaries.** Allotments would only be approved for projects located within the City’s Urban Service Area.

PROJECT DESCRIPTION

- **Project Phasing.** Allotments may be distributed to a single project over a period of one to five years.
- **Expiration of Allotments.** Allotments must be exercised by a date specified in the Development Agreement, as opposed to the end of the fiscal year. An allotment is considered exercised with the approval of a final map, issuance of a grading permit, or the commencement of construction if no final map or grading permit is required. Currently allotment is considered exercised with commencement of construction.
- **Extensions.** Adds options for a one-time extension to be approved at staff level – currently all extensions must be approved by Council (18.78.125.G). Staff may approve extensions only when approval of permits are delayed due to circumstances outside applicants control – currently basis for granting an exception is defined more broadly (18.78.125.G)

3.6.5 ANALYSIS OF THE PROPOSED RDCS IN THIS EIR

The RDCS is a tool that implements the General Plan. It regulates population growth through the provision of residential building allotments. The RDCS affects the pace of development in the City but does not determine the location, type, or intensity of development. Development allowed under the RDCS must comply with all applicable development requirements. Therefore, the RDCS would not result in any physical changes that could impact the environment in a way that is different from or more severe than the development allowed under the proposed General Plan itself.

3.7 INTENDED USES OF THE EIR AND PROPOSED PROJECT

This EIR is intended to review potential environmental impacts associated with the adoption and implementation of the proposed Morgan Hill 2035 General Plan and RDCS and determine corresponding mitigation measures, as necessary. This EIR is a program-level EIR and does not evaluate the impacts of specific, individual developments that may be allowed under the proposed General Plan. Each specific future project will require separate environmental review, as required by CEQA, to secure the necessary discretionary development permits. Therefore, while subsequent environmental review may be tiered off this EIR, this EIR is not intended to address impacts of individual projects. Subsequent projects will be reviewed by the City for consistency with the General Plan, RDCS, and this EIR. Subsequent project-level environmental review will be conducted as required by CEQA. Projects successive to this EIR include, but are not limited to, the following:

- Updates to the City's Municipal Service Review and Comprehensive Annexation Plan, and other utility infrastructure master plans, such as the Water, Wastewater, Stormwater, and Telecommunications Master Plans. .
- A comprehensive updated to the City's Zoning Code.
- Approval and funding of major public projects and capital improvements.

PROJECT DESCRIPTION

- Issuance of permits and other approvals necessary for implementation of the proposed General Plan and RDCS.
- Annexation of land into the City limits.
- Property rezoning consistent with the proposed General Plan.
- Development plan approvals, such as tentative maps, variances, conditional use permits, and other land use permits.
- Permit issuance and other approvals necessary for public and private development projects.
- Development agreement processes and approvals.

PROJECT DESCRIPTION

4. *Environmental Analysis*

This chapter of the Draft EIR is made up of 15 sub-chapters, which evaluate the direct, indirect, and cumulative environmental impacts of the proposed Project. In accordance with Appendix G, Environmental Checklist, and Appendix F, Energy Conservation, of the CEQA Guidelines, the potential environmental effects of the proposed Project are analyzed for potential significant impacts in the following environmental issue areas:

- Aesthetics
- Agriculture and Forestry Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Geology, Soils, and Seismicity
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Noise
- Population and Housing
- Public Services and Recreation
- Transportation and Traffic
- Utilities and Service Systems

FORMAT OF THE ENVIRONMENTAL ANALYSIS

Each sub-chapter is organized into the following sections:

- **Environmental Setting** describes the existing environmental conditions, providing a baseline to evaluate impacts of the proposed Project and an overview of the relevant federal, state, regional and local laws and regulations for each environmental issue.
- **Thresholds of Significance** refer to the quantitative or qualitative standards, performance levels, or criteria used to compare the existing setting with and without the proposed Project to determine whether the impact is significant. These thresholds are based primarily on the CEQA Guidelines and may reflect established health standards, ecological tolerance standards, public service capacity standards, or guidelines established by agencies or experts.

ENVIRONMENTAL ANALYSIS

- **Impact Discussion** provides an overview of the potential impacts of the proposed Project and explains why impacts were found to be significant or less than significant prior to mitigation. This subsection also includes a discussion of cumulative impacts to the proposed Project. Impacts and mitigation measures are numbered consecutively within each topic of analysis and begin with an acronymic or abbreviated reference to the impact section. The following symbols are used for individual topics:
 - AES – Aesthetics
 - AG – Agriculture and Forestry Resources
 - AQ – Air Quality
 - BIO – Biological Resources
 - CULT – Cultural Resources
 - GEO – Geology, Seismicity, and Soils
 - GHG – Greenhouse Gas Emissions and Sustainability
 - HAZ – Hazards and Hazardous Materials
 - HYDRO – Hydrology and Water Quality
 - LU – Land Use
 - NOISE – Noise
 - POP – Population and Housing
 - PS – Public Services and Recreation
 - TRAF – Transportation and Traffic
 - UTIL – Utilities and Service Systems

THRESHOLDS OF SIGNIFICANCE

As noted above, the significance criteria are identified before each impact discussion subsection, under the subsection, “Thresholds of Significance.” For each impact identified, a level of significance is determined using the following classifications:

- *Significant (S)* impacts include a description of the circumstances where an established or defined threshold would be exceeded.
- *Less-than-significant (LTS)* impacts include effects that are noticeable, but do not exceed established or defined thresholds, or are mitigated below such thresholds.
- *No impact* describes the circumstances where there is no adverse effect on the environment.

For each impact identified as being significant, the EIR identifies mitigation measures to reduce, eliminate, or avoid the adverse effect. If the mitigation measures would successfully reduce the impact to a less-than-significant level, this is stated in the EIR. However, significant and unavoidable (SU) impacts are described in cases where mitigation measures would not reduce these effects to less-than-significant levels.

CUMULATIVE IMPACT ANALYSIS

A cumulative impact is an impact that is created as a result of the combined impacts of the project being evaluated in the EIR, together with other reasonably foreseeable projects causing related impacts. Section 15130 of the CEQA Guidelines requires an EIR to discuss cumulative impacts of a project when the project's incremental effect is "cumulatively considerable." Used in this context, cumulatively considerable means that the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.

In the case of a General Plan, cumulative effects occur when future development under the General Plan is combined with development in the surrounding areas, or in some instances, the entire region.

Where the incremental effect of a project is not "cumulatively considerable," a lead agency need not consider that effect significant, but must briefly describe its basis for concluding that the effect is not cumulatively considerable. The cumulative impacts discussions in Chapters 4.1 through 4.15 explain the geographic scope of the area affected by each cumulative effect, e.g., immediate project vicinity, county, watershed, or air basin. The geographic area considered for each cumulative impact depends on the impact analyzed. For example, when assessing aesthetic impacts, the pertinent geographic study area is the vicinity of the areas of new development under the proposed Project from which the new development can be publicly viewed and may contribute to a significant cumulative visual effect. In assessing macro-scale air quality impacts, on the other hand, all development within the air basin contributes to regional emissions of criteria pollutants, and a basin-wide emissions projection is the best tool for determining the cumulative effect.

Section 15130 of the CEQA Guidelines permits two methodologies to complete the cumulative impact analysis:

- The 'list' approach permits the use of a list of past, present, and probable future projects producing related or cumulative impacts, including projects both within and outside the City.
- The 'projections' approach allows the use of a summary of projections contained in an adopted plan or related planning document, such as a regional transportation plan, or in an EIR prepared for such a plan. The projections may be supplemented with additional information such as regional modeling.

This EIR uses the projections approach and takes into account growth from the proposed Project within the Morgan Hill City limit and Sphere of Influence (SOI), combined with impacts from projected growth in the rest of Santa Clara County and the surrounding region, as forecast by the Association of Bay Area of Governments (ABAG). In each section of Chapter 4, the cumulative impacts discussion is based on the cumulative development described in Chapter 6, CEQA-Required Assessment Conclusions, of this Draft EIR. The following provides a summary of the cumulative impact scope for each impact area:

- **Aesthetics:** The cumulative setting for visual impacts includes potential future development under the proposed General Plan combined with effects of development on lands within the Greenbelt Areas

ENVIRONMENTAL ANALYSIS

defined on Figure NRE-1 of the proposed General Plan adjacent to the unincorporated areas of Santa Clara County to the west, east, north, and south.

- **Air Quality:** Cumulative air quality impacts could occur from a combination of the proposed Project combined with regional growth within the San Francisco Bay Area Air Basin.
- **Biological Resources:** The geographic scope of the cumulative analysis for biological resources considers the surrounding incorporated and unincorporated lands, and the region.
- **Cultural Resources:** Cumulative impacts to cultural resources could occur from development planned for under the proposed Project and the region.
- **Geology, Soils, and Seismicity:** Potential cumulative geological impacts could arise from a combination of the development of the proposed Project together with future development in the immediate vicinity of the adjoining jurisdictions.
- **Greenhouse Gas Emissions:** The cumulative impact analyses for greenhouse gas (GHG) emissions is related to the ongoing development in the City of Morgan Hill and the entire region. Because GHG emissions are not confined to a particular air basin but are dispersed worldwide, the cumulative analysis focuses on the global impacts.
- **Hazards and Hazardous Materials:** This chapter analyzes potential cumulative hazardous impacts that could arise from a combination of the development of the proposed Project together with the regional growth in the immediate vicinity of the Project Study Area.
- **Hydrology and Water Quality:** The geographic context used for the cumulative assessment of water quality and hydrology impacts is the Coyote Creek and Uvas-Llagas Watersheds, which encompasses the entire Study Area.
- **Land Use and Planning:** The geographic context for the cumulative land use and planning effects occur from potential future development under the proposed Project combined with effects of development on lands adjacent to the City within San Jose to the north and the unincorporated areas of Santa Clara County to the west, east, north, and south.
- **Noise:** The traffic noise levels are based on cumulative traffic conditions that take into account cumulative development in the region.
- **Population and Housing:** Impacts from cumulative growth are considered in the context of their consistency with regional planning efforts.
- **Public Services and Recreation:** Cumulative impacts are considered in the context of the growth from development under the proposed Project within the City combined with the estimated growth in the service areas of each service provider.
- **Transportation and Traffic:** The analysis of the proposed Project addresses cumulative impacts to the transportation network in the City of Morgan Hill and the surrounding area. Projected 2035 traffic impacts at General Plan buildout are calculated using data from the City of Morgan Hill travel demand

ENVIRONMENTAL ANALYSIS

forecasting model, which uses traffic analysis zone (TAZ) data from the VTA 2035 TDF model. This model includes growth projections for areas north and south of Morgan Hill that are consistent with ABAG 2035 projections.

- **Utilities and Service Systems:** Cumulative impacts are considered in the context of growth from development under the proposed General Plan within the City combined with estimated growth in each utility's service area.

ENVIRONMENTAL ANALYSIS

4.1 AESTHETICS

This chapter discusses the existing aesthetic character in Morgan Hill and its surrounding area, evaluating the potential environmental impacts to aesthetics associated with development of the proposed Project. The following evaluation assesses visual character, scenic vistas, scenic highways, light, and glare.

4.1.1 ENVIRONMENTAL SETTING

4.1.1.1 REGULATORY FRAMEWORK

This section summarizes state and local regulations and programs related to aesthetics in the Project Area. There are no federal regulations pertaining to aesthetics that apply to the proposed Project.

State Regulations

California Scenic Highway Program

The California Scenic Highway Program, maintained by the California Department of Transportation (Caltrans), protects scenic state highway corridors from changes which would diminish the aesthetic value of lands adjacent to the highways. Caltrans has not designated any scenic highways in Morgan Hill or its Sphere of Influence (SOI).¹

California Building Standards Code

Title 24 in the California Code of Regulations (CCR) is the California Building Standards Code.

Part 2 of Title 24 is the California Building Code (CBC), which is based on the International Building Code and combines three types of building standards from three different origins:

- Building standards that have been adopted by state agencies without change from building standards contained in the International Building Code.
- Building standards that have been adopted from the International Building Code to meet California conditions.
- Building standards, authorized by the California legislature, that constitute extensive additions not covered by the International Building Code that have been adopted to address particular California concerns.

¹ California Department of Transportation, California Scenic Highway Mapping System, http://www.dot.ca.gov/hq/LandArch/scenic_highways/index.htm, accessed on July 28, 2015.

AESTHETICS

Part 6 of Title 24 is the California Energy Code (CEC). It includes standards for lighting that are intended to improve energy efficiency, and that reduce light pollution and glare by regulating light power and brightness and sensor controls.

Local Regulations

Santa Clara County General Plan

The Santa Clara County General Plan, adopted in 1994, includes policies that guide development in Morgan Hill's SOI, outside of the Morgan Hill City limit. The Resource Conservation Element contains the policies to reduce the visual impacts of development in the county:

- Policy C-RC 60: Hillsides, ridgelines, scenic transportation corridors, major county entryways, and other areas designated as being of special scenic significance should receive additional consideration and protections due to their prominence, visibility, or symbolic value.
- Policy C-RC 61: Public and private development and infrastructure located in areas of special scenic significance should not create major, lasting adverse visual impacts.
- Policy C-RC 62: Urban parks and open spaces, civic places, and public commons areas should be designed, developed and maintained such that the aesthetic qualities of urban settings are preserved and urban livability is enhanced. Natural resource features and functions within the urban environment should also be enhanced.

City of Morgan Hill Municipal Code

Morgan Hill's Municipal Code regulates development in the City. The following provisions from the Municipal Code pertain to the visual effects of development:

- Section 18.48.045, Glare, establishes a regulation that no direct or sky-reflected glare shall emanate from any establishment or use, so as to be visible at a distance of five hundred feet from such establishment or use.
- Chapter 15.40, Building Security, contains provisions, including lighting requirements, to protect the public by providing safeguards to protect property from unlawful trespass. Section 15.40.310 requires that open parking lots for nonresidential uses shall be illuminated with an intensity of at least 2 footcandles. Section 15.40.400 requires that open parking lots and carports for hotels and multi-family residential uses shall be illuminated with an intensity of at least 2 footcandles. Section 15.40.420 requires that aisles and passageways within the building complex shall be illuminated with an intensity of at least twenty-five one-hundredths (0.25) footcandles.
- Title 18, Zoning, contains site development standards for each zoning district, such as minimum lot area, maximum building coverage, maximum floor area ratio (FAR), minimum setbacks, maximum height, and yard size.

- Chapter 18.74, Design Review, of the Zoning Code establishes the City’s design permit process for the following types of projects: residential projects with three or more dwelling units; significant non-residential development; development on sensitive sites; relocation, significant expansion, or significant modifications to the exteriors of existing buildings; significant grading; accessory structures; and significant City projects. Single-family homes are exempt from the design permit process. City design standards and guidelines are summarized in the Architectural Review Handbook; projects subject to design review must adhere to these standards and guidelines. The City’s Planning Division staff reviews projects for consistency with the Architectural Review Handbook and routes projects to the Design Review Committee for review. Most design review approval is granted by the Community Development Director, although in some instances projects are referred to the Planning Commission or City Council. Section 18.74.010, Findings and Policy, of Chapter 18.74 establishes design review procedures to protect the City’s natural ridgelines and vistas, sensitive habitat areas, and scenic natural features. In granting a Design Review permit, the City must make the following findings:
 - The proposed construction/alterations are in substantial conformance with the General Plan, zoning ordinance, and any applicable plans adopted by the City.
 - The proposed construction/alteration is in substantial conformance with all applicable design standards and guidelines, as contained in the Design Review Handbook.
 - The construction/alteration will not have significant adverse effects on the public health, safety, and welfare.
- Chapter 18.78, Residential Development Code, contains the provisions of the Residential Development Control System (RDCS). Within this Chapter, Section 18.78.310, Safety and Security, states that outdoor lighting should meet police specifications and that pedestrian-scaled lighting should be provided along walkways and common areas in multi-family projects. Section 18.78.320, Landscaping, Screening, and Color, requires that lighting, among other landscape features, should be compatible with the topography and other characteristics of the site.

Morgan Hill Downtown Specific Plan, 2009

The Morgan Hill Downtown Specific Plan, November 2009, encompasses 18 blocks and approximately 110 acres in downtown Morgan Hill in an area centered on Monterey Road. The urban design goals of the Downtown Specific Plan include:

- Creating an active Downtown village through intensifying residential, retail, restaurant, and entertainments uses, within an urban setting improved with unified landscaping and streetscape improvements.
- Making Monterey Road and Third Street more pedestrian and retail friendly, and improve other roads with better street lighting and streetscape improvements.
- Strengthening Downtown’s identity and scale with new design related to a traditional character.

AESTHETICS

- Creating visual and physical linkages to Downtown with landscaping, bike paths and entry are features; and with linking downtown commercial uses to common parking areas available to the general public.

Morgan Hill Architectural Review Handbook

The City maintains an Architectural Review Handbook that sets minimum standards for architecture, site planning, and landscaping. Projects that are subject to design review under Chapter 18.74 of the City's Municipal Code are reviewed against the design standards and guidelines in the Architectural Review Handbook. These standards are applied to new development or improvements to existing development, and include specific standards for single-family residential; multi-family residential; commercial, industrial, and public facilities; and properties that face onto gateway areas, which include seven key areas that are the primary entrances to Morgan Hill.

The Architectural Review Handbook contains the following standards related to lighting. These standards are intended to encourage appropriate lighting to minimize glare while improving safety. Standards for lighting in the Architectural Review Handbook include, but are not limited to, the following:

- Lighting should be shielded to minimize glare upon neighboring properties and public rights of way.
- Projects should use the latest lighting technology to minimize lighting intensity and lighting levels should not be so intense as to draw attention to the glow or glare of the site. Different areas of properties are subject to different lighting intensity guidelines. For instance, aisles and passageways in commercial, industrial, public, and multi-family residential uses should be illuminated with an intensity of at least 0.25 footcandles and building entrances should be illuminated with an intensity of at least 5 footcandles. Public and private parks and walkways should be illuminated with an intensity of at least 1 footcandle.
- The height of lamp poles should be appropriate in scale for the building and surrounding area. Pedestrian light poles along sidewalks and pathways should be 12 to 15 feet high. In commercial, industrial, and public facility projects, the maximum pole height should be 20 feet, and in multi-family residential projects the maximum pole height should be 15 feet.
- Lighting in parking areas of commercial, industrial, public, and multi-family residential uses should be in scale with the height and use of the on-site structures. Lighting fixtures in commercial, industrial, public, and multi-family residential uses should not project above the fascia or roofline of the building.
- Projects should incorporate timers and sensors to avoid unnecessary lighting.
- Up-lighting of landscaping and building elements should be installed to reduce unnecessary glare by utilizing shrouded fixtures or glare-reducing devices.

The Architectural Review Handbook contains the following standards related to glare from sources other than lighting:

- Canopy trees in single-family development areas should be strategically used in park and open space areas to reduce glare.
- Canopy trees in multi-family, commercial, and industrial development should be strategically used in parking areas to reduce glare.

4.1.1.2 EXISTING CONDITIONS

Visual Character

Morgan Hill's visual character is best understood in terms of its natural setting. The City's location along the valley floor, with views of grassy and wooded hillsides to the east and west, defines and embraces the City's friendly atmosphere and provides a visual connection to the natural world from almost any vantage point. The slopes that flank Morgan Hill play a major role in shaping the character of the City. Agricultural lands have also been an important contributor to the City's rural character. Undeveloped and agricultural land separates the City from San Jose to the north and San Martin to the south. The rural character of these lands helps to define and distinguish the urbanized City area from other urban and rural county areas.

Within the City itself, the predominant land use is established suburban neighborhoods with tree-lined streets and well-kept homes. These neighborhoods radiate outwards from an historic Downtown lined with 1- and 2-story commercial buildings in a mix of ages and architectural styles. Throughout the community, vacant parcels, some retaining vestiges of historic agricultural use, are interspersed with urbanized development.

Figure 4.1-1 provides an overview of the overall urban design building blocks in Morgan Hill. Specific place types in Morgan Hill, as shown in Figure 4.1-1, include:

- Traditional neighborhood
- Hillside neighborhood
- Multi-family neighborhood
- Rural fringe
- Downtown
- Shopping center
- Strip commercial
- Business park
- Light industrial
- Mixed use

The strong connections between Morgan Hill's developed neighborhoods, natural setting, and agricultural surroundings establish the feeling of a traditional, family-oriented, high-quality, and active small town that is removed from, though easily accessible to, the more crowded, fast-paced Silicon Valley communities to the north.

Figure 4.1-1 Urban Design Building Blocks



Source: PlaceWorks, 2015.

Scenic Corridors and Vistas

The existing General Plan does not designate official scenic view corridors or vistas. However, there are a number of vistas within Morgan Hill that could be considered scenic. El Toro, rising over the City just west of Downtown, is one of the most prominent visual landmarks and is visible from many vantage points, particularly from Highway 101, along Monterey Road, and along wider east-west roadways like Cochrane Avenue, Main Avenue, Dunne Avenue, and Tennant Avenue. Broader views of the Diablo Range to the east and the Santa Cruz Mountains to the west are visible from 101 and many points within the City and the SOI. Within the low-lying portions of the City and SOI the hills of these ranges provide a backdrop to the City, and views of these hillsides and ridgelines in many areas are partially or fully blocked by existing buildings and trees.

Eastward and westward scenic views are also available in areas of the City and SOI that are undeveloped, such as in parks, agricultural areas, and other open spaces. In the higher elevations in the western and eastern portions of the City and SOI, roadways wind among these hillsides and offer closer views of hillside landscapes and vegetation, as well as intermittent views across the valley.

Within the rural residential and agricultural areas in the City and SOI, hillside views are more expansive and nearfield open spaces, including agricultural lands, allow broader vistas.

Five creeks traverse Morgan Hill. The natural streamside and riparian areas serve as scenic resources, with creeks in the hills remaining generally natural. In the low-lying and more urbanized portion of the City and SOI, the aesthetic value of the creeks varies as most creeks have been straightened and channelized to prevent flooding.

Light and Glare

Light pollution refers to all forms of unwanted light in the night sky, including glare, light trespass, sky glow, and over-lighting. Views of the night sky are an important part of the natural environment. Excessive light and glare can be visually disruptive to humans and nocturnal animal species. Light pollution in Morgan Hill is restricted primarily to street lighting along local streets, and to night-time illumination of shopping centers. Light spillage from residential developments is mostly screened by trees.

The Lick Observatory is located approximately 12 miles north of Morgan Hill on Mount Hamilton and is an astronomical research facility serving eight University of California campuses.² Illumination of the night sky by electric lights throughout the Santa Clara Valley can interfere with observation activities at the Lick Observatory.³ The observatory recommends using low-pressure sodium lights for streets and parking lots, lighting controls such as timers and dimmers, and the minimum amount of lighting needed for the intended

² University of California Observatories, <http://www.ucoick.org/>, accessed on August 29, 2015.

³ City of San José, 2011, Envision San José 2040 General Plan Draft Environmental Impact Report, page 717.

AESTHETICS

purpose. The observatory also recommends proper shielding and placement of lighting fixtures to direct light toward the ground rather than the sky.⁴

4.1.2 STANDARDS OF SIGNIFICANCE

Implementation of the proposed Project would result in a significant aesthetic impact if it would:

1. Have a substantial adverse effect on a scenic vista.
2. Substantially degrade scenic resources, including but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway.
3. Substantially degrade the existing visual character or quality of the site and its surroundings.
4. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.
5. Contribute to cumulative aesthetics impacts in the area.

4.1.3 IMPACT DISCUSSION

This section analyzes potential Project-specific and cumulative impacts to aesthetics.

AES-1	Implementation of the proposed Project would not have a substantial adverse effect on a scenic vista.

General Plan

Neither the California Scenic Highway Program nor the existing and proposed General Plan designate official scenic view corridors or vistas within the Project Area. However, the proposed General Plan recognizes that undeveloped hillsides visible from the valley floor are scenic characteristics of the area, and that views of prominent hillsides should be preserved. Throughout the low-lying area of Morgan Hill, scenic views are generally intermittent and partially obscured by existing development and trees. Uninterrupted scenic vistas to the surrounding hillsides exist throughout the City, and are primarily in agricultural areas, open spaces, and other areas that remain largely undeveloped. These views are considered scenic vistas in this analysis. The proposed General Plan would have a significant impact if future development allowed by the Plan would substantially obstruct existing views to these hillsides.

Much of the new development allowed under the proposed General Plan within the City limits would be on lands that are already developed, or on lands contiguous to urban uses and major roadways. Given the location of the urban uses and the presence of similar neighboring uses, little to no impact on views of

⁴ University of California Observatories, <http://mthamilton.ucolick.org/public/lighting/Summary2.html>, accessed on August 22, 2015.

AESTHETICS

hillsides or El Toro Mountain is anticipated in these areas. In addition, many portions of the Project Area that currently consist of rural residential, agricultural, and open space uses would remain designated for these uses under the proposed General Plan.

However, some future development allowed by the proposed General Plan, where currently undeveloped lands would be designated for development, would have the potential to partially or fully block scenic vistas. These sites are scattered throughout the City and the SOI and include some large areas of existing vacant or agricultural uses where westward and eastward scenic views are relatively uninterrupted, such as the area east of 101, the area southeast of Monterey Road and Watsonville Road, or the area south of Edmundson Avenue. However, these areas are also adjacent to existing developed areas.

The existing and proposed General Plan identify a Greenbelt, which is intended to physically define the City and separate it from San Jose and San Martin. The proposed General Plan does not designate any lands within the Greenbelt for urban development that could affect scenic views to, from, or within these areas.

As stated above, while the proposed General Plan does not designate official scenic vistas, the proposed General Plan states that important scenic views in the City include views of the hillside and mountain areas. In particular, the proposed General Plan recognizes El Toro Mountain as a landmark natural feature that exists in a rugged, undeveloped state. The proposed General Plan also states that the slopes surrounding the City, play a major role in shaping the City's character. In addition, the proposed General Plan includes policies that recognize that natural streamside and riparian areas serve as scenic resources. Specifically, the proposed General Plan includes the following goals, policies, and actions that would protect scenic views and other scenic resources:

<i>Goal NRE-1</i>	<i>Preservation of open space areas and natural features.</i>
Policy NRE-1.1	Natural Features. Preserve outstanding natural features, such as the skyline of a prominent hill, and rock outcroppings.
<i>Goal NRE-2</i>	<i>Preservation of hillside areas as open space and scenic features.</i>
Policy NRE-2.1	Hillside and Ridgeline Views. Protect views of hillsides, ridgelines, and prominent natural features surrounding the City. These features help define the City's historic rural character, sense of place, image and identity.
Policy NRE-2.2	El Toro Mountain as Landmark Feature. Retain the City's unique identity by preserving its landmark natural feature, El Toro Mountain.
Policy NRE-2.3	Scenic Hillside Preservation. Preserve scenic hillsides around the City in an undeveloped state, wherever feasible. Provide for retention of hillside areas as open space through the dedication and/or purchase of scenic easements and/or open space easements, transfer of development rights and other appropriate measures.
Policy NRE-2.4	Building Distance below Ridgelines. Limit all building pads located within the hillside areas to an elevation at or below the 80-foot vertical drop from the ridgeline.

AESTHETICS

Action NRE-2.A	Rural Hillsides. Limit the hillside/mountain areas to the east and west to low-intensity rural uses compatible with open space in order to maintain their integrity as the South County's major scenic and natural resources.
Action NRE-2.B	El Toro Mountain Preservation. Preserve El Toro Mountain in open space above the 500 foot contour line on all sides, with the exception of the Llagas and Paradise Valleys (where all land above the 600 foot contour elevation should be preserved).
Action NRE-2.E	Hillside Ordinance. All hillside areas with an average slope of 10 percent or greater shall be regulated by the Hillside Ordinance.
Policy NRE-5.3	Natural State of Streamside and Riparian Areas. Retain natural streamside and riparian areas in their natural state in order to preserve their value as percolation and recharge areas, natural habitat, scenic resources, and recreation corridors, and to stabilize banks.
Action NRE-5.B	Design Guidelines for Riparian Features. Develop Design Guidelines for preserving, reclaiming and incorporating riparian features into development.

New development allowed by the proposed General Plan would be designed consistent with these goals, policies, and actions.

In addition, the height of new development is restricted by the Municipal Code (for residential development) and the proposed General Plan land use designations (for mixed-use, commercial, and industrial development). The maximum height of new buildings allowed by the proposed General Plan would depend on land use, with medium-density residential uses allowed up to 30 feet, high-density residential uses allowed up to 48 feet, commercial and mixed uses generally allowed up to 35 feet, and industrial uses allowed up to 50 feet. Buildings allowed under the proposed General Plan may be taller than existing buildings in the area and could introduce new development on previously undeveloped sites. Although new buildings would have the potential to modify scenic views from viewpoints adjacent or close to development sites, the majority of the surrounding hillsides and El Toro would remain visible from east-west streets in the Downtown and other areas where there are gaps between structures due to their height and distance from the urbanized area. Therefore, impacts on scenic vistas would be *less than significant*.

Applicable Regulations:

- California Scenic Highway Program
- Santa Clara County General Plan
- Morgan Hill Municipal Code

Significance Before Mitigation: Less than significant.

Residential Development Control System

The RDCS regulates population growth through the provision of residential building allotments. The RDCS, and the proposed updates to the RDCS as part of the proposed Project, affect the pace of development in the City but do not determine the location, type, or intensity of development. Development allowed under the RDCS must comply with all applicable development requirements. Therefore, the RDCS would not

AESTHETICS

result in any physical changes that could affect scenic vistas, beyond those already identified and analyzed as part of the proposed General Plan, above, and it would have *no impact*.

Significance Before Mitigation: No impact.

AES-2	Implementation of the proposed Project would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings, within a state scenic highway.

General Plan

As stated in Section 4.1.1.1, there are no designated scenic highways in Morgan Hill or its SOI. Therefore, the proposed General Plan would have *no impact* to scenic resources within a state scenic highway.

Applicable Regulations:

- California Scenic Highway Program

Significance Before Mitigation: No impact.

Residential Development Control System

As stated above, there are no scenic highways in the Project Area. Therefore, the proposed RDSC update would have *no impact* to scenic resources within a state scenic highway.

Significance Before Mitigation: No impact.

AES-3	Implementation of the proposed Project would not substantially degrade the existing visual character or quality of the site and its surroundings.

General Plan

The proposed General Plan would have a significant impact if future development allowed by the Plan would substantially change the existing visual character in the vicinity around development sites such that the visual quality of those areas would be damaged. As described under Impact AES-1, currently undeveloped sites that are designated for development would be the locations with the greatest potential for a change in visual character under the proposed General Plan.

Undeveloped sites designated for development are scattered throughout the City and include some large areas of existing vacant land or agricultural uses. The maximum height of new buildings allowed by the proposed General Plan would range depending on land use, and buildings allowed under the proposed General Plan may be taller than existing buildings in the area and could introduce new development on

AESTHETICS

previously undeveloped sites. Architectural styles, building heights, and new parking and landscaping on parcels throughout the City where new development or redevelopment would occur under the proposed General Plan would affect the overall visual character of the City as a whole and of areas around development sites. In most cases, new development would be consistent with surrounding existing development in the Downtown and existing commercial and residential areas. However, in some areas of the City the proposed General Plan designates land for urban uses in areas that are near existing agricultural or open space areas. In these areas, new development would substantially alter the existing rural and agricultural appearance of these undeveloped areas. To some people, this change in appearance from agricultural or rural residential landscapes to land developed with attractive neighborhoods, parks, and schools would be a deterioration of the visual character, while others may consider it an improvement.

The proposed General Plan encourages the use of solar photovoltaic panels to generate energy. The proposed General Plan does not require future development to include solar photovoltaic energy and it is unknown where future photovoltaic panels would be located. However, implementation of the Plan could result in the use of more photovoltaic panels to create solar energy throughout the City. The potential for photovoltaic panels to degrade the visual character of the sites on which they are installed would depend on the placement and angle of the panels, and the materials with which the panels are composed.

The design of future projects, including the installation of solar panels, would be subject to the City's Design Review process, which is established in Section 18.74 of the City's Municipal Code and applies to residential projects with three or more units, significant non-residential development, significant expansion or modification to the exterior of an existing building, development on sensitive sites, and other projects. The design standards and guidelines against which projects are reviewed are summarized in the Architectural Review Handbook. In granting a Design Review permit, the City must make the following findings:

- The proposed construction/alterations are in substantial conformance with the General Plan, zoning ordinance, and any applicable plans adopted by the City.
- The proposed construction/alteration is in substantial conformance with all applicable design standards and guidelines, as contained in the Design Review Handbook.
- The construction/alteration will not have significant adverse effects on the public health, safety, and welfare.

In addition, the proposed General Plan includes several goals, policies, and actions that promote high-quality design that would preserve and/or enhance visual quality as new development occurs. For example, the proposed General Plan includes the following goals, policies, and actions that promote high-quality design techniques:

Goal CNF-8

A visually attractive urban environment.

Policy CNF-8.1

High Quality Design. Require all development to feature high quality design that enhances the visual character of Morgan Hill.

AESTHETICS

Policy CNF-8.2	Design Features. Encourage design features and amenities in new development and redevelopment, including, but not limited to: ▪ Highly connected street layouts, supporting multiple paths of travel for all modes. ▪ Cluster buildings to create useable open space. ▪ Abundant landscaping. ▪ Attractive transitions between uses. ▪ Comfortable pedestrian facilities that promote a high level of pedestrian activity. ▪ Distinctiveness and variety in architectural design.
Policy CNF-8.4	Architectural Quality. Optimize architectural quality by encouraging the use of quality materials, particularly as accents and authentic detailing, such as balconies and window trims.
Policy CNF-8.5	Building Façade. On all sides of buildings, require the incorporation of quality architectural design elements for all building façades and stepping back upper floors in order to reduce bulk and mass and to break up monotonous wall lines.
Policy CNF-8.12	Visual Impact of Parking. Require parking areas associated with development to be located and designed to minimize visual impact to the greatest extent feasible. This may include locating parking behind buildings street frontage, below grade, or screening through the use of natural landscaping.
Action CNF-8.A	Architectural Review Handbook. Update the Architectural Review Handbook as needed to reflect newly emerging design best practices.

The proposed General Plan includes the following policies that apply specifically to the design of new residential development:

Goal CNF-11	<i>High quality, aesthetically pleasing, livable, sustainable, well-planned residential neighborhoods, well-connected to neighborhood services.</i>
Policy CNF-11.2	Well-designed Residential Neighborhoods. Design residential neighborhoods so they are distinct and buffered from conflicting non-residential uses.
Policy CNF-11.10	Open Space. Require new subdivisions to feature integrated common open spaces, parks, and community facilities that serve as social and design focal points. Open spaces should be a close walking distance from all residents and should be large enough to be useful for residents.
Policy CNF-11.12	Design Variation. Require new residential subdivisions to feature variation in lot and building design to create visually interesting and distinctive neighborhoods. This may be accomplished by: ▪ Limiting repetition of home models, particularly on adjacent lots. ▪ Utilizing a cohesive architectural theme but incorporating variation in architectural details. ▪ Providing variation in one and two-story building elements. ▪ Providing variation in front, side, and rear setbacks. ▪ Providing variation in the width and size of lots.
Policy CNF-11.22	Minimized Mass and Scale. Minimize the perceived mass and scale of attached single-family homes and multi-family housing to appear consistent with Morgan Hill's small town residential character. This may be accomplished by: ▪ Breaking larger buildings up into multiple masses and adding visual breaks in building volumes. ▪ Providing separation between individual buildings within a single project. ▪ Including paseos, courtyards, plazas and other forms of open space that help to break up building mass. ▪ Utilizing landscaping that helps to soften the visual impact of larger buildings.

AESTHETICS

- Policy CNF-11.23 **Individual Units.** Require attached single-family homes and multi-family housing to appear as individual residences or small groups of units. This can be accomplished by:
- Incorporating separate building volumes or façade protrusions.
 - Utilizing window bays or balconies, porches, and entrance vestibules.
 - Providing individual roof volumes, variation in roof heights, and other roof articulation.
 - Adding variation in building colors and materials.
 - Including narrow façade widths.

The proposed General Plan includes the following policies that apply specifically to the design of new non-residential development:

- Policy CNF-8.9 **Commercial Landscaping.** Encourage new commercial development to provide outdoor areas and landscaping and tree canopy to enhance the surroundings.
- Policy CNF-17.5 **Industrial Design Standards.** Require all new industrial development to be consistent with the design and landscaping standards set forth in the Architectural Review Handbook.

As new development allowed by the proposed General Plan is built, the relationship between new development and existing nearby land uses could degrade the visual character if new development is not designed to be sensitive to its setting. The proposed General Plan includes the following goals and policies that promote visual compatibility between existing and new development:

- Policy CNF-8.3 **Changes in Building Scale.** Discourage abrupt changes in building scale. A gradual transition between low-rise to mid-rise buildings should be achieved by using the low-rise buildings at the edge of the project site. Consider the relationship of buildings to the street, to one another and to adjacent structures and land uses.
- Policy CNF-8.7 **Design Sensitivity.** Ensure that new development is sensitive to the character of adjacent structures and the immediate neighborhood.
- Goal CNF-9 Appropriate transitions between urban land uses and surrounding undeveloped areas.*
- Policy CNF-9.1 **Density Feathering from High to Low Densities.** Encourage feathering from higher urban densities to lower rural densities to occur within the City limits. Feathering should begin as development nears the Urban Growth Boundary.
- Policy CNF-9.2 **Density Feathering West of Highway 101.** West of Highway 101 and north of the Madrone Industrial Park, feather residential uses toward the northern Sphere of Influence boundary with San Jose.
- Policy CNF-9.3 **Density Feathering in South Morgan Hill.** Maintain existing residential feathering south of Watsonville Road and west of Monterey Road.
- Policy CNF-11.20 **Infill Compatibility.** Require residential infill development to complement existing development patterns and minimize impacts on neighboring properties. This may be accomplished by:
- Matching prevailing front and side setbacks on developed blocks.
 - Breaking up large buildings into smaller forms reflective of the scale of nearby structures.
 - Stepping back upper stories of taller structures.
 - Using porches or balconies to counteract the vertical emphasis of taller buildings.
 - Using trees and landscaping to soften scale differences, particularly in areas where trees and vegetation are unifying aspects of community character.

AESTHETICS

Policy CNF-13.2	Density Feathering. Encourage the feathering of land use densities and intensities from high to low along Monterey Road with higher intensity land uses located adjacent to Downtown.
Policy CNF-18.3	Compatible Industrial Uses. Require Planned Unit Development zoning for the industrial and/or commercial development along the side of Highway 101 (south of Cochrane Road and north of Diana Avenue) and the area west of Highway 101 and south of Tennant Avenue to ensure that issues such as circulation, allowable uses, neighborhood compatibility and development standards are properly addressed.
Policy CNF-18.4	Commercial/Industrial Area East of Highway 101. Require the commercial/ industrial area east of Highway 101 to develop in no more than three PUDs. The boundary between the PUDs, should two or three be proposed, would be Half Road and Main Avenue. The PUDs will need to address such issues as traffic circulation, design, allowable uses and impacts on surrounding areas. Mitigation of impacts on nearby residential areas shall be a high priority in planning for and development of the PUDs. Allowable uses within these PUDs shall include, in addition to industrial uses, retail services, lodging, medical facilities, hospitals, and educational facilities.

New development allowed by the proposed General Plan would be designed consistent with these goals, policies, and actions, as well as the design review requirements of the City's Architectural Review Handbook. Adherence to these policies and standards would ensure that new development is designed to be compatible with existing development and uses high-quality building materials and design techniques. Therefore, new development would not degrade the existing visual character and impacts would be *less than significant*.

Applicable Regulations:

- City of Morgan Hill Municipal Code Chapter 18.74
- Morgan Hill Architectural Review Handbook

Significance Before Mitigation: Less than significant.

Residential Development Control System

The RDCS regulates population growth through the provision of residential building allotments. The RDCS, and the proposed updates to the RDCS as part of the proposed Project, affect the pace of development in the City but do not determine the location, type, or intensity of development. Development allowed under the RDCS must comply with all applicable development requirements, including the City's Design Review process. Furthermore, the proposed RDCS competition standards would award points to projects based in part on the quality of their design and visual appearance, resulting in a positive rather than a negative impact on Morgan Hill's visual character. Therefore, the RDCS would not result in any physical changes that could affect visual quality and it would have *no impact*.

Significance Before Mitigation: No impact.

AESTHETICS

AES-4	Implementation of the proposed Project would not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

General Plan

The proposed General Plan would have a significant impact if future development allowed by the Plan would create new sources of light or glare that would adversely affect day or nighttime views. The proposed General Plan is a policy document that provides direction for future development but does not propose the construction of any specific physical improvements or development projects that would include substantial sources of new lighting or glare. New lighting from new development allowed by the proposed General Plan would come mainly from commercial areas, safety lighting, building-mounted lights, illuminated signage, parking lot and street lights, and traffic on major arterials. New glare would come mainly from building materials and parked cars.

Nighttime uses associated with development allowed by the proposed General Plan may increase light intensity levels in development areas and may have the potential to affect existing and future nearby sensitive receptors. If lighting in new development is not designed to reduce upwardly directed light, nighttime lighting could obscure views of the night sky or intrude into neighboring properties. Improperly designed lighting could also contribute to light pollution that would interfere with Lick Observatory's operations. Future development allowed by the proposed General Plan would also incrementally increase glare due to the new building surfaces and parked cars.

The proposed General Plan would allow redevelopment throughout the City that would involve uses similar to Morgan Hill's existing downtown, suburban, and rural uses. Sources of light and glare associated with these uses would be similar in intensity and nature to the existing source of light and glare associated with existing downtown, suburban and rural residential uses.

The proposed General Plan includes the following policies and action related to nighttime lighting:

Policy CNF-8.20	Nighttime Lighting. Require nighttime lighting to be designed to minimize light spillage to adjacent properties.
Policy CNF-8.21	Nighttime Lighting Technology. Require nighttime lighting to use current lighting technology to minimize lighting intensity and be down-shielded to reduce light pollution.
Action CNF-8.B	Low Pressure Sodium Lighting. Revise the Morgan Hill Architectural Review Handbook to require exterior parking lot, building, roadway, and pedestrian lighting to be low-pressure sodium and employ full-cutoff fixtures of directional shielding.
Action CNF-8.C	Parking Lot Lighting Efficiency Retrofit Ordinance. Develop a parking lot lighting retrofit ordinance requiring property owners or managers to replace inefficient parking lot or parking structure lighting with high-efficiency lighting technologies where feasible.

The proposed General Plan also encourages the use of solar photovoltaic panels and it is unknown where future photovoltaic panels would be located. The potential for glare impacts as a result of photovoltaic panels would depend on the placement and angle of the panels, and the materials with which the panels are composed.

The design of future projects, including the installation of solar panels, would be subject to the City's Design Review process, which applies to residential projects with three or more units, significant non-residential development, significant expansion or modification to the exterior of an existing building, development on sensitive sites, and other projects. As part of this process, future development would be reviewed for consistency with the City's Architectural Review Handbook, which includes standards and guidelines regarding the appropriate use of lighting and avoidance of glare from lighting and other sources. Development would also be required to be consistent with the California Building Code standards for outdoor lighting, which are intended to reduce light pollution and glare by regulating light power and brightness, shielding, and sensor controls. Adherence to these standards and guidelines would ensure that lighting is shielded to avoid glare and light spillage and incorporates technologies such as timers to avoid excessive lighting. Therefore, impacts would be *less than significant*.

Applicable Regulations:

- California Building Standards Code.
- City of Morgan Hill Municipal Code Section 8.08.240
- City of Morgan Hill Municipal Code Section 18.48.045
- City of Morgan Hill Municipal Code Chapter 15.40
- City of Morgan Hill Municipal Code Chapter 18.74
- City of Morgan Hill Municipal Code Chapter 18.78
- Morgan Hill Architectural Review Handbook

Significance Before Mitigation: Less than significant.

Residential Development Control System

The RDCS regulates population growth through the provision of residential building allotments. The RDCS, and the proposed updates to the RDCS as part of the proposed Project, affect the pace of development in the City but do not determine the location, type, or intensity of development. Development allowed under the RDCS must comply with all applicable development requirements, including the City's Design Review process and lighting requirements. Therefore, the RDCS would not result in any physical improvements that could generate substantial sources of light and glare and it would have *no impact*.

Significance Before Mitigation: No impact.

AESTHETICS

4.1.4 CUMULATIVE IMPACTS

AES-5	Implementation of the proposed Project would not contribute to cumulative aesthetics impacts in the area.

As discussed in Chapter 4, Environmental Evaluation, this EIR takes into account potential future development under the proposed General Plan, combined with effects of development on lands within the Greenbelt Areas defined on Figure NRE-1 of the proposed General Plan adjacent to the Project Area within the unincorporated areas of Santa Clara County to the west, east, north, and south. As described in the discussion of Impacts AES-1 through AES-4, the RDCS update would not contribute to increased development in the Project Area and would have no aesthetics impact. Therefore, the RDCS update would not have the potential to contribute to cumulative aesthetics impacts and this discussion focuses on the potential cumulative impacts of the proposed General Plan.

There are no designated scenic highways within the Project Area. Therefore, the proposed General Plan would not have the potential to affect scenic highways or contribute to cumulative impacts to scenic highways.

Some future development allowed by the proposed General Plan would have the potential to block scenic vistas or change the visual character where currently undeveloped lands would be designated for urban uses. The locations where the proposed General Plan would allow urban uses on sites that are currently undeveloped are scattered throughout the Project Area in low-lying, suburban or areas of the Project Area adjacent to existing developed areas. The existing and proposed General Plan identify a Greenbelt to physically define the City and separate it from San Jose and San Martin, and the proposed General Plan does not designate any lands within the Greenbelt for urban development. In addition, the proposed General Plan includes goals, policies, and actions to protect scenic views and visual character. Development in adjacent lands in unincorporated areas and in San Jose would similarly have the potential to introduce urban land uses that would block currently uninterrupted scenic views or adversely affect the existing visual character. Therefore, although the proposed General Plan's impacts to scenic vistas and visual character would be less than significant, the proposed General Plan, considered along with development in adjacent lands, could contribute to a significant cumulative impact if uses in the City as well as adjacent lands would together create a significant impact to scenic vistas or visual character.

Development in unincorporated Santa Clara County would be subject to the County's General Plan and development requirements. The Santa Clara County General Plan preserves much of the existing undeveloped lands for open space and agricultural uses and promotes a preserved greenbelt in the Coyote area between Morgan Hill and San Jose. However, the County General Plan does allow some uses that could result in visual impacts in rural lands. The County General Plan EIR finds that potential visual impacts in

these areas would be limited to golf course courses and agricultural uses, and includes mitigation measures that reduce significant impacts to less-than-significant levels.⁵

Development in San Jose would be subject to the City of San Jose's General Plan and development requirements. The Envision San José 2040 General Plan includes policies that would be sufficient to protect most scenic views. However, buildout in the Communications Hill Specific Plan and North Coyote Planning Area could alter or block views of grassy or wooded hillsides. The Envision San José 2040 General Plan EIR finds that this would be a significant unavoidable visual impact.⁶ Neither the Communications Hill Specific Plan area nor the North Coyote Planning Area are adjacent to the Project Area and therefore both of these areas are outside of the cumulative setting for this analysis. Therefore, the proposed General Plan would not contribute to this impact. In addition, the proposed General Plan identifies the southern portion of the Coyote area as Greenbelt, where the Envision San José 2040 General Plan would preserve agricultural uses and hillsides. This area would serve as a buffer between allowed urban uses in the North Coyote Planning Area and north Morgan Hill and would preserve scenic views in adjacent lands north of Morgan Hill.

Future development allowed by the proposed General Plan would also generate new sources of light and glare. New development in Morgan Hill, along with development in adjacent lands in unincorporated areas and San Jose, would have the potential to together create light pollution impacts that would affect operations at Lick Observatory. The design of future projects in Morgan Hill would be subject to the City's Design Review process and proposed General Plan policies, which would ensure that lighting is designed to avoid glare, light spillage, and excessive lighting. Therefore, the proposed General Plan would not contribute to potential cumulative impacts from lighting and glare.

Development allowed by the proposed General Plan would not contribute to cumulative impacts to scenic vistas, scenic highways, visual character, or light and glare. Therefore, the cumulative impact would be *less than significant*.

Applicable Regulations:

- Santa Clara County General Plan
- Envision San José 2040 General Plan
- City of Morgan Hill Municipal Code Chapter 18.74

Significance Before Mitigation: Less than significant.

⁵ Santa Clara County, 1994, Santa Clara County General Plan Draft Environmental Impact Report, pages 5H-9 through 5H-13.

⁶ City of San José, 2011, Envision San José 2040 General Plan, page 739.

AESTHETICS

4.1.5 SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION MEASURES

The project would not result in any significant project-specific or cumulative impacts to aesthetics and visual resources and therefore no mitigation measures are required.

4.1.6 FULL BUILDOUT

The full buildout anticipated under the proposed Project would include significantly more non-residential development than the 2035 horizon-year development projection analyzed in Section 4.1.3, Impact Discussion, in terms of both the amount and the extent of development. Therefore, the potential for impacts related to aesthetics would increase. However, as discussed in Chapter 3, Project Description, it is extremely unlikely that full buildout would ever occur under the proposed Project. Therefore, an analysis of full buildout is not required by CEQA.

AGRICULTURE AND FORESTRY RESOURCES

4.2 AGRICULTURE AND FORESTRY RESOURCES

This chapter contains information about agriculture and forest resources in the proposed Project. It provides an overview of the current regulatory framework, describes existing conditions, and analyzes potential impacts related to agriculture and forest resources that would result from implementation of the proposed Project.

4.2.1 ENVIRONMENTAL SETTING

4.2.1.1 REGULATORY FRAMEWORK

This section summarizes existing state and local laws, policies, programs and regulations that apply to agricultural resources in Morgan Hill.

State Regulations and Programs

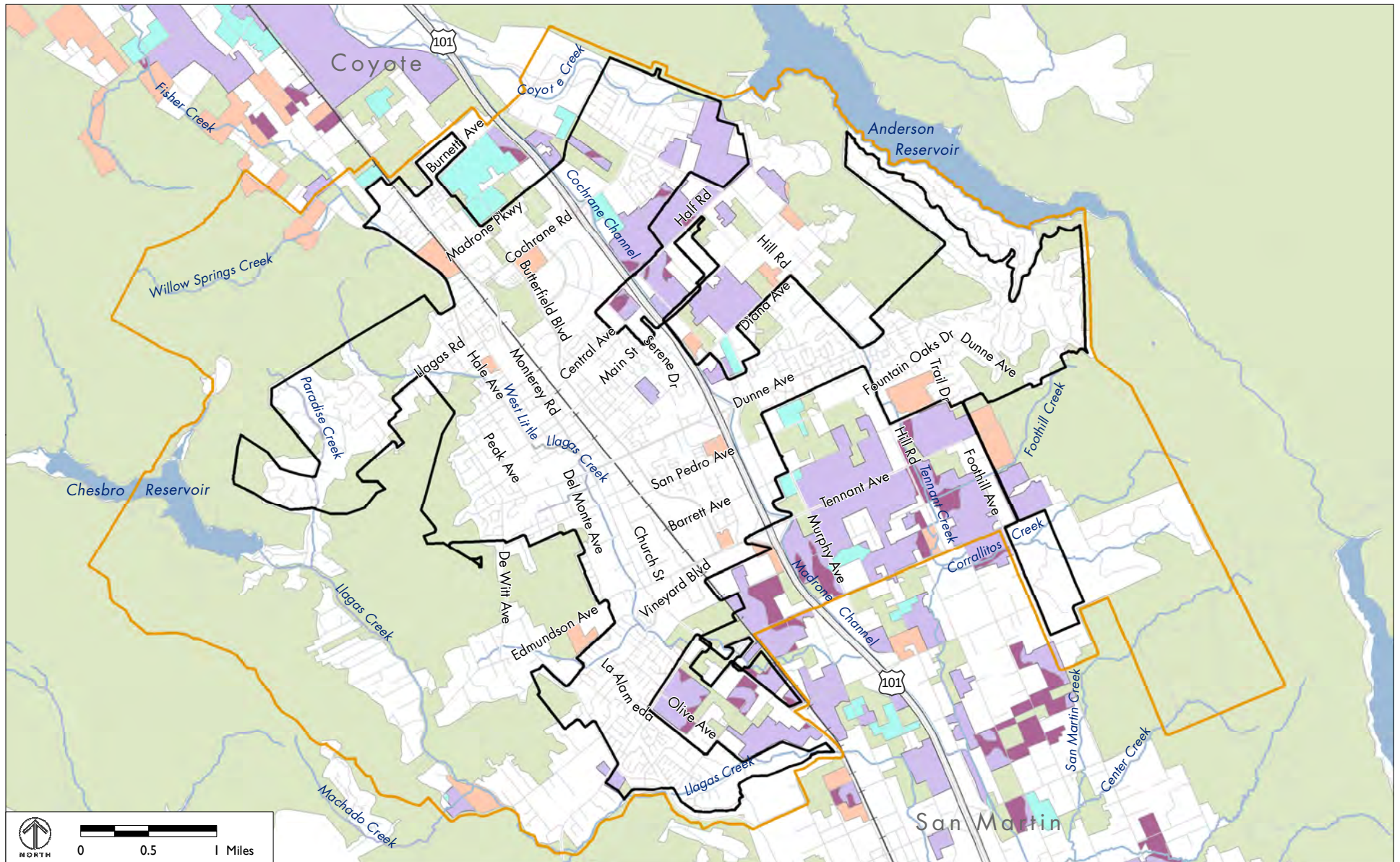
State regulations and programs pertaining to agricultural resources are discussed in this section.

Farmland Mapping and Monitoring Program

Within the California Natural Resources Agency, the state Department of Conservation (DOC) manages the Farmland Mapping and Monitoring Program (FMMP), which supports agriculture throughout California by developing maps and statistical data for analyzing land use impacts to farmland. Every two years, FMMP publishes a field report for each county in the state. The most recent field report for Santa Clara County was published in 2012. FMMP information for Morgan Hill is displayed in Figure 4.2-1. The field report categorizes land by agricultural production potential, according to the following classifications:

- **Prime Farmland** has the best combination of physical and chemical features able to sustain long-term agricultural production. Prime farmland has the soil quality, growing season, and moisture supply needed to produce sustained high yields. Land must have been used for irrigated agriculture production at some time during the four years prior to the mapping date.
- **Farmland of Statewide Importance** is similar to prime farmland, but with minor shortcomings, such as steeper slopes or less ability to store soil moisture. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.
- **Unique Farmland** consists of lesser quality soils used for the production of the state's leading agricultural crops. This land is usually irrigated, but may include non-irrigated orchards or vineyards as found in some climatic zones in California. Land must have been farmed at some time during the four years prior to the mapping date.
- **Grazing Land** is the land on which the existing vegetation is suited to the grazing of livestock.

AGRICULTURE AND FORESTRY RESOURCES



Source: City of Morgan Hill, 2013; California Department of Conservation, Farmland Mitigation Mapping Program, 2012

 Prime Farmland	 Unique Farmland	 Sphere of Influence
 Farmland of Statewide Importance	 Grazing Land	 City Boundary
 Farmland of Local Importance		

Figure 4.2-1

Important Farmland

AGRICULTURE AND FORESTRY RESOURCES

- **Urban and Built-Up Land** is occupied by structures with a building density of at least one unit per 1.5 acres, or approximately six structures to a 10-acre parcel. Common examples include residential structures, industrial structures, commercial structures, institutional facilities, cemeteries, airports, golf courses, sanitary landfills, sewage treatment structures, and water control structures.
- **Other Land** is land not included in any other mapping category. Common examples include low density rural developments, brush, timber, wetlands, riparian areas not suitable for livestock grazing, confined livestock, poultry facilities, aquaculture facilities, and strip mines. Vacant and nonagricultural land surrounded on all sides by urban development and greater than 40 acres is mapped as other land.
- **Water** is used to describe perennial water bodies with an extent of at least 40 acres.

California Land Conservation Act (Williamson Act)

The California Land Conservation Act of 1965, also known as the Williamson Act, provides tax relief for landowners who preserve their agricultural and open space property under Williamson Act contracts. Under contract, the tax on a Williamson Act property is assessed at a rate consistent with its actual use, rather than the potential value.¹ These contracts run for 10 years, are automatically renewable on an annual basis, and may be terminated by the initiative of either the property owner or the legislative body. There is both prime agricultural and non-prime agricultural land that is contracted under the Williamson Act in Morgan Hill's SOI. Figure 4.2-2 shows the distribution of Williamson Act contracts in Santa Clara County.

Public Resources Code Section 12220(g)

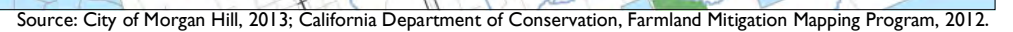
This section of the Public Resources Code defines “forest land” for the purposes of CEQA. According to the Code, “forest land” is land that can support 10-percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water-quality, recreation, and other public benefits.

Government Code Section 51104(g)

This section of the Government Codes defines “Timber,” “Timberland,” and “Timberland Production Zone” for the purposes of CEQA and “Timberland Preserve Zone,” which may be used in city and county General Plans.

(e) “Timber” means trees of any species maintained for eventual harvest for forest production purposes, whether planted or of natural growth, standing or down, on privately or publicly owned land, including Christmas trees, but does not mean nursery stock.

¹ For fiscal years 2010, 2011, and 2012, the State of California has suspended the payments it makes to local jurisdictions to make up for the local property tax revenue foregone due to Williamson Act contracts.



Williamson Act Contracts

AGRICULTURE AND FORESTRY RESOURCES

(f) “Timberland” means privately owned land, or land acquired for state forest purposes, which is devoted to and used for growing and harvesting timber, or for growing and harvesting timber and compatible uses, and which is capable of growing an average annual volume of wood fiber of at least 15 cubic feet per acre.

(g) “Timberland Production Zone” or “TPZ” means an area which has been zoned pursuant to Section 51112 or 51113 and is devoted to and used for growing and harvesting timber, or for growing and harvesting timber and compatible uses, as defined in subdivision (h). With respect to the general plans of cities and counties, “Timberland Preserve Zone” means “Timberland Production Zone.”

Regional Regulations

Santa Clara County General Plan

The Santa Clara County General Plan, adopted in December 1994, is a long-range guide for the future of land use in the unincorporated areas of the county. Even though the Santa Clara County General Plan policies do not affect projects within the Morgan Hill City limit, there are areas within the Morgan Hill General Plan planning area that currently fall within County jurisdiction. These are areas that are within the Morgan Hill sphere of Influence (SOI) but outside of the Morgan Hill City limit. Santa Clara County General Plan policies apply to these areas unless they become annexed into the City.

The Santa Clara County General Plan contains several policies and implementation programs that apply to agricultural resources. Policies addressing agricultural preservation are located in the Resource Conservation Chapter. These policies aim to preserve agricultural land and improve the economic viability of agricultural operations. The following policies currently apply to unincorporated portions of Santa Clara County:

- C-RC 37 – Agriculture should be encouraged and agricultural lands retained for their vital contributions to the overall economy, quality of life, and for their functional importance to Santa Clara County, in particular:
 - local food production capability;
 - productive use land not intended for urban development; and
 - protection of public health and safety.
- C-RC 38 – General public awareness and understanding of the importance of agriculture and the goals of agricultural preservation should be encouraged countywide.
- C-RC 39 – Adequate inventories, mapping and monitoring of the agricultural land supply should be provided, and consistent definitions of agricultural land, forms of measurement, and monitoring between state and local governments encouraged.²

Land Use policies in the County General Plan also address agricultural uses:

² Santa Clara County, 1994, Santa Clara County General Plan, Resource Conservation, pages H-29 – H-30.

AGRICULTURE AND FORESTRY RESOURCES

- R-LU 8 - Santa Clara County is enriched by a special combination of the very finest soils, a very favorable, dependable growing climate, and generally adequate water supplies. Lands in agricultural uses contribute to the economy and quality of life enjoyed by county residents. This combination of factors makes it highly desirable that certain lands be preserved for their intrinsic value as agricultural land and for productive agricultural land uses.
- R-LU 9 - For those areas of greatest long term viability for agriculture and highest quality soils, permanent preservation as agricultural land is the ultimate goal. Other areas are designated 'Agriculture' in order to: a. encourage productive use of lands not currently planned for city development, or b. preserve lands in agricultural uses where physical limitations, such as frequent flooding or high ground water conditions, make them unsuitable for other uses. (see also Resource Conservation chapter, "Agriculture" section)
- R-LU 10 - Lands designated 'Agriculture' include those having Class I, II, and III soils which generally have been in agricultural production and where agricultural uses are most appropriate. Allowable Uses R-LU 11 Allowable land uses shall be limited to: a. agriculture and ancillary uses; b. uses necessary to directly support local agriculture; and c. other uses compatible with agriculture which clearly enhance the long term viability of local agriculture and agricultural lands.
- R-LU 12 - No use permit or other application may be approved for the purpose of establishing a golf course/country club with the "agricultural preserve," consisting of those lands designated "Agriculture-Large Scale" south and east of the city of Gilroy.
- R-LU 13 - Prior to making a decision as to whether to approve any golf course that might be proposed on lands designated "Agriculture" outside of the "agricultural preserve," the County shall conduct a study to establish specific policies and criteria for the development of golf courses within agricultural areas. The study should evaluate environmental and land use impacts including but not limited to: a. compatibility with agriculture; b. effects on prime soils; c. water supply and quality issues; d. public service and infrastructure demands; and e. growth-inducing potential.
- R-LU 14 - For areas designated 'Agriculture-Large Scale,' minimum parcel sizes shall be no less than 40 acres.
- R-LU 15 - For areas designated 'Agriculture-Medium Scale,' minimum parcel sizes shall be no less than 20 acres.

LAFCO Agricultural Mitigation Policies

The Santa Clara Local Agency Formation Commission (LAFCO) agricultural mitigation policies provide guidance to property owners with LAFCO applications who propose the conversion of prime agricultural lands (as defined by LAFCO) into non-agricultural uses. Agricultural mitigation options recommended by LAFCO include:

- "Proposals involving the conversion of prime agricultural lands should provide one of the following mitigations at a not less than 1:1 ratio (1 acre preserved for every acre converted) along with the

AGRICULTURE AND FORESTRY RESOURCES

payment of funds as determined by the City/agricultural conservation entity (whichever applies) to cover the costs of program administration, land management, monitoring, enforcement and maintenance of agriculture on the mitigation lands:

- a. The acquisition and transfer of ownership of agricultural land to an agricultural conservation entity for permanent protection of the agricultural land.
 - b. The acquisition and transfer of agricultural conservation easements to an agricultural conservation entity for permanent protection of the agricultural land.
- The payment of in-lieu fees to an agricultural conservation entity that are sufficient to fully fund:³
1. The cost of acquisition of agricultural lands or agricultural conservation easements for permanent protection, and
 2. The cost of administering, managing, monitoring and enforcing the agricultural lands or agricultural conservation easements, as well as the costs of maintaining agriculture on the mitigation lands.⁴

To prevent potential conflicts between agricultural lands and urban uses, LAFCO encourages the establishment of an agricultural buffer on the project site, adoption of Right to Farm ordinances (which Morgan Hill has done, as described below), and other programs that support the preservation of agricultural land. LAFCO reviews agricultural mitigation programs for specific development proposals. In addition, LAFCO encourages that agricultural mitigation be in place at the time of LAFCO approval.

Santa Clara County Code

Division C13, Land Preservation Contracts, Article 2, Agricultural Preserves

This section of the Santa Clara County Code sets out the requirements for establishing, disestablishing and altering the county agricultural preserves. The county agricultural preserves define the boundaries of those areas within the county that contain lands eligible for consideration for contracts pursuant to the Williamson Act. The establishment, disestablishment or alteration of an agricultural preserve is a legislative act that requires approval by resolution of the Board of Supervisors. This section provides the criteria for establishing, disestablishing or altering agricultural preserves as well as related procedural requirements.

³ With provisions for adjustment of in-lieu fees to reflect potential changes in land values at the time of actual payment

⁴ Local Agency Formation Commission of Santa Clara County, 2007, Agricultural Mitigation Policies, http://www.santaclaralafco.org/images/pdf_files/policies&procedures1/Agricultural%20Mitigation%20Policies.pdf, accessed August 28, 2015.

AGRICULTURE AND FORESTRY RESOURCES

Division B29, Agriculture and Resource Management, Chapter 1, Agricultural Rights, Disclosure and Dispute Resolution

This section of the County Code finds that commercially viable agricultural land exists within the County, and that it is in the public interest to enhance and encourage agricultural operations within the County. The Board of Supervisors of Santa Clara County also finds that residential and commercial development adjacent to certain agricultural lands often leads to restrictions on agricultural operations to the detriment of the adjacent agricultural uses and the economic viability of the County's agricultural industry as a whole. The purpose of the chapter is to promote public health, safety and welfare and to support and encourage continued agricultural operations in the County. Furthermore, this chapter establishes that “no agricultural activity, operation, or facility or appurtenances thereof, conducted or maintained for commercial purposes, and in a manner consistent with proper and accepted customs and standards and with all chapters of the Santa Clara County Code, as established and followed by similar agricultural operations, shall be or become a nuisance, public or private, pursuant to the Santa Clara County Code, if it was not a nuisance when it began.”⁵

City Regulations and Policies

Morgan Hill Municipal Code

Chapter 8.50 Right-to-Farm

Similar to Division B29 from the County Code of Regulations discussed above, the City established its Right-to-Farm ordinance to protect the continued operation of agricultural land within the City limit. Whenever property is sold, transferred, exchanged, or leased, the property owner is required to have the purchaser sign a disclosure statement to acknowledge the City’s support of agricultural operations. The ordinance also includes a system to resolve disputes associated with agricultural operations and adjacent uses.

Chapter 12.32 Restrictions on Removal of Significant Trees

This section of the Morgan Hill Municipal Code makes it unlawful for any person to cut down, remove, poison or otherwise kill or destroy, or cause to be removed any tree or community of trees on any City or private property without first securing a permit. The requirements of this chapter pertain to trees with a single stem or trunk of a circumference of forty inches or more for nonindigenous species and eighteen inches or more for indigenous species measured at four and one-half feet vertically above the ground or immediately below the lowest branch, whichever is lower, and having the inherent capacity of naturally producing one main axis continuing to grow more vigorously than the lateral axes.

⁵ Santa Clara County, Santa Clara County Code of Ordinances, Division B29 – Agriculture and Resource Management, Chapter 1, Agricultural Rights, Disclosure and Dispute Resolution, Section B29-3, Nuisance.

AGRICULTURE AND FORESTRY RESOURCES***Morgan Hill Agricultural Lands Preservation Program and Agricultural Mitigation Ordinance***

The City of Morgan Hill has adopted an Agricultural Lands Preservation Program to provide a program to encourage the preservation and enhancement of open space/agriculture while identifying certain properties for compatible development with sports, recreation, and leisure uses. The project included boundary adjustments to an area in Morgan Hill referred to as the Southeast Quadrant (SEQ) and allows for the development of a portion of the SEQ area, while ensuring that agricultural activity and open space is maintained and permanently preserved in the SEQ area and citywide.

The project established CEQA mitigation procedures to mitigate the loss of agricultural lands. Mitigation for the loss of farmland includes payment of an agricultural mitigation fee, acquisition of other agricultural land, or dedication of a permanent agricultural conservation easement on agricultural land and payment of a fee to cover ongoing management and monitoring activities. Mitigation is required at a ratio of 1:1 (meaning one acre of in-perpetuity farmland preservation (along with necessary funding for stewardship and program administration) for each acre of farmland development/conversion). The program encourages dedications of conservation easements within the Study Area, with particular emphasis on the lands within the SEQ area.

Table 4.2-1 shows the cost breakdown of the Agricultural Mitigation In-Lieu Fee to acquire an Agricultural Conservation Easement within the Study Area, as well as outside of the City's SOI. This program is pending approval by the City.

4.2.1.2 EXISTING CONDITIONS

Like most cities in Santa Clara County, Morgan Hill was built on agricultural land. Agriculture is still an important asset to the region, as evident by surrounding vineyards, which boost the region's economy and tourism industry. However, local farmers who participated in the Morgan Hill 2035 process also described a number of constraints on the continued long-term viability of agriculture within the City's UGB. Existing orchards and vineyards are experiencing urban encroachment that adversely affects the efficiency of farming operations due to restrictions on pesticide use, noise and dust complaints, trespass, vandalism, and theft. These conflicts, combined with rising costs of production, water, insurance, and transportation, make it difficult for crops raised in the Morgan Hill area to compete economically with crops raised in less constrained locations.

Important Farmland

Agricultural land can be found within the Morgan Hill City limit and within the SOI. A significant amount of agricultural land occurs outside of the Morgan Hill City limit and within the Project Area. The farmland data from California Department of Conservation (DOC) provide a broad picture of the agricultural resources in Morgan Hill, which includes prime farmland, farmland of statewide importance, farmland of local importance, unique farmland, and grazing land. However, the Department of Conservation's data reflect conditions as of 2012. Since the time the state published the data, some limited pieces of land may

AGRICULTURE AND FORESTRY RESOURCES

TABLE 4.2-1 AGRICULTURAL MITIGATION IN-LIEU FEE PER DEVELOPED/CONVERTED ACRE

Fee Type	Fee Component	Fee Level (1:1 Mitigation Ratio)
Land Fee	Easement Acquisition	\$12,750
	Transaction Costs ^a	\$255
	City Fee Program Admin ^b	\$255
Subtotal		\$13,260
Monitoring/Outreach Fee	Stewardship ^c	\$1,665
	City Fee Program Admin ^b	\$35
TOTAL MITIGATION FEE		\$14,960

a. Easement transactions costs assumed at average of 2.0 percent per transaction.

B, Cost to City administering fee program, including collection, reporting, and updating costs estimated at additional 2.0 percent of base cost for each fee program element (i.e. easement acquisition; monitoring/outreach).

c. Represents sufficient funding to generate an average of about \$50 per acre per annum in perpetuity in interest payment.

Source: Economic & Planning Systems, Inc. (EPS), December 2013, Technical Memorandum: Draft Morgan Hill Agricultural Mitigation Fee Nexus Study.

have been developed or may now be under development review. Nevertheless, the data provide a broad picture of the agricultural resources within Morgan Hill today.

As evident in both Figure 4.2-1 and Table 4.2-2, the majority of agricultural land within the Study Area is classified as grazing land. As shown in Figure 4.2-1, most of the prime farmland is located on the eastern side of the Study Area, east of Highway 101. Additionally, the SEQ, described above contains several contiguous parcels that are designated as Prime Farmland.

Table 4.2-2 lists the number of acres within the Project Area in each classification.

Williamson Act Contracts

The Williamson Act is one of the most widely used agricultural easement programs in the Project Area, Santa Clara County, and the state of California. There are active Williamson Act contracts on both prime and non-prime farmland within the Project Area. These areas are shown in Figure 4.2-2. There are a total of 1,703 acres of land that are under on-going Williamson act contracts that are within the Project Area. Additionally, a total of 765 acres of land within the Project Area have non-renewal Williamson act parcels. Among the 1,703 acres of land that are under on-going Williamson act contracts and within the Project Area, 586 acres are also defined as Prime Farmland, Farmland of Statewide Importance, Farmland of Local Importance, Unique Farmland, or Grazing Land by the Farmland Mapping and Monitoring Program. A total

AGRICULTURE AND FORESTRY RESOURCES**TABLE 4.2-2 AGRICULTURAL LANDS WITHIN MORGAN HILL SOI**

Farmland Classification	Within City Limit (Acres)	Total (Acres)
Prime Farmland	314	1,386
Farmland of Statewide Importance	22	196
Farmland of Local Importance	153	346
Unique Farmland	30	234
Grazing Land	1,265	7,686

Source: Source: Department of Conservation, Farmland Mapping and Monitoring Program GIS data, 2012.

of 153 acres land within the Project Area are under Williamson Act contracts are designated as Prime Farmland by the Farmland Mapping and Monitoring Program.^{6,7}

Forestry Resources

There are not any portions of the Project Area that contain forest or timber resources zoned as such. However, isolated woodlands that could fall under California Public Resource Code Section 12220(g) are scattered throughout the Project Area according to 2015 mapping data from the California Department of Forestry and Fire Protection (CAL FIRE).⁸ These woodlands are primarily located in the vicinity of the Chesbro Reservoir. CAL FIRE data also shows greater concentrations of woodlands beyond the Project Area, to the east and west. 2015 CAL FIRE data related to forestry resources is shown in Figure 4-2.3.

4.2.2 STANDARDS OF SIGNIFICANCE

The proposed Project would result in a significant agricultural resources impact if it would:

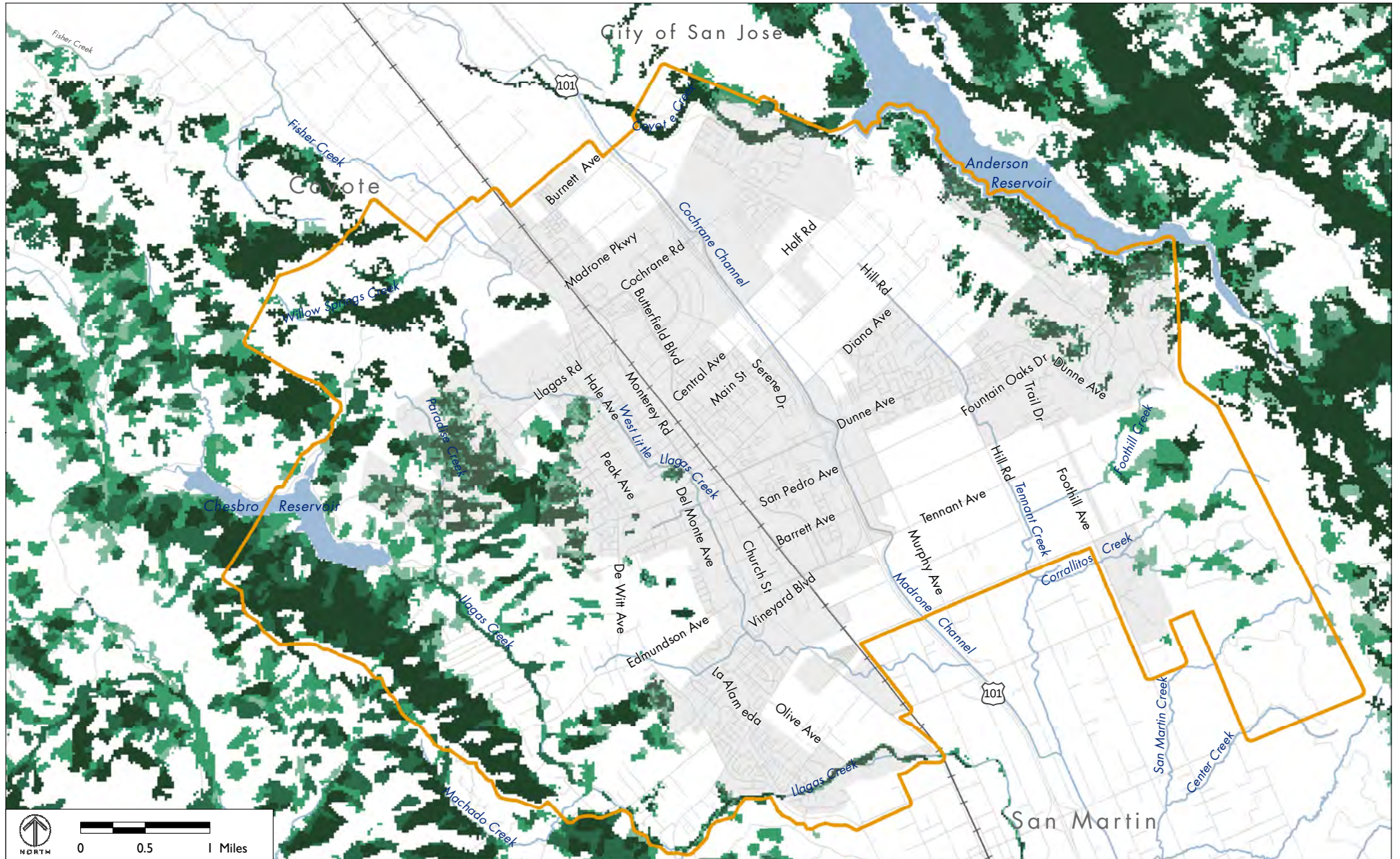
1. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use.
2. Conflict with existing zoning for agricultural use, or a Williamson Act contract.

⁶ Santa Clara County Department of Planning and Development, October 2014, Williamson Act Properties in Santa Clara County. Acreage numbers are based on GIS data, as calculated by PlaceWorks, 2015.

⁷ Department of Conservation, Farmland Mapping and Monitoring Program. Acreage numbers are based on GIS data, as calculated by PlaceWorks, 2015.

⁸ California Department of Forestry and Fire Protection Fire and Resource Assessment Program, Land Cover map, http://frap.cdf.ca.gov/webdata/maps/statewide/fvegwhr13_map.pdf, accessed on July 9, 2015.

AGRICULTURE AND FORESTRY RESOURCES



Source: California Department of Forestry and Fire Protection Resources, 2015; City of Morgan Hill, 2015.

Figure 4.2-3

Forestry Resources

AGRICULTURE AND FORESTRY RESOURCES

4. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g)).
5. Result in the loss of forest land or conversion of forest land to non-forest use.
6. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use.
7. Contribute to cumulative impacts to agriculture and forestry resources in the area.

4.2.3 IMPACT DISCUSSION

This section analyzes potential Project-specific impacts to agriculture and forestry resources that could result from implementation of the proposed Project.

AG-1	Implementation of the proposed Project would convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use.

General Plan

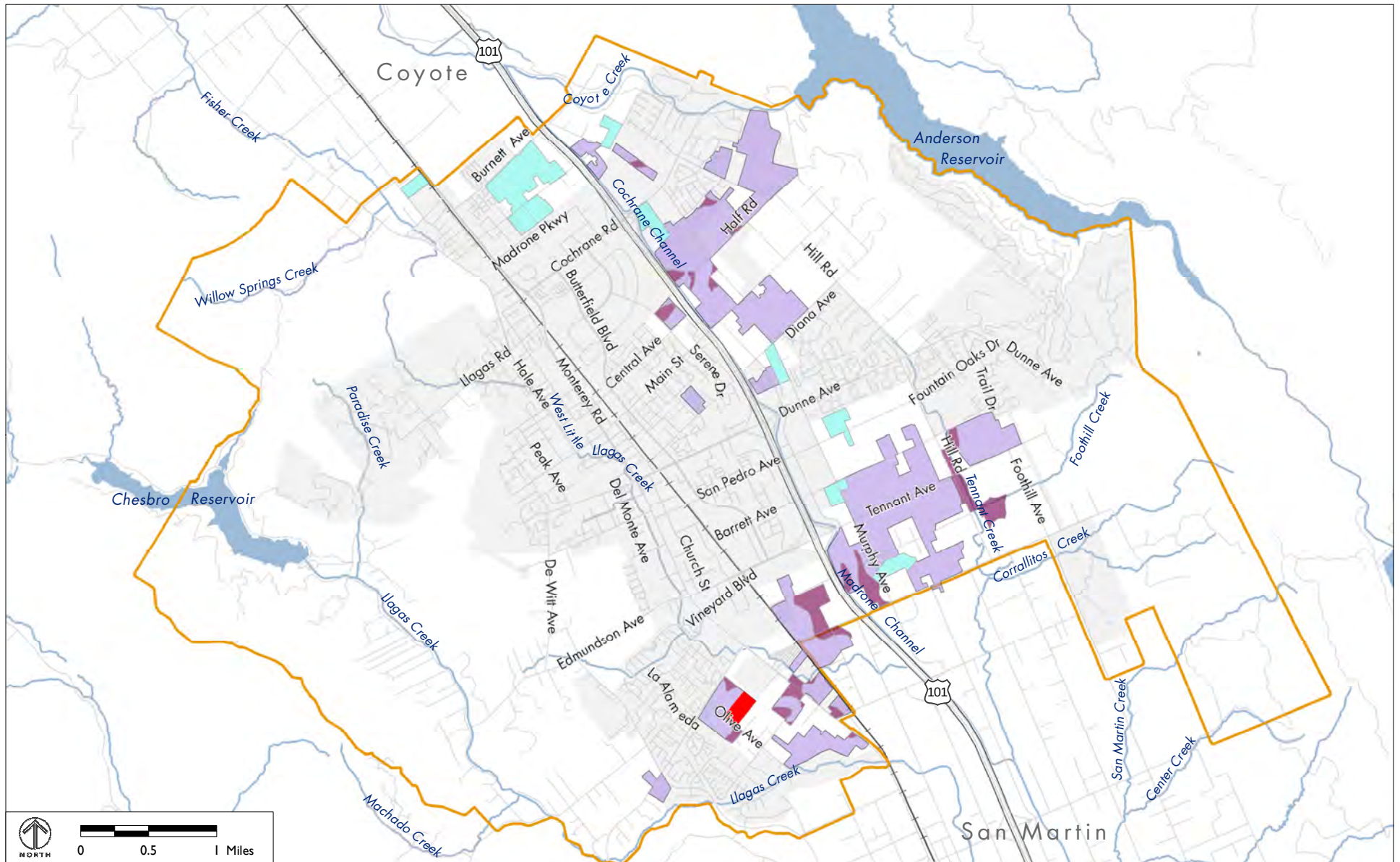
As shown in Table 4.2-2, the Project Area contains 1,386 acres of Prime Farmland, 196 acres of Farmland of Statewide Importance, and 234 acres of Unique Farmland. The proposed General Plan would have a significant impact if it would result in the conversion of these lands to non-agricultural use.

The proposed General Plan would designate approximately 1,125 acres of farmland of concern under CEQA for non-agricultural uses as shown on Figure 4.2-4.^{9,10} The largest concentrations of land where conversion of farmland to development would be allowed by the proposed General Plan are located east of Highway 101 between Half Road and Diana Avenue, and in the southwestern portion of the Project Area, west of Highway 101 and south of Tennant Avenue and Watsonville Road. The majority of these properties are outside of the City limit. Although these properties are within the City's SOI, they are currently in the Santa Clara County and therefore subject to County land use regulations. The current County General Plan designation in this area is Agriculture, Medium Scale. Although the designation is primarily intended to preserve agricultural uses, it also allows one single-family home per parcel, and recent construction of

⁹ Department of Conservation, 2012, Farmland Mapping and Monitoring Program, GIS data for Santa Clara County. Acreage numbers based on GIS data, as calculated by PlaceWorks, 2015.

¹⁰ This figure excludes land within the SOI that is also within the Southeast Quadrant because the impacts of changes in land use designation in that area were addressed in a separate, certified EIR. State Clearinghouse Number: 2010102010.

AGRICULTURE AND FORESTRY RESOURCES



Source: City of Morgan Hill, 2013; California Department of Conservation, Farmland Mitigation Mapping Program, 2012.

- Williamson Act Parcel Conflict
- Prime Farmland
- Farmland of Statewide Importance
- Unique Farmland

- Sphere of Influence
- City Boundary

Figure 4.2-4

Farmlands of Concern Conflicts

AGRICULTURE AND FORESTRY RESOURCES

several single-family homes on Agriculture, Medium Scale parcels immediately adjacent to Morgan Hill in the SOI indicate that residential use is occurring within this designation.

It is important to note that portions of areas designated under the proposed General Plan for non-agricultural uses are included in an area of the City referred to as the Southeast Quadrant (SEQ), located immediately south of the City, along the southeastern City limit. Although the SEQ has already been anticipated for development under the previously adopted Citywide Agriculture and Preservation program and Southeast Quadrant Land Use Plan, and certified the associated EIR (State Clearinghouse Number 2010102010), development has not yet occurred.

As noted in the Project Description, in addition to the SEQ project components analyzed in the certified SEQ EIR, this General Plan EIR analyzes residential land use designations, the development of single-family housing, and associated RDCS set-asides associated with a proposed new Transfer of Development Rights (TDR) system. The proposed TDR system would initially be based on development and preservation within the Chiala property, located within the SEQ roughly between Hill Road and Carey Avenue to the west and east and Barrett Avenue and Maple Avenue to the north and south. Under this proposal, approximately 50 acres of the 284-acre Chiala property would be redesignated from Rural County to a combination of Residential Estate, Single Family Low, Single Family Medium, and Open Space uses. These 50 acres would have capacity for approximately 170 housing units. Through the creation of the new TDR system, a portion of the sale price of each of these units would fund the purchase of permanent agricultural conservation easements on the remaining 211 acres of the Chiala property. An agricultural conservation easement is a voluntary, legally recorded deed restriction that goes with the land, regardless of owner, and removes the development capacity from the land in order to ensure it can remain in agricultural use. Because it removes the value of the allowed development capacity from a given property, the landowner must be compensated for the easement. The TDR funds would be used for this compensation.

All agricultural land that is placed under an agricultural conservation easement would remain in County jurisdiction in perpetuity, but the permanent agricultural conservation easement would preclude development that would otherwise be allowed by County land use designations. Current County land use designations and parcel sizes within the SEQ area would allow approximately 100 new low density residential units spread throughout the SEQ area. Implementing the proposed TDR system would concentrate allowed residential growth in one area of the SEQ to preserve viable agricultural areas on the remaining lands.

The City of Morgan Hill maintains its Urban Growth Boundary (UGB), in part, to differentiate land intended for future urbanization from land intended to remain rural and unincorporated for the next 20 years. Existing and limited new rural residential uses, as well as agricultural and open space uses, are appropriate for lands outside of the UGB. Policy CNF-4.3 from the proposed General Plan calls for the City to “consider land adjacent to the City as available for urban development only when it is included within the Urban Service Area and Urban Growth Boundary and can be developed in a manner that will be cost-effective to the City, and will be served by adequate public services and facilities.” The majority of the farmland designated for development is within the City’s UGB.

AGRICULTURE AND FORESTRY RESOURCES

The following policies of the proposed General Plan would serve to protect agricultural lands:

Policy CNF-7.1	County General Plan Policies. Promote the maintenance of current County General Plan policies encouraging low-density uses, including large lots and agriculture, for County projects adjacent to the UGB. Encourage the County to retain large minimum parcel sizes, and promote agricultural and open space uses on unincorporated lands.
Policy CNF-7.4	Agricultural Land Use Conflicts. Work with Santa Clara County to minimize potential land use conflicts between urban uses within the UGB and rural lands adjacent to the growth boundary.
Policy CNF-7.5	Inter-Jurisdictional Support for Agriculture. Coordinate measures to enhance the economic viability of agriculture in conjunction with other inter-jurisdictional planning in the South County.

In addition to the proposed General Plan and the proposed agricultural TDR preservation system, the City's Agricultural Lands Preservation Program and the associated Agricultural Mitigation Ordinance are expressly intended to mitigate impacts to agricultural lands as follows:

- Requires agricultural mitigation at a ratio of 1:1, meaning one acre of in-perpetuity farmland preservation (along with necessary funding for stewardship and program administration) for each acre of farmland development/conversion.
- Encourages dedications of conservation easements within the Project Area, with particular emphasis on the lands within the SEQ area.

While these City policies would reduce potential impacts related to the conversion of Farmland and the proposed General Plan would convert less farmland of concern under CEQA for non-agricultural uses than the existing General Plan, since the proposed General Plan would designate 1,126 acres of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use, a *significant* impact would result.

Mitigation Measures Considered

In compliance with CEQA, "each public agency shall mitigate or avoid the significant effects on the environment of the project it carries out or approves whenever it is feasible to do so."¹¹ The term "feasible" is defined in CEQA to mean, "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors."¹² A number of measures were considered for mitigating or avoiding the impact of the conversion of agricultural lands to other uses; however, no feasible mitigation measures are available that would reduce the agricultural resource impact to less than significant levels. CEQA Guidelines Section 15370 defines "mitigation" as including: (1) avoiding the impact altogether by not taking a certain action or parts of an action; (2) minimizing impacts by limiting the degree or magnitude of an action and its implementation; (3) rectifying

¹¹ Public Resources Code, Section 21002.1(b).

¹² Public Resources Code, Section 21061.1.

AGRICULTURE AND FORESTRY RESOURCES

the impact by repairing, rehabilitating, or restoring the impacted environment; (4) reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; and (5) compensating for the impact by replacing or providing substitute resources or environments. The following is a brief discussion of the mitigation measures considered to reduce the impacts of the project to less than significant and their infeasibility.

Designation of Agricultural Land with Open Space or Rural County Designation

Designating all existing agricultural land in the Project Area with an Open Space or Rural County designation is considered to be infeasible due to the constraints on the continued long-term viability of agriculture within the Project Area, as described in AG-5. These constraints would become greater over time, particularly the economic constraints and those due to increased environmental regulation. The retention of agricultural land use designations on land within the Project Area will not, therefore, necessarily result in the continuation of agricultural uses.

Moreover, since the land is currently in Santa Clara County, the City's application of an Open Space designation would do nothing to prohibit development from occurring under County jurisdiction. Current County land use designations allow one single-family home per parcel. Since much of the agricultural land in the Project Area is already parcelized, there is capacity for additional units on land in the SOI, and indeed, new low-density single-family homes are being constructed in the SOI at the time of publication of this EIR. This amount of very low density residential development intermixed with agricultural operations could create increasing conflicts between residential and agricultural uses and result in increasing pressure on existing agricultural operations, as described in AG-5, below. Therefore, leaving the existing Open Space or Rural County designation in place would not prevent residential development and would not guarantee that the land would remain in agricultural use. This mitigation measure is considered infeasible.

Replacement of Agricultural Resources

This measure would replace the existing agricultural use with the same use on other property that is not currently used for agriculture. From a statewide perspective, the replacement of farmland means that there will be no net loss of farmland in the state. However, farmlands of concern would still be developed. The majority of agricultural land within the Project Area is classified as grazing land, and most of the prime farmland is located east of Highway 101. Although there are areas of undeveloped lands in the City of Morgan Hill that could be replaced with agricultural uses, for the same reasons identified above, such as economic and environmental constraints that challenge the continued long-term viability of agriculture within the Project Area, conversion of these lands would be insufficient to achieve a no net loss. Moreover, even if adequate land could be identified to achieve no net loss, the challenges of creating the soil, irrigation, climatic, and economic conditions that are required for productive farmland are significant and there would be no guarantee that replacement land could be successfully farmed. In addition, replacing existing undeveloped areas with active agriculture could trigger a range of negative environmental impacts, including increased groundwater consumption, habitat destruction, erosion, air quality impacts, and

AGRICULTURE AND FORESTRY RESOURCES

herbicide and pesticide application. The replacement of the existing agricultural uses on other properties within the Project Area is infeasible.

Relocation of Prime Farmland Top Soil

Approximately 2,163-acres in the Project Area are designated as Prime Farmland, Farmland of Statewide Importance, or Unique Farmland. This measure would remove the top 12 to 18 inches of top soil from these areas and would be hauled to a farm site or several farm sites that have lower quality soils. The Prime Farmland, Farmland of Statewide Importance, or Unique Farmland soils may assist in increasing crop yield at the relocated site. This measure would have its own environmental impacts, including increased truck traffic on local roadways from both hauling soil off-site and replacement soil onsite; traffic congestion; increased diesel truck emissions; construction noise; and increased duration of construction. The relocation of prime farmland soils on another active farm would increase other environmental impacts and is therefore considered infeasible.

Applicable Regulations:

- Farmland Mapping and Monitoring Program
- Santa Clara County General Plan
- LAFCO Agricultural Mitigation Policies
- Morgan Hill Municipal Code

Significance Before Mitigation: Significant.

Residential Development Control System

Since 1977, the City of Morgan Hill has utilized the Residential Development Control System (RDCS) to ensure that new development can be served by existing infrastructure and public services. Some components of the RDCS were established through a voter approved ballot initiative. These components include an overall population cap, a formula for determining the number of building permit allotments available each year, a competition process to award those allotments, specific processing timelines, and reporting requirements. These components have been incorporated into the City's General Plan and ordinances as directed by the ballot language. The City Council has also adopted additional ordinances and policies which provide further guidance on the implementation of the RDCS, but which are modified more frequently as a general vote is not required.

The proposed RDCS component of the proposed Project would seek to streamline and improve the existing growth management system to be more efficient, effective, and sustainable while maintaining its most important benefits: a population cap; pace of development; high quality development; and contribution toward community amenities.¹³

¹³ City of Morgan Hill, April 1, 2015, City Council Staff Report, Morgan Hill 2035: RDCS Update, <http://www.morgan-hill.ca.gov/DocumentCenter/View/15900>, accessed August 14, 2015.

AGRICULTURE AND FORESTRY RESOURCES

Since the proposed RDCS would only serve to limit and meter the growth permitted under the proposed General Plan, it would not result in impacts separate from or greater than the impacts associated with development permitted under the proposed General Plan. Moreover, the proposed RDCS would include competition standards that award points to projects that are located adjacent to existing development; and/or that include agricultural conservation easements. These impacts are discussed above in the analysis of the impact of the General Plan. The proposed RDCS itself would have *less-than-significant* impacts to agricultural resources.

Significance Before Mitigation: Less than significant.

AG-2	Implementation of the proposed Project would conflict with existing zoning for agricultural use, or a Williamson Act contract.

General Plan

There are a total of 1,703 acres of land that are under on-going Williamson act contracts that are within the Project Area. Additionally, a total of 765 acres of land within the Project Area have non-renewal Williamson act parcels. The proposed General Plan would have a significant impact if it would designate these lands for non-agricultural use.^{14,15}

The majority of these Williamson Act contract lands are designated for agricultural use under the proposed General Plan, which would avoid a conflict with the Williamson Act contracts on these sites. However, there is one parcel within the Project Area that is under a Williamson Act contract and would be given a land use designation in the proposed General Plan that would conflict with agriculture. This parcel has an area of 16 acres and is located in the southwestern portion of the Project Area, on Olive Avenue outside of the City limits. The proposed General Plan would designate this parcel as Residential Detached Medium, consistent with its existing General Plan designation. Moreover, this parcel is outside of the Morgan Hill City limit and therefore would not be developed under the proposed General Plan until annexed into the City. Upon annexation, proposed General Plan land use designation would apply, and would conflict with the Williamson Act contract and a *significant* impact would result.

Mitigation Measure Considered

Replacement of Williamson Act Contract Farmland

This measure would place other farmland under Williamson Act contract. Even if feasible, the placing of alternative farmland under Williamson Act contract, would establish a commitment to retain that alternative

¹⁴ Santa Clara County Department of Planning and Development, October 2014, Williamson Act Properties in Santa Clara County. Acreage numbers are based on GIS data, as calculated by PlaceWorks, 2015.

¹⁵ Department of Conservation, Farmland Mapping and Monitoring Program. Acreage numbers are based on GIS data, as calculated by PlaceWorks, 2015.

AGRICULTURE AND FORESTRY RESOURCES

farmland for agricultural use. The length of time that that alternative land will remain in agricultural use would be dependent upon the terms of the Williamson Act contract. However, the Williamson Act contract will only reduce the potential that the alternative land will convert to non-agricultural use. The individual and cumulative loss of agricultural land caused by the proposed General Plan would still occur. Therefore, this mitigation measure will not reduce the proposed General Plan impacts upon agriculture to below the level of significance. For these reasons, placing alternative privately held land under permanent restriction through conservation easements is considered infeasible.

Applicable Regulations:

- Farmland Mapping and Monitoring Program
- California Land Conservation Act (Williamson Act)

Significance Before Mitigation: Significant.

Residential Development Control System

Since the proposed RDCS would only serve to limit and meter the growth permitted under the proposed General Plan, it would not result in impacts greater than the impacts associated with development permitted under the proposed General Plan. These impacts are discussed above. Moreover, the RDCS analyzed here only seek to streamline and improve the existing system. The overall impact of the RDCS with respect to conflicts with Williamson Act contracts would be relatively unchanged. Therefore a *less-than-significant* impact would result in this respect.

Significance Before Mitigation: Less than significant.

AG-3	Implementation of the proposed Project would not conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g)).

General Plan, and Residential Development Control System

The Morgan Hill Municipal Code does not contain a zoning district for forest land or timberland. Therefore, the proposed General Plan and proposed RDCS would have *no impact*.

Applicable Regulations:

- Morgan Hill Municipal Code

Significance Before Mitigation: No impact.

AGRICULTURE AND FORESTRY RESOURCES

AG-4 Implementation of the proposed Project would not result in the loss of forest land or conversion of forest land to non-forest use.

General Plan

Public Resources Code section 12220(g) defines forest land as “land that can support 10-percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits.”¹⁶

As discussed above; there is not any portion of the Project Area that contains forest resources zoned as such. However, isolated woodlands that could fall under the definition provided by California Public Resource Code Section 12220(g) are located within the Project Area according to 2015 mapping data from CAL FIRE.¹⁷ These woodlands are primarily located in the vicinity of the Chesbro Reservoir with some additional forest resources located along the eastern border of the Project Area. CAL FIRE data also shows greater concentrations of woodlands beyond the Project Area, to the east and west. Forestry resources are shown in Figure 4-2.3.

With implementation of the proposed General Plan most of the area that contains forestry resources would be designated as open space, a designation that is “generally meant to remain unimproved and devoted to the preservation of natural resources, managed production of resources, or public health and safety, as well as to complement adjacent, higher density residential and commercial development.”¹⁸ One single-family home per parcel would be permitted in areas designated as open space with implementation of the proposed General Plan. Additionally, the following policies of the proposed General Plan would serve to reduce potential impacts related to forestry resources:

Policy CNF-7.1	County General Plan Policies. Promote the maintenance of current County General Plan policies encouraging low-density uses, including large lots and agriculture, for County projects adjacent to the UGB. Encourage the County to retain large minimum parcel sizes, and promote agricultural and open space uses on unincorporated lands.
Policy CNF-11.7	Clustering of Residential Units. Encourage the clustering of residential units to provide open space and recreation areas, and to provide buffer areas between different land uses (e.g., industrial and residential).

Furthermore, as discussed above in the regulatory setting portion of this chapter, Chapter 12.32 of the Morgan Hill Municipal Code would continue to regulate the removal of trees, ensuring that unchecked clearing of trees would be unlawful. Therefore, while forestry resources exist in the Study Area,

¹⁶ Public Resources Code section 12220(g)

¹⁷ California Department of Forestry and Fire Protection Fire and Resource Assessment Program, Land Cover map, http://frap.cdf.ca.gov/webdata/maps/statewide/fvegwhr13_map.pdf, accessed on July 9, 2015.

¹⁸ Proposed Morgan Hill 2035 General Plan, 2015, Chapter 3, City and Neighborhood Form.

AGRICULTURE AND FORESTRY RESOURCES

implementation of the proposed General Plan would have a *less-than-significant* impact on these resources for the reasons discussed above.

Applicable Regulations:

- Public Resources Code Section 12220(g)
- Government Code Section 51104(g)
- Santa Clara County General Plan
- Morgan Hill Municipal Code

Significance Before Mitigation: Less than significant.

Residential Development Control System

Since the proposed RDCS would only serve to limit and meter the growth permitted under the proposed General Plan, it would not result in impacts greater than the impacts associated with development permitted under the proposed General Plan. These impacts are discussed above. Moreover, the RDCS analyzed here only seek to streamline and improve the existing system. The overall impact of the RDCS with respect to forestry resources would be relatively unchanged. Therefore a *less-than-significant* impact would result in this respect.

Significance Before Mitigation: Less than significant

AG-5	Implementation of the proposed Project would not involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use.

General Plan

The proposed General Plan would allow development that could result in potentially incompatible urban uses next to farms or ranches, creating circumstances that impair the productivity and profitability of agricultural operation, and could eventually lead farmers to take their land out of production. For example, this could manifest as complaints from new residents about noise, dust, and chemical use from agricultural operations. Concerns of farmers and ranchers about increased vandalism, traffic, access difficulties, and the introduction of domestic animals can lower productivity. Adjacent urban development may also drive up land values, increasing the property tax burden for farmland not protected by Williamson Act contracts or permanent agricultural conservation easements.

Because there are no forest lands in the Project Area, no adjacent urban development would be incompatible with forest land uses and result in the conversion of forest lands.

AGRICULTURE AND FORESTRY RESOURCES

However, the proposed General Plan recognizes that the agricultural history of Morgan Hill contributes to its sense of place. As such, the proposed General Plan seeks to preserve active agricultural lands. Additionally, the General Plan states that “the City is committed to protecting significant native flora and fauna” and goes on to state that “ensuring that development does not compromise existing habitat will be a part of future land use decisions.”¹⁹ Policies of the proposed General Plan intended to enforce these goals include the following:

Policy CNF-7.1	County General Plan Policies. Promote the maintenance of current County General Plan policies encouraging low-density uses, including large lots and agriculture, for County projects adjacent to the UGB. Encourage the County to retain large minimum parcel sizes, and promote agricultural and open space uses on unincorporated lands.
Policy CNF-7.4	Agricultural Land Use Conflicts. Work with Santa Clara County to minimize potential land use conflicts between urban uses within the UGB and rural lands adjacent to the growth boundary.
Policy CNF-7.5	Inter-Jurisdictional Support for Agriculture. Coordinate measures to enhance the economic viability of agriculture in conjunction with other inter-jurisdictional planning in the South County.
Policy CNF-11.7	Clustering of Residential Units. Encourage the clustering of residential units to provide open space and recreation areas, and to provide buffer areas between different land uses (e.g., industrial and residential).

In addition to these policies of the proposed General Plan, as described above, the City of Morgan Hill maintains its UGB in part to differentiate land intended for future urbanization from land intended to remain rural and unincorporated for the next 20 years. Existing and limited new rural residential uses, as well as agricultural and open space uses, are appropriate for lands outside of the UGB. Policy CNF-4.3 from the proposed General Plan calls for the City to “consider land adjacent to the City as available for urban development only when it is included within the Urban Service Area and Urban Growth Boundary and can be developed in a manner that will be cost-effective to the City, and will be served by adequate public services and facilities.” This policy would serve to protect agriculture and forestry resources that exist within the SOI but outside of the UGB.

Division B29, Agriculture and Resource Management, Chapter 1, Agricultural Rights, Disclosure and Dispute Resolution, of the Santa Clara County Code, described above, would also serve to protect agricultural resources, stating that “no agricultural activity, operation, or facility or appurtenances thereof, conducted or maintained for commercial purposes, and in a manner consistent with proper and accepted customs and standards and with all chapters of the Santa Clara County Code, as established and followed by similar agricultural operations, shall be or become a nuisance, public or private, pursuant to the Santa Clara County Code, if it was not a nuisance when it began.”²⁰

Therefore, in light of the policies and regulations described above, a *less-than-significant* impact would result in this respect.

¹⁹ City of Morgan Hill, Proposed General Plan 2035, Natural Resources Element, page NRE-11.

²⁰ Santa Clara County, Santa Clara County Code of Ordinances, Division B29 – Agriculture and Resource Management, Chapter 1, Agricultural Rights, Disclosure and Dispute Resolution, Section B29-3, Nuisance.

AGRICULTURE AND FORESTRY RESOURCES

Applicable Regulations:

- Farmland Mapping and Monitoring Program
- Santa Clara County General Plan
- Santa Clara County Code
- LAFCO Agricultural Mitigation Policies
- Morgan Hill Municipal Code

Significance Before Mitigation: Less than significant.

Residential Development Control System

Since the proposed RDCS would only serve to limit and meter the growth permitted under the proposed General Plan, it would not result in impacts greater than the impacts associated with development permitted under the proposed General Plan. These impacts are discussed above. Moreover, the RDCS analyzed here only seek to streamline and improve the existing system. The overall impact of the RDCS with respect to agriculture and forestry resources would be relatively unchanged. Therefore a *less-than-significant* impact would result in this respect.

Significance Before Mitigation: Less than significant.

4.2.4 CUMULATIVE IMPACTS

AG-6	Implementation of the proposed Project would contribute to cumulative impacts to agriculture resources in the area.

General Plan

ABAG projects that the population of Morgan Hill, including areas within the Study Area, will increase by 19 percent between 2015 and 2035.²¹ This increasing population will result in increased development pressure on previously undeveloped land. Moreover, the Santa Clara County General Plan EIR found that a significant cumulative impact would result with respect to the conversion of agricultural lands.²² In addition, the City of Gilroy is currently updating their General Plan which could also result in additional conversion of agricultural lands thereby contributing to the cumulative impacts; however, at the time of preparation of this Draft EIR, the public review draft of the updated Gilroy General Plan was not available for review. Further, the Envision San Jose 2040 General Plan EIR stated that implementation of their General Plan would likely result in development of the remaining few agricultural sites designated as Prime Farmland in San Jose.²³ With implementation of the proposed Project, in combination with agricultural impacts likely to

²¹ Association of Bay Area Governments, 2013, *Projections 2013*.

²² Santa Clara County, September 1994, Santa Clara County General Plan Environmental Impact Report, page 2-7

²³ City of San Jose, Envision San Jose 2040 General Plan EIR, June 2011, page. 176.

AGRICULTURE AND FORESTRY RESOURCES

occur as a result of the City of Gilroy's General Plan Update, and San Jose, the proposed Project would contribute to cumulative impacts to agriculture resources.

As described above in impact discussions AG-1 and AG-2, implementation of the proposed Project would result in significant impacts related to the conversion of farmland of concern under CEQA and Williamson Act properties. As such, the proposed Project would contribute to the cumulative impact described in the Santa Clara County General Plan. Although the policies and actions in the proposed General Plan would reduce and partially offset regional agricultural impacts, the proposed Project would contribute to cumulatively significant agricultural impacts in the region and a cumulative *significant* impact would occur.

Applicable Regulations:

- Farmland Mapping and Monitoring Program
- California Land Conservation Act (Williamson Act)
- Public Resources Code Section 12220(g)
- Government Code Section 51104(g)
- Santa Clara County General Plan
- Santa Clara County Code
- LAFCO Agricultural Mitigation Policies
- Morgan Hill Municipal Code

Significance Before Mitigation: Significant.

Residential Development Control System

The proposed RDCS component of the proposed Project would seek to streamline and improve the existing growth management system to be more efficient, effective, and sustainable while maintaining its most important benefits: a population cap; pace of development; high quality development; and contribution toward community amenities.²⁴

Since the proposed RDCS would only serve to limit and meter the growth permitted under the proposed General Plan, it would not result in impacts greater than the impacts associated with development permitted under the proposed General Plan. These impacts are discussed above. Moreover, the RDCS has been in place since 1977 and the changes to the RDCS analyzed here only seek to streamline and improve the existing system. The overall impact of the RDCS with respect to agriculture and forestry resources would be relatively unchanged. Therefore a *less-than-significant* impact would result in this respect.

Significance Before Mitigation: Less than significant.

²⁴ City of Morgan Hill, April 1, 2015, City Council Staff Report, Morgan Hill 2035:RDCS Update, <http://www.morgan-hill.ca.gov/DocumentCenter/View/15900>, accessed August 14, 2015.

AGRICULTURE AND FORESTRY RESOURCES

4.2.5 SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION MEASURES

AG-1	Implementation of the proposed Project would convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use.

As discussed above, the Project would designate 1,125 acres of land to non-agricultural land uses. Although mitigation measures were considered, such as preserving agricultural uses in the Project Area by designating agricultural lands as open space or for agricultural uses only, replacement of agricultural resources by replacing lost agricultural uses to other areas of the City, and relocation of prime agricultural top soil to other areas, these mitigations are not feasible because the only way to fully avoid the agricultural impact of the proposed General Plan is to not allow development on state-designated farmland, thereby eliminating the agricultural impact. Possible forms of mitigation for, or avoidance of, conservation of agricultural lands in the Project Area would be infeasible and inconsistent with City planning goals and objectives. Therefore, impacts would remain *significant and unavoidable*.

AG-2	Implementation of the proposed Project would conflict with existing zoning for agricultural use, or a Williamson Act contract.

As discussed above, there is one parcel within the Project Area that is under a Williamson Act contract and would be given a land use designation in the proposed General Plan that would conflict with agriculture. This parcel has an area of 16 acres and is located in the southwestern portion of the Project Area, on Olive Avenue outside of the City limits. The proposed General Plan would designate this parcel as Residential Detached Medium, consistent with its existing General Plan designation. Moreover, this parcel is outside of the Morgan Hill City limit and therefore would not be developed under the proposed General Plan until annexed into the City. Upon annexation, the proposed General Plan land use designation would apply, and would conflict with the Williamson Act contract.

Mitigation for this impact was considered, including the placement of other farmland under Williamson Act contract. Even if feasible, the placing of alternative farmland under Williamson Act contract, would establish a commitment to retain that alternative farmland for agricultural use. The length of time that that alternative land will remain in agricultural use would be dependent upon the terms of the Williamson Act contract. However, the Williamson Act contract will only reduce the potential that the alternative land will convert to non-agricultural use. The individual and cumulative loss of agricultural land caused by the proposed General Plan would still occur. Given that CEQA does not require that the project be changed in

AGRICULTURE AND FORESTRY RESOURCES

order to avoid an impact, and no additional mitigation is available, this would result in a *significant and unavoidable* impact.

AG-6 Implementation of the proposed Project would contribute to cumulative impacts to agriculture resources in the area.

As described above, implementation of the proposed Project would result in significant impacts related to the conversion of farmland of concern under CEQA and Williamson Act properties. As such, the proposed Project would contribute to the cumulative impact described in the Santa Clara County General Plan. Although the policies and actions in the proposed General Plan would reduce and partially offset regional agricultural impacts, as well as consideration of mitigation measures to preserve agricultural lands, the only way to fully avoid the agricultural impact of the proposed General Plan is to not allow development on state-designated farmland, thereby eliminating the agricultural impact. However, this would be infeasible and inconsistent with City planning goals and objectives. Further, the amount of growth foreseen in the region and the decisions of Santa Clara County and other surrounding counties regarding conversion of agricultural land are outside the control of Morgan Hill. Therefore, this impact would be *significant and unavoidable*.

4.2.6 FULL BUILDOUT

The full buildout anticipated under the proposed Project would include significantly more non-residential development than the 2035 horizon-year development projection analyzed in Section 4.2.3, Impact Discussion, in terms of both the amount and the extent of development. Therefore, the potential for impacts related to agriculture and forestry resources would increase. However, as discussed in Chapter 3, Project Description, it is extremely unlikely that full buildout would ever occur under the proposed General Plan. Therefore, an analysis of full buildout is not required by CEQA.

AGRICULTURE AND FORESTRY RESOURCES

4.3 AIR QUALITY

This chapter describes the existing air quality setting and examines the air quality impacts associated with adopting and implementing the proposed Project. “Emissions” refers to the actual quantity of pollutants, measured in pounds per day or tons per year. “Concentrations” refers to the amount of pollutant material per volumetric unit of air. Concentrations are measured in parts per million (ppm), parts per billion (ppb), or micrograms per cubic meter ($\mu\text{g}/\text{m}^3$).

Air quality refers to the degree to which the air in our community is pollution free. Air quality is influenced by the quantity of pollutants emitted into the air and by the concentration of pollutants in the air around us. Motor vehicles are the primary source of air pollution in Morgan Hill and the Bay Area, with industrial activities such as electronics manufacturing, auto repair, dry cleaning, and other businesses that use chemicals or solvents also contributing to pollution levels. Additionally, particulate matter emitted into the air as a result of construction, grading activities, and the use of wood-burning stoves and fireplaces can compound air quality issues. The General Plan addresses air quality primarily in the Natural Resources Environment Element and in the Transportation Element, with policies and actions designed to minimize air quality emissions to the extent feasible.

This chapter is based on the methodology recommended by the Bay Area Air Quality Management District (BAAQMD) for plan-level review for projects in the San Francisco Bay Area Air Basin (Air Basin). The analysis focuses on air pollution from regional emissions and localized pollutant concentrations from buildout of the proposed General Plan. Air pollutant emissions modeling is included in Appendix B, Air Quality Modeling, of this Draft EIR.

4.3.1 ENVIRONMENTAL SETTING

Air Pollutants of Concern

A substance in the air that can cause harm to humans and the environment is known as an air pollutant. Pollutants can be in the form of solid particles, liquid droplets, or gases. In addition, they may be natural or man-made.

Air pollutants of concern are criteria air pollutants and toxic air contaminants (TACs). Federal, state, and local air districts have adopted laws and regulations to control and improve air quality; these are discussed below in Section 4.3.1.1, Regulatory Framework.

Criteria Air Pollutants

The pollutants emitted into the ambient air by stationary and mobile sources are regulated by federal and state law. Pollutants can be classified as primary or secondary. Usually, primary pollutants are directly emitted from a process, such as ash from a volcanic eruption, carbon monoxide from a motor vehicle

AIR QUALITY

exhaust, or sulfur dioxide from factories. Secondary pollutants are not emitted directly, but form in the air when primary pollutants react or interact. Carbon monoxide (CO), reactive organic gases (ROG), nitrogen oxides (NO_x), sulfur dioxide (SO₂), coarse inhalable particulate matter (PM₁₀), fine inhalable particulate matter (PM_{2.5}), and lead (Pb) are primary air pollutants. Of these, CO, SO₂, NO₂, PM₁₀, and PM_{2.5} are “criteria air pollutants,” which means that ambient air quality standards (AAQS) have been established for them (see section 4.3.1.1, Regulatory Framework). ROG and NO_x are criteria pollutant precursors that form secondary criteria air pollutants through chemical and photochemical reactions in the atmosphere. Ozone (O₃) and nitrogen dioxide (NO₂) are the principal secondary pollutants.

A description of each of the primary and secondary criteria air pollutants and their known health effects is presented below.

- **Carbon Monoxide (CO)** is a colorless, odorless, toxic gas produced by incomplete combustion of carbon substances, such as gasoline or diesel fuel. CO is a primary criteria air pollutant. CO concentrations tend to be the highest during winter mornings with little or no wind, when surface-based inversions trap the pollutant at ground levels. Because CO is emitted directly from internal combustion engines, motor vehicles operating at slow speeds are the primary source of CO in the Air Basin. Emissions are highest during cold starts, hard acceleration, stop-and-go driving, and low speeds. New findings indicate that CO emissions per mile are lowest at about 45 miles per hour (mph) for the average light-duty motor vehicle and begin to increase again at higher speeds. When inhaled at high concentrations, CO combines with hemoglobin in the blood and reduces its oxygen-carrying capacity. This results in less oxygen reaching the brain, heart, and other body tissues. This condition is especially critical for people with cardiovascular diseases, chronic lung disease, or anemia, as well as for fetuses. Even healthy people exposed to high CO concentrations can experience headaches, dizziness, fatigue, unconsciousness, and even death.¹ The Air Basin is designated under the California and National AAQS as being in attainment of CO criteria levels.²
- **Reactive Organic Gases (ROGs)**, also referred to as volatile organic compounds (VOCs), are compounds composed primarily of hydrogen and carbon atoms. Internal combustion associated with motor vehicles is the major source of ROGs. Other sources of ROGs include evaporative emissions from paints and solvents, the application of asphalt paving, and the use of household consumer products such as aerosols. Adverse effects on human health are not caused directly by ROGs, but by reactions of ROGs to form secondary pollutants such as O₃. There are no AAQS established for ROGs. However, because they contribute to the formation of O₃, BAAQMD has established a significance threshold for this pollutant.
- **Nitrogen Oxides (NO_x)** are a by-product of fuel combustion and contribute to the formation of O₃, PM₁₀, and PM_{2.5}. The two major components of NO_x are nitric oxide (NO) and nitrogen dioxide (NO₂).

¹ Bay Area Air Quality Management District, 2010 (Revised 2011), Appendix C: Sample Air Quality Setting, in California Environmental Quality Act Air Quality Guidelines.

² California Air Resources Board, 2014, Area Designations: Activities and Maps, <http://www.arb.ca.gov/design/adm/adm.htm>, accessed November 21, 2014.

The principal component of NO_x produced by combustion is NO, but NO reacts with oxygen to form NO₂, creating the mixture of NO and NO₂ commonly called NO_x. NO₂ acts as an acute irritant and in equal concentrations is more injurious than NO. At atmospheric concentrations, however, NO₂ is only potentially irritating. There is some indication of a relationship between NO₂ and chronic pulmonary fibrosis. Some increase in bronchitis in children (two and three years old) has also been observed at concentrations below 0.3 ppm. NO₂ absorbs blue light, resulting in a brownish-red cast to the atmosphere and reduced visibility. NO is a colorless, odorless gas formed from atmospheric nitrogen and oxygen when combustion takes place under high temperature and/or high pressure.³ The Air Basin is designated an attainment area for NO₂ under the National AAQS and California AAQS.⁴

- **Sulfur Dioxide (SO₂)** is a colorless, pungent, irritating gas formed by the combustion of sulfurous fossil fuels. It enters the atmosphere as a result of burning high-sulfur-content fuel oils and coal and from chemical processes at chemical plants and refineries. Gasoline and natural gas have very low sulfur content and do not release significant quantities of SO₂. When SO₂ forms sulfates (SO₄) in the atmosphere, together these pollutants are referred to as sulfur oxides (SO_x). Thus, SO₂ is both a primary and secondary criteria air pollutant. At sufficiently high concentrations, SO₂ may irritate the upper respiratory tract. At lower concentrations and when combined with particulates, SO₂ may do greater harm by injuring lung tissue.⁵ The Air Basin is designated an attainment area for SO₂ under the California and National AAQS.⁶
- **Suspended Particulate Matter (PM₁₀ and PM_{2.5})** consists of finely divided solids or liquids such as soot, dust, aerosols, fumes, and mists. Two forms of fine particulates are now recognized and regulated. Inhalable coarse particles, or PM₁₀, include particulate matter with an aerodynamic diameter of 10 microns (i.e., 10 millionths of a meter or 0.0004-inch) or less. Inhalable fine particles, or PM_{2.5}, have an aerodynamic diameter of 2.5 microns or less (i.e., 2.5 millionths of a meter or 0.0001 inch).

Some particulate matter, such as pollen, occurs naturally. In the Air Basin, most particulate matter is caused by combustion, factories, construction, grading, demolition, agricultural activities, and motor vehicles. Extended exposure to particulate matter can increase the risk of chronic respiratory disease. PM₁₀ bypasses the body's natural filtration system more easily than larger particles and can lodge deep in the lungs. The United States Environmental Protection Agency (US EPA) scientific review concluded that PM_{2.5} penetrates even more deeply into the lungs, and this is more likely to contribute to health effects—at concentrations well below current PM₁₀ standards. These health effects include premature death in people with heart or lung disease, nonfatal heart attacks, irregular heartbeat, aggravated asthma, decreased lung function, and increased respiratory symptoms (e.g., irritation of the airways,

³ Bay Area Air Quality Management District, 2010 (Revised 2011). Appendix C: Sample Air Quality Setting, in California Environmental Quality Act Air Quality Guidelines.

⁴ California Air Resources Board, 2014, Area Designations: Activities and Maps, <http://www.arb.ca.gov/design/adm/adm.htm>, accessed November 21, 2014.

⁵ Bay Area Air Quality Management District, 2010 (Revised 2011). Appendix C: Sample Air Quality Setting, in California Environmental Quality Act Air Quality Guidelines.

⁶ California Air Resources Board, 2014, Area Designations: Activities and Maps, <http://www.arb.ca.gov/design/adm/adm.htm>, accessed November 21, 2014.

AIR QUALITY

coughing, or difficulty breathing). Motor vehicles are currently responsible for about half of particulates in the Air Basin. Wood-burning in fireplaces and stoves is another large source of fine particulates.⁷

Both PM₁₀ and PM_{2.5} may adversely affect the human respiratory system, especially in people who are naturally sensitive or susceptible to breathing problems. These health effects include premature death and increased hospital admissions and emergency room visits (primarily the elderly and individuals with cardiopulmonary disease); increased respiratory symptoms and disease (children and individual with asthma); and alterations in lung tissue and structure and in respiratory tract defense mechanisms.⁸ There is emerging evidence that even smaller particulates, with an aerodynamic diameter of <0.1 microns or less (i.e., ≤0.1 millionths of a meter or <0.000004 inch), known as ultrafine particulates (UFPs), have human health implications, because UFPs toxic components may initiate or facilitate biological processes that may lead to adverse effects to the heart, lungs, and other organs. However, the US EPA and the California Air Resources Board (CARB) have yet to adopt AAQS to regulate these particulates. Diesel particulate matter (DPM) is also classified a carcinogen by CARB. The Air Basin is designated nonattainment under the California AAQS for PM₁₀ and nonattainment under both the California and National AAQS for PM_{2.5}.^{9,10}

- **Ozone (O₃)** is commonly referred to as “smog” and is formed when ROGs and NO_x, both by-products of internal combustion engine exhaust, undergo photochemical reactions in the presence of sunlight. O₃ is a secondary criteria air pollutant. O₃ concentrations are generally highest during the summer months when direct sunlight, light winds, and warm temperatures create favorable conditions for its formation. O₃ poses a health threat to those who already suffer from respiratory diseases as well as to healthy people. O₃ levels usually build up during the day and peak in the afternoon hours. Short-term exposure can irritate the eyes and cause constriction of the airways. Besides causing shortness of breath, it can aggravate existing respiratory diseases such as asthma, bronchitis, and emphysema. Chronic exposure to high ozone levels can permanently damage lung tissue. O₃ can also damage plants and trees and materials such as rubber and fabrics.¹¹ The Air Basin is designated nonattainment for the 1-hour California AAQS and 8-hour California and National AAQS for O₃.¹²

⁷ Bay Area Air Quality Management District, 2010 (Revised 2011). Appendix C: Sample Air Quality Setting, in California Environmental Quality Act Air Quality Guidelines.

⁸ South Coast Air Quality Management District, 2005. Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning.

⁹ California Air Resources Board (CARB), 2014, Area Designations: Activities and Maps, <http://www.arb.ca.gov/design/adm/adm.htm>, accessed November 21, 2014.

¹⁰ On January 9, 2013, the US EPA issued a final rule to determine that the SFBAAB has attained the 24-hour PM_{2.5} National AAQS. This action suspends key federal State Implementation Plan planning requirements for the Bay Area as long as monitoring data continues to show that the Bay Area attains the standard. Despite this US EPA action, the SFBAAB will continue to be designated nonattainment for the National 24-hour PM_{2.5} standard until such time as BAAQMD elects to submit a redesignation request and a maintenance plan to US EPA, and US EPA approves the proposed redesignation.

¹¹ Bay Area Air Quality Management District, 2010 (Revised 2011). Appendix C: Sample Air Quality Setting, in California Environmental Quality Act Air Quality Guidelines.

¹² California Air Resources Board, 2014, Area Designations: Activities and Maps, <http://www.arb.ca.gov/design/adm/adm.htm>, accessed November 21, 2014.

- **Lead (Pb)** is a metal found naturally in the environment as well as in manufactured products. The major sources of lead emissions have historically been mobile and industrial sources. As a result of the phase-out of leaded gasoline, metal processing is currently the primary source of lead emissions. The highest levels of lead in air are generally found near lead smelters. Other stationary sources are waste incinerators, utilities, and lead-acid battery manufacturers. Twenty years ago, mobile sources were the main contributor to ambient lead concentrations in the air. In the early 1970s, the US EPA set national regulations to gradually reduce the lead content in gasoline. In 1975, unleaded gasoline was introduced for motor vehicles equipped with catalytic converters. The US EPA banned the use of leaded gasoline in highway vehicles in December 1995. As a result of the US EPA's regulatory efforts to remove lead from gasoline, emissions of lead from the transportation sector and levels of lead in the air decreased dramatically.¹³ The Air Basin is designated in attainment of the California and National AAQS for lead.¹⁴ Because emissions of lead are found only in projects that are permitted by BAAQMD, lead is not an air quality of concern for the proposed Project.

Toxic Air Contaminants

Public exposure to TACs is a significant environmental health issue in California. In 1983, the California Legislature enacted a program to identify the health effects of TACs and to reduce exposure to these contaminants to protect the public health. The California Health and Safety Code defines a TAC as “an air pollutant which may cause or contribute to an increase in mortality or in serious illness, or which may pose a present or potential hazard to human health.” A substance that is listed as a hazardous air pollutant pursuant to Section 112(b) of the federal Clean Air Act (42 US Code § 7412[b]) is a toxic air contaminant.

Under state law, the California Environmental Protection Agency (CalEPA), acting through CARB, is authorized to identify a substance as a TAC if it is an air pollutant that may cause or contribute to an increase in mortality or serious illness, or may pose a present or potential hazard to human health. At the time of the last update to the TAC list in December 1999, CARB had designated 244 compounds as TACs.¹⁵ Additionally, CARB has implemented control measures for a number of compounds that pose high risks and show potential for effective control. The majority of the estimated health risks from TACs can be attributed to relatively few compounds, the most important being particulate matter from diesel-fueled engines. According to BAAQMD, particulate matter emitted from diesel engines contributes more than 85 percent of the cancer risk within the Air Basin and cancer risk from TAC is highest near major diesel PM sources.¹⁶ Based on this finding, the primary mobile source of TACs within Morgan Hill is truck idling and use of off-road equipment at warehousing operations.

¹³ Bay Area Air Quality Management District, 2010 (Revised 2011). Appendix C: Sample Air Quality Setting, in California Environmental Quality Act Air Quality Guidelines.

¹⁴ California Air Resources Board, 2014, Area Designations: Activities and Maps, <http://www.arb.ca.gov/design/adm/adm.htm>, accessed November 21, 2014.

¹⁵ California Air Resources Board, 1999. Final Staff Report: Update to the Toxic Air Contaminant List.

¹⁶ Bay Area Air Quality Management District, 2014, Improving Air Quality & Health in Bay Area Communities, Community Air Risk Evaluation Program Retrospective & Path Forward (2004-2013), April.

AIR QUALITY

In 1998, CARB identified diesel particulate matter (DPM) as a TAC. Previously, the individual chemical compounds in diesel exhaust were considered TACs. Almost all diesel exhaust particles are 10 microns or less in diameter. Because of their extremely small size, these particles can be inhaled and eventually trapped in the bronchial and alveolar regions of the lungs.

San Francisco Bay Area Air Basin

California is divided geographically into air basins for the purpose of managing the air resources of the state on a regional basis. An air basin generally has similar meteorological and geographic conditions throughout. The state is divided into 15 air basins. As shown in Figure 4.3-1, *San Francisco Bay Area Air Basin*, the City of Morgan Hill is in the San Francisco Bay Area Air Basin, which is managed by the Bay Area Air Quality Management District (BAAQMD). The Air Basin comprises all of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, and Santa Clara counties; the southern portion of Sonoma County; and the southwestern portion of Solano County.

Air quality in this area is determined by such natural factors as topography, meteorology, and climate, in addition to the presence of existing air pollution sources and ambient conditions.¹⁷ The discussion below identifies the natural factors in the Air Basin that affect air pollution.

Meteorology

The Air Basin is characterized by complex terrain, consisting of coastal mountain ranges, inland valleys, and bays, which distort normal wind flow patterns. The Coast Range¹⁸ splits in the Bay Area, creating a western coast gap, the Golden Gate, and an eastern coast gap, the Carquinez Strait, which allow air to flow in and out of the Bay Area and the Central Valley.

The climate is dominated by the strength and location of a semi-permanent, subtropical high-pressure cell. During the summer, the Pacific high-pressure cell is centered over the northeastern Pacific Ocean, resulting in stable meteorological conditions and a steady northwesterly wind flow. Upwelling of cold ocean water from below the surface because of the northwesterly flow produces a band of cold water off the California coast.

The cool and moisture-laden air approaching the coast from the Pacific Ocean is further cooled by the presence of the cold water band, resulting in condensation and the presence of fog and stratus clouds along the Northern California coast. In the winter, the Pacific high-pressure cell weakens and shifts southward, resulting in wind flow offshore, the absence of upwelling, and the occurrence of storms. Weak inversions coupled with moderate winds result in a low air-pollution potential.

¹⁷ This section describing the air basin is from Bay Area Air Quality Management District, 2010 (Revised 2011), Appendix C: Sample Air Quality Setting, in *California Environmental Quality Act Air Quality Guidelines*.

¹⁸ The Coast Ranges traverses California's west coast from Humboldt County to Santa Barbara County.

AIR QUALITY

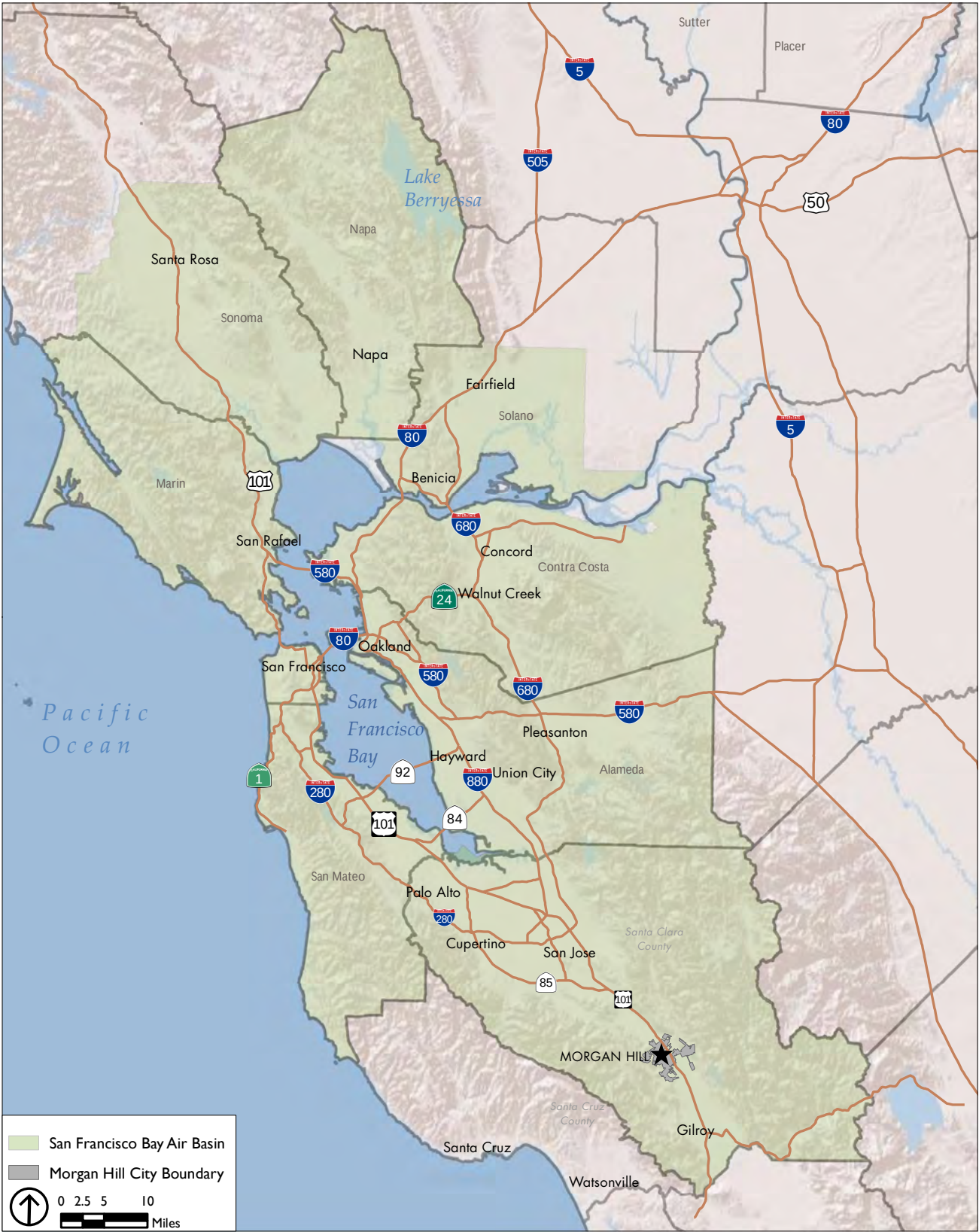


Figure 4.3-1
San Francisco Air Basin

AIR QUALITY

Wind Patterns

During the summer, winds flowing from the northwest are drawn inland through the Golden Gate and over the lower portions of the San Francisco Peninsula. Immediately south of Mount Tamalpais in Marin County, the northwesterly winds accelerate considerably and come more directly from the west as they stream through the Golden Gate. This channeling of wind through the Golden Gate produces a jet that sweeps eastward and splits off to the northwest toward Richmond and to the southwest toward San Jose when it meets the East Bay hills.

Wind speeds may be strong locally in areas where air is channeled through a narrow opening, such as the Carquinez Strait, the Golden Gate, or the San Bruno gap. For example, the average wind speed at San Francisco International Airport in July is about 17 knots (from 3:00 p.m. to 4:00 p.m.), compared with only 7 knots in San Jose and less than 6 knots at the Farallon Islands.

The air flowing in from the coast to the Central Valley, called the sea breeze, begins developing at or near ground level along the coast in late morning or early afternoon. As the day progresses, the sea breeze layer deepens and increases in velocity while spreading inland. The depth of the sea breeze depends in large part upon the height and strength of the inversion. Under normal atmospheric conditions, the air in the lower atmosphere is warmer than the air above it. An inversion is a change in the normal conditions that causes the temperature gradient to be reversed, or inverted. If the inversion is low and strong, and hence stable, the flow of the sea breeze will be inhibited, and stagnant conditions are likely to result.

In the winter, the Air Basin frequently experiences stormy conditions with moderate to strong winds, as well as periods of stagnation with very light winds. Winter stagnation episodes (i.e., conditions where there is little mixing, which occur when there is a little to no wind or air circulation is blocked by bridges or tunnels) are characterized by nighttime drainage flows in coastal valleys. Drainage is a reversal of the usual daytime air-flow patterns; air moves from the Central Valley toward the coast and back down toward the Bay from the smaller valleys within the Air Basin.

Temperature

Summertime temperatures in the Air Basin are determined in large part by the effect of differential heating between land and water surfaces. Because land tends to heat up and cool off more quickly than water, a large-scale gradient (differential) in temperature is often created between the coast and the Central Valley, and small-scale local gradients are often produced along the shorelines of the ocean and bays. The temperature gradient near the ocean is also exaggerated, especially in summer, because of the upwelling of cold water from the ocean bottom along the coast. On summer afternoons, the temperatures at the coast can be 35 degrees Fahrenheit (°F) cooler than temperatures 15 to 20 miles inland. At night, this contrast usually decreases to less than 10°F. In the winter, the relationship of minimum and maximum temperatures is reversed. During the daytime the temperature difference between the coast and inland areas is small; at night it is large.

Precipitation

The Air Basin is characterized by moderately wet winters and dry summers. Winter rains (November through March) account for about 75 percent of the average annual rainfall. The amount of annual precipitation can vary greatly from one part of the Air Basin to another, even within short distances. Total annual rainfall can reach 40 inches in the mountains, but it is often less than 16 inches in sheltered valleys.

During rainy periods, ventilation (rapid horizontal movement of air and injection of cleaner air) and vertical mixing (an upward and downward movement of air) are usually high, and thus pollution levels tend to be low (i.e., air pollutants are dispersed more readily into the atmosphere rather than accumulate under stagnant conditions). However, during the winter, frequent dry periods do occur, where mixing and ventilation are low and pollutant levels build up.

Wind Circulation

Low-wind speed contributes to the buildup of air pollution because it allows more pollutants to be emitted into the air mass per unit of time. Light winds occur most frequently during periods of low sun (fall and winter, and early morning) and at night. These are also periods when air pollutant emissions from some sources are at their peak, namely, commuter traffic (early morning) and wood-burning appliances (nighttime). The problem can be compounded in valleys, when weak flows carry the pollutants up-valley during the day, and cold air drainage flows move the air mass down-valley at night. Such restricted movement of trapped air provides little opportunity for ventilation and leads to buildup of pollutants to potentially unhealthful levels.

Inversions

As described above, an inversion is a layer of warmer air over a layer of cooler air. Inversions affect air quality conditions significantly because they influence the mixing depth (i.e., the vertical depth in the atmosphere available for diluting air contaminants near the ground). There are two types of inversions that occur regularly in the Air Basin. Elevation inversions¹⁹ are more common in the summer and fall, and radiation inversions²⁰ are more common during the winter. The highest air pollutant concentrations in the Air Basin generally occur during inversions.

4.3.1.1 REGULATORY FRAMEWORK

Federal, state, and local air districts have passed laws and regulations intended to control and enhance air quality. Land use in the City is subject to the rules and regulations imposed by BAAQMD, CARB, and US

¹⁹ When the air blows over elevated areas, it is heated as it is compressed into the side of the hill/mountain. When that warm air comes over the top, it is warmer than the cooler air of the valley.

²⁰ During the night, the ground cools off, radiating the heat to the sky.

AIR QUALITY

EPA. The regulatory framework that is potentially applicable to the proposed General Plan is also summarized below.

Federal and State Regulations

Ambient air quality standards have been adopted at federal and state levels for criteria air pollutants. In addition, both the federal and state governments regulate the release of toxic air contaminants (TACs). The City is in the Air Basin and is subject to the rules and regulations imposed by the BAAQMD, the national AAQS adopted by the US EPA, and the California AAQS adopted by CARB. Federal, state, regional, and local laws, regulations, plans, or guidelines that are potentially applicable to the proposed Project are summarized below.

Ambient Air Quality Standards

The Clean Air Act (CAA) was passed in 1963 by the United States Congress and has been amended several times. The 1970 Clean Air Act amendments strengthened previous legislation and laid the foundation for the regulatory scheme of the 1970s and 1980s. In 1977, Congress again added several provisions, including nonattainment requirements for areas not meeting National AAQS and the Prevention of Significant Deterioration program. The 1990 amendments represent the latest in a series of federal efforts to regulate the protection of air quality in the United States. The CAA allows states to adopt more stringent standards or to include other pollution species. The California Clean Air Act, signed into law in 1988, requires all areas of the state to achieve and maintain the California AAQS by the earliest practical date. The California AAQS tend to be more restrictive than the National AAQS.

Criteria air pollutants are the air pollutants for which AAQS have been developed that are regulated under the CAA. The National and California AAQS are the levels of air quality considered to provide a margin of safety in the protection of the public health and welfare. They are designed to protect sensitive receptors—those most susceptible to further respiratory distress, such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise. Healthy adults can tolerate occasional exposure to air pollutant concentrations considerably above these minimum standards before adverse effects are observed.

The California and National AAQS regulate seven air pollutants, which are shown in Table 4.3-1. These pollutants include ozone (O₃), nitrogen dioxide (NO₂), carbon monoxide (CO), sulfur dioxide (SO₂), coarse inhalable particulate matter (PM₁₀), fine inhalable particulate matter (PM_{2.5}), and lead (Pb). In addition, the state has set standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. The California AAQS tend to be more restrictive than the National AAQS based on even greater health and welfare concerns.

AIR QUALITY**TABLE 4.3-1 AMBIENT AIR QUALITY STANDARDS FOR CRITERIA POLLUTANTS**

Pollutant	Averaging Time	California Standard	Federal Primary Standard	Major Pollutant Sources
Ozone (O ₃)	1 hour	0.09 ppm	*	Motor vehicles, paints, coatings, and solvents.
	8 hours	0.070 ppm	0.070 ppm	
Carbon Monoxide (CO)	1 hour	20.0 ppm	35.0 ppm	Internal combustion engines, primarily gasoline-powered motor vehicles.
	8 hours	9.0 ppm	9.0 ppm	
Nitrogen Dioxide (NO ₂)	Annual Average	0.030 ppm	0.053 ppm	Motor vehicles, petroleum-refining operations, industrial sources, aircraft, ships, and railroads.
	1 hour	0.18 ppm	0.100 ppm	
Sulfur Dioxide (SO ₂)	Annual Arithmetic Mean	*	* ^a	Fuel combustion, chemical plants, sulfur recovery plants, and metal processing.
	1 hour	0.25 ppm	0.075 ppm	
	24 hours	0.04 ppm	* ^a	
Respirable Particulate Matter (PM ₁₀)	Annual Arithmetic Mean	20.0 µg/m ³	*	Dust and fume-producing construction, industrial, and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g., wind-raised dust and ocean sprays).
	24 hours	50.0 µg/m ³	150.0 µg/m ³	
Respirable Particulate Matter (PM _{2.5})	Annual Arithmetic Mean	12.0 µg/m ³	12.0 µg/m ³	Dust and fume-producing construction, industrial, and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g., wind-raised dust and ocean sprays).
	24 hours	*	35.0 µg/m ³	
Lead (Pb)	30-Day Average	1.5 µg/m ³	*	Present source: lead smelters, battery manufacturing & recycling facilities. Past source: combustion of leaded gasoline.
	Calendar Quarterly	*	1.5 µg/m ³	
	Rolling 3-Month Average	*	0.15 µg/m ³	
Sulfates (SO ₄)	24 hours	25 µg/m ³	*	Industrial processes.
Visibility Reducing Particles	8 hours	ExCo ^f = 0.23/km visibility of 10≥ miles	No Federal Standard	Visibility-reducing particles consist of suspended particulate matter, which is a complex mixture of tiny particles that consists of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. These particles vary greatly in shape, size, and chemical composition, and can be made up of many different materials such as metals, soot, soil, dust, and salt.

AIR QUALITY

TABLE 4.3-1 AMBIENT AIR QUALITY STANDARDS FOR CRITERIA POLLUTANTS

Pollutant	Averaging Time	California Standard	Federal Primary Standard	Major Pollutant Sources
Hydrogen Sulfide	1 hour	0.03 ppm	No Federal Standard	Hydrogen sulfide (H ₂ S) is a colorless gas with the odor of rotten eggs. It is formed during bacterial decomposition of sulfur-containing organic substances. Also, it can be present in sewer gas and some natural gas, and can be emitted as the result of geothermal energy exploitation.
Vinyl Chloride	24 hour	0.01 ppm	No Federal Standard	Vinyl chloride (chloroethene), a chlorinated hydrocarbon, is a colorless gas with a mild, sweet odor. Most vinyl chloride is used to make polyvinyl chloride (PVC) plastic and vinyl products. Vinyl chloride has been detected near landfills, sewage plants, and hazardous waste sites, due to microbial breakdown of chlorinated solvents.

Notes: ppm: parts per million; µg/m³: micrograms per cubic meter

* Standard has not been established for this pollutant/duration by this entity.

a. On June 2, 2010, a new 1-hour SO₂ standard was established, and the existing 24-hour and annual arithmetic mean standards were revoked.

Source: California Air Resources Board (CARB), 2015, October 1. Ambient Air Quality Standards, <http://www.arb.ca.gov/research/aaqs/aaqs2.pdf>.

California has also adopted a host of other regulations that reduce criteria pollutant emissions, including:

- AB 1493: Pavley Fuel Efficiency Standards
- Title 20 California Code of Regulations (CCR): Appliance Energy Efficiency Standards
- Title 24, Part 6, CCR: Building and Energy Efficiency Standards
- Title 24, Part 11, CCR: Green Building Standards Code

Toxic Air Contaminants

California regulates TACs primarily through AB 1807 (Tanner Air Toxics Act) and AB 2588 (Air Toxics “Hot Spot” Information and Assessment Act of 1987). The Tanner Air Toxics Act sets up a formal procedure for CARB to designate substances as TACs. Once a TAC is identified, CARB adopts an “airborne toxics control measure” for sources that emit designated TACs. If there is a safe threshold for a substance (i.e., a point below which there is no toxic effect), the control measure must reduce exposure to below that threshold. If there is no safe threshold, the measure must incorporate toxics best available control technology to minimize emissions. To date, CARB has established formal control measures for 11 TACs that are identified as having no safe threshold.

Under AB 2588, TAC emissions from individual facilities are quantified and prioritized by the air quality management district or air pollution control district. High priority facilities are required to perform a health risk assessment, and if specific thresholds are exceeded, are required to communicate the results to the public through notices and public meetings.

The major contributor to acute and chronic non-cancer health effects in the Air Basin is acrolein (C_3H_4O). Major sources of acrolein are on-road mobile sources and aircraft, and areas with high acrolein emissions are near freeways and commercial and military airports.²¹ Currently, CARB does not have certified emission factors or an analytical test method for acrolein. Since the appropriate tools needed to implement and enforce acrolein emission limits are not available, BAAQMD does not conduct health risk screening analysis for acrolein emissions.²²

CARB has promulgated the following specific rules to limit TAC emissions:

- CARB Rule 2485 (13 CCR Chapter 10, Section 2485), Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling
- CARB Rule 2480 (13 CCR Chapter 10, Section 2480), Airborne Toxic Control Measure to Limit School Bus Idling and Idling at Schools
- CARB Rule 2477 (13 CCR Section 2477 and Article 8), Airborne Toxic Control Measure for In-Use Diesel-Fueled Transport Refrigeration Units (TRU) and TRU Generator Sets and Facilities Where TRUs Operate

In addition, to reduce exposure to TACs, CARB developed and approved the *Air Quality and Land Use Handbook: A Community Health Perspective* (2005) to provide guidance regarding the siting of sensitive land uses in the vicinity of freeways, distribution centers, rail yards, ports, refineries, chrome-plating facilities, dry cleaners, and gasoline-dispensing facilities. This guidance document was developed to assess compatibility and associated health risks when placing sensitive receptors near existing pollution sources.

CARB's recommendations on the siting of new sensitive land uses were based on a compilation of recent studies that evaluated data on the adverse health effects from proximity to air pollution sources. The key observation in these studies is that proximity to air pollution sources substantially increases exposure and the potential for adverse health effects. There are three carcinogenic toxic air contaminants that constitute the majority of the known health risks from motor vehicle traffic, DPM from trucks, and benzene and 1,3 butadiene from passenger vehicles. CARB recommendations are based on data that show that localized air pollution exposures can be reduced by as much as 80 percent by following CARB minimum distance separations.

²¹ Bay Area Air Quality Management District (BAAQMD), 2006. Community Air Risk Evaluation Program, Phase I Findings and Policy Recommendations Related to Toxic Air Contaminants in the San Francisco Bay Area.

²² Bay Area Air Quality Management District (BAAQMD), 2010. Air Toxics NSR Program, Health Risk Screening Analysis Guidelines.

AIR QUALITY

Regional Regulations

Bay Area Air Quality Management District

BAAQMD is the agency responsible for ensuring that the National and California AAQS are attained and maintained in the Air Basin. BAAQMD is responsible for:

- Adopting and enforcing rules and regulations concerning air pollutant sources
- Issuing permits for stationary sources of air pollutants
- Inspecting stationary sources of air pollutants
- Responding to citizen complaints
- Monitoring ambient air quality and meteorological conditions
- Awarding grants to reduce motor vehicle emissions
- Conducting public education campaigns
- Air Quality Management Planning

Air quality conditions in the Air Basin have improved significantly since BAAQMD was created in 1955.²³ BAAQMD prepares air quality management plans (AQMPs), including ozone attainment plans for the National O₃ standard and clean air plans for the California O₃ standard. BAAQMD prepares these AQMPs in coordination with the Association of Bay Area Governments (ABAG) and the Metropolitan Transportation Commission (MTC). The most recent comprehensive plan is the *2010 Bay Area Clean Air Plan*, which was adopted by BAAQMD on September 15, 2010, and incorporates significant new scientific data, primarily in the form of updated emissions inventories, ambient measurements, new meteorological episodes, and new air quality modeling tools.

2010 Bay Area Clean Air Plan

The purpose of the *2010 Bay Area Clean Air Plan* is to: 1) update the Bay Area 2005 Ozone Strategy in accordance with the requirements of the California Clean Air Act to implement all feasible measures to reduce O₃; 2) consider the impacts of O₃ control measures on PM, TAC, and greenhouse gases (GHGs) in a single, integrated plan; 3) review progress in improving air quality in recent years; and 4) establish emission control measures in the 2009 to 2012 timeframe. The *2010 Bay Area Clean Air Plan* also provides the framework for the Air Basin to achieve attainment of the California and National AAQS.

Areas that meet AAQS are classified as attainment areas, and areas that do not are classified as nonattainment areas. Severity classifications for O₃ range from marginal, moderate, and serious to severe and extreme. The attainment status for the Air Basin is shown in Table 4.3-2. The Air Basin is currently designated a

²³ Bay Area Air Quality Management District, 2010 (Revised 2011). Appendix C: Sample Air Quality Setting, in California Environmental Quality Act Air Quality Guidelines.

AIR QUALITY**TABLE 4.3-2 ATTAINMENT STATUS OF CRITERIA POLLUTANTS IN THE SAN FRANCISCO BAY AREA AIR BASIN**

Pollutant	State	Federal
Ozone – 1-hour	Nonattainment (serious)	Nonattainment
Ozone – 8-hour	Nonattainment	Classification revoked (2005)
PM ₁₀	Nonattainment	Unclassified/Attainment
PM _{2.5}	Nonattainment	Nonattainment ^a
CO	Attainment	Attainment
NO ₂	Attainment	Attainment
SO ₂	Attainment	Attainment
Lead	Attainment	Attainment
Sulfates	Attainment	Unclassified/Attainment
All others	Unclassified/Attainment	Unclassified/Attainment

a. On January 9, 2013, the US EPA issued a final rule to determine that the Air Basin has attained the 24-hour PM_{2.5} National AAQS. This action suspends key federal State Implementation Plan planning requirements for the Bay Area as long as monitoring data continues to show that the Bay Area attains the standard. Despite this US EPA action, the Air Basin will continue to be designated nonattainment for the National 24-hour PM_{2.5} standard until BAAQMD submits a redesignation request and a maintenance plan to US EPA, and US EPA approves the proposed redesignation.

Source: California Air Resources Board, 2014, Area Designations: Activities and Maps, <http://www.arb.ca.gov/design/adm/adm.htm>, June 4.

nonattainment area for California and National O₃, California and National PM_{2.5}, and California PM₁₀ AAQS.

Community Air Risk Evaluation Program

BAAQMD's Community Air Risk Evaluation (CARE) program was initiated in 2004 to evaluate and reduce health risks associated with exposure to outdoor TACs in the Bay Area. BAAQMD has identified seven impacted communities in the Bay Area. Morgan Hill is not within one of BAAQMD's impacted CARE communities.

Regulation 7, Odorous Substances

Sources of objectionable odors may occur within the City. BAAQMD's Regulation 7, Odorous Substances, places general limitations on odorous substances and specific emission limitations on certain odorous compounds. Odors are also regulated under BAAQMD Regulation 1, Rule 1-301, Public Nuisance, which states that "no person shall discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance or annoyance to any considerable number of persons or the public; or which endangers the comfort, repose, health or safety of any such persons or the public, or

AIR QUALITY

which causes, or has a natural tendency to cause, injury or damage to business or property.” Under BAAQMD’s Rule 1-301, a facility that receives three or more violation notices within a 30-day period can be declared a public nuisance.

Other BAAQMD Regulations

In addition to the plans and programs described above, BAAQMD administers a number of specific regulations on various sources of pollutant emissions that would apply to individual development projects allowed under the proposed General Plan, including:

- BAAQMD, Regulation 2, Rule 2, New Source Review
- BAAQMD, Regulation 2, Rule 5, New Source Review of Toxic Air Contaminants
- BAAQMD Regulation 6, Rule 1, General Requirements
- BAAQMD Regulation 6, Rule 2, Commercial Cooking Equipment
- BAAQMD Regulation 8, Rule 3, Architectural Coatings
- BAAQMD Regulation 8, Rule 4, General Solvent and Surface Coatings Operations
- BAAQMD Regulation 8, Rule 7, Gasoline Dispensing Facilities
- BAAQMD Regulation 11, Rule 2, Asbestos, Demolition, Renovation and Manufacturing)

Santa Clara Valley Transportation Authority

The Santa Clara Valley Transportation Authority (VTA) is the congestion management agency for Santa Clara County. VTA is tasked with developing a comprehensive transportation improvement program among local jurisdictions that will reduce traffic congestion and improve land use decision-making and air quality. VTA’s latest congestion management program (CMP) is the *2013 Congestion Management Program*. VTA’s countywide transportation model must be consistent with the regional transportation model developed by the MTC with ABAG data. The countywide transportation model is used to help evaluate cumulative transportation impacts of local land use decisions on the CMP system. In addition, VTA’s updated CMP includes multi-modal performance standards and trip reduction and transportation demand management strategies consistent with the goals of reducing regional vehicle miles traveled (VMT) in accordance with Senate Bill 375.²⁴

Plan Bay Area: Strategy for a Sustainable Region

- *Plan Bay Area* is the Bay Area’s Regional Transportation Plan (RTP)/Sustainable Community Strategy (SCS). The *Plan Bay Area* was adopted jointly by the ABAG and MTC July 18, 2013. The SCS lays out a development scenario for the region, which when integrated with the transportation network and other transportation measures and policies, would reduce GHG emissions from transportation (excluding

²⁴ Santa Clara Valley Transportation Authority (VTA), 2013, 2013 Congestion Management Program, <http://www.vta.org/sfc/servlet.shepherd/version/download/068A0000001Q7pt>, October.

goods movement) beyond the per capita reduction targets identified by CARB. *Plan Bay Area* is discussed in greater detail in Section 4.7, Greenhouse Gases, of this EIR.

4.3.1.2 EXISTING CONDITIONS

Existing Ambient Air Quality

Existing levels of ambient air quality and historical trends and projections in the vicinity of Morgan Hill are best documented by measurements made by the BAAQMD. The air quality monitoring station closest to Morgan Hill is the San Martin Murphy Avenue Monitoring Station. Data from this station are summarized in Table 4.3-3; however, this station only monitors O₃. Therefore, data was obtained from the San Jose Jackson Street Monitoring Station for the other criteria air pollutants. The data show that the area regularly exceeds the state and federal O₃ standards and federal PM_{2.5} standard and occasionally exceeds the state PM₁₀ standard. The state and federal CO and NO₂ standards have not been exceeded in the last five years in the vicinity of the City.

Existing Emissions

Land uses in the Project Area currently generate criteria air pollutants from natural gas use for energy, heating and cooking, vehicle trips associated with each land use, and area sources such as landscaping equipment and consumer cleaning products.

Sensitive Receptors

Some land uses are considered more sensitive to air pollution than others due to the types of population groups or activities involved. Sensitive population groups include children, the elderly, the acutely ill, and the chronically ill, especially those with cardiorespiratory diseases. Residential areas are also considered sensitive receptors to air pollution because residents (including children and the elderly) tend to be at home for extended periods of time, resulting in sustained exposure to any pollutants present. Other sensitive receptors include retirement facilities, hospitals, and schools. Recreational land uses are considered moderately sensitive to air pollution. Although exposure periods are generally short, exercise places a high demand on respiratory functions, which can be impaired by air pollution. In addition, noticeable air pollution can detract from the enjoyment of recreation. Industrial, commercial, retail, and office areas are considered the least sensitive to air pollution. Exposure periods are relatively short and intermittent, since the majority of the workers tend to stay indoors most of the time. In addition, the working population is generally the healthiest segment of the public.

Because placement of sensitive land uses falls outside CARB jurisdiction, CARB developed and approved the *Air Quality and Land Use Handbook: A Community Health Perspective* (2005) to address the siting of sensitive land uses in the vicinity of freeways, distribution centers, rail yards, ports, refineries, chrome-plating facilities, dry cleaners, and gasoline-dispensing facilities. This guidance document was developed to assess compatibility and associated health risks when placing sensitive receptors near existing pollution sources.

AIR QUALITY

TABLE 4.3-3 AMBIENT AIR QUALITY MONITORING SUMMARY

Pollutant/Standard	Number of Days Threshold Were Exceeded and Maximum Levels During Such Violations				
	2010	2011	2012	2013	2014
Ozone (O₃)^a					
State 1-Hour $\geq$ 0.09 ppm	3	0	0	0	1
State 8-hour $\geq$ 0.07 ppm	8	2	4	1	5
Federal 8-Hour $>$ 0.075 ppm	5	0	1	1	3
Maximum 1-Hour Conc. (ppm)	0.109	0.091	0.092	0.094	0.097
Maximum 8-Hour Conc. (ppm)	0.088	0.072	0.077	0.076	0.079
Carbon Monoxide (CO)^a					
State 8-Hour $>$ 9.0 ppm	0	0	0	*	*
Federal 8-Hour $\geq$ 9.0 ppm	0	0	0	*	*
Maximum 8-Hour Conc. (ppm)	2.19	2.18	1.86	*	*
Nitrogen Dioxide (NO₂)^a					
State 1-Hour $\geq$ 0.18 (ppm)	0	0	0	0	0
Maximum 1-Hour Conc. (ppb)	64.0	51.0	67.2	58.7	58.4
Sulfur Dioxide (SO₂)^b					
State 1-Hour $\geq$ 0.04 ppm	0	0	0	0	*
Max. 1-Hour Conc. (ppm)	0.002	0.003	0.003	0.001	*
Coarse Particulates (PM₁₀)^c					
State 24-Hour $>$ 50 $\mu\text{g}/\text{m}^3$	0	0	1	5	1
Federal 24-Hour $>$ 150 $\mu\text{g}/\text{m}^3$	0	0	0	0	0
Maximum 24-Hour Conc. ($\mu\text{g}/\text{m}^3$)	46.8	44.3	59.6	58.1	54.7
Fine Particulates (PM_{2.5})^a					
Federal 24-Hour $>$ 35 $\mu\text{g}/\text{m}^3$	3	3	2	4	2
Maximum 24-Hour Conc. ($\mu\text{g}/\text{m}^3$)	41.5	50.5	38.4	57.7	60.4

Notes: ppm = parts per million; ppb = parts per billion; $\mu\text{g}/\text{m}^3$ = micrograms per cubic meter; * = insufficient data; NA = Not Available

a. Data from the San Martin Murphy Street Monitoring Station.

b. Data from the San Jose Jackson Street Monitoring Station.

Source: California Air Resources Board, 2015, Air Pollution Data Monitoring Cards (2010, 2011, 2012, 2013, and 2014), Accessed September 3, 2015, <http://www.arb.ca.gov/adam/index.html>.

CARB's recommendations on the siting of new sensitive land uses are based on recent studies that evaluated data on the adverse health effects from proximity to air pollution sources. The key observation in these studies is that proximity to air pollution sources substantially increases exposure and the potential for adverse health effects. Three carcinogenic TACs constitute the majority of the known health risks from motor vehicle traffic: DPM from trucks, benzene, and 1,3 butadiene from passenger vehicles. Table 4.3-4 shows a summary of CARB recommendations for siting new sensitive land uses within the vicinity of air-

AIR QUALITY**TABLE 4.3-4 CARB RECOMMENDATIONS FOR SITING NEW SENSITIVE LAND USES**

Source/Category	Advisory Recommendations
Freeways and High-Traffic Roads	Avoid siting new sensitive land uses within 500 feet of a freeway, urban roads with 100,000 vehicles per day, or rural roads with 50,000 vehicles per day.
Distribution Centers	Avoid siting new sensitive land uses within 1,000 feet of a distribution center (that accommodates more than 100 trucks per day, more than 40 trucks with operating transport refrigeration units [TRUs] per day, or where TRU unit operations exceed 300 hours per week). Take into account the configuration of existing distribution centers and avoid locating residences and other sensitive land uses near entry and exit points.
Rail Yards	Avoid siting new sensitive land uses within 1,000 feet of a major service and maintenance rail yard. Within 1 mile of a rail yard, consider possible siting limitations and mitigation approaches.
Ports	Avoid siting of new sensitive land uses immediately downwind of ports in the most heavily impacted zones. Consult local air districts or CARB on the status of pending analyses of health risks.
Refineries	Avoid siting new sensitive land uses immediately downwind of petroleum refineries. Consult with local air districts and other local agencies to determine an appropriate separation.
Chrome Platers	Avoid siting new sensitive land uses within 1,000 feet of a chrome plater.
Dry Cleaners Using Perchloroethylene	Avoid siting new sensitive land uses within 300 feet of any dry cleaning operation. For operations with two or more machines, provide 500 feet. For operations with three or more machines, consult with the local air district. Do not site new sensitive land uses in the same building with perchloroethylene dry cleaning operations.
Gasoline Dispensing Facilities	Avoid siting new sensitive land uses within 300 feet of a large gas station (defined as a facility with a throughput of 3.6 million gallons per year or greater). A 50-foot separation is recommended for typical gas dispensing facilities.

Source: California Air Resources Board (CARB), May 2005, *Air Quality and Land Use Handbook: A Community Health Perspective*.

pollutant sources. Recommendations in Table 4.3-4 are based on data showing that localized air pollution exposures can be reduced by as much as 80 percent by following CARB minimum distance separations.

4.3.2 STANDARDS OF SIGNIFICANCE

The proposed Project would result in a significant air quality impact if it would:

1. Conflict with or obstruct implementation of the applicable air quality plan.
2. Violate any air quality standard or contribute substantially to an existing or projected air quality violation.
3. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).
4. Expose sensitive receptors to substantial pollutant concentrations.
5. Create objectionable odors affecting a substantial number of people.
6. Cumulatively contribute to air quality impacts in the San Francisco bay Area Air Basin.

AIR QUALITY

BAAQMD Thresholds

The BAAQMD CEQA Air Quality Guidelines were prepared to assist in the evaluation of air quality impacts of projects and plans proposed within the Bay Area. The guidelines provide recommended procedures for evaluating potential air impacts during the environmental review process, consistent with CEQA requirements, and include recommended thresholds of significance, mitigation measures, and background air quality information. They also include recommended assessment methodologies for air toxics, odors, and greenhouse gas emissions. In June 2010, the BAAQMD's Board of Directors adopted CEQA thresholds of significance and an update of the CEQA Guidelines. In May 2011, the updated BAAQMD CEQA Air Quality Guidelines were amended to include a risk and hazards threshold for new receptors and modified procedures for assessing impacts related to risk and hazard impacts.

On March 5, 2012, the Alameda County Superior Court issued a judgment finding that the BAAQMD had failed to comply with CEQA when it adopted the thresholds of significance in the BAAQMD CEQA Air Quality Guidelines. The court did not rule on whether the thresholds of significance were valid on their merits, but found that the adoption of the thresholds was a project under CEQA. The court issued a writ of mandate ordering the BAAQMD to set aside the thresholds and cease their dissemination until the BAAQMD complied with CEQA.

Following the court's order, the BAAQMD released revised CEQA Air Quality Guidelines in May 2012 that included guidance on calculating air pollution emissions, obtaining information regarding the health impacts of air pollutants, and identifying potential mitigation measures, and that set aside the significance thresholds. The BAAQMD recognizes that lead agencies may rely on the previously recommended Thresholds of Significance in its CEQA Guidelines adopted in 1999. The Alameda County Superior Court, in ordering BAAQMD to set aside the thresholds, did not address the merits of the science or evidence supporting the thresholds. The City finds, therefore, that despite the Superior Court ruling, and in light of the subsequent case history, discussed below, the science and reasoning in the BAAQMD 2011 CEQA Air Quality Guidelines provide the latest, state-of-the-art guidance available. For that reason, substantial evidence supports continued use of the BAAQMD 2011 CEQA Air Quality Guidelines.

On August 13, 2013, the First District Court of Appeal ordered the trial court to reverse the judgment and upheld the BAAQMD's CEQA Guidelines. (*California Building Industry Association versus Bay Area Air Quality Management District*, Case No. A135335 and A136212 [Court of Appeal, First District, August 13, 2013]). In addition to the City's independent determination that use of the BAAQMD's CEQA Guidelines is supported by substantial evidence, they have been found to be valid guidelines for use in the CEQA environmental review process. On November 26, 2013, the California Supreme Court granted review on the issue of whether the toxic air contaminants thresholds are consistent with CEQA, specifically, whether CEQA requires analysis of exposing project residents or users to existing environmental hazards.

While the outcome of this case creates uncertainty for current project applicants and local agencies regarding proper evaluation of toxic air contaminants in CEQA documents, local agencies still have a duty

to evaluate impacts related to air quality and greenhouse gas emissions. In addition, CEQA grants local agencies broad discretion to develop their own thresholds of significance, or to rely on thresholds previously adopted or recommended by other public agencies or experts so long as they are supported by substantial evidence. Accordingly, the City is using the BAAQMD's 2011 thresholds to evaluate project impacts in order to protectively evaluate the potential effects of the Project on air quality and community risk and hazards.

Air Quality Plan Implementation

Under its plan-level review criteria, BAAQMD requires a consistency evaluation of a plan with its current air quality plan control measures. The current AQMP is the 2010 Bay Area Clean Air Plan. BAAQMD considers the project consistent with the AQMP in accordance with the following:

- Does the project support the primary goals of the AQMP?
- Does the project include applicable control measures from the AQMP?
- Does the project disrupt or hinder implementation of any AQMP control measures?
- Is the project VMT or vehicle trip increase less than or equal to the projected population increase?

Exposure of Sensitive Receptors to Air Pollution

This criteria addresses two types of localized air pollution impacts:

- CO hotspots
- TACs, and PM_{2.5}

CO Hotspots

Congested intersections have the potential to create elevated concentrations of CO, referred to as CO hotspots. The significance criteria for CO hotspots are based on the California AAQS for CO, which are 9.0 ppm (8-hour average) and 20.0 ppm (1-hour average). With the turnover of older vehicles, introduction of cleaner fuels, and implementation of control technology, the Air Basin is in attainment of the California and National AAQS, and CO concentrations in the Air Basin have steadily declined. Because CO concentrations have improved, the BAAQMD does not require a CO hotspot analysis if the following criteria are met:

- The project is consistent with an applicable congestion management program established by the County Congestion Management Agency for designated roads or highways, the regional transportation plan, and local congestion management agency plans.
- The project would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour.

AIR QUALITY

- The project traffic would not increase traffic volumes at affected intersection to more than 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited (e.g., tunnel, parking garage, bridge underpass, natural or urban street canyon, below-grade roadway).²⁵

Air Toxics and PM_{2.5}

The BAAQMD's significance thresholds for local community risk and hazard impacts from exposure of sensitive receptors to air pollutants apply to both the siting of a new source and the siting of a new receptor.

Local community risk and hazard impacts are associated with TACs and PM_{2.5} because emissions of these pollutants can have significant health impacts at the local level. Significant health impacts may occur when a project generates:

- An excess cancer risk level of more than 10 in one million, or a non-cancer (i.e., chronic or acute) hazard index greater than 1.0; or
- An incremental increase of greater than 0.3 µg/m³ annual average PM_{2.5}.²⁶

For assessing community risk and hazards, sources within a 1,000-foot radius of a project site are considered. Sources are defined as freeways, high volume roadways (with volume of 10,000 vehicles or more per day or 1,000 trucks per day), and permitted sources.²⁷ For a plan-level analysis, BAAQMD requires the following:

- Overlay zones around existing and planned sources of TACs.
- Overlay zones of at least 500 feet from all freeways and high volume roads.

For a plan-level analysis, a project must also identify goals, policies, and objectives to minimize potential impacts and create overlay zones for sources of TACs and receptors.²⁸

Odors

BAAQMD's thresholds for odors are qualitative based on BAAQMD's Regulation 7, Odorous Substances. This rule places general limitations on odorous substances and specific emission limitations on certain odorous compounds. Odors are also regulated under BAAQMD Regulation 1, Rule 1-301, Public Nuisance, which states that no person shall discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance or annoyance to any considerable number of persons or the public; or which endangers the comfort, repose, health or safety of any such persons or the public, or which cause, or has a natural tendency to cause, injury or damage to business or property. Under

²⁶ Bay Area Air Quality Management District, 2010 (Revised 2011), California Environmental Quality Act Air Quality Guidelines.

²⁶ Bay Area Air Quality Management District, 2010 (Revised 2011), California Environmental Quality Act Air Quality Guidelines.

²⁷ Bay Area Air Quality Management District (BAAQMD), 2010 (Revised 2011). California Environmental Quality Act Air Quality Guidelines.

²⁸ Bay Area Air Quality Management District (BAAQMD), 2010 (Revised 2011). California Environmental Quality Act Air Quality Guidelines.

BAAQMD's Rule 1-301, a facility that receives three or more violation notices within a 30-day period can be declared a public nuisance. BAAQMD has established odor screening thresholds for land uses that have the potential to generate substantial odor complaints, including wastewater treatment plants, landfills or transfer stations, composting facilities, confined animal facilities, food manufacturing, and chemical plants.²⁹ For a plan-level analysis, BAAQMD requires:

- Identification of potential existing and planned location of odors sources.
- Policies to reduce odors.

4.3.3 IMPACT DISCUSSION

This section analyzes potential Project-specific and cumulative impacts to air quality.

AQ-1	Implementation of the proposed Project would not conflict with or obstruct implementation of the applicable air quality plan.

General Plan

BAAQMD requires a consistency evaluation of a plan with the current AQMP measures as well as an evaluation on how the project would affects VMT per capita. The current AQMP is the *2010 Bay Area Clean Air Plan*. BAAQMD considers project consistency with the AQMP in accordance with the following:

- Does the project support the primary goals of the AQMP?
- Does the project include applicable control measures from the AQMP?
- Does the project disrupt or hinder implementation of any AQMP control measures?
- Is the project VMT or vehicle trip increase less than or equal to the projected population increase?

As described below, the proposed General Plan would reduce VMT per population and VMT per service population (SP, defined as residents and employees). Therefore, the policies identified in the proposed General Plan would not hinder BAAQMD's implementation of the Clean Air Plan.

2010 Bay Area Clean Air Plan Goals

The primary goals of the *2010 Bay Area Clean Air Plan* are to attain the state and federal AAQS, reduce population exposure and protect public health in the Bay Area, and reduce GHG emissions and protect the climate.

²⁹ Bay Area Air Quality Management District (BAAQMD), 2010 (Revised 2011). California Environmental Quality Act Air Quality Guidelines.

AIR QUALITY

Attain Air Quality Standards

BAAQMD's 2010 Bay Area Clean Air Plan strategy is based on regional population and employment projections in the Bay Area compiled by ABAG. Demographic trends incorporated into the *Plan Bay Area* determine VMT in the Bay Area, which BAAQMD uses to forecast future air quality trends. The Air Basin is currently designated a nonattainment area for O₃, PM_{2.5}, and PM₁₀ (state AAQS only).

Growth under the proposed General Plan would occur incrementally over approximately 20 years. ABAG's latest growth projections estimate 54,700 people and 22,900 employees in the City and SOI by 2035.³⁰ Chapter 4.12, Population and Housing, of this Draft EIR evaluates consistency of the proposed Project with regional growth projections. This EIR estimates that the 2035 horizon development allowed under the proposed General Plan would exceed ABAG's projections for the City and SOI by 13,357 people and 4,373 employees. However, as detailed in the analysis below, despite the additional growth, VMT per service population would decrease under the proposed General Plan. Therefore, emissions resulting from future development allowed by the proposed General Plan would not hinder BAAQMD's ability to attain the California or National AAQS, despite the additional population and employers potentially allowed. The impact would be *less than significant*.

Reduce Population Exposure and Protect Public Health

As identified in the discussion of community risk and hazards (see AQ-4 below), new sensitive land uses could be near major sources of TACs. Adherence to BAAQMD regulations would ensure that new sources of TACs do not expose populations to significant health risk; however, siting land uses near major sources of air pollution is outside the control of BAAQMD. These impacts are addressed under AQ-4, below. Additionally, Policies NRE-11.1 through NRE-11.6, Action NRE-11.a, and mitigation identified below would reduce community risk and hazards. Because the proposed General Plan is consistent with these measures in the 2010 Bay Area Clean Air Plan impacts are *less than significant*.

Reduce GHG Emissions and Protect the Climate

The GHG emissions impacts of the proposed General Plan are discussed in Chapter 4.7, Greenhouse Gas Emissions, of this Draft EIR. As described in Chapter 4.7, future development allowed by the proposed General Plan would be required to adhere to statewide measures that have been adopted to achieve the GHG reduction targets of Assembly Bill 32. In addition, the proposed General Plan is consistent with regional strategies for infill development identified by the MTC/ABAG in the *Plan Bay Area*. The proposed General Plan would achieve the plan-level BAAQMD efficiency target of 6.6 metric tons of GHG emissions per service population (residents plus employees) for 2020 and would also be on a trajectory to achieve the 2035 target recently identified in Executive Order B-30-15.

³⁰ Association of Bay Area Governments (ABAG). 2013, December. *Projections 2013*, P2013 SSA.

The proposed General Plan weaves the City’s GHG emissions reductions policies throughout the elements in order to reduce GHG emissions. Examples of policies and actions in the General Plan that put Morgan Hill on a trajectory to achieve the long-term GHG emissions reduction targets of Executive Order S-03-05 and Executive Order B-30-15 include:

Policy NRE-15.1	Greenhouse Gas Emission Reduction Targets. Maintain a greenhouse gas reduction trajectory that is consistent with the greenhouse gas reduction targets of Executive Orders B-30-15 (40 percent below 1990 levels by 2030) and S-03-05 (80 percent below 1990 levels by 2050) to ensure the City is consistent with statewide efforts to reduce greenhouse gas emissions.
Policy NRE-15.2	Linking Land Use and Transportation. Encourage land use and transportation patterns that reduce dependence on automobiles.
Policy NRE-15.3	Climate Action Plan. Utilize policies in this General Plan denoted with the green leaf symbol as the City’s greenhouse gas emissions reduction strategy.
Policy NRE-15.4	Sustainable Land Use. Promote land use patterns that reduce the number and length of motor vehicle trips.
Policy NRE-15.5	Jobs Housing Balance. To the extent feasible, encourage a balance and match between jobs and housing.
Policy NRE-15.6	Residential Near Transit. Encourage higher density residential and mixed-use development adjacent to commercial centers and transit corridors—the land along or within walking distance of a street served by transit.
Policy NRE-15.7	Mix of Uses in Employment Centers. Encourage employment areas to include a mix of support services to minimize the number of employee trips.
Policy NRE-15.8	Walkable City. Encourage retail and office areas to be located within walking and biking distance of existing and proposed residential developments.
Policy NRE-15.9	VMT Reduction. Continue to work with the Santa Clara Valley Transportation Authority on regional transportation solutions that will reduce vehicle miles traveled and greenhouse gas emissions.
Policy NRE-15.10	Green Building. Promote green building practices in new development.

Consequently, the proposed General Plan is consistent with the goal of the *2010 Bay Area Clean Air Plan* to reduce GHG emissions and protect the climate, and the impact would be *less than significant*.

2010 Bay Area Clean Air Plan Control Measures

Table 4.3-5 identifies the control measures included in the *2010 Bay Area Clean Air Plan*.

Include Applicable Control Measures from the AQMP

The proposed General Plan includes regional policies to improve regional and local air quality, including:

Policy NRE-10.1	Regional and Subregional Cooperation. Cooperate with regional agencies in developing and implementing air quality management plans. Support subregional coordination with other cities, counties, and agencies in the Santa Clara Valley and adjacent areas to address land use, jobs/housing balance, and transportation planning issues as a means of improving air quality.

AIR QUALITY

TABLE 4.3-5 CONTROL MEASURES FROM THE 2010 BAY AREA CLEAN AIR PLAN

Type	Measure Number / Title	Consistency
Stationary and Area Sources Control Measures	- SSM 1 – Metal Melting Facilities - SSM 2 – Digital Printing - SSM 3 – Livestock Waste - SSM 4 – Natural Gas Processing and Distribution - SSM 5 – Vacuum Trucks - SSM 6 – General Particulate Matter Weight Rate Limitations - SSM 7 – Open Burning - SSM 8 – Coke Calcining - SSM 9 – Cement Kilns - SSM 10 – Refinery Boilers and Heaters - SSM 11 – Residential Fan Type Furnaces - SSM 12 – Space Heating - SSM 13 – Dryers, Ovens, Kilns - SSM 14 – Glass Furnaces - SSM 15 – Greenhouse Gases in Permitting Energy Efficiency - SSM 16 – Revise Regulation 2, Rule 2: New Source Review - SSM 17 – Revise Regulation 2, Rule 5 New Source Review for Air Toxics - SSM 18 – Revise Air Toxics “Hot Spot” Program	Stationary and area sources are regulated directly by BAAQMD. To implement the stationary and area source control measures, BAAQMD adopts/revises rules or regulations to implement the control measures and reduce emissions from stationary and area sources. Because BAAQMD is the implementing agency, new and existing sources of stationary and area sources within the Project Area would be required to comply with these control measures in the <i>2010 Bay Area Clean Air Plan</i> .
Mobile Source Control Measures	- MSM A-1 – Promote Clean, Fuel Efficient Light & Medium-Duty Vehicles - MSM A-2 – Zero Emission Vehicle and Plug-in Hybrids - MSM A-3 – Green Fleets (Light Medium & Heavy-Duty Vehicles) - MSM A-4 – Replacement or Repair of High Emitting Vehicles - MSM B-1 – HDV Fleet Modernization - MSM B-2 – Low NOx Retrofits for In-Use Engines - MSM B-3 – Efficient Drive Trains - MSM C-1 – Construction and Farming Equipment - MSM C-2 – Lawn & Garden Equipment - MSM C-3 – Recreational Vessels	Mobile source control measures would reduce emissions by accelerating the replacement of older, dirtier vehicles and equipment through programs such as the BAAQMD’s Vehicle Buy-Back and Smoking Vehicle programs, and by promoting advanced technology vehicles that reduce emissions. The implementation of these measures relies heavily on incentive programs, such as the Carl Moyer Program and the Transportation Fund for Clean Air, to achieve voluntary emission reductions in advance of or in addition to CARB requirements. CARB has new regulations that require the replacement or retrofit of on-road trucks, construction equipment, and certain other diesel-powered equipment. The proposed General Plan would not hinder the ability of BAAQMD to implement these regional programs.
Transportation Control Measures	- TCM A-1 – Improve Local and Area-wide Bus Service - TCM A-2 – Improve Local and Regional Rail Service - TCM B-1 – Implement Freeway Performance Initiative	Transportation control measures (TCM) are strategies to reduce vehicle trips, vehicle use, VMT, vehicle idling, and traffic congestion for the purpose of reducing motor vehicle emissions. Although most of the TCMs are implemented at the

AIR QUALITY

TABLE 4.3-5 CONTROL MEASURES FROM THE 2010 BAY AREA CLEAN AIR PLAN

Type	Measure Number / Title	Consistency
	- TCM B-2 – Improve Transit Efficiency and Use - TCM B-3 – Bay Area Express Land Network - TCM B-4 – Goods Movement Improvements and Emission Reduction Strategies - TCM C-1 – Support Voluntary Employer-Based Trip Reduction Program - TCM C-2 – Implement Safe Routes to Schools and Safe Routes to Transit - TCM C-3 – Promote Rideshare Service and Incentives - TCM C-4 – Conduct Public Outreach and Education - TCM C-5 – Promote Smart Driving/Speed Moderation - TCM D-1 – Improve Bicycle Access and Facilities - TCM D-2 – Improve Pedestrian Access and Facilities - TCM D-3 – Support Local Land Use Strategies - TCM E-1 – Value Pricing Strategies - TCM E-2 – Parking Pricing and Management - TCM E-3 – Implement Transportation Pricing Reform	regional level—that is, by MTC or Caltrans—the <i>2010 Bay Area Clean Air Plan</i> relies on local communities to assist with implementation of some measures. The proposed General Plan includes policies related to transportation and land use that would assist BAAQMD in meeting the regional goals of the <i>2010 Bay Area Clean Air Plan</i>: - Circulation System and Complete Streets - Transit - Bikeways - Pedestrian Network - Transportation Demand Management - Regional Coordination The proposed General Plan also includes the following air quality–related policy and action related to alternative modes of transportation: - Policy NRE-10.3 - Automobile Emissions. Encourage the use of and infrastructure for alternative fuel, hybrid, and electric vehicles. Encourage new and existing public and private development to include electric vehicle charging stations. - Action NRE-10.A - Municipal Vehicle Fleet. Reduce air emission from municipal vehicles by increasing the City’s alternative fuel vehicle fleet.
Land Use and Local Impact Control Measures	- LUM 1 – Goods Movement - LUM 2 – Indirect Source Review - LUM 3 – Enhanced CEQA Program - LUM 4 – Land Use Guidelines - LUM 5 – Reduce Risk in Impacted Communities - LUM 6 – Enhanced Air Quality Monitoring	The proposed General Plan includes strategies related to transportation and land use that would assist BAAQMD in meeting the regional goals of the <i>2010 Bay Area Clean Air Plan</i>. Policies include: - Policy NRE-10.1 - Regional and Subregional Cooperation. Cooperate with regional agencies in developing and implementing air quality management plans. Support subregional coordination with other cities, counties, and agencies in the Santa Clara Valley and adjacent areas to address land use, jobs/housing balance, and transportation planning issues as a means of improving air quality. - Policy NRE-10.4 - Reduced Automobile Use. To reduce air pollution the frequency and length of automobile trips and the amount of traffic congestion by controlling sprawl, promoting infill development, and encouraging mixed uses and higher density development near transit. Support the expansion and improvement of alternative modes of transportation. Encourage development project designs that protect and improve air quality and minimize direct and indirect air pollutant emissions by including components that reduce vehicle trips.

AIR QUALITY

TABLE 4.3-5 CONTROL MEASURES FROM THE 2010 BAY AREA CLEAN AIR PLAN

Type	Measure Number / Title	Consistency
		- Policy NRE-15.2 - Linking Land Use and Transportation. Encourage land use and transportation patterns that reduce dependence on automobiles. - Policy NRE-15.4 - Sustainable Land Use. Promote land use patterns that reduce the number and length of motor vehicle trips. - Policy NRE-15.5 - Jobs Housing Balance. To the extent feasible, encourage a balance and match between jobs and housing. - Policy NRE-15.6 - Residential Near Transit. Encourage higher density residential and mixed-use development adjacent to commercial centers and transit corridors – the land along or within walking distance of a street served by transit. - Policy NRE-15.7 - Mix of Uses in Employment Centers. Encourage employment areas to include a mix of support services to minimize the number of employee trips. - Policy NRE-15.8 - Walkable City. Encourage retail and office areas to be located within walking and biking distance of existing and proposed residential developments. - Policy NRE-15.9 - VMT Reduction. Continue to work with the Santa Clara Valley Transportation Authority on regional transportation solutions that will reduce vehicle miles traveled and greenhouse gas emissions.
		The <i>2010 Bay Area Clean Air Plan</i> also includes measures to reduce energy use, water use, and waste generation. Projects would also be required to comply with the California Green Building Standards Code and the current Building and Energy Efficiency Standards of Title 24 for energy efficiency. In addition, the proposed General Plan includes the following policies and actions related to energy use and water efficiency:
Energy and Climate Control Measures	- ECM 1 – Energy Efficiency - ECM 2 – Renewable Energy - ECM 3 – Urban Heat Island Mitigation - ECM 4 – Tree Planting	- Policy NRE-16.1 - Energy Standards for New Development. New development, including public buildings, should be designed to exceed state standards for the use of energy. [Policy OS-7a and OS-7d] - Policy NRE-16.2 - Energy Conservation. Promote energy conservation techniques and energy efficiency in building design, orientation, and construction. [Policy OS-7b] - Policy NRE-16.3 - Energy Efficiency. Encourage development project designs that protect and improve air quality and minimize direct and indirect air pollutant emissions by including components that promote energy efficiency.

AIR QUALITY**TABLE 4.3-5 CONTROL MEASURES FROM THE 2010 BAY AREA CLEAN AIR PLAN**

Type	Measure Number / Title	Consistency
		- Policy NRE-16.4 - Landscaping for Energy Conservation. Encourage landscaping plans for new development to address the planting of trees and shrubs that will provide shade to reduce the need for cooling systems and allow for winter daylighting. [Policy OS-7g] - Policy NRE-16.5 - Renewable Energy. Encourage new and existing development to incorporate renewable energy generating features, like solar panels. [Policy OS-7j] - Policy NRE-16.6 - Residential Development Code. Emphasize energy conservation building techniques for new residential construction through the implementation of Chapter 18.78 of the Municipal Code. [Action OS-7.5] - Policy NRE-16.7 - Subdivision Design. In compliance with Section 66473.1 of the State Subdivision Map Act, promote subdivision design that provides for passive solar heating and natural cooling through the Development Review Committee subdivision review procedures. [Action OS-7.6] - Action NRE-16.A - Renewable Energy and Public Facilities. Evaluate the use of renewable energy generation opportunities for all existing and future public buildings and facilities. [Policy OS-7i] - Action NRE-16.B -Cooperative Energy Network. Participate in the formation of a cooperative energy network with other local governments, particularly in Santa Clara County. [Action OS-7.1] - Action NRE-16.C -Municipal Energy Audit. In cooperation with PG&E, subject all municipal buildings to an energy audit and perform practicable energy conservation alterations on municipal buildings. Such alterations can include modifying automatic heating, cooling, and lighting systems, and installing natural ventilation methods and solar hot water systems, etc. [Action OS-7.2] - Action NRE-16.D - Local Energy Ordinances. Develop local ordinances that promote energy conservation and efficiency. Examples of such ordinances include: energy audits, solar access, solar swimming pool heating, insulation and solar retrofit, and solar water heating. [Action OS-7.3] - Action NRE-16.E - Weatherization and Retrofitting. Establish programs under Department of Housing and Community Development (HCD) Block Grant rehabilitation or Section 220 funds, to weatherize and solar retrofit existing homes. [Action OS-7.4] - Action NRE-16.F - Energy Efficiency Plan. Develop a comprehensive strategy for using energy efficiently at all City facilities. [Policy OS-7h] - Policy NRE-7.1 - Water Standards for Private Development. Promote water

AIR QUALITY

TABLE 4.3-5 CONTROL MEASURES FROM THE 2010 BAY AREA CLEAN AIR PLAN

Type	Measure Number / Title	Consistency
		conservation and efficient water use in all private development projects. Require development to exceed state standards for the use of water. [Policy OS-7a] - Policy NRE-7.2 - Water Standards for Public Development. Promote water conservation and efficient water use in all public development projects. All new public buildings shall be designed to exceed state standards for water efficiency. [Policy OS-7d] - Policy NRE-7.3 - Water Efficiency and Landscaping. Promote water conservation and efficient water use in all public and private landscaping plans. [Policy OS-7k] - Policy NRE-7.4 - Non-Potable Water for Irrigation. Encourage use of non-potable water for landscape irrigation. [Policy OS-7l] - Policy NRE-7.5 - Dual Plumbing. Explore installation of dual plumbing in large, new commercial and/or residential developments to enable future use of recycled non-potable water generated on- or off-site. - Action NRE-7.A - Infrastructure Maintenance. Correct known deficiencies in the City's sewer, storm drain, and water systems and work toward environmentally sustainable systems. Maintain the City's infrastructure to ensure that facilities are up to date and incorporate efficiency and conservation mechanisms. - Action NRE-7.B - Drought-Tolerant Landscaping. Develop local ordinances that require new commercial and industrial development to use only drought-tolerant landscaping and that increase the use of drought-tolerant landscaping in new residential development. - Action NRE-7.C - Water Fixture Retrofitting. Create incentives for homeowners of older residential buildings to retrofit water fixtures to improve water efficiency and conservation. Explore ways to link homeowners with incentive programs offered by other agencies or organizations. Options for creating a City-sponsored retrofit program could include using Measure C funds or creating Citywide fees for water usage. Work with utility providers and City departments to market the program owners who own older homes, are undertaking renovations, or are new owners. - Action NRE-7.D - Water Efficiency at City Facilities. Develop a comprehensive strategy for using water efficiently at all City facilities. [Policy OS-7h]
Further Study Control Measures	- FSM 1 – Adhesives and Sealants - FSM 2 – Reactivity in Coating and Solvents - FSM 3 – Solvent Cleaning and Degreasing Operations - FSM 4 – Emissions from Cooling Towers	The majority of the further study control measures apply to sources regulated directly by BAAQMD. Because BAAQMD is the implementing agency, new and existing sources of stationary and area sources in the Project Area would be required to comply with these additional further study control measures in the <i>2010 Bay Area Clean Air Plan</i>.

AIR QUALITY**TABLE 4.3-5 CONTROL MEASURES FROM THE 2010 BAY AREA CLEAN AIR PLAN**

Type	Measure Number / Title	Consistency
	▪ FSM 5 – Equipment Leaks ▪ FSM 6 – Wastewater from Coke Cutting ▪ FSM 7 – SO₂ from Refinery Processes ▪ FSM 8 – Reduce Emission from LPG, Propane, Butane, and other Pressurized Gases ▪ FSM 9 – Greenhouse Gas Mitigation in BACT and TBACT Determinations ▪ FSM 10 Further Reductions from Commercial Cooking Equipment ▪ FSM 11 – Magnet Source Rule ▪ FSM 12 – Wood Smoke ▪ FSM 13 – Energy Efficiency and Renewable Energy ▪ FSM 14 – Winery Fermentation ▪ FSM 15 – Composting Operations ▪ FSM 16 – Vanishing Oils and Rust Inhibitors ▪ FSM 17 – Ferry System Expansion ▪ FSM 18 – Greenhouse Gas Fee	

Source: Bay Area Air Quality Management District, 2011 Revised, *California Environmental Quality Act Air Quality Guidelines*.

AIR QUALITY

Policy NRE-10.2	State and Federal Regulation. Encourage effective regulation of mobile and stationary sources of air pollution and support state and federal regulations to improve automobile emission controls.
Policy TR-10.4	Air Quality and Transportation Demand Management. Investigate opportunities for preparing and implementing Air Quality and Transportation Demand Management Plans by employers and developers of new residential and non-residential developments. [Policy CIR-6I]

As shown in Table 4.3-5, implementation of the proposed General Plan would be consistent with the *2010 Bay Area Clean Air Plan*, and the impacts due to inconsistency would be *less than significant*.

Disrupt or Hinder Implementation of any AQMP Control Measures

As identified in Table 4.3-5, the proposed General Plan would not hinder BAAQMD from implementing the control measures in the *2010 Bay Area Clean Air Plan*. Impacts are *less than significant*.

Regional Growth Projections for VMT and Population and Employment

Future development accommodated by the proposed General Plan would result in additional sources of criteria air pollutants. Growth accommodated within the Project Area would occur over 25 years or longer. As a result, BAAQMD's approach to evaluating impacts from criteria air pollutants generated by a plan's long-term growth is done by comparing population and employment estimates to the VMT estimates. This is because BAAQMD's AQMP plans for growth in the Air Basin are based on regional population and employment projections identified by ABAG and growth in VMT identified by the Santa Clara VTA. Changes in regional, community-wide emissions in the Project Area (City limits + SOI) could affect the ability of BAAQMD to achieve the air quality goals in the AQMP. Consequently, air quality impacts for a plan-level analysis are based on consistency with the regional growth projections.

VMT estimates based on data provided by Hexagon were calculated for the proposed General Plan, as shown in Table 4.14-8 of this Draft EIR. Table 4.3-6 compares the projected increase in population and service population with the projected increases in total VMT and per capita VMT. VMT estimates are sensitive to changes in land use. Generally, land uses that reflect a more balanced jobs-housing ratio result in lower per capita VMT. As shown in Table 4.3-6, the proposed General Plan would result in a decrease in VMT per population and VMT per service population (SP). Daily VMT in the Project Area would increase at a lower rate (38 percent) than would the population (51 percent) or service population (51 percent).

BAAQMD's AQMP requires that the VMT increase by less than or equal to the projected population increase from the proposed Project (e.g., generate the same or less VMT per population). However, because the City's General Plan accommodates both residential and non-residential growth, a better indicator of how efficiently the City is growing can be made by comparing the increase in VMT to the increase in service population (e.g., generate the same or less VMT per service population). This approach is similar to the efficiency metrics for GHG emissions, which consider the total service population when calculating project efficiency. Consequently, the table above analyzes how efficiently the City is growing in terms of both population and service population. As shown in Table 4.3-6, implementation of the proposed General Plan

AIR QUALITY**TABLE 4.3-6 COMPARISON OF THE CHANGE IN POPULATION, SERVICE POPULATION, AND VMT IN THE PROJECT AREA**

Category	Existing	Scenario 1
Population	45,168	68,057
Percent Change in Population	NA	51%
Employment	17,947	27,273
Total Service Population (SP)	63,115	95,330
Percent Change in SP	NA	51%
VMT/Day	1,846,433	2,545,452
Percent Change in VMT/Day	NA	38%
VMT/Person/Day	40.9	37.4
Percent Change in VMT/Person/Day	NA	-8.5%
VMT/SP/Day	29.3	26.7
Percent Change in VMT/SP/Day	NA	-8.7%

Notes: VMT provided by Hexagon.

would result in lower VMT per capita than under existing conditions (8.5 percent less) or lower VMT per service population than under existing conditions (8.7 percent less). Additionally, future projects allowed under the proposed General Plan would be required to comply with General Plan policies and actions, which would further reduce VMT from future projects in the City. Accordingly, impacts would be *less than significant*.

Applicable Regulations:

- AB 1493: Pavley Fuel Efficiency Standards
- Title 20 California Code of Regulations (CCR): Appliance Energy Efficiency Standards
- Title 24, Part 6, CCR: Building and Energy Efficiency Standards
- Title 24, Part 11, CCR: Green Building Standards Code
- CARB Rule 2485 (13 CCR Chapter 10, Section 2485), Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling
- CARB Rule 2480 (13 CCR Chapter 10, Section 2480), Airborne Toxic Control Measure to Limit School Bus Idling and Idling at Schools
- CARB Rule 2477 (13 CCR Section 2477 and Article 8), Airborne Toxic Control Measure for In-Use Diesel-Fueled Transport Refrigeration Units (TRU) and TRU Generator Sets and Facilities Where TRUs Operate

AIR QUALITY

- BAAQMD, Regulation 2, Rule 2, New Source Review
- BAAQMD, Regulation 2, Rule 5, New Source Review of Toxic Air Contaminants
- BAAQMD Regulation 6, Rule 1, General Requirements
- BAAQMD Regulation 6, Rule 2, Commercial Cooking Equipment
- BAAQMD Regulation 7, Odorous Substances
- BAAQMD Regulation 8, Rule 3, Architectural Coatings
- BAAQMD Regulation 8, Rule 4, General Solvent and Surface Coatings Operations
- BAAQMD Regulation 8, Rule 7, Gasoline Dispensing Facilities
- BAAQMD Regulation 11, Rule 2, Asbestos, Demolition, Renovation and Manufacturing)

Significance Before Mitigation: Less than significant.

Residential Development Control System

The Residential Development Control System, known as the RDCS, regulates population growth through the provision of residential building allotments. The RDCS and the proposed updates to the RDCS as part of the proposed Project affect the pace of development in the City but do not determine the location, type, or intensity of development. Therefore, the RDCS would not interfere with implementation of the *2010 Bay Area Clean Air Plan*. Therefore, the RDCS would have *no impact*.

Significance Before Mitigation: No impact.

AQ-2	Implementation of the proposed Project would violate an air quality standard or contribute substantially to an existing or projected air quality violation.

General Plan

Projects that exceed BAAQMD's regional significance thresholds contribute to the nonattainment designation of the Air Basin, which constitutes an air quality violation. The attainment designation is based on the AAQS, which are set at levels of exposure that are determined to not result in adverse health. Consequently, projects that exceed BAAQMD's significance thresholds cumulatively contribute to health impacts within the Air Basin. Regional emissions contribute to these known health effects, but it is speculative for this broad-based program EIR to determine how exceeding the regional thresholds would affect the number of days the region is in nonattainment—since mass emissions are not correlated with concentrations of emissions—or how many additional individuals in the Air Basin would be affected by the health effects cited above.

AIR QUALITY*Operational Emissions*

Although BAAQMD's CEQA Air Quality Guidelines only require an emissions inventory of criteria air pollutants for project-level analyses, an inventory of criteria air pollutants was generated for the proposed Project, since enough information regarding the buildout of the proposed General Plan is available to identify the magnitude of emissions from buildout of the proposed Project and whether development allowed under the proposed General Plan would contribute to an air quality violation. Table 4.3-7 identifies the emissions associated with buildout of the proposed Project. Subsequent environmental review of development projects would be required to assess potential impacts under BAAQMD's project-level thresholds.

TABLE 4.3-7 NET INCREASE IN COMMUNITY-WIDE CRITERIA AIR POLLUTANTS GENERATED BY PROPOSED LAND USES AT THE GENERAL PLAN HORIZON YEAR 2035

Category	Criteria Air Pollutants (average lbs/day)			
	ROG	NO _x	Exhaust PM ₁₀	Exhaust PM _{2.5}
Area Sources	364	7	15	15
Energy	6	52	4	4
Transportation ^a	210	386	604	167
Total	581	446	623	186
BAAQMD Average Daily Project-Level Threshold ^b	54	54	82	54
Exceeds Average Daily Threshold	Yes	Yes	Yes	Yes
Total Tons per Year (tpy)	94	69	93	27
BAAQMD Annual Project-Level Threshold	10 tpy	10 tpy	15 tpy	10 tpy
Exceeds Annual Threshold	Yes	Yes	Yes	Yes

Note: Emissions may not total to 100 percent due to rounding.

a. Transportation. VMT is based on data provided by Hexagon: based on VTA model for Morgan Hill.

b. There is no separate plan-level threshold, so plans are evaluated using the project-level threshold.

AIR QUALITY

The proposed General Plan includes the following policies that, once adopted, would reduce criteria air pollutants from development projects to the maximum extent practicable.

Policy NRE-10.1	Regional and Subregional Cooperation. Cooperate with regional agencies in developing and implementing air quality management plans. Support subregional coordination with other cities, counties, and agencies in the Santa Clara Valley and adjacent areas to address land use, jobs/housing balance, and transportation planning issues as a means of improving air quality.
Policy NRE-10.2	State and Federal Regulation. Encourage effective regulation of mobile and stationary sources of air pollution and support state and federal regulations to improve automobile emission controls.
Policy NRE-10.3	Automobile Emissions. Encourage the use of and infrastructure for alternative fuel, hybrid, and electric vehicles. Encourage new and existing public and private development to include electric vehicle charging stations.
Policy NRE-10.4	Reduced Automobile Use. To reduce air pollution the frequency and length of automobile trips and the amount of traffic congestion by controlling sprawl, promoting infill development, and encouraging mixed uses and higher density development near transit. Support the expansion and improvement of alternative modes of transportation. Encourage development project designs that protect and improve air quality and minimize direct and indirect air pollutant emissions by including components that reduce vehicle trips.
Policy NRE-16.1	Energy Standards for New Development. New development, including public buildings, should be designed to exceed state standards for the use of energy. [Policy OS-7a and OS-7d]
Policy NRE-16.2	Energy Conservation. Promote energy conservation techniques and energy efficiency in building design, orientation, and construction. [Policy OS-7b]
Policy NRE-16.5	Energy Efficiency. Encourage development project designs that protect and improve air quality and minimize direct and indirect air pollutant emissions by including components that promote energy efficiency.
Policy NRE-16.6	Landscaping for Energy Conservation. Encourage landscaping plans for new development to address the planting of trees and shrubs that will provide shade to reduce the need for cooling systems and allow for winter daylighting. [Policy OS-7g]
Policy NRE-16.7	Renewable Energy. Encourage new and existing development to incorporate renewable energy generating features, like solar panels and solar hot water heaters. [Policy OS-7j]
Policy NRE-16.8	Residential Development Code. Emphasize energy conservation building techniques for new residential construction through the implementation of Chapter 18.78 of the Municipal Code. [Action OS-7.5]
Policy NRE-16.9	Subdivision Design. In compliance with Section 66473.1 of the state Subdivision Map Act, promote subdivision design that provides for passive solar heating and natural cooling through the Development Review Committee subdivision review procedures. [Action OS-7.6]
Policy TR-2.2	Integrated Land Use/Transportation Planning. Integrate planning for land use and transportation development by ensuring that the timing, amount, and location of urban development is consistent with the development of the transportation system capacity. Promote environmental objectives that supports smart growth and Sustainable Communities principles, such as safe and uncongested neighborhoods, a pedestrian-friendly vibrant downtown that emphasizes non-auto transportation modes, energy conservation, reduction of air and noise pollution, and the integrity of scenic and/or hillside areas. (SCJAP 11.02 & 11.05) [Policy CIRC-1d & CIR-2e]

AIR QUALITY

Policy TR-10.2	Flexible Work Hours. Encourage employers to provide a flexible set of working hours to ease traffic congestion. [Policy CIR-6h]
Policy TR-10.3	Carpooling. Support a Countywide car/vanpool matching program. [Policy CIR-6f]
Policy TR-10.4	Air Quality and Transportation Demand Management. Investigate opportunities for preparing and implementing Air Quality and Transportation Demand Management Plans by employers and developers of new residential and non-residential developments. [Policy CIR-6l]

Despite implementation of the proposed General Plan policies listed above and identified in Table 4.3-5, criteria air pollutant emissions associated with development allowed the proposed General Plan would generate a substantial net increase in emissions that exceeds the BAAQMD regional significance thresholds. Because cumulative development within the City of Morgan Hill could exceed the regional significance thresholds, the project could contribute to an increase in adverse health effects in the Air Basin until the attainment standards are met. Criteria air pollutant emissions would be generated from on-site area sources (e.g., landscaping fuel, consumer products), vehicle trips generated by the proposed General Plan, and energy use (e.g., natural gas used for cooking and heating).

The BAAQMD is the primary agency responsible for ensuring the health and welfare of individuals sensitive to elevated concentrations of air pollutants in the Air Basin. To achieve the health-based standards established by the US EPA and CARB, BAAQMD prepares an air quality management plan that detail regional programs to attain the AAQS. However, because cumulative development within the City of Morgan Hill could exceed the regional significance thresholds, the project could contribute to an increase in adverse health effects in the Air Basin until the attainment standards are met. Consequently, impacts are *significant*.

Applicable Regulations:

- AB 1493: Pavley Fuel Efficiency Standards
- Title 20 CCR: Appliance Energy Efficiency Standards
- Title 24, Part 6, CCR: Building and Energy Efficiency Standards
- Title 24, Part 11, CCR: Green Building Standards Code
- BAAQMD Regulation 8, Rule 7, Gasoline Dispensing Facilities

Significance Before Mitigation: Significant. Despite implementation of the proposed General Plan policies listed above and identified in Table 4.3-5, criteria air pollutant emissions associated with the proposed General Plan would cause a substantial net increase in emissions that exceeds the BAAQMD regional significance thresholds. Impacts would be *significant*.

Construction Emissions

BAAQMD's plan-level guidelines do not require an evaluation of construction emissions for plan-level projects. There is no proposed development under the proposed General Plan at this time. Future development proposals under the proposed General Plan would be subject to separate environmental review pursuant to CEQA in order to identify and mitigate potential air quality impacts. Because the details

AIR QUALITY

regarding future construction activities are not known at this time, including their phasing, duration, and equipment, construction emissions are evaluated qualitatively in accordance with BAAQMD's plan-level guidance.

Construction emissions associated with individual development projects under the proposed General Plan would generate an increase in criteria air pollutants and TACs. BAAQMD has developed project-level thresholds for construction activities. Subsequent environmental review of future development projects would be required to assess potential impacts under BAAQMD's project-level thresholds. Construction emissions from buildout of future projects within Morgan Hill would primarily be 1) exhaust emissions from off-road diesel-powered construction equipment; 2) dust generated by demolition, grading, earthmoving, and other construction activities; 3) exhaust emissions from on-road vehicles; and 4) off-gas emissions of ROGs from application of asphalt, paints, and coatings.

The proposed General Plan includes policies and actions that, once adopted, would minimize impacts during construction, including:

Policy NRE-12.1	Best Practices. Requirement that development projects implement best management practices to reduce air pollutant emissions associated with construction and operation of the project.
Policy NRE-12.2	Conditions of Approvals. Include dust, particulate matter, and construction equipment exhaust control measures as conditions of approval for subdivision maps, site development and planned development permits, grading permits, and demolition permits. At a minimum, conditions shall conform to construction mitigation measures recommended in the current Bay Area Air Quality Management District CEQA Guidelines.
Policy NRE-12.3	Control Measures. Require construction and demolition projects that have the potential to disturb asbestos (from soil or building material) to comply with all the requirements of the California Air Resource Board's air toxics control measures (ATCMs) for Construction, Grading, Quarrying, and Surface Mining Operations.
Policy NRE-12.4	Grading. Require subdivision designs and site planning to minimize grading and use landform grading in hillside areas.
Action NRE-12.A	Standard Measures for Demolition and Grading. Adopt and periodically update dust, particulate matter, and exhaust control standard measures for demolition, grading, and construction activities to include on project plans mitigation measures as conditions of approval based Bay Area Air Quality Management District CEQA Guidelines. Include measures to prevent silt loading on roadways that generates particulate matter air pollution by prohibiting unpaved or unprotected access to public roadways from construction sites.
Action NRE-12.B	Grading Ordinance. Revise the grading ordinance and condition grading permits to require that graded areas be stabilized from the completion of grading to commencement and construction.

Existing federal, state, and local regulations, and policies and actions of the proposed General Plan described throughout this chapter protect local and regional air quality. Continued compliance with these regulations and implementation of proposed General Plan policies and actions would reduce construction-related impacts to the extent feasible. However, if uncontrolled, fugitive dust (PM₁₀ and PM_{2.5}) levels downwind of actively disturbed areas during construction or overlapping construction activities could violate air quality

standards or contribute substantially to an existing or projected air quality violation and expose sensitive receptors to elevated concentrations of pollutants during construction activities.

The BAAQMD is the primary agency responsible for ensuring the health and welfare of individuals sensitive to elevated concentrations of air pollutants in the Air Basin. To achieve the health-based standards established by the US EPA and CARB, BAAQMD prepares an air quality management plan that details regional programs to attain the AAQS. However, because cumulative development within the City of Morgan Hill could exceed the regional significance thresholds, the proposed General Plan could contribute to an increase in adverse health effects in the Air Basin until attainment standards are met. Consequently, impacts are *significant*.

Applicable Regulations

- Title 24, Part 11, CCR: Green Building Standards Code
- BAAQMD Regulation 8, Rule 3, Architectural Coatings
- BAAQMD Regulation 8, Rule 4, General Solvent and Surface Coatings Operations
- BAAQMD Regulation 11, Rule 2, Asbestos, Demolition, Renovation and Manufacturing

Significance Before Mitigation: Significant. Despite implementation of the proposed General Plan policies listed above, criteria air pollutant emissions associated with the proposed General Plan construction activities would generate a substantial net increase in emissions that exceeds the BAAQMD regional significance thresholds. Impacts would be *significant*.

Residential Development Control System

The Residential Development Control System, known as the RDCS, regulates population growth through the provision of residential building allotments. The RDCS, and the proposed updates to the RDCS as part of the proposed Project, affects the pace of development in the City but does not determine the location, type, or intensity of development. Therefore, the RDCS would not have the potential to generate an increase in air pollutant emissions. Therefore, the RDCS would have *no impact*.

Significance Before Mitigation: No impact.

AQ-3	Implementation of the proposed Project would result in a cumulatively considerable net increase of criteria pollutants for which the project region is in nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors).

AIR QUALITY

General Plan

This section analyzes potential impacts related to air quality that could occur from the buildout allowed under the General Plan in combination with the regional growth within the Air Basin. The Air Basin is currently designated a nonattainment area for California and National O₃, California and National PM_{2.5}, and California PM₁₀ AAQS. At a plan level, air quality impacts are measured by the potential for a project to exceed BAAQMD's significance criteria and contribute to the state and federal nonattainment designations in the Air Basin. Any project that produces a significant regional air quality impact in an area that is in nonattainment adds to the cumulative impact. Pursuant to the CEQA Guidelines Section 15130(b)(1), cumulative impacts can be based on the growth projections in a local General Plan. Consequently, the analysis in this chapter is the proposed General Plan's contribution to cumulative impacts.

The proposed General Plan's contribution to cumulative air quality impacts are identified under the discussion in Impact AQ-2. The analysis in these sections identify whether the proposed Project would generate a substantial increase in criteria air pollutants. The proposed General Plan would generate a substantial increase in criteria air pollutant emissions from construction and operational activities. Consequently, Impact AQ-2 identified regional air quality impacts as *significant*.

Applicable Regulations:

- AB 1493: Pavley Fuel Efficiency Standards
- Title 20 CCR: Appliance Energy Efficiency Standards
- Title 24, Part 6, CCR: Building and Energy Efficiency Standards
- Title 24, Part 11, CCR: Green Building Standards Code
- BAAQMD, Regulation 2, Rule 2, New Source Review
- BAAQMD, Regulation 2, Rule 5, New Source Review of Toxic Air Contaminants
- BAAQMD Regulation 8, Rule 7, Gasoline Dispensing Facilities

Significance Before Mitigation: Significant. Despite implementation of the proposed General Plan policies listed above, criteria air pollutant emissions associated with the proposed General Plan would generate a substantial net increase in emissions that exceeds the BAAQMD regional significance thresholds. Impacts would be *significant*.

Residential Development Control System

The Residential Development Control System, known as the RDCS, regulates population growth through the provision of residential building allotments. The RDCS, and the proposed updates to the RDCS as part of the proposed Project, affects the pace of development in the City but does not determine the location, type, or intensity of development. Therefore, the RDCS would not have the potential to generate an increase in air pollutant emissions. Therefore, the RDCS would have *no impact*.

Significance Before Mitigation: No impact.

AQ-4 Implementation of the proposed Project would expose sensitive receptors to substantial concentrations of air pollution.

This threshold addresses two types of pollutant concentrations: CO hotspots and TACs.

General Plan

CO Hotspots

Areas of vehicle congestion have the potential to create pockets of CO called hotspots. These pockets have the potential to exceed the state one-hour standard of 20 ppm or the eight-hour standard of 9.0 ppm. Because CO is produced in the greatest quantities from vehicle combustion and does not readily disperse into the atmosphere, adherence to ambient air quality standards is typically demonstrated through an analysis of localized CO concentrations. Hotspots are typically produced at intersections, where traffic congestion is highest because vehicles queue for longer periods and are subject to reduced speeds.

Under existing and future vehicle emission rates, a project would have to increase traffic volumes at a single intersection by more than 44,000 vehicles per hour—or 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited by bridges or tunnels—in order to generate a significant CO impact.³¹ Buildout of the proposed General Plan would not increase traffic at affected intersections to these volumes.³² Trips associated with the proposed General Plan would not exceed the screening criteria of the BAAQMD. In addition, the Air Basin has been designated attainment under both the national and California AAQS for CO. Therefore, the proposed General Plan would not have the potential to substantially increase CO hotspots at intersections in Morgan Hill.

In order to determine the potential for CO hotspots, BAAQMD considers consistency with the relevant Congestion Management Plan, because congested intersections generate unhealthy concentrations of CO. The proposed General Plan would be consistent with VTA's 2013 Congestion Management Program (CMP), which is the applicable CMP.³³ The proposed General Plan includes policies that, once adopted, would encourage bicycle, pedestrian, and transit use to tie land use and transportation, which ensures consistency with VTA's 2013 Congestion Management Program. Example policies include:

³¹ Bay Area Air Quality Management District (BAAQMD), 2011 (Revised), *CEQA Air Quality Guidelines*.

³² Hexagon Transportation Consultants, Inc., 2015, *Morgan Hill 2035 General Plan Update Traffic Impact Analysis*.

³³ Santa Clara Valley Transportation Authority (VTA), 2013. 2013 Congestion Management Program <http://www.vta.org/sfc/servlet.shepherd/version/download/068A0000001Q7pt>, October.

AIR QUALITY

Policy TR-2.1	Multi-Modal System for All Users. A balanced multi-modal system offers viable choices for residents, employees, customers, visitors, and recreational users. Use smart growth and Sustainable Communities principles throughout the City to provide a balanced transportation system which assures access to all, and which integrates all appropriate modes of transportation into an effectively functioning system, including modes such as auto, ride sharing, public rail and bus transit, paratransit, bicycling, and walking. (SCJAP 11.00 & 11.01) [Policy CIR-1c & CIR-9a]
Policy TR-2.2	Integrated Land Use/Transportation Planning. Integrate planning for land use and transportation development by ensuring that the timing, amount, and location of urban development is consistent with the development of the transportation system capacity. Promote environmental objectives that supports smart growth and Sustainable Communities principles, such as safe and uncongested neighborhoods, a pedestrian-friendly vibrant downtown that emphasizes non-auto transportation modes, energy conservation, reduction of air and noise pollution, and the integrity of scenic and/or hillside areas. (SCJAP 11.02 & 11.05) [Policy CIR-1d & CIR-2e]
Policy TR-6.1	Street Design for Improved Bus Service. Coordinate with VTA to provide improved local bus service and to encourage people to ride the bus for local as well as longer trips (e.g., to Gilroy and San Jose). The design of key arterial streets such as Hale/Santa Teresa, the Butterfield Corridor and Monterey Road should consider incorporating bus curb lanes or duckouts, enhanced stop amenities, transit signal priority, and supporting pedestrian improvements. [Policy CIR-6a]
Policy TR-6.3	Transfer Center. Investigate the creation of an integrated transit transfer center that would provide convenient transfer between bus, auto, bicycle, and rail. [Policy CIR-6c]
Policy TR-6.4	Monterey Road Design for Commuter Bus Service. Make existing and future commuter bus service convenient and accessible. Coordinate with the Monterey Road streetscape planning process to plan for and implement optimal locations for bus stops, shelters, and turnouts in and near the Downtown area. [Policy CIR-6d]
Policy TR-6.5	Local Shuttle Service. Promote improved local transit service, including shuttle service through the downtown, and major shopping, and employment centers. [Policy CIR-6e]
Policy TR-6.6	Employer Support for Transit. Support Countywide programs to encourage employers to promote use of mass transportation. [Policy CIR-6g]
Policy TR-6.12	Bus Shelters from Private Development. Require developers to install bus shelters compatible with City architectural standards, where appropriate. [Action CIR-6.6]
Action TR-6.D	Enclosed Bus Shelters. Work with the VTA to install enclosed bus shelters at major bus stops. [Action CIR-6.5]
Policy TR-7.1	Planning for High-Speed Rail. Remain actively engaged in planning efforts for High-Speed Rail service to minimize local impacts and ensure that design is consistent with local plans and policies.
Policy TR-8.2	Bicycle Commuting. Encourage increased use of bicycles for adults commuting to work and for students traveling to school through a safe and efficient bikeways system, enhanced bicycle parking facilities, and bicycle safety and promotion programs, including showers for bicycle commuters at places of employment. [Policy CIR-7b]
Policy TR-8.3	Alternative Routes. Establish alternative routes, with direct routes on busy streets for experienced cyclists, and less direct routes on bicycle paths and quieter streets for less experienced and recreational cyclists. [Policy CIR-7c]

AIR QUALITY

Policy TR-8.4	Coordinated Bicycle Planning. Coordinate development of the bikeways system with the Santa Clara Countywide Trails Master Plan, the Santa Clara Countywide Bicycle Plan, the South County Joint Area Plan, the Santa Clara County Bicycle Technical Guidelines, and the California Department of Transportation Highway Design Manual. [Policy CIR-7d]
Policy TR-8.10	Safe Routes to Schools. Define safe pedestrian and bicycle routes to all new schools (public and private) during the planning and design process so that these routes can be developed and in place prior to opening the school. [Policy CIR-7j]
Policy TR-8.11	Multi-Jurisdictional Bikeway Alignments. For multi-jurisdictional alignments, develop partnerships with Santa Clara County to plan, finance, implement, and maintain the bikeways system. [Policy CIR-7k]
Policy TR-8.12	Bicycle Parking. Bicycle parking facilities shall be provided at all schools, parks, recreation facilities, commercial centers, civic buildings (including the library), transit centers, and work places based on the recommendations and standards in the Bikeways Master Plan. [Policy CIR-7l]
Policy TR-9.1	Private Development Connections. Ensure adequate pedestrian access in all developments, with special emphasis on pedestrian connections in the downtown area, in shopping areas, and major work centers, including sidewalks in industrial areas in accordance with the Trails and Natural Resources Master Plan. [Policy CIR-8a]
Policy TR-9.10	Sidewalk Connectivity. Improve sidewalk connectivity by installing new sidewalks where they do not exist, consistent with the Trails and Natural Resources Master Plan. [Policy CIR-8j]
Policy TR-10.4	Air Quality and Transportation Demand Management. Investigate opportunities for preparing and implementing Air Quality and Transportation Demand Management Plans by employers and developers of new residential and non-residential developments. [Policy CIR-6l]

Localized air quality impacts related to pollutant concentrations from mobile-source emissions would therefore be *less than significant*.

Applicable Regulations

- AB 1493: Pavley Fuel Efficiency Standards
- CARB Rule 2485 (13 CCR Chapter 10, Section 2485), Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling
- CARB Rule 2480 (13 CCR Chapter 10, Section 2480), Airborne Toxic Control Measure to Limit School Bus Idling and Idling at Schools
- CARB Rule 2477 (13 CCR Section 2477 and Article 8), Airborne Toxic Control Measure for In-Use Diesel-Fueled Transport Refrigeration Units (TRU) and TRU Generator Sets and Facilities Where TRUs Operate

Significance Before Mitigation: Less than significant.

Toxic Air Contaminants: New Sources

Various industrial and commercial processes (e.g., manufacturing, dry cleaning) allowed under the proposed General Plan would be expected to release TACs. TAC emissions generated by stationary and point sources of emissions within the Air Basin are regulated and controlled by BAAQMD. Emissions of TAC from mobile

AIR QUALITY

sources are regulated by statewide rules and regulations, not by BAAQMD, and have the potential to generate substantial concentrations of air pollutants.

New development allowed under the proposed General Plan such as industrial land uses, chemical processing facilities, chrome-plating facilities, dry cleaners, and gas stations would have the potential to generate substantial stationary sources of emissions and would require a permit from BAAQMD for emissions of TACs. Emissions of stationary source TACs would be controlled by BAAQMD through permitting and would be subject to further study and health risk assessment prior to the issuance of any necessary air quality permits under BAAQMD Regulation 2, Rule 2, New Source Review, and Rule 5, New Source Review of Toxic Air Contaminants.

Mobile sources of TACs are not regulated by BAAQMD. The primary mobile sources of TACs within Morgan Hill are truck idling and use of off-road equipment at warehousing operations. Warehousing operations could generate a substantial amount of DPM emissions from off-road equipment use and truck idling. In addition, some warehousing and industrial facilities may include use of transport refrigeration units (TRUs) for cold storage. New land uses in Morgan Hill that are permitted under the proposed Project that use trucks, including trucks with TRUs, could generate an increase in DPM that would contribute to cancer and non-cancer health risk in the Air Basin. Impacts could occur at facilities that permit 100 or more truck trips per day or 40 or more trucks with TRUs within 1,000 feet of a sensitive land use. These new land uses could be near existing sensitive receptors within and outside the Study Area. In addition, trucks would travel on regional transportation routes through the Air Basin, contributing to near-roadway DPM concentrations.

Implementation of the proposed General Plan policies and actions would minimize impacts from community risk and hazards. Specifically, implementation of the following policies would minimize potential conflicts between land uses.

Policy NRE-11.2	TACs and Existing Sensitive Uses. Encourage the installation of appropriate air filtration mechanisms at existing schools, residences, and other sensitive receptors adversely affected by existing or proposed pollution sources.
Policy NRE-11.3	Health Risk Assessments. For proposed development that emits toxic air contaminants, require project proponents to prepare health risk assessments in accordance with Bay Area Air Quality Management District procedures as part of environmental review and implement effective mitigation measures to reduce potential health risks to less-than-significant levels. Alternatively, require these projects to be located an adequate distance from residences and other sensitive receptors to avoid health risks. Consult with the Bay Area Air Quality Management District to identify stationary and mobile toxic air contaminant sources and determine the need for and requirements of a health risk assessment for proposed developments.
Policy NRE-11.4	Truck Routes. For development projects generating significant heavy duty truck traffic, designate truck routes that minimize exposure of sensitive receptors to toxic air contaminants and particulate matter.
Policy NRE-11.5	Truck Idling. For development projects generating significant truck traffic, require signage to remind drivers that the state truck idling law limits truck idling to five (5) minutes.
Policy NRE-11.6	Vegetation Buffers. Encourage the use of pollution-absorbing trees and vegetation in buffer areas between substantial sources of toxic air contaminants and sensitive receptors.

However, these policies do not identify BAAQMD's performance standards (ten in one million [10E-06], PM_{2.5} concentrations exceed 0.3 µg/m³, or the appropriate noncancer hazard index exceeds 1.0). Consequently, mitigation is needed to ensure that new projects are evaluated in accordance with BAAQMD's CEQA Guidelines. Community risk, and hazard impacts are *significant*.

Applicable Regulations

- CARB Rule 2485 (13 CCR Chapter 10, Section 2485), Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling
- CARB Rule 2480 (13 CCR Chapter 10, Section 2480), Airborne Toxic Control Measure to Limit School Bus Idling and Idling at Schools
- CARB Rule 2477 (13 CCR Section 2477 and Article 8), Airborne Toxic Control Measure for In-Use Diesel-Fueled Transport Refrigeration Units (TRU) and TRU Generator Sets and Facilities Where TRUs Operate
- BAAQMD, Regulation 2, Rule 2, New Source Review
- BAAQMD, Regulation 2, Rule 5, New Source Review of Toxic Air Contaminants
- BAAQMD Regulation 6, Rule 1, General Requirements

Significance Before Mitigation: Significant. Mitigation is needed to ensure that new projects are evaluated in accordance with BAAQMD's CEQA Guidelines, and therefore impacts are *significant*.

Toxic Air Contaminants : Siting of Sensitive Receptors

Existing TAC sources within the City of Morgan Hill include stationary sources permitted by BAAQMD, roadways with more than 10,000 annual average daily traffic, and highways or freeways. Stationary sources in Morgan Hill were identified using BAAQMD's Stationary Source Screening Analysis Tool. Figure 2-2 identifies several major areas of the City that have the potential to expose sensitive receptors to substantial pollutant concentrations within 1,000 feet of the sources identified. Figure 4.3-2 identifies approximately 69 potential stationary sources in or near the City of Morgan Hill. Of these sources, there are approximately 20 industrial uses, 18 emergency diesel generators, 5 auto body repair and refinishing facilities, 12 gas stations, 8 dry cleaners, and 6 miscellaneous sources (e.g., technology companies, printing shops, furniture refinishing, etc.).³⁴

High-volume roadways with over 10,000 vehicles per day were also mapped. In the General Plan Horizon year 2035, a total of 10 high volume local roadways were identified within 1,000 feet of the City, including Monterey Road, Hale Avenue, Butterfield Boulevard, Mission View Drive, Murphy Avenue, Cochrane Road, Dunne Avenue, Edmundson Avenue, Tennant Avenue, and Watsonville Road.³⁵ Additionally, Highway 101 transects the City and has over 100,000 average annual daily vehicle trips. The Caltrain rail line is included

³⁴ Bay Area Air Quality Management District, 2012, Tools and Methodology, Stationary Source Screening Analysis Tool, <http://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/ceqa-tools>, May 30. Accessed on September 14, 2015.

³⁵ Hexagon. 2015. Morgan Hill General Plan Update Roadway Segment ADT.

AIR QUALITY

in Figure 4.3-2 because Caltrain uses diesel-fueled locomotives, which emit TACs. Figure 4.3-2 also identifies high-volume roadways that would warrant a 500-foot screening analysis to determine potential impacts and a 200-foot screening buffer for rail lines. Because these are screening distances, refined analysis of the effects from many of the high volume roadways and rail lines would likely show much lower potential TAC exposure and smaller buffer zones. A refined analysis or site-specific health risk assessment should be conducted for all new sensitive sources that are sited within the buffer zone to determine the actual health impact.

Implementation of the proposed General Plan policies and actions would minimize impacts from community risk and hazards. Specifically, implementation of the following policies would minimize potential impacts on sensitive receptors from substantial concentrations pollutants.

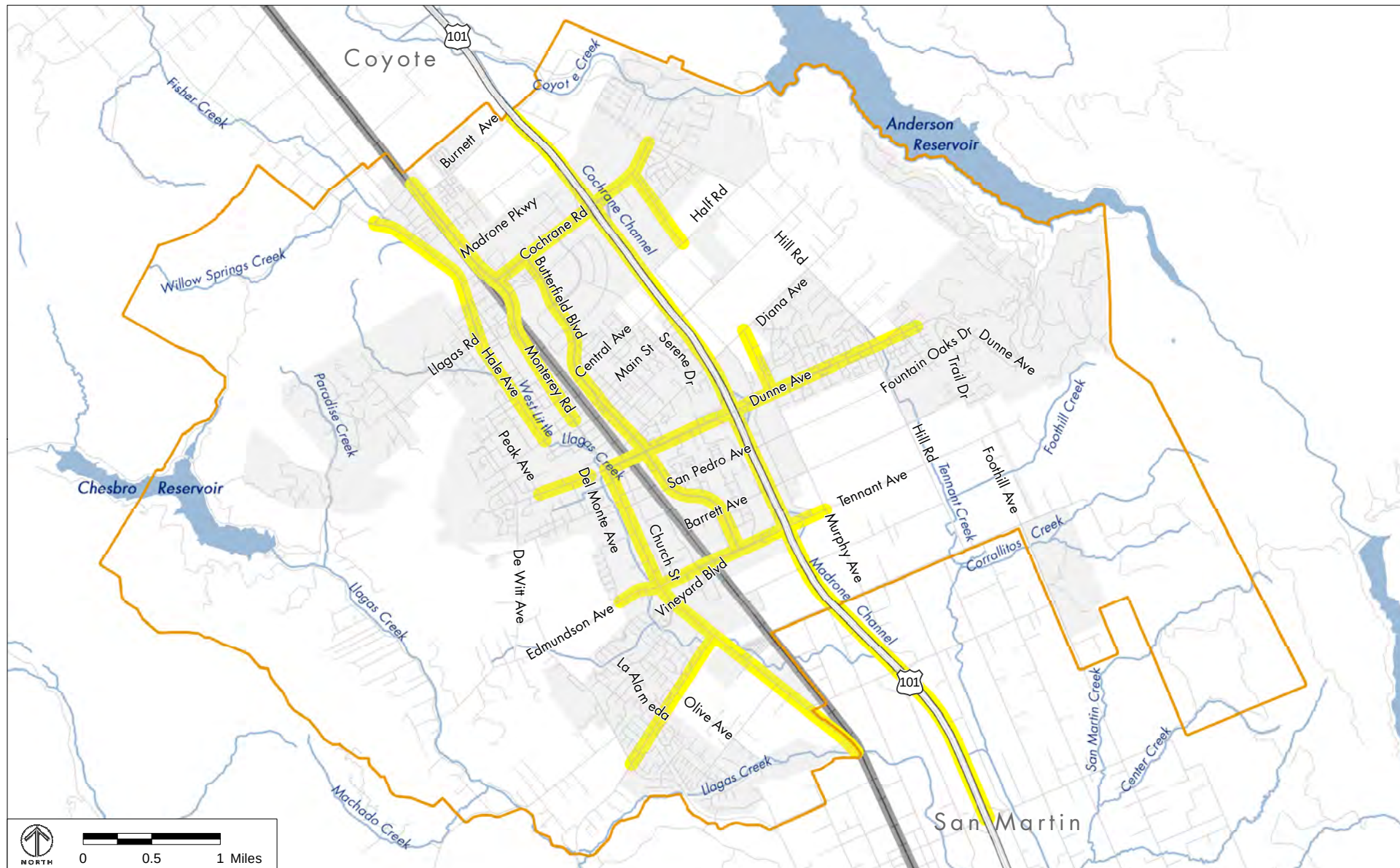
Policy NRE-11.1	TACs and Proposed Sensitive Uses. Require modeling for sensitive land uses, such as residential development, proposed near sources of pollution such as freeways and industrial uses. Require new residential development and projects categorized as sensitive receptors to incorporate effective mitigation measures into project designs or be located adequate distances from sources of toxic air contaminants (TACs) to avoid significant risk to health and safety.
Policy NRE-11.6	Vegetation Buffers. Encourage the use of pollution-absorbing trees and vegetation in buffer areas between substantial sources of toxic air contaminants and sensitive receptors.
Policy NRE-13.1	Building Materials. Promote the use of building materials that maintain healthful indoor air quality in an effort to reduce irritation and exposure to toxins and allergens for building occupants.
Policy NRE-13.2	Construction and Pre-Occupancy Practices. Encourage construction and pre-occupancy practices to improve indoor air quality for new development upon occupancy of the structure.
Action NRE-13.A	Building Materials Ordinance. Develop and implement ordinances to promote the use of building materials, furniture, and paint that maintain healthful indoor air quality and to discourage the use of materials that degrade indoor air quality.
Action NRE-13.B	Construction and Pre-Occupancy Practices Ordinance. Develop and implement ordinances to promote construction and pre-occupancy practices beneficial to indoor air quality, such as sealing of the HVAC system during construction, air flush outs prior to occupancy, and/or air quality testing and corrections prior to occupancy.

Implementation of the proposed General Plan policies and actions would minimize impacts from community risk and hazards. However, future projects proximate to major sources air pollution (e.g., within 1,000 feet of an industrial area) would need to ensure that they could achieve BAAQMD's performance standards (ten in one million [10E-06], PM_{2.5} concentrations exceed 0.3 µg/m³, or the appropriate noncancer hazard index exceeds 1.0). Consequently, mitigation is needed to ensure that new projects are evaluated in accordance with BAAQMD's CEQA Guidelines. Consequently, impacts are *significant*.

Applicable Regulations

- AB 1493: Pavley Fuel Efficiency Standards

Significance Before Mitigation: Significant. Mitigation is needed to ensure that new projects are evaluated in accordance with BAAQMD's CEQA Guidelines, and therefore impacts are *significant*.



Source: City of Morgan Hill, 2013; Bay Area Air Quality Management District, 2012

Figure 4.3-2

Sources of Toxic Air Contaminants

Note: Site specific analysis of the freeways and high volume roadways is needed to determine actual screening buffer distances.

AIR QUALITY

Residential Development Control System

The Residential Development Control System, known as the RDCS, regulates population growth through the provision of residential building allotments. The RDCS, and the proposed updates to the RDCS as part of the proposed Project, affects the pace of development in the City but does not determine the location, type, or intensity of development. Therefore, the RDCS would not have the potential to generate an increase in TACs or expose people to substantial pollutant concentrations. Therefore, the RDCS would have *no impact*.

Significance Before Mitigation: No impact.

AQ-5	Implementation of the proposed Project would not create or expose a substantial number of people to objectionable odors.

General Plan

There are two types of odor impacts: 1) siting sensitive receptors near nuisance odors, and 2) siting new sources of nuisance odors near sensitive receptors. Table 4.3-8 identifies screening distances from potential sources of objectionable odors within the Air Basin. Odors from these types of land uses are regulated under BAAQMD Regulation 7, Odorous Substances.³⁶

Siting Receptors in Proximity to Odor Sources

Sensitive receptors, such as the residential uses associated with allowed development under the proposed General Plan, may be placed within the distances to these sources specified in Table 4.3-8. In general, the City's land use plan designates residential areas and commercial/industrial areas of the City to prevent potential mixing of incompatible land use types, with the exception of mixed-use areas that combine commercial with residential. The proposed General Plan also includes policies that, once adopted, would reduce potential land use incompatibilities regarding objectionable odors. Implementation of the following policy would minimize potential conflicts between land uses:

Policy NRE-14.2	Odors and Proposed Sensitive Uses. Require new residential development projects and projects categorized as sensitive receptors to be located an adequate distance from facilities that are existing or potential sources of odor. Determine the adequate separation distance based on the type, size, and operations of the facility.

BAAQMD Regulation 7, Odorous Substances, requires abatement of any nuisance generated by an odor complaint. Because existing sources of odors are required to comply with BAAQMD Regulation 7, and the

³⁶ It should be noted that while restaurants can generate odors, these sources are not identified by BAAQMD as nuisance odors since they typically do not generate significant odors that affect a substantial number of people. Larger restaurants that employ five or more people are subject to BAAQMD Regulation 7, Odorous Substances.

AIR QUALITY**TABLE 4.3-8 BAAQMD ODOR SCREENING DISTANCES**

Land Use/Type of Operation	Screening Distance
Wastewater Treatment Plan	2 miles
Wastewater Pumping Facilities	1 mile
Sanitary Landfill	2 miles
Transfer Station	1 mile
Composting Facility	1 mile
Petroleum Refinery	2 miles
Asphalt Batch Plant	2 miles
Chemical Manufacturing	2 miles
Fiberglass Manufacturing	1 mile
Painting/Coating Operations	1 mile
Rendering Plant	2 miles
Coffee Roaster	1 mile
Food Processing Facility	1 mile
Confined Animal Facility/Feed Lot/ Dairy	1 mile
Green Waste and Recycling Operations	1 mile
Metal Smelting Plants	2 miles

Source: Bay Area Air Quality Management District (BAAQMD), 2011, California Environmental Quality Act Air Quality Guidelines, Table 3-3, Odor Screening Distances, and associated Appendix D of these Guidelines.

proposed General Plan includes a policy and land use strategies to minimize potential incompatibilities, impacts to siting of new sensitive land uses would be *less than significant*.

Applicable Regulations

- California Health & Safety Code, Section 114149
- BAAQMD Regulation 1, Rule 1-301, Public Nuisance
- BAAQMD Regulation 7, Odorous Substances

Significance Before Mitigation: Less than significant.

AIR QUALITY

Siting New Odor Sources

While not all sources in Table 4.3-8 are found in Morgan Hill (e.g., rendering plants, confined animal facilities), commercial and industrial areas in Morgan Hill have the potential to include land uses that generate nuisance odors.

Buildout permitted under the proposed General Plan could include new sources of odors, such as composting, greenwaste, and recycling operations; food processing; chemical manufacturing; and painting/coating operations, because these are permitted uses in the commercial and/or industrial areas in the City. Future environmental review could be required for industrial projects listed in Table 4.3-8, above, to ensure that sensitive land uses are not exposed to objectionable odors. BAAQMD Regulation 7, Odorous Substances, requires abatement of any nuisance generating an odor complaint. Typical abatement includes passing air through a drying agent followed by two successive beds of activated carbon to render air odor free. Facilities listed in Table 4.3-8 would need to consider measures to reduce odors as part of their CEQA review.

The proposed General Plan includes policies that, once adopted, would also reduce potential land use incompatibilities regarding objectionable odors. Implementation of the following policy would minimize potential conflicts between land uses:

Policy NRE-14.1 **New Odor Sources.** For new, expanded, or modified facilities that are potential sources of objectionable odors require an analysis of possible odor impacts and the provision of odor minimization and control measures as mitigation.

Review of projects using BAAQMD's odor screening distances during future CEQA review, implementation of Policy NRE-14.1, and compliance with BAAQMD Regulation 7 would ensure that odor impacts are minimized and are *less than significant*.

Applicable Regulations:

- California Health & Safety Code, Section 114149
- BAAQMD Regulation 7, Odorous Substances.

Significance Before Mitigation: Less than significant. Implementation of the proposed General Plan policies and compliance with BAAQMD Regulation 7 would ensure that impacts are *less than significant*.

Residential Development Control System

The Residential Development Control System, known as the RDCS, regulates population growth through the provision of residential building allotments. The RDCS, and the proposed updates to the RDCS as part of the proposed Project, affects the pace of development in the City but does not determine the location, type, or intensity of development. Therefore, the RDCS would not have the potential to generate substantial nuisance odors or place people near existing nuisance odors. Therefore, the RDCS would have *no impact*.

Significance Before Mitigation: No impact.

4.3.4 CUMULATIVE IMPACTS

AQ-6	Implementation of the proposed General Plan would cumulatively contribute to air quality impacts in the San Francisco Bay Area Air Basin.

The cumulative area of analysis is the Air Basin. As identified in Section 4.3.1, Environmental Setting, California is divided into air basins for the purpose of managing the air resources of the state on a regional basis based on meteorological and geographic conditions. Similar to GHG emissions impacts, air quality impacts are regional in nature as no single project generates enough emissions that would cause an air basin to be designated as nonattainment area. Criteria air pollutant emissions generated by buildout of the proposed General Plan (ROG, NO_x, PM₁₀, and PM_{2.5}, as identified in Table 4.3-7) would exceed BAAQMD's project-level significance thresholds and would contribute to the nonattainment designations of the Air Basin. The Air Basin is currently designated a nonattainment area for California and National O₃, California and National PM_{2.5}, and California PM₁₀ AAQS. Therefore, in combination with past, present, and reasonably foreseeable projects elsewhere within the Air Basin, the proposed General Plan, even with implementation of applicable regulations, would result in a *significant* cumulative impact with respect to air quality.

Applicable Regulations and Conditions of Approval:

- AB 1493: Pavley Fuel Efficiency Standards
- Title 20 CCR: Appliance Energy Efficiency Standards
- Title 24, Part 6, CCR: Building and Energy Efficiency Standards
- Title 24, Part 11, CCR: Green Building Standards Code
- CARB Rule 2485 (13 CCR Chapter 10, Section 2485), Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling
- CARB Rule 2480 (13 CCR Chapter 10, Section 2480), Airborne Toxic Control Measure to Limit School Bus Idling and Idling at Schools
- CARB Rule 2477 (13 CCR Section 2477 and Article 8), Airborne Toxic Control Measure for In-Use Diesel-Fueled Transport Refrigeration Units (TRU) and TRU Generator Sets and Facilities Where TRUs Operate
- BAAQMD, Regulation 2, Rule 2, New Source Review
- BAAQMD, Regulation 2, Rule 5, New Source Review of Toxic Air Contaminants
- BAAQMD Regulation 6, Rule 1, General Requirements
- BAAQMD Regulation 6, Rule 2, Commercial Cooking Equipment
- BAAQMD Regulation 7, Odorous Substances
- BAAQMD Regulation 8, Rule 3, Architectural Coatings
- BAAQMD Regulation 8, Rule 4, General Solvent and Surface Coatings Operations

AIR QUALITY

- BAAQMD Regulation 8, Rule 7, Gasoline Dispensing Facilities
- BAAQMD Regulation 11, Rule 2, Asbestos, Demolition, Renovation and Manufacturing

Significance Before Mitigation: Significant. Despite implementation of the proposed General Plan policies, criteria air pollutant emissions associated with the proposed General Plan would generate a substantial net increase in emissions that exceeds the BAAQMD regional significance thresholds, and impacts would be *significant*.

4.3.5 SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION MEASURES

AQ-2	Implementation of the proposed General Plan would violate any air quality standard or contribute substantially to an existing or projected air quality violation.

Construction

Mitigation Measure AQ-2a-1: As part of the City's development approval process, the City shall require applicants for future development projects to comply with the current Bay Area Air Quality Management District's basic control measures for reducing construction emissions of PM₁₀ (Table 8-1, *Basic Construction Mitigation Measures Recommended for All Proposed Projects*, of the BAAQMD CEQA Guidelines).

Mitigation Measure AQ-2a-2: Prior to issuance of construction permits, development project applicants that are subject to CEQA shall prepare and submit to the City of Morgan Hill a technical assessment evaluating potential project construction-related air quality impacts. The evaluation shall be prepared in conformance with the Bay Area Air Quality Management District (BAAQMD) methodology in assessing air quality impacts. If construction-related criteria air pollutants are determined to have the potential to exceed the BAAQMD thresholds of significance, as identified in the BAAQMD CEQA Guidelines, the City of Morgan Hill shall require that applicants for new development projects incorporate mitigation measures to reduce air pollutant emissions during construction activities to below these thresholds (Table 8-2, *Additional Construction Mitigation Measures Recommended for Projects with Construction Emissions Above the Threshold* of the BAAQMD CEQA Guidelines, or applicable construction mitigation measures subsequently approved by BAAQMD). These identified measures shall be incorporated into all appropriate construction documents (e.g. construction management plans) submitted to the City and shall be verified by the City's Community Development Department.

Significance After Mitigation: Significant and unavoidable. Mitigation Measure AQ-2a-1 would require adherence to the current Bay Area Air Quality Management District's basic control measures for reducing construction emissions of PM₁₀ and would ensure impacts from fugitive dust generated during

construction activities are less than significant. Mitigation Measure AQ-2a-2 would require implementation of BAAQMD-approved mitigation measures if determined during subsequent environmental review that applicants for future development in Morgan Hill could generate construction exhaust emissions in excess of the BAAQMD significance thresholds. An analysis of emissions generated from the construction of specific future projects under the proposed General Plan would be required to evaluate emissions compared to BAAQMD's project-level significance thresholds during individual environmental review. It should be noted that the identification of this program-level impact does not preclude the finding of less-than-significant impacts for subsequent projects that comply with BAAQMD screening criteria or meet applicable thresholds of significance. Over the 20-year horizon of the proposed General Plan, many individual projects would be constructed in the City. It is not possible to predict the specific characteristics of the construction and operation of those projects and accurately model their individual emissions, nor is that appropriate within the scope of this programmatic EIR. Therefore, due to the programmatic nature of the proposed General Plan, no additional mitigation measures are available that could be certain to reduce the emissions of each individual project to a less-than-significant level, and the impact is considered significant and unavoidable.

Operation

Mitigation Measure AQ-2b Prior to issuance of construction permits, development project applicants that are subject to CEQA shall prepare and submit to the City of Morgan Hill a technical assessment evaluating potential project operation-phase-related air quality impacts. The evaluation shall be prepared in conformance with the Bay Area Air Quality Management District's (BAAQMD) methodology in assessing air quality impacts. If operational-related criteria air pollutants are determined to have the potential to exceed the BAAQMD thresholds of significance, as identified in BAAQMD's CEQA Guidelines, the City of Morgan Hill Community Development Department, Planning Division, shall require that applicants for new development projects incorporate mitigation measures to reduce air pollutant emissions during operational activities.

Significance After Mitigation: Significant and unavoidable. The proposed General Plan includes policies, listed above and under Impact AQ-2, that, once adopted, would minimize emissions to the extent feasible. Mitigation Measure AQ-2b would require implementation of BAAQMD-approved mitigation measures if subsequent environmental review determines that applicants for future development in Morgan Hill could generate operational emissions in excess of the BAAQMD significance thresholds. An analysis of emissions generated from the operation of specific future projects allowed under the proposed General Plan would be compared to BAAQMD's project-level significance thresholds during individual environmental review.

The total criteria air pollutant emissions from operation of future development projects under the proposed General Plan would be substantial and would contribute to increases in concentrations of air pollutants, which could contribute to ongoing violations of air quality standards. It should be noted that

AIR QUALITY

the identification of this program-level impact does not preclude the finding of less-than-significant impacts for subsequent projects that comply with BAAQMD screening criteria or meet applicable thresholds of significance. The policies proposed as part of the proposed General Plan would reduce criteria air pollutants, to the extent feasible, as part of this programmatic review of air quality impacts. Additional measures to reduce criteria air pollutant emissions would be considered during individual project-level review based on site-specific and project-specific characteristics to reduce significant impacts as applicable. Because those projects and measures cannot be known at this time, the impact is considered significant and unavoidable.

AQ-3	Implementation of the proposed General Plan would result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).

There are no additional mitigation measures available to mitigate this impact.

Significance After Mitigation: Significant and unavoidable. Criteria air pollutant emissions generated by land uses allowed under the proposed Project could exceed the BAAQMD thresholds (see AQ-1). Air quality impacts identified in the discussions of Impact AQ-2 constitute the proposed General Plan's contribution to cumulative air quality impacts in the Air Basin. Mitigation measures AQ-2a-1, AQ-2a-2, and AQ-2b-1, identified above to reduce proposed General Plan-related emissions, would reduce impacts to the extent feasible. Due to the programmatic nature of the proposed General Plan, no additional mitigation measures are available. Air pollutant emissions associated with the proposed General Plan would result in a cumulatively considerable contribution to air quality impacts.

AQ-4	Implementation of the proposed General Plan would expose sensitive receptors to substantial concentrations of air pollution.

Toxic Air Contaminants – New Sources of Air Toxics

Mitigation Measure AQ-4a: Applicants for future non-residential land uses within the City that: 1) have the potential to generate 100 or more diesel truck trips per day or have 40 or more trucks with operating diesel-powered TRUs, and 2) are within 1,000 feet of a sensitive land use (e.g., residential, schools, hospitals, nursing homes), as measured from the property line of the proposed Project to the property line of the nearest sensitive use, shall submit a health risk assessment (HRA) to the City of Morgan Hill prior to future discretionary Project approval. The HRA shall be prepared in accordance with policies and procedures of the state Office of Environmental Health Hazard Assessment and the Bay Area Air Quality Management District. If the HRA shows that the incremental cancer risk exceeds ten in one million ($10E-06$), $PM_{2.5}$ concentrations exceed $0.3 \mu g/m^3$, or the appropriate noncancer

hazard index exceeds 1.0, the applicant will be required to identify and demonstrate that mitigation measures are capable of reducing potential cancer and noncancer risks to an acceptable level, including appropriate enforcement mechanisms. Mitigation measures may include but are not limited to:

- Restricting idling on-site beyond Air Toxic Control Measures idling restrictions, as feasible.
- Electrifying warehousing docks.
- Requiring use of newer equipment and/or vehicles.
- Restricting off-site truck travel through the creation of truck routes.

Mitigation measures identified in the project-specific HRA shall be identified as mitigation measures in the environmental document and/or incorporated into the site development plan as a component of the proposed project.

Significance After Mitigation: Less than significant. Buildout of the proposed General Plan could result in new sources of criteria air pollutant emissions and/or toxic air contaminants near existing or planned sensitive receptors. Existing and proposed General Plan policies would reduce concentrations of TACs and $PM_{2.5}$ generated by new development. Review of projects by BAAQMD for permitted sources of air toxics (e.g., industrial facilities, dry cleaners, and gasoline dispensing facilities) would ensure health risks are minimized. Mitigation Measure AQ-4a would ensure that mobile sources of TACs not covered under BAAQMD permits are considered during subsequent project-level environmental review. Development of individual projects would be required to achieve the incremental risk thresholds established by BAAQMD.

Toxic Air Contaminants: Siting New Sensitive Receptors

Mitigation Measure AQ-4b: Applicants for residential and other sensitive land use projects (e.g., hospitals, nursing homes, day care centers) in Morgan Hill within 1,000 feet of a major source of TACs (e.g., warehouses, industrial areas, freeways, and roadways with traffic volumes over 10,000 vehicle per day), as measured from the property line of the project to the property line of the source/edge of the nearest travel lane, shall submit a health risk assessment (HRA) to the City of Morgan Hill prior to future discretionary project approval. The HRA shall be prepared in accordance with policies and procedures of the state Office of Environmental Health Hazard Assessment (OEHHA) and the Bay Area Air Quality Management District. The latest OEHHA guidelines shall be used for the analysis, including age sensitivity factors, breathing rates, and body weights appropriate for children ages 0 to 16 years. If the HRA shows that the incremental cancer risk exceeds ten in one million ($10E-06$), $PM_{2.5}$ concentrations exceed $0.3 \mu g/m^3$, or the appropriate noncancer hazard index exceeds 1.0, the applicant will be required to identify and demonstrate that mitigation measures are capable of reducing potential cancer and non-cancer risks to an acceptable level (i.e., below ten in one million or a hazard index of 1.0), including appropriate enforcement mechanisms. Measures to reduce risk may include but are not limited to:

AIR QUALITY

- Air intakes located away from high volume roadways and/or truck loading zones.
- Heating, ventilation, and air conditioning systems of the buildings provided with appropriately sized maximum efficiency rating value (MERV) filters.

Mitigation measures identified in the HRA shall be included as mitigation measures in the environmental document and/or incorporated into the site development plan as a component of the proposed General Plan. The air intake design and MERV filter requirements shall be noted and/or reflected on all building plans submitted to the City and shall be verified by the City's Community Development Department.

Significance After Mitigation: Less than significant. Placement of new sensitive receptors near major sources of TACs and PM_{2.5} could expose people to substantial pollutant concentrations. Proposed General Plan policies would reduce concentrations of criteria air pollutant emissions and air toxics generated by new development. Mitigation Measure AQ-4b would ensure that placement of sensitive receptors near major sources of air pollution would achieve the incremental risk thresholds established by BAAQMD.

AQ-6	Implementation of the proposed General Plan would cumulatively contribute to air quality impacts in the San Francisco Bay Area Air Basin.

Mitigation Measure AQ-6: There are no additional mitigation measures available to mitigate this impact.

Significance After Mitigation: Significant and unavoidable. Criteria air pollutant emissions generated by land uses within the proposed Project could exceed the BAAQMD thresholds (see AQ-2). Air quality impacts identified in the discussions of Impact AQ-2 constitute the proposed General Plan's contribution to cumulative air quality impacts in the Air Basin. Mitigation measures AQ-2a-1, AQ-2a-2, and AQ-2b, identified above to reduce proposed General Plan-related emissions, would reduce impacts to the extent feasible. Due to the programmatic nature of the proposed General Plan, no additional mitigation measures are available. Air pollutant emissions associated with the proposed General Plan would result in a cumulatively considerable contribution to air quality impacts.

4.3.6 FULL BUILDOUT

The full buildout anticipated under the proposed General Plan would include significantly more non-residential development than the 2035 horizon-year development projection analyzed in Section 4.3.3, Impact Discussion, in terms of both the amount and the extent of development. Therefore, the potential for impacts related to air quality would increase. However, as discussed in Chapter 3, Project Description, it is extremely unlikely that full buildout would ever occur under the proposed General Plan. Therefore, an analysis of full buildout is not required by CEQA.

BIOLOGICAL RESOURCES

4.4 BIOLOGICAL RESOURCES

This chapter describes existing biological resources within the Morgan Hill City limit and Sphere of Influence (SOI), collectively referred to as the “Project Area,” and evaluates the potential environmental consequences on biological resources from future development that could occur from the proposed Project. The proposed Project includes a General Plan Update and an update to the Residential Development Control System (RDCS). For more detail on the components of proposed Project, please refer to Chapter 3, Project Description, of this Draft Environmental Impact Report (Draft EIR).

Biological resources include special-status plant and wildlife species, sensitive and jurisdictional habitats, natural waterways, wildlife corridors, breeding habitats, and other special wildlife habitats, and areas of public land designated for the protection of species and habitats.

A detailed description of the environmental setting, including regulatory framework; existing conditions; and policies and mitigation measures that would avoid or reduce significant impacts are provided below. Biological resources within the Project Area were identified through a review of available background information, including the Santa Clara Valley Habitat Plan (Habitat Plan), inspection of aerial photography, and a records search of the California Natural Diversity Data Base (CNDDDB) of the California Department of Fish and Wildlife (CDFW).

4.4.1 ENVIRONMENTAL SETTING

4.4.1.1 REGULATORY FRAMEWORK

This section summarizes existing federal, state, and local laws, policies, and regulations that apply to environmental resources and natural hazards in Morgan Hill.

Federal Regulations

Clean Water Act

The Clean Water Act was enacted to address water pollution. It establishes regulations and permit requirements regarding construction activities that affect storm water, dredge and fill material operations, and water quality standards. The United States Army Corps of Engineers (USACE) is responsible under Section 404 of the Clean Water Act to regulate any fill placed into water of the United States, including streams and wetlands.¹

In general, a Corps permit must be obtained before an individual project can place fill or grade in wetlands or other waters of the United States, and mitigation for such actions is required based on the conditions of

¹ Waters of the United States and their lateral limits are defined in Part 328.3(a) of Title 33 of the Code of Federal Regulations (CFR).

BIOLOGICAL RESOURCES

the Corps permit. The Corps is required to consult with the United States Fish and Wildlife Service (USFWS) and/or the National Marine Fisheries Service (NMFS) under Section 7 of the Endangered Species Act (described in below) if the action being permitted under the Clean Water Act could harm a federally-listed species. Typically, a project must also have approvals at a local level before a permit can be issued.

Federal Endangered Species Act

The federal Endangered Species Act (ESA) is a complex law enacted in 1973 to protect and recover plant and animal species in danger of becoming extinct and to conserve their ecosystems, with the ultimate goal being the recovery of a species to the point where it is no longer in need of protection. An endangered species is one that is considered in danger of becoming extinct throughout all, or a significant portion, of its range. A threatened species is one that is likely to become endangered in the foreseeable future. The USFWS also maintains a list of species proposed for listing as threatened or endangered. Proposed species are those for which a proposed rule to list as endangered or threatened has been published in the Federal Register.

USFWS has jurisdiction over plant and animals species listed as threatened or endangered under the ESA. In addition, NMFS has jurisdiction over fish species listed under the ESA. This Act protects listed animal species from “take,” broadly defined as to “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in such conduct.” Harming or harassing species includes interfering with breeding, feeding, or sheltering. An activity can be defined as a “take” if it is unintentional or accidental.

Any activity that could result in take of a federally listed species would require an incidental take authorization resulting from an ESA Section 7 consultation or an ESA Section 10 permit.

Migratory Bird Treaty Act

In addition to the protection offered under the ESA, the federal Migratory Bird Treaty Act (MBTA) provides for protection of migratory bird species, birds in danger of extinction, and their active nests. The USFWS is responsible for enforcing the MBTA.² Most of the native bird species that occur in and around Morgan Hill are covered by this Act. As with the federal ESA, the MBTA is a broad regulation aimed at protecting migratory bird species; however, unlike the ESA, the MBTA implementing regulations do not have a permit system that allows for taking of most migratory birds.

State Regulations

California Endangered Species Act

The California Endangered Species Act (CESA) is similar to the federal ESA both in process and substance, providing additional protection to listed species in California. The CESA does not supersede the federal

² United States Code, Title 16, Chapter 7, Subchapter II.

BIOLOGICAL RESOURCES

ESA, but operates in conjunction with it, with some species having different listing status. The CESA is intended to conserve, protect, restore, and enhance listed species and their habitat. The state and federal lists of threatened and endangered species are generally similar; however, a species present on one list may be absent from the other. California Endangered Species Act (CESA) regulations are also somewhat different from the federal ESA in that the state regulations include threatened and endangered plants on non-federal lands within the definition of “take.”

California Department of Fish and Game Code

In addition to administering the CESA, CDFW also has jurisdiction over the beds and banks of watercourses. The California Fish and Game Code³ require a Streambed Alteration Permit for the fill or removal of any material from any natural drainage. The jurisdiction of CDFW extends to the top of the bank and often includes the outer edge of riparian vegetation canopy cover.

CDFW also maintains lists of “species of special concern” (SSC). These species are broadly defined as plants and wildlife that are of concern to CDFW because of population declines and restricted distributions and/or they are associated with habitats that are declining in California.

Oak Woodlands Conservation Act

The California Oak Woodlands Conservation Act⁴ acknowledges the importance of private land stewardship to the conservation of the state’s valued oak woodlands. The Act establishes the California Oak Woodlands Conservation Program, which aims to conserve oak woodlands existing in the state’s working landscapes through education and incentives to private landowners. The program provides technical and financial incentives to private landowners to protect and promote biologically-functional oak woodlands.

California Native Plant Protection Act

The California Native Plant Protection Act of 1977 (CNPPA) prohibits importation of rare and endangered plants into California, “take” of rare and endangered plants, and sale of rare and endangered plants. CESA defers to the CNPPA, which ensures that state-listed plant species are protected when state agencies are involved in projects subject to CEQA. In this case, plants listed as rare under the CNPPA are not protected under CESA; however, impacts to endangered, rare, or threatened species, including plants, are evaluated under CEQA.

³ As of January 1, 2013, the California Department of Fish and Game (CDFG) changed its name to the California Department of Fish and Wildlife (CDFW), as required by AB 2402. However, the Code referenced in the next sentence remains the Fish and Game Code.

⁴ California Fish and Game Code Section 1602 et seq.

BIOLOGICAL RESOURCES

Regional Regulations

*Santa Clara Valley Habitat Plan*⁵

The Santa Clara Valley Habitat Plan (Habitat Plan) is a regional partnership between six Local Partners including the County of Santa Clara, Santa Clara Valley Transportation Authority, Santa Clara Valley Water District, and the Cities of San Jose, Gilroy, and Morgan Hill, and two Wildlife Agencies including the CDFW and the USFWS. The City of Morgan Hill adopted the Final Habitat Plan in October 2012 as described below under Local Regulations.

The Habitat Plan provides a framework for promoting the protection and recovery of natural resources, including endangered species. The Habitat Plan also aims to streamline the permitting process for planned development, infrastructure, and maintenance activities under the jurisdictions of the County of Santa Clara (County), the Santa Clara Valley Water District (SCVWD), the Santa Clara Valley Transportation Authority (VTA) and the cities of Gilroy, Morgan Hill, and San José. This will be achieved by securing incidental take authorization from the USFWS for federal-listed species and the CDFW for state-listed species with permit terms of 50 years. In addition, the cities and County will be allowed to extend take authorization to project applicants under their jurisdiction.

The Habitat Plan is intended to secure incidental take authorization for a total of 18 listed and non-listed species, referred to as covered species. Covered species were selected based on their occurrence, the adequacy of data, the species' current or foreseeable listing status, and their potential to be affected by specific activities, called covered activities, which will occur in accordance with approved land-use and capital-improvement plans. Covered activities fall into seven general categories.

- **Urban Development**, including
 - Residential, commercial, industrial, and other types of urban development within the cities of Gilroy, Morgan Hill, and San José planning limits of urban growth in areas designated for urban or rural development, including areas that are currently in the unincorporated county (i.e., in “pockets” of unincorporated land inside the cities’ planning limits of urban growth).
 - Transportation facilities including sidewalks, bike paths, paved and unpaved roads, bridges, culverts, and transit facilities.
 - Public service and cultural facilities including new fire stations, police stations, community policing centers, communications facilities, public administration centers, convention centers, theatres, museums, community centers, community gardens, and concession buildings.

⁵ ICF International, August 2012, *Final Santa Clara Valley Habitat Plan*.

BIOLOGICAL RESOURCES

- Recreational facilities such as neighborhood parks, dog parks, soccer fields, golf courses, indoor and outdoor sports centers, racetracks, campgrounds, and trails, and associated infrastructure including roads, bridges, parking areas, and restrooms.
- Public and private utilities including electric transmission and distribution lines, telecommunications lines, and gas pipelines. Solar energy projects are covered by the proposed Habitat Plan as long as their impacts to covered species and natural communities are consistent with the evaluation of effects in Chapter 4 of the proposed Habitat Plan.
- City water delivery and storage facilities including water treatment plants, water supply pipelines, percolation ponds, and pump stations.
- Stormwater management facilities such as storm sewer systems, nonpoint source reduction, outfalls, and drainage improvements.
- Waste-management facilities including sewage-treatment plants, sanitary sewer systems and rehabilitation, water recycling, recycling centers, transfer stations.
- A number of City of Morgan Hill development and infrastructure planning documents, such as the Downtown Specific Plan, Bicycle and Pedestrian Plan, and infrastructure master plans.
- **In-stream Capital Projects.** This activity is generally considered to address public infrastructure projects that occur within streams or immediately adjacent to streams and/or creeks.
- **In-stream Operations and Maintenance.** This activity includes operations and maintenance activities in the stream channel, along the stream bank, or adjacent lands at top-of-bank within the riparian corridor. These activities include maintenance of roads and trails, in both urban and rural areas.
- **Rural Capital Projects.** This activity includes public infrastructure projects outside of the City limits of urban growth. Examples of this type of activity include bridge construction and private rural development.
- **Rural Operation and Maintenance.** This activity primarily includes development such as utility line or facility operations and maintenance, pond maintenance outside of the reserve system, and vegetation and infrastructure management.
- **Rural Development.** Rural Development includes private development that will occur in accordance with existing general plans at the time of permit issuance. This includes activities that are subject to ministerial or discretionary approval by the County or City. In Morgan Hill, this would include development in hillside areas.
- **Conservation Strategy Implementation.** This activity includes management actions required by the Habitat Plan or other actions that might be necessary to achieve implementation of the Habitat Plan. Examples include construction, maintenance, and use of facilities needed to manage the reserves, including reserve offices, sheds, carports, bridges, culverts, fences, gates, wells, and ponds.

BIOLOGICAL RESOURCES

The Habitat Plan also provides a conservation strategy to mitigate impacts on covered species and to contribute to the recovery of these species in the Project Area. The Habitat Plan divided its Project Area into 34 discrete units, called conservation analysis zones. The Morgan Hill General Plan Project Area falls in the Llagas-3 Zone, which comprises the northern half of the Llagas Basin subwatershed downstream of Chesbro Reservoir, mostly on the floor of the Santa Clara Valley. The primary purposes of the land acquisition strategy in this conservation analysis zone are to protect species including Bay checkerspot butterfly, western burrowing owl, least Bell's vireo and other native songbirds, California tiger salamander, Coyote ceanothus, most beautiful jewelflower, Santa Clara Valley dudleya, and smooth lessingia.

In addition to an overall conservation strategy, the Habitat Plan describes conditions on covered activities that help meet regional avoidance and minimization goals. Conditions are categorized by activity type, by natural community, and by species. Collectively, the conditions provide regional and site-specific avoidance and minimization of impacts on covered species and sensitive land cover types. It is the responsibility of project proponents to design and implement their projects in compliance with these conditions. For private projects, the applicable local jurisdictions would be responsible for project review to ensure compliance with such conditions.

The Habitat Plan establishes several conditions that include avoidance minimization strategies, as well as design guidelines based on the type or location of development. These strategies and design guidelines can be found in Table 6-2 of the Habitat Plan, and include measures and design guidelines, such as minimizing impacts on covered species likely to be affected by changes in hydrology and water quality; using the minimum amount of impermeable surface (to the extent practical); using pervious materials, including gravel or turf pavers in place of asphalt or concrete to the extent practical; maintaining native shrubs, trees and groundcover whenever possible and revegetating disturbed areas with local native or non-invasive plants; avoiding the removal of riparian vegetation, if feasible; minimizing ground disturbance to the smallest area feasible; preparing and implementing sediment erosion control plans.

The Habitat Plan also requires private projects that are covered by the Habitat Plan to submit a Habitat Plan application package that includes information including a project description, documentation of land cover types on-site, a map of wetlands and waters if applicable, results of applicable surveys for selected covered species, and documentation of any additional and applicable avoidance and minimization requirements that will be implemented.

The Habitat Plan also addresses funding and financing mechanisms to help implement its strategies. The Habitat Plan expects that development fee funding will contribute to the mitigation of impacts while non-fee funding from local, state, and federal sources will contribute to the conservation needs of the Habitat Plan. The Habitat Plan utilizes a variety of private and public development-based fees including Land Cover Fee, Endowment Fee Component, Plan Preparation Cost Recovery Fee Component, Nitrogen Deposition Fee, Serpentine Fee, Burrowing Owl Fee, Wetland Fee, and Temporary Impact Fee. Depending on the location and type of the project, some of these fees may not apply.

BIOLOGICAL RESOURCES

Santa Clara County General Plan

The Santa Clara County General Plan contains several policies and implementation programs that apply to environmental resources. Even though the Santa Clara County General Plan policies do not affect projects within the City limits, there are areas within the Morgan Hill General Project Area that currently fall within County jurisdiction. Santa Clara County General Plan policies apply to these areas unless they become annexed into the City. Policies protecting habitats are found in the Resource Conservation Chapter and address multi-jurisdictional coordination, impacts from urbanization, and wetland and habitat restoration.

Santa Clara Valley Water District Resources Protection Collaborative Guidelines and Standards for Land Use near Streams

On October 24, 2006, the SCVWD adopted the Water Resources Protection Ordinance (Ordinance 06-1).⁶ Beginning on February 28, 2007, this ordinance established the policy through which the SCVWD issues permits for modifications, entry, use, or access to SCVWD facilities or easements. This Ordinance was adopted following the creation of the *Guidelines and Standards for Land Use Near Streams: A Manual of Tools, Standards, and Procedures to Protect Streams and Streamside Resource in Santa Clara County* (Guidelines and Standards) by the Santa Clara Valley Water Resources Protection Collaborative (Collaborative). The Collaborative includes the SCVWD and representatives from the County of Santa Clara, the 15 cities within the county, the Guadalupe-Coyote Resource Conservation District, the San Francisco Bay Regional Water Quality Control Board, and representatives of various community interests.⁷ The Collaborative members share the water and watershed resources protection goals of flood management, drinking water quality and adequate quantity, surface and groundwater quality and quantity, and habitat protection and enhancement throughout the county. In 2007, the City of Morgan Hill adopted the Guidelines and Standards for Land Use near Streams per the City's resolution No. 6112.

A property that is adjacent to a stream or located within 50 feet of the top of the bank is considered a Streamside Protection Area and is subject to the Guidelines and Standards.

Land use activities that are exempt from the Guidelines and Standards include:

- Less than 3 cubic yards of earthwork.
- Interior building construction and alterations.
- Erection of storage buildings not greater than 120 square feet.
- Replacement of sewer or water laterals.
- Re-roofing.
- Wood fences 6 feet in height or less.

⁶ Santa Clara Valley Water District, 2006. Water Resource Protection Ordinance 06-1, <http://www.valleywater.org/uploadedFiles/Programs/BusinessInformationPermits/Permits/Ordinance071213%281%29.pdf>, accessed August 27, 2014.

⁷ Santa Clara Valley Water Resources Protection Collaborative, 2007. *Guidelines and Standards for Land Use Near Streams: A Manual of Tools, Standards, and Procedures to Protect Streams and Streamside Resource in Santa Clara County*.

BIOLOGICAL RESOURCES

- Exterior decks less than or equal to 30 inches above grade (decks or pathways should not overhang or extend beyond the creek bank).

All other land use activities are subject to guidelines and standards described in Chapter 3 of the Guidelines and Standards. Chapter 3 addresses the following issues: riparian corridor protection, bank stability/streambed conditions, encroachments on the top of a bank, erosion prevention and repair, grading, outfalls, pump stations and site drainage, channelization, utility encroachments, trail construction, septic systems, trash control and removal, protection of water quality, groundwater protection, and flood protection. In particular, *Guideline I.G., Land Uses Next to Riparian Corridors/Streams*, requires avoiding the construction of loading docks, trash enclosures, chemical storage areas, stationary noise producing mechanical equipment, new paved areas, active recreational areas, agricultural growing areas, and grazing activities within riparian corridors. *Guideline I.H., Light*, requires avoiding bright colors and glossy or glare-producing building finishes on structures facing the stream or riparian areas, keeping direct lighting away from riparian corridors, and maximizing distance of lighting from riparian corridors. Chapter 4 of the Guidelines and Standards provides vegetation guidelines to protect native riparian plants.

Local Regulations

Morgan Hill Municipal Code

Chapter 8.80, Disking Restrictions

The City adopted an ordinance to restrict disking or plowing activities in the City in order to protect burrowing owl habitats. The exceptions to this ordinance include disking activity in connection with active agricultural production, an occupied residential property that is less than 2 acres in size, disking for fire break purposes, a property that the City, upon advice of a qualified ornithologist, has identified as having little or no potential for burrowing owl nesting habitat, or property located within the hazardous fire boundary as adopted by the Santa Clara County Fire Department.

Chapter 12.32, Restrictions on Removal of Significant Trees

Per Chapter 12.32 of the Morgan Hill Municipal Code, the City requires project applicants apply to the Community Development Department for a permit to cut down or remove any significant trees in Morgan Hill. The permit will be reviewed and approved by the Community Development Director based on the information provided, a site inspection, and the criteria contained in Section 12.32.070 of the Municipal Code.

Chapter 18.08, Open Space District

The City has zoned some areas as Open Space District (OS District) to preserve and enhance the use of open space lands. Permitted uses in the OS District include agriculture, public parks, wildlife refuges,

BIOLOGICAL RESOURCES

single-family dwellings, small residential care facilities, and secondary dwelling units on a slope less than 20 percent. Under the existing Zoning Code, such uses are required to comply with the following standards:

- The impervious coverage shall not exceed 10 percent of the area of each lot.
- Natural vegetation shall be retained and protected to the maximum extent feasible.
- Permanent vegetation and improvements capable of carrying stormwater runoff in a safe manner shall be installed to the extent possible before the vegetative cover is removed from the area.
- Sediment basins shall be installed and maintained to reserve sediment from runoff waters of land undergoing development.
- Construction of dwellings shall only be permitted if the proposed dwelling units shall be served by public sewers, public water, City fire and police services, and acceptable access facilities.
- No building shall be constructed within 80 feet of a ridgeline, nor within 50 feet of a perennial or intermittent stream. All proposed structures shall be constructed outside of the one-hundred-year floodplain.

Chapter 18.69, Habitat Conservation Plan

The City adopted the Santa Clara Valley Habitat Conservation Plan/Natural Community Conservation Plan (Habitat Plan) on October 17, 2012, and incorporated the Habitat Plan by reference in Chapter 18.69 of the Morgan Hill Municipal Code. As a condition of a planning permit, a private project applicant must pay mitigation fees to the City and implement applicable mitigation measures that are identified in Chapter 6 of the Habitat Plan. The City is in charge of transmitting the mitigation fees to the implementing entity as identified in the Habitat Plan.

Morgan Hill is within the Llagas-3 Zone of the Habitat Plan which comprises the northern half of the Llagas Basin subwatershed downstream of Chesbro Reservoir, mostly on the floor of the Santa Clara Valley. The primary purposes of the land acquisition strategy in this conservation analysis zone are to protect species including Bay checkerspot butterfly, western burrowing owl, least Bell's vireo and other native songbirds, California tiger salamander, Coyote ceanothus, most beautiful jewelflower, Santa Clara Valley dudleya, and smooth lessingia. The Habitat Plan also addresses funding and financing mechanisms to help implement its strategies. The Habitat Plan expects that development fee funding will contribute to the mitigation of impacts while non-fee funding from local, state, and federal sources will contribute to the conservation needs of the Habitat Plan. The Habitat Plan utilizes a variety of private and public development-based fees including Land Cover Fee, Endowment Fee Component, Plan Preparation Cost Recovery Fee Component, Nitrogen Deposition Fee, Serpentine Fee, Burrowing Owl Fee, Wetland Fee, and Temporary Impact Fee. Depending on the location and type of the project, some of these fees may not apply.

BIOLOGICAL RESOURCES

Morgan Hill Burrowing Owl Mitigation Plan⁸

The City of Morgan Hill's Burrowing Owl Mitigation Plan, prepared in June 2003, addresses impacts to burrowing owls from City development through a comprehensive program rather than on a project-by-project basis. This planning effort is derived from the Program Environmental Impact Report for the City of Morgan Hill Redevelopment Agency's redevelopment plan amendment in 1999. The Burrowing Owl Mitigation Plan includes a survey of the City for current nest sites, potential habitat areas and nest sites, and mitigation measures to address the potential loss of burrowing owl habitat that will be caused by Citywide development, assuming buildout of the current General Plan.

4.4.1.2 EXISTING CONDITIONS

This section describes existing conditions related to biological resources in the Project Area. Much of the information is taken from the Habitat Plan, which is described in more detail above under Regulatory Framework in the Regional Regulations section.

Natural Communities⁹

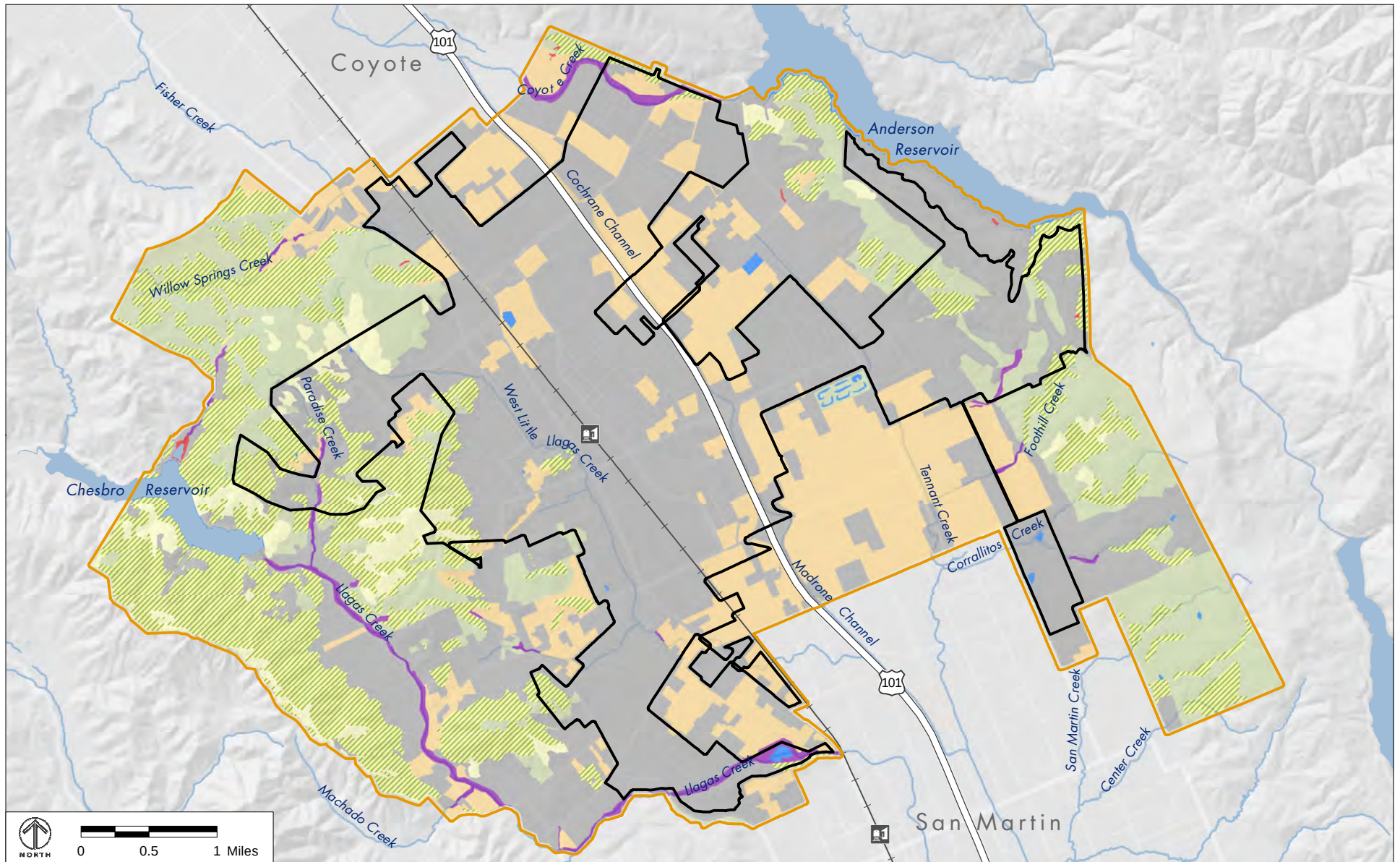
A natural community refers to a group of species that occurs in the same habitat or area. The Habitat Plan also includes non-natural land cover types in the natural community category. According to the Habitat Plan's GIS data, six natural communities and two non-natural communities are present in the Project Area (Figure 4.4-1). The six natural communities include:

- **Grassland** consisting of 2,518 acres within the SOI and includes herbaceous vegetation dominated by grasses and forbs. CDFW considers serpentine bunchgrass grassland a sensitive biotic community.
- **Oak Woodland** consisting of 3,221 acres within the SOI is the most common land cover type in the Habitat Plan Project Area and is dominated by upland hardwood trees, typically including various species of oaks.
- **Chaparral and Northern Coastal Scrub** consisting of 546 acres within the SOI are found throughout California on rocky, porous, nutrient-deficient soils and on steep slopes. These communities are dominated by densely packed drought-adapted evergreen woody shrubs.
- **Riparian Forest and Scrub** consisting of 236 acres within the SOI and three land cover types, including willow riparian forests, woodlands, and scrub; central California sycamore alluvial woodland; and mixed riparian woodland and forest. CDFW considers central California sycamore alluvial woodland a sensitive community.

⁸ City of Morgan Hill, *Burrowing Owl Mitigation Plan*, June 2003.

⁹ Santa Clara Valley Habitat Plan Local Partners and the U.S. Fish and Wildlife Service, August 2012, *Santa Clara Valley Habitat Plan / Natural Community Conservation Plan*; GIS data from the *Santa Clara Valley Habitat Plan / Natural Community Conservation Plan*, provided by the City of Morgan Hill in February 2013.

BIOLOGICAL RESOURCES



Source: City of Morgan Hill, 2013; Santa Clara Valley Habitat Conservation Plan/Natural Community Conservation Plan, 2012

Natural Community

- Chaparral & Northern Coastal Scrub
- Grasslands
- Oak Woodland

- Open Water (Aquatic)
- Wetland
- Riparian Forest and Scrub

- Irrigated Agriculture
- Developed

- Sphere of Influence
- City Boundary

Figure 4.4-1

Natural Communities

BIOLOGICAL RESOURCES

- **Wetland** consisting of 13 acres within the SOI and includes areas subject to seasonal or perennial flooding or ponding, or that possess saturated soil conditions and that support predominantly hydrophytic herbaceous plant species. In general, wetlands represent a sensitive biotic community due to their limited distribution and importance to special-status plant and wildlife species.
- **Open Water** consisting of 181 acres within the SOI and including water bodies such as ponds or reservoirs. Ponds are generally less than 20 acres perennial or seasonal water bodies with little or no vegetation. If vegetation is present, it is typically submerged or floating. Reservoirs are open water bodies greater than 20 acres that are managed for water storage and supply, flood protection, or recreational uses. Plants typical of reservoirs include those plants common to deep water systems.

The two non-natural land cover types include developed land consisting of 9,373 acres and agricultural lands consisting of 3,486 acres.

Sensitive Natural Communities

CDFW has identified several native plant communities that are rare and/or diminishing within California. Although some of these communities represent important biological resources and may be unique to California, they have no legal protective status. Nevertheless, substantial losses of some of these plant communities may be considered “significant” under the CEQA. Plant communities that CDFW considers sensitive in the Project Area include serpentine bunchgrass grassland, valley oak woodland, and blue oak woodland.¹⁰ Areas of well-developed riparian woodland and scrub, such as central California sycamore alluvial woodland, as well as other wetlands, are also considered sensitive because they are valuable to plant and wildlife diversity and are diminishing.¹¹ Figure 4.4-2 shows sensitive natural communities in the Project Area.

Aquatic Habitats

A variety of aquatic species have the potential to occur within the Project Area. As illustrated in Figure 4.4-3, several creeks in the Project Area support riverine habitats for fish and amphibian species. The Habitat Plan categorizes riverine habitats into ten habitat types based on the occurrence of and habitat conditions for aquatic species. Five of these habitat types are present within Morgan Hill:¹²

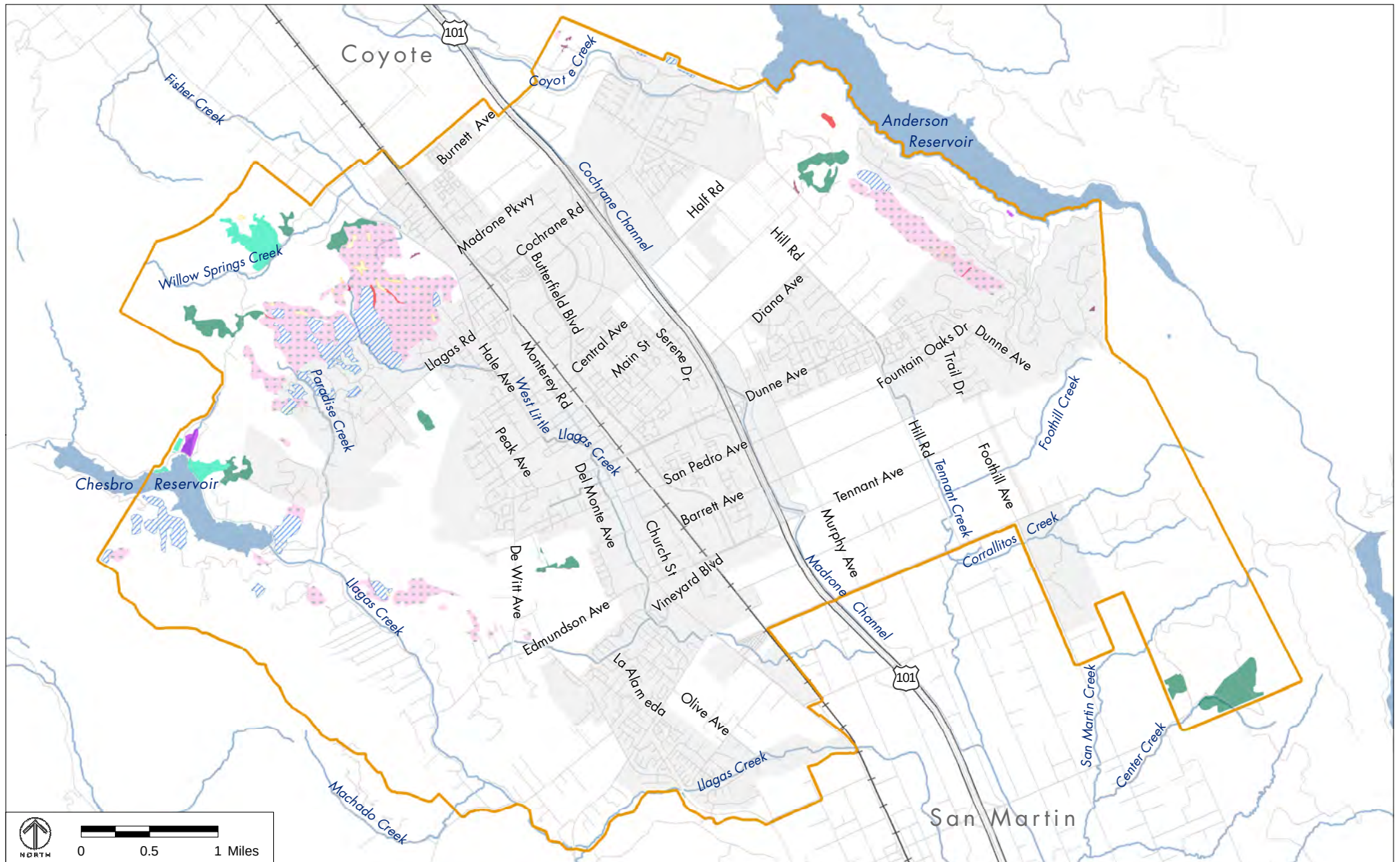
- **Cold Steelhead Habitat:** This habitat is primarily located downstream of reservoirs. High stream flows due to reservoir releases, sufficient sun, and high water clarity provide for suitable steelhead habitat conditions.

¹⁰ Santa Clara Valley Habitat Plan Local Partners and the U.S. Fish and Wildlife Service, 2012, *Santa Clara Valley Habitat Plan / Natural Community Conservation Plan*, pages 3-34, 3-61, and 3-103.

¹¹ Santa Clara Valley Habitat Plan Local Partners and the U.S. Fish and Wildlife Service, 2012, *Santa Clara Valley Habitat Plan / Natural Community Conservation Plan*, pages 3-68 and 3-80.

¹² Santa Clara Valley Habitat Plan Local Partners and the U.S. Fish and Wildlife Service, 2012, *Santa Clara Valley Habitat Plan / Natural Community Conservation Plan*, Appendix L.

BIOLOGICAL RESOURCES



Source: City of Morgan Hill, 2013; Santa Clara Valley Habitat Conservation Plan/Natural Community Conservation Plan, 2012.

Sensitive Natural Community

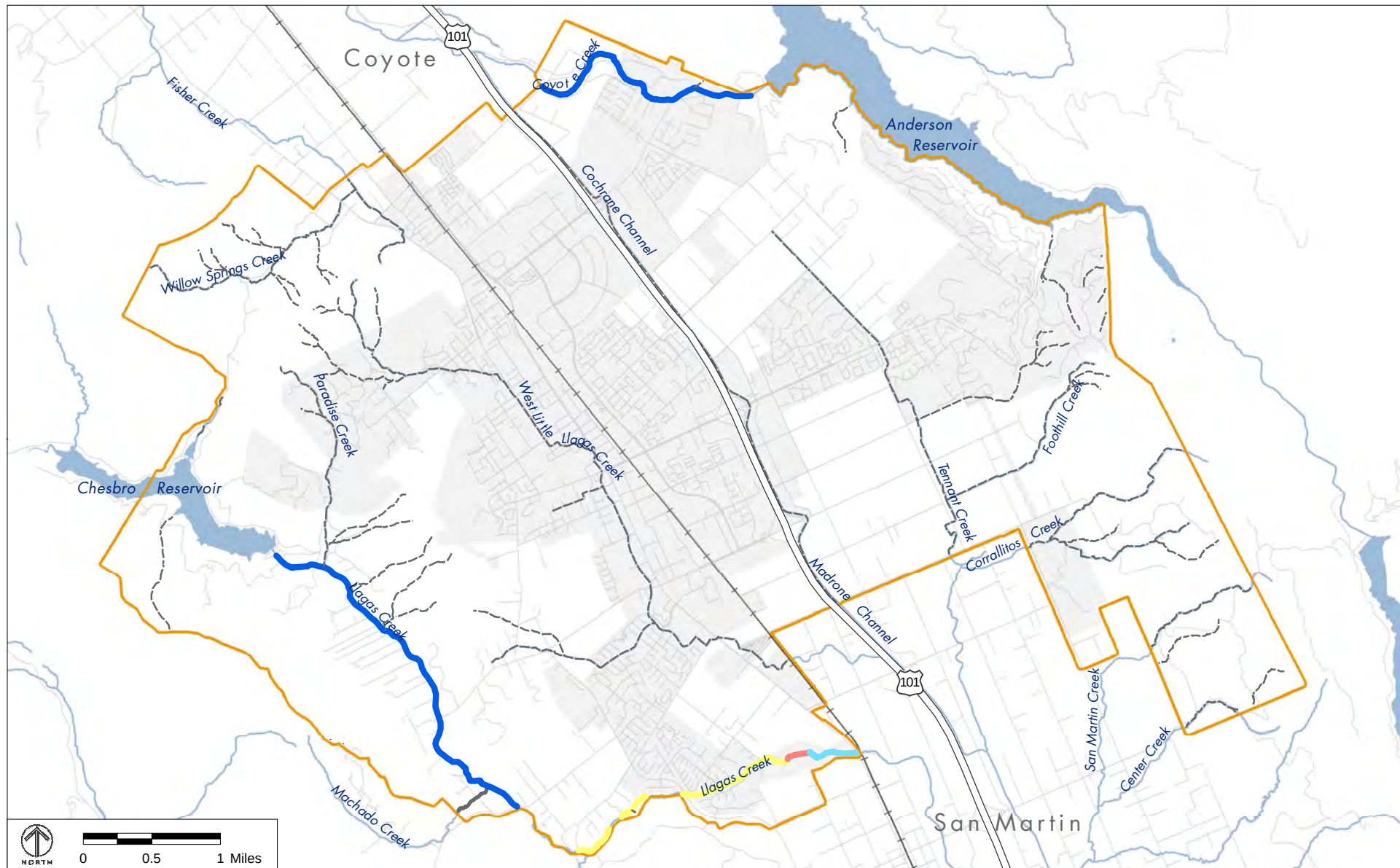
- Serpentine Bunchgrass
- Serpentine Rock Outcrop/Barren
- Serpentine Seep
- Mixed Serpentine Chaparral

- Valley Oak Woodland
- Blue Oak Woodland
- Coastal and Valley Freshwater Marsh
- Vernal Pools

- Sphere of Influence
- City Boundary

Figure 4.4-2

Sensitive Natural Communities



Source: City of Morgan Hill, 2013; Santa Clara Valley Habitat Conservation Plan/Natural Community Conservation Plan, 2012

- Fish Habitat**
- Cold Steelhead
 - Warm Native
 - Mixed Native
 - Warm Potential Trout / Steelhead
 - Fish Scarce
 - No Fish Value
 - Sphere of Influence
 - City Boundary

Figure 4.4-3
Fish Habitat

BIOLOGICAL RESOURCES

- **Warm Potential Trout/Steelhead Habitat:** This habitat is located further downstream of reservoirs and has higher water temperatures and/or lower stream flows than the cold steelhead habitat. Its high water temperatures increase steelhead food demands, but its low stream flows and poor turbidity characteristics often do not produce enough insects to feed the fish. Increasing stream flows or reducing water temperatures can make the habitat more suitable for steelhead. Warm-water fish often dominate in this habitat type.
- **Warm Native Habitat:** This habitat is suitable for native warm-water fish including Sacramento sucker, hitch or California roach, Sacramento pike minnow, three spine stickleback, and prickly sculpin.
- **Mixed Native and Introduced Habitat:** This habitat has warm water temperatures, which provide suitable habitat conditions for native and introduced species including tule perch (*Hysterocarpus traski*).
- **Fish-Scarce Habitat:** This habitat is mostly dry during summer and fall, but it can provide migration routes for steelhead and other fish or a reproductive habitat for amphibians.

Special-Status Species

Special-status plant and wildlife species include those listed under the state and federal Endangered Species Acts, plants listed by the California Native Plant Society (CNPS) Inventory of Rare and Endangered Vascular Plants of California, and wildlife designated as Species of Special Concern by the CDFW.

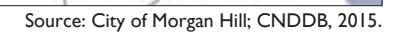
The special-status species addressed in this section are selected based on a review of records from the CNPS online inventory and the CNDDDB.¹³ Field verification by a biologist may be required to confirm the presence of special-status plant and animal species in the Project Area.

Below is a summary of the special-status plant and animal species that have the potential for occurring in the SOI. In addition to plant and animal species, a special-status habitat, serpentine bunchgrass, has been identified in Morgan Hill by the CNDDDB. Figure 4.4-4 illustrates the locations of known occurrences of special-status species and habitat.

Plant Species

There are nine special-status plant species that are known to occur in Morgan Hill as recorded in the CNDDDB. Table 4.4-1 lists these species alphabetically by common name and shows their status on the federal and state Endangered Species Lists and the CNPS Inventory of Rare and Endangered Plants.

¹³ The CNDDDB inventories the status and locations of rare plants and animals in California based on field surveys beginning in the 1970s. As such, in the areas where little survey work has been done, the CNDDDB may provide biased information. In the areas where survey work has not been done recently, some species recorded in the CNDDDB may no longer be present.



Special Status Species

BIOLOGICAL RESOURCES**TABLE 4.4-1 SPECIAL-STATUS PLANT SPECIES**

Common Name	Scientific Name	Status (Federal List /State List/CNPS Rank)
Arcuate bush-mallow	<i>Malacothamnus arcuatus</i>	None/None/1B.2
Coyote ceanothus	<i>Ceanothus ferrisiae</i>	Endangered/None/1B.1
Hall's bush-mallow	<i>Malacothamnus hallii</i>	None/None/1B.2
Most beautiful jewel-flower	<i>Streptanthus albidus ssp. peramoenus</i>	None/None/1B.2
Mt. Hamilton fountain thistle	<i>Cirsium fontinale var. campylon</i>	None/None/1B.2
San Francisco collinsia	<i>Collinsia multicolor</i>	None/None/1B.2
Santa Clara Valley dudleya	<i>Dudleya abramsii ssp. setchellii</i>	Endangered/None/1B.1
Smooth lessingia	<i>Lessingia micradenia var. glabrata</i>	None/None/1B.2
Woodland woollythreads	<i>Monolopia gracilens</i>	None/None/1B.2

a. The CNDDDB defines Serpentine bunchgrass as a special-status habitat.

CNPS California Rare Plant Rank

1B.1 Plants rare, threatened, or endangered in California and elsewhere. Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat).

1B.2 Plants rare, threatened, or endangered in California and elsewhere. Fairly threatened in California (20% to 80% occurrences threatened / moderate degree and immediacy of threat).

Source: California Natural Diversity Database, 2014.

Animal Species

There are seven special-status animal species that are known to occur, have historically occurred, or may potentially occur within the Project Area, as recorded in the CNDDDB. Table 4.4-2 lists these species alphabetically by common name and shows whether each species is listed on the federal and state Endangered Species Lists and/or designated as California Species of Concern by the CDFW.

4.4.2 STANDARDS OF SIGNIFICANCE

Implementation of the proposed Project would result in a significant impact to biological resources if it would:

1. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status-species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or US Fish and Wildlife Service.
2. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or US Fish and Wildlife Service.

BIOLOGICAL RESOURCES

TABLE 4.4-2 SPECIAL-STATUS ANIMAL SPECIES

Common Name	Scientific Name	Status (Federal List/State List/CDFW Special Concern)
Amphibians/Reptiles		
California tiger salamander	<i>Ambydstoma californiense</i>	Threatened/Threatened/ Special Concern
Western pond turtle	<i>Emys marmorata</i>	None/None/Special Concern
California red-legged frog	<i>Rana draytonii</i>	Threatened/None/Special Concern
Birds		
Burrowing owl	<i>Athene cunicularia</i>	None/None/Special Concern
Insects		
Bay checkerspot butterfly	<i>Euphydryas editha bayensis</i>	Threatened/None/Not Applicable
Opler's longhorn moth	<i>Adela oplerella</i>	None/None/Not Applicable
Hom's micro-blind harvestman	<i>Microcina homi</i>	None/None/Not Applicable

Notes: The CDFW does not account insects as animals, and as such, insects are not included in the list of the Animal Species of Special Concern.
Source: California Natural Diversity Database, 2014.

3. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act including, but not limited to, marsh, vernal pool, coastal, etc. through direct removal, filling, hydrological interruption, or other means.
4. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.
5. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
6. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

BIOLOGICAL RESOURCES

4.4.3 IMPACT DISCUSSION

This section analyzes potential project-specific and cumulative impacts to biological resources.

BIO-1	Implementation of the proposed Project would not have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.

General Plan

Future development and land use activities as a result of implementation of the proposed General Plan would occur primarily in urbanized areas where special-status species are generally not expected to occur. The potential for occurrence of special-status species in developed areas is generally very remote in comparison to undeveloped lands with natural habitat that contain essential habitat characteristics for the range of species known to occur within the Project Area. As shown in Figure 4.4-4, occurrences of nine special-status plant species, seven special-status animal species, and one special-status habitat have been documented within the Project Area. While buildout of the proposed General Plan would primarily occur in previously urbanized areas, there is the potential for future development associated with the implementation of the proposed General Plan to occur on undeveloped land which could significantly impact, either directly, or through habitat modifications, special-status plant and animal species. For example, California tiger salamander occurrences have been documented in the northern part of the City, west of Highway 101, and the proposed General Plan would include some of this area within the UGB and designate it for Residential Attached Medium development. Similarly, burrowing owls have been documented on several sites within urbanized area of Morgan Hill, and could have the potential to occur on existing undeveloped sites within the urbanized area that are designated for development.

Several existing regulations would help ensure that development and redevelopment activities associated with the proposed General Plan would not result in significant impacts to special-status plant and animal species. Compliance with the federal, state, regional, and local regulations described in Section 4.4.1.1 of this chapter would protect special-status species present or potentially present within the Project Area by minimizing potential impacts associated with implementation of the proposed General Plan. For example, the federal and California Endangered Species Acts, MBTA, Fish and Game Code, and California Native Protection Act all serve to prevent the potential “take” of federally, state, or locally protected species. The Santa Clara Valley Habitat Plan secures incidental take permits for covered activities, including public and private urban development and provides a region-wide conservation strategy that mitigates impacts on

BIOLOGICAL RESOURCES

covered species on the basis of species and habitat needs.¹⁴ It should be noted that projects and activities that are not covered by the Habitat Plan are still subject to the state and federal regulations described above.¹⁵

In addition, Morgan Hill's local regulations, such as Municipal Code Chapters 8.80, 12.32, 18.08, and 18.69 serve to protect habitat and open space throughout the Project Area by establishing measures to govern the removal of significant trees and regulating the type of development allowed in the Open Space District, thereby further minimizing potential impacts to special-status species. Further, the existing Morgan Hill Burrowing Owl Mitigation Plan establishes citywide measures for the protection of the Burrowing Owl, such as requiring preconstruction surveys no more than 30 days prior to ground-disturbing activity to identify the presence of owls in areas where construction activities are expected to occur.¹⁶

In addition to compliance with existing regulations, the proposed General Plan includes the following goals, policies, and actions in the Natural Resources Element (NRE) that are intended to further minimize potential impacts to special-status plant and animal species.

<i>Goal NRE-1</i>	<i>Preservation of open space areas and natural features.</i>
Policy NRE-1.2	Large Open Space Areas. Work with the County, the Open Space Authority, appropriate conservancy organizations and land trusts, and property owners to preserve open space areas, such as agricultural lands and other outdoor recreation areas, to conserve natural resources and retain the City's unique identity.
Policy NRE-1.3	Designated Open Space. Maintain land designated as "Open Space" on the Morgan Hill General Plan Land Use Map (Figure CNF-3 [of the General Plan]), in accordance with Measure C, through fiscal year 2019/20.
Policy NRE-1.4	South County Open Space. Preserve and maintain the wide variety of open spaces in the South County; including greenbelt areas, parks, agricultural uses.
Policy NRE-1.9	Poppy Jasper. Preserve Poppy Jasper as a natural resource unique to Morgan Hill.
<i>Goal NRE-5</i>	<i>Preservation of streams and riparian areas as open space.</i>
Policy NRE-5.2	Other Agencies Environmental Review. Coordinate with jurisdictional agencies, as required, as part of the environmental review process for development projects.
Policy NRE-5.4	Development Impacts in Riparian Areas. Consider development impacts upon wildlife in riparian areas and mitigate those environmental impacts.
<i>Goal NRE-6</i>	<i>Protection of native plants, animals, and sensitive habitats.</i>
Policy NRE-6.1	Natural State of Habitat. Preserve all fish and wildlife habitats in their natural state whenever possible. Consider development impacts upon wildlife and utilize actions to mitigate those environmental impacts.

¹⁴ ICF International, August 2012, *Santa Clara Valley Habitat Conservation Plan/Natural Community Conservation Plan*, page 5-1.

¹⁵ ICF International, August 2012, *Santa Clara Valley Habitat Conservation Plan/Natural Community Conservation Plan*, page 2-43.

¹⁶ City of Morgan Hill, Burrowing Owl Mitigation Plan, June 2003, page III-4.

BIOLOGICAL RESOURCES

Policy NRE-6.2	Habitat Conservation Plan. Support the implementation of the Santa Clara Valley Habitat Conservation Plan to protect wildlife, rare and endangered plants and animals, and sensitive habitats from loss and destruction.
Policy NRE-6.3	Urban Expansion Impacts. Minimize impacts upon wildlife when considering annexations, urban service areas extensions, and other governmental actions that permit urban development of previously undeveloped property.
Policy NRE-6.4	Tree Preservation and Protection. Preserve and protect mature, healthy trees whenever feasible, particularly native trees, historically significant trees, and other trees which are of significant size or of significant aesthetic value to the immediate vicinity or to the community as a whole.

Applicable federal, state, regional, and local regulations, together with proposed General Plan goals, policies, and actions listed above would reduce potential impacts to special-status species that could result from buildout of the Plan. Subsequent projects under the proposed General Plan that would involve development in areas where special-status species may occur would be subject to separate project-level environmental review pursuant to CEQA in order to identify and mitigate impacts to special-status species. Therefore, impacts from the proposed General Plan would be *less-than-significant*.

Applicable Regulations:

- Clean Water Act
- Federal Endangered Species Act
- Migratory Bird Treaty Act
- California Endangered Species Act
- California Department of Fish and Game Code
- Oak Woodlands Conservation Act
- California Native Plant Protection Act
- Santa Clara Valley Habitat Conservation Plan
- Santa Clara County General Plan
- Morgan Hill Municipal Code

Significance Before Mitigation: Less than significant.

Residential Development Control System

The Residential Development Control System, known as the RDCS, regulates population growth through the provision of residential building allotments. The proposed updates to the RDCS as part of the proposed Project affect the pace of development in the City but do not determine the location, type, or intensity of development. Therefore, the proposed RDCS would not have a substantial adverse effect on special status species. As such, the proposed RDCS would have *no impact*.

Significance Before Mitigation: No impact.

BIOLOGICAL RESOURCES

BIO-2	Implementation of the proposed Project would not have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or US Fish and Wildlife Service.

According to the Santa Clara Valley Habitat Plan, there are six natural communities within the Project Area, including grassland (2,518 acres); oak woodland (3,221 acres); chaparral and coastal scrub (546 acres); riparian forest and scrub (236 acres); wetland (13 acres); and open water (181 acres).¹⁷ Although some these natural communities represent important biological resources and may be unique to California, they have no legal protective status. Nevertheless, substantial losses of some of these natural communities may be considered “significant” under CEQA. Sensitive communities that CDFW considers sensitive include serpentine bunchgrass grassland, valley oak woodland and scrub, and blue oak woodland.¹⁸ Areas of well-developed riparian woodland, as well as other woodland and scrub including California sycamore alluvial woodland and other wetlands, are also considered sensitive because they are valuable to plant and wildlife diversity.¹⁹ Figure 4.4-2 shows sensitive natural communities in the Project Area.

General Plan

Future development and land use activities as a result of implementation of the proposed General Plan would occur primarily in urbanized areas where sensitive natural communities are generally not expected to be present. The potential for substantial adverse effects on habitat and sensitive natural communities in developed areas is generally very remote in comparison to undeveloped lands with natural habitat that contain sensitive natural communities. While development allowed under the proposed General Plan would primarily occur in previously urbanized areas, there is the potential for future development associated with the implementation of the proposed General Plan to occur on undeveloped land which could significantly impact, either directly, or through habitat modifications, sensitive natural communities.

As shown in Figure 4.4-4, a majority of the sensitive natural communities are located in the northwestern part of the Project Area near Willow Springs Creek, Paradise Creek, Chesbro Reservoir and Llagas Creek, including areas of serpentine bunchgrass, blue oak woodland, and valley oak woodland. Other areas containing sensitive natural communities are located on the easternmost edge of the Project Area, west of Anderson Reservoir, including a portion of serpentine bunchgrass within the City limit. The majority of these areas are outside of the City’s UDB and are designated Rural County or Open Space under the proposed General Plan, but some areas, such as the undeveloped hillsides north of Llagas Road, are within the UGB, within the Urban Service Area, and have a Residential Estate designation. Several existing

¹⁷ ICF International, August 2012, Santa Clara Valley Habitat Plan/Natural Community Conservation Plan.

¹⁸ Santa Clara Valley Habitat Plan Local Partners and the U.S. Fish and Wildlife Service, August 2012, Santa Clara Valley Habitat Plan/Natural Community Conservation Plan, pages 3-34, 3-61, and 3-103.

¹⁹ Santa Clara Valley Habitat Plan Local Partners and the U.S. Fish and Wildlife Service, August 2012, Santa Clara Valley Habitat Plan/Natural Community Conservation Plan, pages 3-68 and 3-80.

BIOLOGICAL RESOURCES

regulations would help to ensure that development and redevelopment activities associated with the proposed General Plan would not result in significant impacts to habitat or sensitive natural communities. Compliance with the federal, state, regional, and local regulations described in Section 4.4.1.1 of this chapter, along with the provisions of the Habitat Plan, including incorporating design and mitigation for the avoidance of disturbance to areas covered under the Habitat Plan, would protect habitat and sensitive natural communities present within the Project Area by minimizing potential impacts associated with implementation of the proposed General Plan. For example, the federal and California Endangered Species Acts, MBTA, Fish and Game Code, and California Native Protection Act all serve to prevent the potential destruction of habitat and sensitive natural communities that would result in the “taking” of special status plant- and animal species. As discussed above under BIO-1, the Santa Clara Valley Habitat Plan provides a region-wide conservation strategy that mitigates impacts on covered species, including habitat and natural communities where species may be present. It should be noted that projects and activities that are not covered by the Habitat Plan are still subject to the state and federal regulations described above.²⁰

In addition, Morgan Hill’s local regulations, such as Municipal Code Chapters 8.80, 12.32, 18.08, and 18.69 serve to protect habitat and open space throughout the Project Area by establishing measures to govern the removal of significant trees and regulating the type of development allowed in the Open Space District, thereby further minimizing potential impacts to special-status species. The existing Morgan Hill Burrowing Hill Mitigation Plan establishes citywide measures for the protection of the burrowing owl, such as requiring surveys to identify current nest sites and potential habitat areas, and developing a mitigation plan to offset habitat loss and other impacts to burrowing owls.²¹

In addition to compliance with existing regulations, the proposed General Plan includes the following goals, policies, and actions in the Natural Resources Element (NRE) that are intended to further minimize potential impacts to habitat or other sensitive natural communities.

<i>Goal NRE-6</i>	<i>Protection of native plants, animals, and sensitive habitats.</i>
Policy NRE-6.1	Natural State of Habitat. Preserve all fish and wildlife habitats in their natural state whenever possible. Consider development impacts upon wildlife and utilize actions to mitigate those environmental impacts.
Policy NRE-6.2	Habitat Conservation Plan. Support the implementation of the Santa Clara Valley Habitat Conservation Plan to protect wildlife, rare and endangered plants and animals, and sensitive habitats from loss and destruction.
Policy NRE-6.3	Urban Expansion Impacts. Minimize impacts upon wildlife when considering annexations, urban service areas extensions, and other governmental actions that permit urban development of previously undeveloped property.
<i>Goal NRE-1</i>	<i>Preservation of open space areas and natural features.</i>

²⁰ ICF International, August 2012, *Santa Clara Valley Habitat Conservation Plan/Natural Community Conservation Plan*, page 2-43.

²¹ City of Morgan Hill, *Burrowing Owl Mitigation Plan*, June 2003, page I-1.

BIOLOGICAL RESOURCES

Policy NRE-1.3	Designated Open Space. Maintain land designated as “Open Space” on the Morgan Hill General Plan Land Use Map (Figure CNF-3 [of the General Plan]), in accordance with Measure C, through fiscal year 2019/20.
Policy NRE-1.4	South County Open Space. Preserve and maintain the wide variety of open spaces in the South County; including greenbelt areas, parks, and agricultural uses.
Goal NRE-5	<i>Preservation of streams and riparian areas as open space.</i>
Policy NRE-5.1	Reclamation of Streams and Riparian Areas. Encourage reclamation of degraded streams and riparian areas.
Policy NRE-5.2	Other Agencies Environmental Review. Coordinate with jurisdictional agencies, as required, as part of the environmental review process for development projects.
Policy NRE-5.3	Natural State of Streamside and Riparian Areas. Retain natural streamside and riparian areas in their natural state in order to preserve their value as percolation and recharge areas, natural habitat, scenic resources, and recreation corridors, and to stabilize banks.
Policy NRE-5.4	Development Impacts in Riparian Areas. Consider development impacts upon wildlife in riparian areas and mitigate those environmental impacts.
Policy NRE-5.5	Flood Control Projects. Where flood control projects are needed to protect existing development, minimize disruption of streams and riparian systems, maintaining slow flow and stable banks through design and other appropriate mitigation measures.
Policy NRE-5.6	Stream Channel Protection. Protect existing stream channels and riparian vegetation by requiring buffering or landscaped setbacks and storm runoff interception.
Policy NRE-5.8	Creeks Access: Access to creeks should be of sufficient width to accommodate trails, flood control access, and protection of riparian habitat.
Action NRE-5.B	Design Guidelines for Riparian Features. Develop Design Guidelines for preserving, reclaiming and incorporating riparian features into development.
Action NRE-5.C	Riparian Preservation and Reclamation Programs. Develop programs for the preservation and reclamation of degraded riparian areas.

Applicable federal, state, regional, and local regulations, together with proposed General Plan goals, policies, and actions listed above, along with compliance with the Santa Clara Valley Habitat Plan, would reduce potential impacts to special-status species that could result from buildout of the Plan. Subsequent projects under the proposed General Plan that would involve development in areas where special-status species may occur would be subject to separate project-level environmental review pursuant to CEQA in order to identify and mitigate impacts to habitat and other sensitive natural communities. Therefore, impacts from the proposed General Plan would be *less-than-significant*.

Applicable Regulations:

- Clean Water Act
- Federal Endangered Species Act
- California Department of Fish and Game Code
- Oak Woodlands Conservation Act
- California Native Plant Protection Act

BIOLOGICAL RESOURCES

- Santa Clara Valley Habitat Conservation Plan
- Santa Clara Valley Water District Resources Protection Collaborative Guidelines and Standards for Land Use near Streams
- Morgan Hill Municipal Code

Significance Before Mitigation: Less than significant.

Residential Development Control System

The Residential Development Control System, known as the RDCS, regulates population growth through the provision of residential building allotments. The proposed updates to the RDCS as part of the proposed Project, affect the pace of development in the City but does not determine the location, type, or intensity of development. Therefore, the proposed RDCS would not have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or US Fish and Wildlife Service. As such, the proposed RDCS would have *no impact*.

Significance Before Mitigation: No impact.

BIO-3	Implementation of the proposed Project would not have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.

As shown in Figure 4.4-1 and described under Impact Discussion BIO-2, a total of 13 acres of wetlands are dispersed throughout the Project Area; however, the wetlands are not located within the urbanized areas of the City limit, and are primarily located along the boundary of the SOI. For example, the largest wetland is located along the northeastern bank of the Chesbro Reservoir, which is outside of the City limit, and directly adjacent to the SOI border. Other areas with wetlands include on the north side of Coyote Creek and west of Anderson Reservoir, both of which are outside of the City limit. Implementation of the proposed Project would have a significant impact if it would have a substantial adverse effect on federally protected wetlands, including marshlands, through direct removal, filling, hydrological interruption, or other means. Federally protected wetlands are those which have been delineated as jurisdictional waters of the United States. Pursuant to Section 404 of the Clean Water Act, the USACE maintains a policy of “no net loss” of wetlands and regulates the discharge of dredged or fill material into any water of the United States. Where a project would adversely affect waters of the United States, the USACE typically requires in-kind mitigation at a ratio of at least 1:1 before they will issue a permit authorizing development.

BIOLOGICAL RESOURCES

General Plan

Future development and land use activities as a result of implementation of the proposed General Plan would occur primarily in urbanized areas where wetlands are generally not expected to be present. The potential for substantial adverse effects on wetlands in developed areas is generally very remote in comparison to lands outside of the City limit and within the SOI that contain areas where wetlands are present. All sites of mapped wetlands are designated either Open Space or Rural County in the proposed General Plan. Nevertheless, since the Rural County designation does allow single-family homes and/or agricultural operations as permitted uses, there is the potential for future development associated with the implementation of the proposed General Plan to occur on undeveloped land which could significantly impact, either directly, or indirectly, wetlands.

Several existing regulations would help to ensure that development and redevelopment activities associated with the proposed General Plan would not result in significant impacts to wetlands. Compliance with the federal, state, regional, and local regulations described in Section 4.4.1.1 of this chapter would protect habitat and sensitive natural communities present within the Project Area by minimizing potential impacts associated with implementation of the proposed General Plan. For example, compliance with the Clean Water Act would require any future projects that would involve the filling of a wetland to obtain a permit.

In addition to compliance with existing regulations, the proposed General Plan includes the following goals, and policies in the Natural Resources Element (NRE) that are intended to further minimize potential impacts to wetlands.

<i>Goal NRE-1</i>	<i>Preservation of open space areas and natural features.</i>
Policy NRE-1.10	Wetland Delineation and Mitigation. Require wetland delineation and mitigation as part of the environmental review for future development.
Policy NRE-1.11	Wetlands Enhancement. Encourage enhancement of sensitive wetlands as part of the future development.
<i>Goal NRE-5</i>	<i>Preservation and reclamation of streams and riparian areas as open space.</i>
Policy NRE-5.2	Other Agencies Environmental Review. Coordinate with jurisdictional agencies, as required, as part of the environmental review process for development projects.
Policy NRE-5.4	Development Impacts in Riparian Areas. Consider development impacts upon wildlife in riparian areas and mitigate those environmental impacts.
<i>Goal NRE-6</i>	<i>Protection of native plants, animals, and sensitive habitats.</i>
Policy NRE-6.1	Natural State of Habitat. Preserve all fish and wildlife habitats in their natural state whenever possible. Consider development impacts upon wildlife and utilize actions to mitigate those environmental impacts.
Policy NRE-6.2	Habitat Conservation Plan. Support the implementation of the Santa Clara Valley Habitat Plan to protect wildlife, rare and endangered plants and animals, and sensitive habitats from loss and destruction.

BIOLOGICAL RESOURCES

Policy NRE-6.3

Urban Expansion Impacts. Minimize impacts upon wildlife when considering annexations, urban service areas extensions, and other governmental actions that permit urban development of previously undeveloped property.

Applicable existing laws and regulations, together with proposed General Plan goals, policies, and actions listed above would reduce potential impacts to wetlands that could result from buildout of the Plan. Subsequent projects under the proposed General Plan that would involve development in areas where special-status species may occur would be subject to separate project-level environmental review pursuant to CEQA in order to identify and mitigate impacts to habitat and other sensitive natural communities. Therefore, impacts from the proposed General Plan would be *less than significant*.

Applicable Regulations:

- Clean Water Act
- Santa Clara Valley Habitat Conservation Plan
- Santa Clara Valley Water District Resources Protection Collaborative Guidelines and Standards for Land Use near Streams
- Morgan Hill Municipal Code

Significance Before Mitigation: Less than significant.

Residential Development Control System

The RDSCS regulates population growth through the provision of residential building allotments. The RDSCS, and the proposed updates to the RDSCS as part of the proposed Project, affect the pace of development in the City but do not determine the location, type, or intensity of development. Therefore, the proposed RDSCS would not have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act including marsh, vernal pool, coastal, etc. through direct removal, filling, hydrological interruption, or other means. As such, the proposed RDSCS would have *no impact*.

Significance Before Mitigation: No impact.

BIO-4	Implementation of the proposed Project would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.

As shown in Figure 4.4-3, a variety of aquatic species have the potential to occur within the Project Area in the several creeks which support riverine habitats for fish and amphibian species. According to the Santa Clara Habitat Plan, which categorizes riverine habitats into ten habitat types based on the occurrence of and

BIOLOGICAL RESOURCES

habitat conditions; five of these habitat types are present with Morgan Hill.²² These types include cold steelhead habitat, warm potential trout and steelhead habitat, warm native habitat, mixed native and introduced habitat, and fish-scarce habitat. However, as shown in Figure 4.4-3, these habitat types are primarily concentrated in Llagas Creek outside of the City limit, although within the SOI. Coyote Creek, which is just east of Highway 101, is also considered as cold steelhead habitat. This stretch of Coyote Creek starts at the City's SOI and generally runs parallel to the SOI, although it does pass through a portion of the northern City limit. In general, the area's best suited for wildlife movement would occur in areas outside of the City limit and within the SOI as a result of Morgan Hill being more urbanized towards the center of the City and gradually comprised of less urbanized areas towards the outer edge of the City limit and within the SOI.

General Plan

Given the urbanized context of the Project Area within the City limit, opportunities for wildlife movement are limited. Existing development, including buildings, major roadways, or other similar improvements, represent substantial barriers to wildlife movement. Although creeks and channels are present within the urbanized areas of the City, most of these creeks and channels have been straightened and channelized to prevent flooding.²³ Engineered drainage channels in the Project Area include West Little Llagas Creek, Butterfield and Madrone Channels, and Tennant Creek. Therefore, the potential for future development, as a result of implementation of the General Plan, to interfere substantially with the movement of any native resident or migratory fish or wildlife species is generally very remote. The areas best suited for wildlife movement generally surround the urbanized areas of the City; future development allowed in these areas as a result of implementation of the Plan could significantly impact, either directly, or indirectly, movement of native or migratory fish or wildlife species.

Several existing regulations would help to ensure that development and redevelopment activities associated with the proposed General Plan would not result in significant impacts to wildlife corridors. Compliance with the federal, state, regional, and local regulations described in Section 4.4.1.1 of this chapter would protect habitat including protection of corridors essential to the movement of native fish and animal species present within the Project Area by minimizing potential impacts associated with implementation of the proposed General Plan.

In addition to compliance with existing regulations, the proposed General Plan includes the following goals, policies, and actions in the Natural Resources Element (NRE) that are intended to further minimize potential impacts to wildlife corridors.

²² Santa Clara Valley Habitat Plan Local Partners and the U.S. Fish and Wildlife Service, August 2012, Santa Clara Valley Habitat Plan/Natural Community Conservation Plan, Appendix L.

²³ William Lettis & Associates, Inc. Creek and Watershed Map, http://museumca.org/creeks/WholeMaps/15_Morgan%20Creek.pdf, accessed on February 23, 2013.

BIOLOGICAL RESOURCES

Goal NRE-1	<i>Preservation of open space areas and natural features.</i>
Goal NRE-5	<i>Preservation and reclamation of streams and riparian areas as open space.</i>
Policy NRE-5.1	Reclamation of Streams and Riparian Areas. Encourage reclamation of degraded streams and riparian areas.
Policy NRE-5.2	Other Agencies Environmental Review. Coordinate with jurisdictional agencies, as required, as part of the environmental review process for development projects.
Policy NRE-5.3	Natural State of Streamside and Riparian Areas. Retain natural streamside and riparian areas in their natural state in order to preserve their value as percolation and recharge areas, natural habitat, scenic resources, and recreation corridors, and to stabilize banks.
Policy NRE-5.4	Development Impacts in Riparian Areas. Consider development impacts upon wildlife in riparian areas and mitigate those environmental impacts.
Policy NRE-5.5	Flood Control Projects. Where flood control projects are needed to protect existing development, minimize disruption of streams and riparian systems, maintaining slow flow and stable banks through design and other appropriate mitigation measures.
Policy NRE-5.6	Stream Channel Protection. Protect existing stream channels and riparian vegetation by requiring buffering or landscaped setbacks and storm runoff interception.
Policy NRE-5.8	Creeks Access: Access to creeks should be of sufficient width to accommodate trails, flood control access, and protection of riparian habitat.
Action NRE-5.B	Design Guidelines for Riparian Features. Develop Design Guidelines for preserving, reclaiming and incorporating riparian features into development.
Action NRE-5.C	Riparian Preservation and Reclamation Programs. Develop programs for the preservation and reclamation of degraded riparian areas.
Goal NRE-6	<i>Protection of native plants, animals, and sensitive habitats.</i>
Policy NRE-6.1	Natural State of Habitat. Preserve all fish and wildlife habitats in their natural state whenever possible. Consider development impacts upon wildlife and utilize actions to mitigate those environmental impacts.
Policy NRE-6.2	Habitat Conservation Plan. Support the implementation of the Santa Clara Valley Habitat Plan to protect wildlife, rare and endangered plants and animals, and sensitive habitats from loss and destruction.
Policy NRE-6.3	Urban Expansion Impacts. Minimize impacts upon wildlife when considering annexations, urban service areas extensions, and other governmental actions that permit urban development of previously undeveloped property.

Applicable existing laws and regulations, together with proposed General Plan goals, policies, and actions listed above would reduce potential impacts to wetlands that could result from buildout of the proposed Plan. Subsequent projects under the proposed General Plan that would involve development in areas where wildlife corridors may occur would be subject to separate project-level environmental review pursuant to CEQA in order to identify and mitigate impacts to habitat and other sensitive natural communities. Therefore, impacts from the proposed General Plan would be *less than significant*.

BIOLOGICAL RESOURCES

Applicable Regulations:

- Clean Water Act
- Federal Endangered Species Act
- California Department of Fish and Game Code
- Santa Clara Valley Habitat Conservation Plan
- Santa Clara Valley Water District Resources Protection Collaborative Guidelines and Standards for Land Use near Streams
- Morgan Hill Municipal Code

Significance Before Mitigation: Less than significant.

Residential Development Control System

The RDCS regulates population growth through the provision of residential building allotments. The RDCS, and the proposed updates to the RDCS as part of the proposed Project, affect the pace of development in the City but do not determine the location, type, or intensity of development. Proposed competition standards for the proposed RDCS would award points for infill and brownfield development, which would tend to encourage new residential development to locate away from wildlife movement corridors. Therefore, the proposed RDCS would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites. As such, the proposed RDCS would have *no impact*.

Significance Before Mitigation: No impact.

BIO-5	Implementation of the proposed Project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

As described under Section 4.4.1.1, Regulatory Framework, of this chapter, the City of Morgan Hill includes a tree preservation ordinance under Chapter 12.32 of the Municipal Code which establishes regulations for the removal of significant trees within the City. In addition, Chapter 18.69 Habitat Conservation Plan, and the Morgan Hill Burrowing Owl Mitigation Plan serve to protect biological resources through various policies, which generally call for the protection of habitat, such as trees. As described above under Impact Discussion BIO-2, sensitive natural communities, including valley and blue oak woodland areas are concentrated in the northwestern part of the Project Area around Willow Springs Creek. Additionally, there are trees located in and around the City of Morgan Hill that could have the potential for removal as a result of future development under implementation of the proposed General Plan. Further, as described above under the other impact discussions, there are biological resources including special status and plant species covered under ordinances and policies, such as the burrowing owl, which

BIOLOGICAL RESOURCES

have been identified in areas throughout the Project Area, including areas within the City limit east and west of Highway 101 and an area outside of the City limit west of West Little Llagas Creek.

General Plan

Future development and land use activities as a result of implementation of the proposed General Plan would occur primarily in urbanized areas. The proposed Project itself does not propose any removal of trees; however, there is the potential for future development associated with the implementation of the proposed General Plan to result in the removal of trees which could conflict with local policies and ordinances protection biological resources.

Several existing regulations would help to ensure that development and redevelopment activities associated with the proposed General Plan would not conflict with local policies or ordinances to protect biological resources including the burrowing owl. Compliance with the federal, state, regional, and local regulations described in Section 4.4.1.1 of this chapter would protect biological resources, including resources such as trees that can provide habitat. Municipal Code Chapter 12.32 requires project applicants to apply to the Community Development Department for a permit for the removal of any significant trees in Morgan Hill. The permit would be reviewed and approved by the Community Development Director based on the information provided, a site inspection, and the criteria contained in Section 12.32.070 of the Municipal Code. The adoption of the proposed General Plan would not affect ongoing enforcement of these local ordinances.

In addition to compliance with existing regulations, adherence to the goals, policies, and actions listed under Impact Discussion BIO-1, along with Chapter 12.32 of the Municipal Code, which serve to minimize potential impacts related to the protection of biological resources, impacts would be considered *less than significant*.

Applicable Regulations:

- Clean Water Act
- Federal Endangered Species Act
- California Department of Fish and Game Code
- Oak Woodlands Conservation Act
- California Native Plant Protection Act
- Santa Clara Valley Habitat Conservation Plan
- Santa Clara Valley Water District Resources Protection Collaborative Guidelines and Standards for Land Use near Streams
- Morgan Hill Municipal Code

Significance Before Mitigation: Less than significant.

BIOLOGICAL RESOURCES

Residential Development Control System

The RDCS regulates population growth through the provision of residential building allotments. The RDCS, and the proposed updates to the RDCS as part of the proposed Project, affect the pace of development in the City but do not determine the location, type, or intensity of development. Any residential development allowed under the proposed RDCS would remain subject to all local ordinances that protect biological resources. Therefore, the proposed RDCS would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. As such, the proposed RDCS would have *no impact*.

Significance Before Mitigation: No impact.

BIO-6	Implementation of the proposed Project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

As described above in Section 4.4.1.1, Regulatory Framework, of this chapter, the City adopted the Santa Clara Valley Habitat Plan on October 17, 2012, and incorporated the Habitat Plan by reference in Chapter 18.69 of the Morgan Hill Municipal Code. As a condition of a planning permit, a private project applicant must pay mitigation fees to the City and implement applicable mitigation measures that are identified in Chapter 6 of the Habitat Plan, which are then transmitted to the implementing entity as identified in the Habitat Plan.

General Plan

Future development and land use activities as a result of implementation of the proposed General Plan would occur primarily in urbanized areas. As discussed above, the Project Area that is covered under the Habitat Plan is in the Llagas-3 Zone, which comprises the northern half of the Llagas Basin subwatershed downstream of Chesbro Reservoir. The primary purpose of this Zone is to afford protection of the Bay checkerspot butterfly, western burrowing owl, least Bell's vireo and other native songbirds, California tiger salamander, Coyote ceanothus, most beautiful jewelflower, Santa Clara Valley dudleya, and smooth lessingia. However, while buildout of the proposed General Plan would primarily occur in previously urbanized areas, there is the potential for future development associated with the implementation of the proposed General Plan to occur on undeveloped land which could significantly impact, either directly, or indirectly, areas covered under the Habitat Plan.

Several existing regulations would help to ensure that development and redevelopment activities associated with the proposed General Plan would not conflict with the goals of the Habitat Plan. Compliance with the federal, state, regional, and local regulations described in Section 4.4.1.1, as well as compliance with the General Plan goals, policies, and actions listed under Impact Discussion BIO-1 of this chapter would protect

BIOLOGICAL RESOURCES

biological resources, including those identified under the Habitat Plan. The proposed General Plan includes the following policy specifically in support of the Habitat Plan:

Policy NRE-6.2 **Habitat Conservation Plan.** Support the implementation of the Santa Clara Valley Habitat Plan to protect wildlife, rare and endangered plants and animals, and sensitive habitats from loss and destruction.

The City has also adopted and would continue to enforce ordinances that support Habitat Plan implementation. Municipal Code Chapter 18.69 requires project applicants, as a condition of approval, to contribute mitigation fees to offset impacts that may occur as a result of development activities. Therefore, compliance with the Habitat Plan through mitigation fees paid to apply for a planning permit would ensure that impacts to the species within the Llagas-3 Zone of the Habitat Plan are *less than significant*.

Applicable Regulations:

- Santa Clara Valley Habitat Conservation Plan
- Morgan Hill Municipal Code

Significance Before Mitigation: Less than significant.

Residential Development Control System

The RDCS regulates population growth through the provision of residential building allotments. The RDCS, and the proposed updates to the RDCS as part of the proposed Project, affect the pace of development in the City but do not determine the location, type, or intensity of development. Therefore, the proposed RDCS would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. As such, the proposed RDCS would have *no impact*.

Significance Before Mitigation: No impact.

4.4.4 CUMULATIVE IMPACTS

BIO-7 Implementation of the proposed Project would not contribute to cumulative biological resource impacts in the area.

As discussed in Chapter 4, Environmental Analysis, this EIR takes into account growth from the proposed Project within the Morgan Hill City limit and SOI, in combination with impacts from projected growth in the rest of the 519,506-acre Santa Clara Valley Habitat Plan Study Area.

The potential impacts of proposed development on biological resources tend to be site-specific, and the overall cumulative effect would be dependent on the degree to which significant vegetation and wildlife resources are protected on a particular site. This includes preservation of well-developed native vegetation

BIOLOGICAL RESOURCES

including native grasslands, oak woodlands, riparian woodland, etc., populations of special-status plant or animal species, and wetland features.

To some degree, cumulative development contributes to an incremental reduction in the amount of existing wildlife habitat, particularly for birds and larger mammals. Habitat for species intolerant of human disturbance can be lost as development encroaches into previously undeveloped areas, disrupting or eliminating movement corridors and fragmenting the remaining suitable habitat retained within parks, private open space, or undeveloped properties. New development in the region would result in further conversion of existing natural habitats to urban and suburban conditions, limiting the existing habitat values of the surrounding area. This could include further loss of wetlands and sensitive natural communities, reducing essential habitat for special-status species, removing of mature native trees and other important wildlife habitat features, and obstructing important wildlife movement corridors. Additional development may also contribute to degradation of the aquatic habitat in creeks throughout the region, including the proposed Project Area.

Grading associated with construction activities generally increases erosion and sedimentation, and urban pollutants from new development would reduce water quality. While buildout of the proposed General Plan would primarily occur in previously urbanized areas, there is the potential for future development associated with the implementation of the proposed General Plan to occur on undeveloped land, which could result in a cumulative impacts to biological resources.

However, as described above under impact discussion BIO-1 through BIO-6 and because impacts to biological resources tend to be site-specific, compliance with the federal, state, regional, and local regulations described in Section 4.4.1.1 of this chapter would protect biological resources. In particular, the EIR/EIS on the Santa Clara Valley Habitat Plan concluded that the Habitat Plan would have an overall beneficial impact on the species considered.²⁴ Therefore, covered activities that comply with the conditions in the Habitat Plan and implementation of the conservation strategies outlined in the Habitat Plan would be expected to reduce or avoid cumulative impacts to biological resources. In addition, implementation of the General Plan goals, policies, and actions listed above throughout the impact discussions above would reduce potential impacts to biological resources to less-than-significant levels. Subsequent projects under the proposed General Plan would be subject to separate project-level environmental review pursuant to CEQA in order to identify and mitigate impacts to special-status species. Therefore, past, present, and reasonably foreseeable projects would not result in a cumulatively considerable contribution to impacts on biological resources and cumulative impacts would be *less than significant*.

Applicable Regulations:

- Clean Water Act
- Federal Endangered Species Act

²⁴ County of Santa Clara, *Santa Clara Valley Habitat Plan Final Environmental Impact Report/Environmental Impact Statement, Volume I*. August 2012. Page ES-4. Accessed online at <http://scv-habitatagency.org/DocumentCenter/Home/View/139> on September 22, 2015.

BIOLOGICAL RESOURCES

- California Department of Fish and Game Code
- Oak Woodlands Conservation Act
- California Native Plant Protection Act
- Santa Clara Valley Habitat Conservation Plan
- Santa Clara County General Plan
- Santa Clara Valley Water District Resources Protection Collaborative Guidelines and Standards for Land Use near Streams
- Morgan Hill Municipal Code

Significance Before Mitigation: Less than significant.

4.4.5 SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION MEASURES

The proposed Project would not result in any significant impacts to biological resources upon implementation of the federal, state, and local regulations, as well as proposed General Plan goals, policies, and actions; therefore, no mitigation measures are required.

4.4.6 FULL BUILDOUT

The full buildout anticipated under the proposed Project would include significantly more non-residential development than the 2035 horizon-year development projection analyzed in Section 4.4.3, Impact Discussion, in terms of both the amount and the extent of development. Therefore, the potential for impacts related to biological resources would increase. However, as discussed in Chapter 3, Project Description, it is extremely unlikely that full buildout would ever occur under the proposed Project. Therefore, an analysis of full buildout is not required by CEQA.

BIOLOGICAL RESOURCES

4.5 CULTURAL RESOURCES

Cultural resources are buildings, objects, features, structures, or locations with historic or cultural value. This chapter describes existing cultural resources in the City of Morgan Hill and evaluates the potential environmental consequences on cultural resources from future development that could occur by adopting and implementing the proposed Project. Cultural resources include historically and architecturally significant resources, as well as archaeological, paleontological, and tribal cultural resources.

4.5.1 ENVIRONMENTAL SETTING

4.5.1.1 REGULATORY FRAMEWORK

This section summarizes the existing federal, state, and local policies and regulations that apply to cultural resources. There are no regional policies or regulations regarding this subject.

Federal Regulations

National Historic Preservation Act

The National Register of Historic Places (National Register) established by the National Historic Preservation Act (NHPA) of 1966, as amended, recognizes properties that are significant at local, state, and national levels. Officially, designated historical resources include districts, sites, buildings, structures, and objects.

Properties that are eligible for listing in the National Register are afforded the same protection given to properties that are listed in the National Register.

For a property to be eligible for listing in the National Register, it must be significant in American history, architecture, archaeology, engineering, or culture, and must retain integrity in terms of location, design, setting, materials, workmanship, feeling, and association. Resources less than 50 years in age, unless of exceptional importance, are not eligible for the National Register. Though a listing in the National Register does not prohibit demolition or alteration of a property, California Environmental Quality Act (CEQA) requires the evaluation of projects potential effects on properties that are listed in the National Register.

American Indian Religious Freedom Act and Native American Graves and Repatriation Act

The American Indian Religious Freedom Act recognizes that Native American religious practices, sacred sites, and sacred objects have not been properly protected under other statutes. It establishes as national policy that traditional practices and beliefs, sites (including right of access), and the use of sacred objects shall be protected and preserved. Additionally, Native American remains are protected by the Native American Graves and Repatriation Act of 1990.

CULTURAL RESOURCES

Paleontological Resources Preservation Act

The Federal Paleontological Resources Preservation Act of 2002 codifies the generally accepted practice of limited vertebrate fossil collection and limited collection of other rare and scientifically significant fossils by qualified researchers. Researchers must obtain a permit from the appropriate state or federal agency and agree to donate any materials recovered to recognized public institutions, where they will remain accessible to the public and to other researchers.

State Regulations

California Environmental Quality Act

Public Resources Code (PRC) Section 21083.2 provides for protection of unique archaeological resources. Preservation of unique archaeological sites is the preferred treatment (PRC 21083.2[b]) however, if sites are not preserved in place, mitigation measures must be required as provided in PRC 21083.2(c).

PRC section 21084.1 addresses the issue of historical resources including prehistoric Native American resources, historical-era archaeological deposits, buildings, structures, objects, and districts. Historical resources are defined as resources that are listed in or determined to be eligible for listing in the California Register of Historical Resources. It also includes resources listed in a local register of historical resources or otherwise determined to be historically significant under section 5024.1.

Section 15064.5 of the CEQA Guidelines states that a project that may cause a substantial adverse change in the significance of a historical resource is a project that may have a significant effect on the environment. The CEQA Guidelines define four ways that a property can qualify as a historical resource for purposes of CEQA compliance:

- The resource is listed in or determined eligible for listing in the California Register of Historical Resources, as determined by the State Historical Resources Commission.
- The resource is included in a local register of historical resources, as defined in PRC section 5020.1(k), or identified as significant in a historical resource survey meeting the requirements of Section 5024.1(g) of the Public Resources Code, unless the preponderance of evidence demonstrates that it is not historically or culturally significant.
- The lead agency determines the resource to be significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California, as supported by substantial evidence in light of the whole record.
- The lead agency determines that the resource may be a historical resource as defined in Public Resources Code Sections 5020.1(j) or 5024.1 (CEQA Guidelines Section 15064.5) which means, in part, that it may be eligible for the California Register.

CULTURAL RESOURCES

In addition, PRC section 21083.2 and sections 15064.5(c), 15064(f), and 15126.4(b) of the CEQA Guidelines specify lead agency responsibilities to determine whether a project may have a significant effect on unique archaeological resources. If it can be demonstrated that a project will damage a unique archaeological resource, the lead agency may require reasonable efforts for the resources to be preserved in place or left in an undisturbed state. Preservation in place is the preferred approach to mitigation. The PRC also details required mitigation if unique archaeological resources are not preserved in place.

Section 15064.5(d) and (e) of the CEQA Guidelines specifies procedures to be used in the event of a discovery of Native American human remains on non-federal land. Section 15064.5(d) of the CEQA Guidelines addresses procedures when an initial study identifies the existence or probable likelihood of Native American human remains within a project area. Section 15064.5(e) provides guidance for accidental discovery of any human remains after a project is already under way. These provisions protect such remains from disturbance, vandalism, and inadvertent destruction; establish procedures to be implemented if Native American skeletal remains are discovered during construction of a project, and establish the Native American Heritage Commission (NAHC) as the authority to identify the Most Likely Descendant (MLD) and mediate any disputes regarding disposition of such remains.

California Register of Historic Resources

The California Register of Historic Places (California Register) establishes a list of properties to be protected from substantial adverse change (PRC section 5024.1). The office of Historic Preservation (OHP) advocates that all historic resources over 45 years old be recorded for inclusion in the OHP filing system, although the use of professional judgment is urged in determining whether a resource warrants documentation.¹ A historic resource may be listed in the California Register if it meets any of the following criteria.

- It is associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States.
- It is associated with the lives of persons important to local, California, or national history.
- It embodies the distinctive characteristics of a type, period, region, or method of construction; represents the work of a master; or possesses high artistic value.
- It has yielded, or may be likely to yield, information important in the pre-history or history of the local area, California, or the nation.

In addition to meeting one or more of the four criteria listed above, a property must possess “integrity,” defined as the ability to convey its significance. Seven elements are considered key in considering a property’s integrity including location, design, setting, materials, workmanship, feeling, and association.

¹ Office of Historic Preservation, Instructions For Recording Historical Resources, March 1995, page 2.

CULTURAL RESOURCES

The California Register includes properties that are listed or have been formally determined eligible for listing in the National Register, State Historical Landmarks, and eligible Points of Historical Interest. Other resources that may be eligible for the California Register, and which require nomination and approval for listing by the State Historic Resources Commission, include:

- Resources contributing to the significance of a local historic district.
- Individual historical resources.
- Historical resources identified in historic surveys conducted in accordance with OHP procedures.
- Historic resources or districts designated under a local ordinance consistent with the procedures of the State Historic Resources Commission.
- Local landmarks or historic properties designated under local ordinance.

Additionally, for a resource to be eligible for the California Register of Historic Resources, it must retain sufficient integrity to be recognizable as a historical resource and to convey its significance.

2013 California Historical Building Code, California Code of Regulations, Title 24, Part 8

The California Historical Building Code (CHBC) (as set forth in Sections 18950 to 18961 of Division 13, Part 2.7 of Health and Safety Code and as subject to the rules and regulations set forth in 24 California Code of Regulations Part 8), provides regulations and standards for the rehabilitation, preservation, restoration, including related reconstruction, or relocation of historical buildings, structures, and properties determined by any level of government as having importance to the history, architecture, or culture of an area.

Health and Safety Code Sections 7052 and 7050.5

Section 7052 of the Health and Safety Code states that the disinterment of remains known to be human, without authority of law, is a felony. Section 7050.5 requires that construction or excavation be stopped in the vicinity of discovered human remains until the county coroner can determine whether the remains are those of a Native American. If determined to be Native American, the coroner must contact NAHC.

California State Senate Bill 18

Senate Bill (SB) 18, which went into effect January 1, 2005, set forth requirements for local governments, including cities and counties, to consult with Native American tribes to aid in the protection of traditional tribal cultural places through local land use planning.² The intent of SB 18 is to provide California Native

² SB 18 amends Government Sections (GC) 65040.2, 65092, 65351 and 65560, while adding GC sections 65352.3, 65352.4 and 65562.5.

CULTURAL RESOURCES

American tribes an opportunity to participate in local land use decisions at an early stage of planning for the purpose of protecting, or mitigating impacts to, cultural places. The purpose of involving tribes at these early planning stages is to allow consideration of cultural places in the context of broad local land use policy prior to individual site-specific, project-level land use designations are made by a local government.

In compliance with SB 18 and AB 52 (described below), the City contacted all tribes listed by the NAHC, which included members of the Muwekma Ohlone Indian Tribe, Ohlone Indian Tribe, Amah Mutsun Tribal Band, and the Indian Canyon Mutsun Band of Costonoan tribe. None of these tribes requested consultation.

California State Assembly Bill 52

California Public Resources Code Sections 21074, 21080.3.1, 21084.2, and 21084.3, enacted by Assembly Bill 52(AB 52) in 2014, establish the requirements and procedures for Native American tribal consultation before or upon initiation of a Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report. The purpose of the tribal consultation is to help identify potential impacts to tribal cultural resources early in the planning process. A lead agency must provide written notice about the proposed project to the affected tribes and consult on any potential mitigation measures.

Additionally, AB 52 created a new CEQA resource called Tribal Cultural Resources (TCRs). TCRs are defined as “sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe.” A lead agency can, at its discretion and supported by substantial evidence, choose to treat a resource as a TCR.

Public Resources Code Sections 5097

Public Resources Code Section 5097 specifies the procedures to be followed in the event of the unexpected discovery of human remains on non-federal public lands. The disposition of Native American burials fall within the jurisdiction of the NAHC, which prohibits willfully damaging any historical, archaeological, or vertebrate paleontological site or feature on public land.

Local Regulations

City of Morgan Hill Municipal Code

Contained in Title 18 of Morgan Hill’s Municipal Code (Municipal Code), the City’s zoning ordinance describes specific zoning districts within the City and prescribes the development standards which apply to each district, e.g. height limits, setbacks. The Historical Resources Code was recently updated in order to streamline the development review process for the purposes of CEQA. The following provisions from the Municipal Code help protect and preserve cultural resources within the City:

- Section 18.75.035, Identification of Historical Resources through Reconnaissance Surveys, Evaluations, and Sensitivity Maps, establishes regulations for the identification of historical resources and allows the City discretion to require applicants for development projects and building alteration projects to retain

CULTURAL RESOURCES

qualified consultants to prepare evaluations that can be used by the City to determine whether a property or site is a potentially significant historical resource.

- Section 18.75.040, Process for Determining When a Historical Alteration Permit and/or Historical Resources Demolition or Relocation Permit is Required, requires that development projects involving structures or buildings at least forty-five years in age or located in a historic district follow specific steps in the development review process to determine if a historical alteration permit and/or historical resource demolition permit is required.
- Section 18.75.045, Historical Alteration Permit, outlines permit procedures for development projects proposing to modify or alter character defining features of a potentially significant or significant historical resource that has been formally designated or listed on the City's adopted survey list, or which lies within a historic district.
- Section 18.75.050, Historical Resources Demolition or Relocation Permit, states that it is unlawful for any person to tear down, demolish, remove or relocate a potentially significant or significant historical resource, a resource that has been formally designated or listed on the City's adopted survey list, or which lies within a historic district, without first obtaining a historical resource demolition permit or relocation permit.
- Section 18.75.110, Evaluation of and Standard Conditions of Approval for Development Projects Located Within Archaeologically Sensitive Areas, and/or Within or Adjacent to Known Archaeological Sites, which as the title suggests provides for the evaluation of development projects with the potential to affect archeological resources and prescribes standard conditions of approval for projects with the potential to adversely affect archeological resources. Section 18.75.110(A) of the Morgan Hill Municipal Code calls for the City to consult with the Northwest Information Center for information about whether a proposed project is located within or adjacent to a known archaeological site. If the site is within or adjacent to a known archaeological site a historical alteration permit would be required for the project, and CEQA review of the project must consider potentially significant impacts on archaeological resources and identify appropriate mitigation measures to be imposed as conditions of approval in addition to the standard conditions identified in subsequent subsections of section 18.75.110 of the Morgan Hill Municipal Code.

If a future potential project site is not within or adjacent to a known archaeological site, the project applicant would have the option to either have an archaeological survey completed for the site to determine what, if any, conditions of approval would be required as mitigation measures or the applicant would have the option to comply with the standard conditions of approval listed in Morgan Hill Municipal Code section 18.75.110(B)(1). These standard conditions of approval are listed below:

“An archaeologist shall be present on-site to monitor all ground-disturbing activities. Where historical or archaeological artifacts are found, work in areas where remains or artifacts are found will be restricted or stopped until proper protocols are met, as described below:

1. Work at the location of the find will halt immediately within thirty feet of the find. If an archaeologist is not present at the time of the discovery, the applicant shall contact an

CULTURAL RESOURCES

- archaeologist for evaluation of the find to determine whether it qualifies as a unique archaeological resource as defined by this chapter.
2. If the find is determined not to be a Unique Archaeological Resource, construction can continue. The archaeologist will prepare a brief informal memo/letter that describes and assesses the significance of the resource, including a discussion of the methods used to determine significance for the find.
 3. If the find appears significant and to qualify as a unique archaeological resource, the archaeologist will determine if the resource can be avoided and will detail avoidance procedures in a formal memo/letter.
 4. If the resource cannot be avoided, the archaeologist shall develop within forty-eight hours an action plan to avoid or minimize impacts. The field crew shall not proceed until the action plan is approved by the community development director. The action plan shall be in conformance with California Public Resources Code 21083.2.”

Development projects permitted under the proposed General Plan located within an archaeological sensitivity area and/or containing known archaeological resources onsite would also be subject to the following measures as standard conditions of project approval, per Morgan Hill Municipal Code section 18.75.110(2)(a):

- “This project may adversely impact undocumented human remains or unintentionally discover significant historic or archaeological materials. The following policies and procedures for treatment and disposition of inadvertently discovered human remains or archaeological materials shall apply. If human remains are discovered, it is probable they are the remains of Native Americans,
- i. If human remains are encountered they shall be treated with dignity and respect as due to them. Discovery of Native American remains is a very sensitive issue and serious concern. Information about such a discovery shall be held in confidence by all project personnel on a need to know basis. The rights of Native Americans to practice ceremonial observances on sites, in labs and around artifacts shall be upheld.
 - ii. Remains should not be held by human hands. Surgical gloves should be worn if remains need to be handled.
 - iii. Surgical mask should also be worn to prevent exposure to pathogens that may be associated with the remains.”
- Section 18.75.120 outlines the ways that the provisions discussed above would be enforced. Enforcement methods include legal proceedings and calling upon the chief of police and authorized agents to assist in the enforcement of the chapter.

CULTURAL RESOURCES

4.5.1.2 EXISTING CONDITIONS

This section provides an overview of the history of Morgan Hill and of resources of paleontological, archaeological, tribal cultural and historical significance that may be affected by the proposed Project.

Paleontological Resources

Paleontological resources or fossils are the remains of prehistoric plant and animal life. Paleontological resources do not include human remains or artifacts. Fossil remains such as bones, teeth, shells, and wood are found in geologic formations. Paleontological resources are limited, non-renewable, sensitive scientific and educational resources. The potential for fossil remains at a location can be predicted based on whether or not previous fossil finds have been made in the vicinity, as well as based on the age of the geologic formations.

Occurrences of fossil resources are closely tied to the geologic units, e.g., formations or members that contain them. Morgan Hill sits on a shallow rise centrally located in the Santa Clara Valley south of San Jose. This geologic area is unique and quite unusual because Morgan Hill is located between two major active fault lines including, the Sargent and San Andreas faults to the west in the Santa Cruz Mountains, and the Calaveras fault in the Diablo ranch to the east.³ A byproduct of this active geological area and the geologic units in the Morgan Hill area is the existence of a rare metamorphic stone, Poppy Jasper. Additionally, the geologic units in the Project Area consist of 12 to 15 feet of poorly sorted, fine sandy silt and clayey silt. Below this, the Santa Clara Valley formation is an older alluvium made up of partially consolidated clay, silt, sand, and gravel deposited more than 11,000 years ago.⁴

Archaeological Resources

There have been several noteworthy studies of the archaeological resources in Morgan Hill. Within this body of research, cultural, temporal, and spatial units were separated from each other and assigned them to six chronological periods: Paleo-Indian (10000 to 6000 B.C.), Lower, Middle and Upper Archaic (6000 B.C. to A.D. 500), and Emergent (Upper and Lower, A.D. 500 to 1800).⁵ According to a report by Circa: Historic Property Development, the first inhabitants to the Morgan Hill area arrived approximately 10,000 years ago, shortly after the Ice Age.⁶

³ CIRCA: Historic Property Development, October 2006, Historic Context Statement for the City of Morgan Hill.

⁴ Helley, E.J., et al., *Flatland Deposits of the San Francisco Bay Region, California*. Washington, D.C., United States Geological Survey, Professional Paper 943, 1979, Scale 1:125,000, Plate 3.

Brabb, E.E., *Preliminary Geologic Map of the Central Santa Cruz Mountains, California*. Menlo Park, California, United States Geological Survey Open File Map 70-36, 1970. Scale 1:63,500, Sheet 1.

⁵ City of Morgan Hill, City of Morgan Hill – Citywide Agriculture Preservation Program and Southeast Quadrant land Use Plan, Appendix E: Cultural Resources Supporting Data.

⁶ CIRCA: Historic Property Development, October 2006, Historic Context Statement for the City of Morgan Hill.

CULTURAL RESOURCES

Tribes in the area were hunter gatherers and relied on local terrestrial and marine flora and fauna. Waterfowl, including Canadian geese, mallards, greenwinged teal, and American widgeon, were captured in nets using decoys to attract them. Native peoples constructed watercraft from tule reeds and possessed bow and arrow technology, fashioned blankets from sea otter pelts, and fabricated basketry from twined reeds of various types. They also assembled a variety of stone and bone tools in their assemblages.⁷ Buried remnants of this lifestyle would constitute archeological resources.

Archaeological surveys conducted in Morgan Hill have identified numerous prehistoric sites with shell midden components, including human burials. This finding indicates there is potential for additional undiscovered archeological resources in the City.

Historic Resources

Morgan Hill has a range of important historic resources, including landmarks from early communities in the area and historic structures from the more recent past. This section provides a brief description of the City's historical context as well as a description of existing resources within the Project Area.

Historic Context

Early Human Settlement

When Europeans made first contact with the Project Area, it was occupied by the Ohlone group of Native Americans, specifically, the Tamien triblet. The Ohlone group of Native Americans are a designated linguistic family made up of eight related languages. As described above, the various Ohlone tribes subsisted as hunter-gatherers that relied on local terrestrial and marine flora and fauna. The main plant food source was the acorn, but they also used a range of other plants, including various seeds, buckeye, berries, and roots. Protein sources included grizzly bear, elk, sea lions, antelope and black-tailed deer as well as smaller mammals such as raccoon, brush rabbit, ground squirrels, and wood rats. Fish also played an important role in the Tamien diet, and included steelhead, salmon, and sturgeon.⁸

Spanish Colonization

The first European exchange with the Ohlone was probably in 1602, when Sebastian Vizcaíno's expedition arrived in Monterey. The Ohlone population in 1770 was approximately 10,000 when the first mission was established in Ohlone territory. By 1832, the population had declined to fewer than 2,000. This was primarily due to diseases introduced by Europeans.⁹ However, a combination of factors accounts for this

⁷ City of Morgan Hill, City of Morgan Hill – Citywide Agriculture Preservation Program and Southeast Quadrant land Use Plan, Appendix E: Cultural Resources Supporting Data.

⁸ City of Morgan Hill, City of Morgan Hill – Citywide Agriculture Preservation Program and Southeast Quadrant land Use Plan, Appendix E: Cultural Resources Supporting Data.

⁹ City of Morgan Hill, City of Morgan Hill – Citywide Agriculture Preservation Program and Southeast Quadrant land Use Plan, Appendix E: Cultural Resources Supporting Data.

CULTURAL RESOURCES

rapid decrease, including slavery, violence, starvation and reduced birth rates. Following the secularization of the missions by the Mexican government in the 1830s, meaning that their identification with religious values was lessened, Native Americans gradually left the missions.¹⁰ Many went on to become manual laborers on ranchos, which are land grants from the Spanish and Mexican governments and the root of the modern English word, ranch.¹¹

Morgan Hill Local History

The context of Santa Clara Valley changed dramatically with the discovery of gold. The population explosion that followed the gold rush rapidly changed the nature of the Santa Clara Valley. There was a large scale conversion of land to agriculture and livestock cultivation to support the gold rush population. Innovations in irrigation and the introduction of mass transportation systems further compounded the shift to an agriculture economy. The introduction of the transcontinental railroad was a major catalyst of this shift as it connected Santa Clara Valley agricultural businesses with major markets in the east coast and major cities along the railroad route.¹²

Four prominent local families including Murphy, Tenant, Fisher, and Weber, catalyzed much of the early development in and around Morgan Hill, as well as a majority of the South Bay. In 1885, Martin Murphy acquired the 9,000-acre Rancho Ojo de Agua de la Coche,¹³ south from Rancho Laguna Seca (Alvires) between Coyote Creek and Llagas Creek, which encompassed present day Morgan Hill,¹⁴ as part of the Spanish Land Grants. The Murphy and Fisher families were joined when Daniel Martin and Maria Fisher, heir to the nearby 19,000-acre Rancho Laguna Seca, married. The daughter of Daniel and Maria Martin, Diana, married Hiram Morgan Hill. Diana and Hiram Morgan Hill built the Villa Mira Monte estate between the Southern Pacific Railroad and Monterey Road in 1884.¹⁵ The proximity of Villa Mira Monte to the booming railroads attracted many visitors to the Morgan Hill's Ranch train stop, which ultimately lead the town to assume the name Morgan Hill.

¹⁰ Milliken, R., Shoup, L.H., & Ortiz, B.R., 2009, Ohlone/Costanoan Indians of the San Francisco Peninsula and their neighbors, yesterday and today. Oakland, CA: Archaeological and Historical Consultants.

¹¹ Levy, R., 1978, "Costanoan," in *Handbook of North American Indians*, ed. R.L. Heizer, Washington D.C.: Smithsonian Institution, Volume 8, California, pages 485–495.

¹² City of Morgan Hill, City of Morgan Hill – Citywide Agriculture Preservation Program and Southeast Quadrant land Use Plan, Appendix E: Cultural Resources Supporting Data, page 12.

¹³ Hoover, Mildred B., et al., 1966, *Historic Spots in California*. 3rd Edition, Stanford, California: Stanford University Press, page 448

¹⁴ United States Department of the Interior, Geological Survey. http://geonames.usgs.gov/apex/f?p=gnispq:3:::NO::P3_FID:234406, accessed June 25, 2015.

¹⁵ City of Morgan Hill – Citywide Agriculture Preservation Program and Southeast Quadrant Land Use Plan, Appendix E: Cultural Resources Supporting Data, page 13.

CULTURAL RESOURCES

Early Growth and Development

In the decades following the founding of Morgan Hill, a post office, train depot, two hotels, a restaurant, several churches and shops, and a school were built.¹⁶ Morgan Hill's population increased to 250 around the turn of the century, growing at a slow pace. The slow growth was attributed to a concentration of wealth and land ownership among a handful of wealthy families, who controlled vast portions of the county, making it almost impossible for small farmers or new settlers to gain a foothold on ownership.¹⁷

Modern Growth and Development

Following World War II, Morgan Hill began to experience an evolution in their local economy from a successful agricultural center to a suburban residential community.¹⁸ The technological boom of the 1960s through the 1980s spurred by IBM's award-winning Cottle Road campus, catalyzed Morgan Hill's population transformation.¹⁹ The technology economy shifted the majority of Morgan Hill residents from farmers and blue-collar agriculture workers to white-collar workers who were attracted to Morgan Hill's small-town atmosphere and relatively reasonable housing prices.²⁰

Designated Historical Resources

Table 4.5-1 provides a list of properties that are listed on the Santa Clara County Historic Resources inventory, the National Register, and properties recognized by the City of Morgan Hill as designated cultural resources.²¹

4.5.2 STANDARDS OF SIGNIFICANCE

Implementation of the proposed Project would result in a significant impact to cultural resources if it would:

1. Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5.

¹⁶ City of Morgan Hill - Citywide Agriculture Preservation Program and Southeast Quadrant Land Use Plan, Appendix E: Cultural Resources Supporting Data, page 14.

¹⁷ Circa Historic Property Development (Circa). 2006. Final Report: Historic Context Statement for the City of Morgan Hill. October.

¹⁸ City of Morgan Hill - Citywide Agriculture Preservation Program and Southeast Quadrant Land Use Plan, Appendix E: Cultural Resources Supporting Data, page 15.

¹⁹ City of Morgan Hill - Citywide Agriculture Preservation Program and Southeast Quadrant Land Use Plan, Appendix E: Cultural Resources Supporting Data, page 15.

²⁰ City of Morgan Hill - Citywide Agriculture Preservation Program and Southeast Quadrant Land Use Plan, Appendix E: Cultural Resources Supporting Data, page 15.

²¹ As shown in note 1 in Table 4.5-1, properties recognized by the City of Morgan Hill as designated cultural resources were listed as designated cultural resources in the Morgan Hill General Plan but were only listed in the General Plan for informational purposes and were not adopted as part of the General Plan.

CULTURAL RESOURCES

TABLE 4.5-1 HISTORIC PROPERTIES IN MORGAN HILL

Address	Name	Year Built	Designations	Notes
14905 Santa Teresa Blvd.	Barney Machado House & Barn	1863	Santa Clara County Heritage Survey	
2215 Tennant Ave.	Castillon Farm	c1890	Santa Clara County Heritage Survey	n/a
East Dunne above Anderson Reservoir	Cochrane-Jackson House	1914	Santa Clara County Heritage Survey, eligible for NR or CA	Moved to present location in 1952.
1480 East Main Ave.	Emelio Guglielmo Winery	1925	Santa Clara County Heritage Survey	n/a
15835 Carey Ave.	Fountain Oaks	1927	Santa Clara County Heritage Survey, HABS	Gertrude Achilles Estate
16010 Carey Ave.	Kellogg House	1927	Santa Clara County Heritage Survey, HABS	Built by Gertrude Achellies for Charles Kellogg
East end of Dunne Ave.	Henry Coe SP visitor Center	c1870	Santa Clara County Heritage Survey	Outside City limit
15130 Sycamore Dr.	Machado School	1895	Santa Clara County Heritage Survey, HABS, California point of interest	n/a
350 Peebles Ave	early Madrone home	1850-1900	Santa Clara County Heritage Survey	n/a
395 Peebles Ave.	early Madrone home	1850-1900	Santa Clara County Heritage Survey	n/a
565 Peebles Ave.	early Madrone home	1850-1900	Santa Clara County Heritage Survey	n/a
675 Peebles Ave.	early Madrone home	1850-1900	Santa Clara County Heritage Survey	n/a
East end of Burnett Ave.	Malaguerra Winery	1913	Santa Clara County Heritage Survey	n/a
?	Poverty Flat Archeological site	prehistory	Santa Clara County Heritage Survey, National Register	n/a
17350 Hill Road	Sevens House and Barn	C1890	Santa Clara County Heritage Survey, eligible for National Register	n/a
12775 Uvas Road	Sycamore Creek Vineyards	c1900	Santa Clara County Heritage Survey	Outside City limit
19665 Hale Ave.	Tilton House	1918	Santa Clara County Heritage Survey	n/a
19665 Hale Ave.	Circle of Circles Archeological Site	prehistory	Santa Clara County Heritage Survey, eligible for National Register	n/a
17860 Monterey Road	Villa Miramonte	1887	HABS, National Register	n/a
35 West Main St.	Hatch House	1907	n/a	n/a
95 West Main St.	Bone House	1899	n/a	n/a
145 West Main St.	Bruzzo House	1890s	n/a	n/a
17100 Monterey Rd.	Page House	1908	n/a	n/a
17175 Monterey Rd.	Methodist Church	1893	n/a	n/a

CULTURAL RESOURCES**TABLE 4.5-1 HISTORIC PROPERTIES IN MORGAN HILL**

Address	Name	Year Built	Designations	Notes
17400 Monterey Rd.	Votaw Building	1905	n/a	n/a
17860 Monterey Rd.	Morgan Hill House	1886	n/a	n/a
18980 Monterey Rd.	Cribari Winery	1904	n/a	n/a
17555 Peak Ave.	Acton House	1911	n/a	n/a
40 East Fourth St.	Grange Hall	1909	n/a	n/a
25 West Fourth St.	McCreery House	1907	n/a	n/a
20 East Fifth St.	Newbold House	1904	n/a	n/a

Source: CIRCA: Historic Property Development, October 2006, Historic Context Statement for the City of Morgan Hill, Appendix B, Maps Concerning the Development of Morgan Hill.

2. Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5.
3. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.
4. Disturb any human remains, including those interred outside of formal cemeteries.

4.5.3 IMPACT DISCUSSION

This section analyzes potential Project-specific impacts to cultural resources.

CULT-1	Implementation of the proposed Project would not cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5.

The types of cultural resources that meet the definition of historical resources under CEQA generally consist of districts, sites, buildings, structures, and objects that are significant for their traditional, cultural, and/or historical associations. Historical architectural resources could be impacted by development allowed under the proposed Project. Archaeological deposits are addressed in CULT-2, and human remains are addressed below in impact discussion CULT-4, below.

As shown on Table 4.5-1, several historical resources exist within the City. Therefore, implementation of the proposed Project could have the potential to directly impact cultural resources by altering land use regulations that govern these properties or surrounding sites. The following sections describe the potential for each component of the proposed Project to affect historical resources.

CULTURAL RESOURCES

General Plan

Implementation of the proposed General Plan would allow for an increase in residential, commercial, and industrial development in Morgan Hill over the planning horizon of the plan which is 2035. Potential future development permitted under the proposed General Plan could cause a significant impact on the historical resources in question if new construction were incompatible with the existing cultural resources' site relationships that contribute to the significance of the existing property (for example, new construction which extends to all property lines where the historical pattern is to have setbacks), or if the massing (height and bulk) of new construction were incompatible with the historical resource. Lastly, the design characteristics and materials of new construction could impact adjoining or nearby historical buildings, e.g., a flat-roofed building with aluminum windows and a rain-screen wall finish next to a gable-roofed building with period-revival stucco walls. Because the proposed General Plan would allow denser new development by encouraging infill,²² if new development near historic properties is not compatible, impacts on historical resources could be significant. Additionally, if new development were to directly impact existing resources, impacts on historical resources could be significant. However, as described above in the Environmental Setting section of this chapter. The Morgan Hill Municipal Code and state law contains regulations that would mitigate this potential.

Chapter 18.75, Historical Resources, of the Morgan Hill Municipal Code applies to potentially significant, significant and designated historical resources within the City. Section 18.75.035, Identification of Historical Resources through Reconnaissance Surveys, Evaluations and Sensitivity Maps, would ensure that potentially significant properties are identified prior to new development, or redevelopment of historical sites permitted under the proposed General Plan. Section 18.75.040 lays out a process for determining when a historical alteration permit and/or historical resource demolition or relocation permit is required. When development is proposed on a potentially significant property, Municipal Code section 18.75.045(4) would require subsequent CEQA review depending on the whether or not the proposed modification to the property would be in compliance with the Secretary of the Interior's Standards for the Treatment of Historic Properties. This subsequent CEQA review would be required to disclose potential impacts and mitigate potential impacts to the extent feasible. In addition to the protections provided by additional CEQA review, section 18.75.065 of the Morgan Hill Municipal Code lays out incentives for preserving designated historical resources listed on the local register. Finally, CEQA would require that future potential projects permitted under the proposed General Plan with the potential to significantly impact cultural resources be subject to project-level CEQA review wherein the future potential project's potential to affect the significance of a surrounding historical resource would be evaluated and mitigated to the extent feasible. The requirement for subsequent CEQA review, pursuant to state law, would minimize the potential for new development to indirectly affect the significance of existing historical resources to the maximum extent practicable.

²² Policy CNF-1.1, Orderly Development.

CULTURAL RESOURCES

Potential impacts from future development on historical resources could lead to 1) demolition, which by definition results in the material impairment of a resource's ability to convey its significance; 2) inappropriate modification, which may use incompatible materials, designs, or construction techniques in a manner that alters character-defining features; and 3) inappropriate new construction, which could introduce incompatible new buildings that clash with an established architectural context. While any of these scenarios, especially demolition and alteration, have the potential to change the historic fabric or setting of an architectural resource such that the resource's ability to convey its significance may be materially impaired, adherence to the Municipal Code sections identified above and compliance with federal and state laws as described in Section 4.5.1.1, Regulatory Framework, above, would ensure future development would not be detrimental or injurious to property or improvements in the vicinity and impacts would be *less than significant*.

Applicable Regulations:

- CEQA
- Morgan Hill Municipal Code

Significance Before Mitigation: Less than significant.

Residential Development Control System

Since 1977, the City of Morgan Hill has utilized the Residential Development Control System (RDCS) to ensure that new development can be served by existing infrastructure and public services. Some components of the RDCS were established through a voter approved ballot initiative. These components include an overall population cap, a formula for determining the number of building permit allotments available each year, a competition process to award those allotments, specific processing timelines, and reporting requirements. These components have been incorporated into the City's General Plan and ordinances as directed by the ballot language. The City Council has also adopted additional ordinances and policies which provide further guidance on the implementation of the RDCS, but which are modified more frequently as a general vote is not required.

The proposed growth management ordinance component of the proposed Project would seek to streamline and improve the existing growth management system to be more efficient, effective, and sustainable while maintaining its most important benefits including a population cap, pace of development, high quality development, and contribution toward community amenities.²³

Since the proposed RDCS would only serve to limit and meter growth as permitted under the proposed General Plan, it would not result in impacts greater than the impacts associated with development permitted under the proposed General Plan. These impacts are discussed above. Moreover, the RDCS has

²³ City of Morgan Hill, April 1, 2015, City Council Staff Report, Morgan Hill 2035: RDCS Update, <http://www.morgan-hill.ca.gov/DocumentCenter/View/15900>, accessed August 14, 2015.

CULTURAL RESOURCES

been in place since 1977 and changes to the RDCS analyzed here only seek to streamline and improve the existing system. The overall impact of the proposed RDCS with respect to historical resources would be relatively unchanged. Therefore, a *less-than-significant* impact would result in this respect.

Significance Before Mitigation: Less than significant.

CULT-2	Implementation of the proposed Project would not cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5.

General Plan

Historical and pre-contact archaeological deposits that meet the definition of archeological resources under CEQA could be damaged or destroyed by ground-disturbing activities associated with future development allowed under the proposed General Plan. A substantial adverse change in the significance of an archaeological resource would occur from its demolition, destruction, relocation, or alteration such that the significance of the resource would be materially impaired per CEQA Guidelines Section 15064.5(b)(1). Should this occur, the ability of the deposits to convey their significance, either through containing information important in prehistory or history, or through possessing traditional or cultural significance to Native American or other descendant communities, would be materially impaired.

The proposed General Plan calls for concentric growth and infill of existing developed areas, which would reduce the potential for disturbing archaeological deposits since ground disturbing activities have already taken place in developed areas. However, the General Plan would also allow development on a number of vacant, rural, or agricultural sites that may not have been as extensively disturbed as urbanized areas. The potential remains that archaeological deposits could be discovered because implementation of the proposed General Plan would result in development on, or in the vicinity of areas with the potential to contain significant resources. In addition, there are several known archeological sites that have been identified in Morgan Hill. Development in proximity to these sites would have the potential to contain significant resources that could be permanently damaged by development permitted under the proposed General Plan.

Compliance with existing regulations described under Section 4.5.1.1, Regulatory Framework, including Municipal Code Section 18.75.110, provides for the evaluation of development projects with the potential to affect archaeological resources and prescribes standard conditions of approval for projects with the potential to adversely affect archaeological resources. Section 18.75.120 outlines how these provisions would be enforced, and existing federal and state laws described in Section 4.5.1.1 would ensure that potential impacts to archeological resources would be *less than significant*.

CULTURAL RESOURCES

Tribal Cultural Resources

As discussed above in section 4.5.1.1, Regulatory Framework, AB 52, which went into effect in 2015, made TCRs a new CEQA resource. TCRs are defined as “sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe.” Additionally, a lead agency can, at its discretion and supported by substantial evidence, choose to treat a resource as a TCR.

As noted above, in compliance with AB 52, the City contacted all tribes listed by the NAHC, which included members of the Muwekma Ohlone Indian Tribe, Ohlone Indian Tribe, Amah Mutsun Tribal Band, and the Indian Canyon Mutsun Band of Costonoan tribe. None of these tribes requested consultation.

The provisions of the Morgan Hill Municipal Code discussed above would protect TCR’s in the same way that they ensure the protection of archeological resources and a *less-than-significant* impact would result with respect to the potential for negative impacts to TCRs.

Applicable Regulations:

- CEQA
- Morgan Hill Municipal Code

Significance Before Mitigation: Less than significant.

Residential Development Control System

The proposed RDSCS could potentially award allotments to a project on a site with archaeological resources; however, all residential projects subject to the proposed RDSCS would also be subject to the same state and local regulations described above that protect archaeological resources. The proposed RDSCS would not have any impacts to archaeological resources separate and distinct from the less-than-significant impacts described above. Therefore, impacts would be *less than significant*.

Significance Before Mitigation: Less than significant.

CULT-3	Implementation of the proposed Project would not directly or indirectly destroy a unique paleontological resource, site or unique geologic feature.

A review of the University of California’s Museum of Paleontology’s (UCMP) fossil locality database was conducted for all of Santa Clara County. No paleontological resources have been explicitly identified as being found within Morgan Hill.²⁴ Nonetheless, the Project Area could contain undiscovered paleontological resources.

²⁴ University of California Museum of Paleontology, UCMP Specimen Search, http://ucmpdb.berkeley.edu/cgi/ucmp_query2, accessed June 26, 2015.

CULTURAL RESOURCES

General Plan

The proposed General Plan would have a significant effect on the environment if it would directly or indirectly destroy a unique paleontological resource or site. Although the proposed Project would not in and of itself result in direct physical development, future development as a result of implementation of the proposed Project could result in potentially significant impacts to a unique paleontological resources or site, or unique geologic feature.

The standard mitigation measures described above in reference to archeological resources would lessen the potential for significant effects to paleontological resources. Moreover, the proposed General Plan calls for concentric growth and infill of existing developed areas, which would reduce the potential for disturbing paleontological deposits since ground disturbing activities would have taken place in the vicinity of these sites. Nonetheless, the potential would continue to exist that paleontological resources could be discovered since implementation of the proposed General Plan would result in development on, or within the vicinity of, areas with some potential to contain significant resources. However, since CEQA requires that projects with the potential to have significant physical effects on the environment undergo environmental review and mitigate impacts to the extent feasible, future potential projects permitted under the proposed General Plan with the potential to significantly impact paleontological resources would have mitigation measures applied, if feasible, to minimize impacts to the extent feasible. Therefore, potential impacts related to paleontological resources associated with implementation of the proposed General Plan would be *less than significant*.

Applicable Regulations:

- CEQA
- Morgan Hill Municipal Code

Significance Before Mitigation: Less than significant.

Residential Development Control System

The proposed RDCS could potentially award allotments to a project on a site with paleontological resources; however, all residential projects subject to the proposed RDCS would also be subject to the same state and local regulations described above that protect paleontological resources. The proposed RDCS would not have any impacts to paleontological resources separate and distinct from the less-than-significant impacts described above. Therefore, impacts would be *less than significant*.

Significance Before Mitigation: Less than significant.

CULT-4	Implementation of the proposed Project would not disturb any human remains, including those interred outside of formal cemeteries.

CULTURAL RESOURCES

General Plan

Human remains associated with pre-contact archaeological deposits could exist in the General Plan's Planning Area and could be encountered at the time potential future development occurs. Associated ground-disturbing activities including site grading and trenching for utilities, have the potential to disturb human remains interred outside of formal cemeteries. Descendant communities may ascribe religious or cultural significance to such remains, and may view their disturbance as an unmitigable impact. Disturbance of unknown human remains would be a significant impact. However, any human remains encountered during ground-disturbing activities associated with future development permitted with implementation of the proposed Project would be subject to federal, state, and local regulations, such as California Health and Safety Code Section 7050.5, PRC section 5097.98, and CCR Section 15064.5(e) (CEQA), which state the mandated procedures of conduct following the discovery of human remains. According to the provisions in CEQA, if human remains are encountered at a project site, all work in the immediate vicinity of the discovery must cease and necessary steps to ensure the integrity of the immediate area must be taken. The Santa Clara County Coroner must be notified immediately. The Coroner must then determine whether the remains are Native American. If the Coroner determines the remains are Native American, the Coroner must notify the NAHC within 24 hours, who would, in turn, notify the person the NAHC identifies as the most likely descendent (MLD) of any human remains. Further actions must be determined, in part, by the desires of the MLD. The MLD has 48 hours to make recommendations regarding the disposition of the remains following notification from the NAHC of the discovery. If the MLD does not make recommendations within 48 hours, the owner must, with appropriate dignity, re-inter the remains in an area of the property secure from further disturbance. Alternatively, if the owner does not accept the MLD's recommendations, the owner or the descendent may request mediation by the NAHC.

In addition to state and federal laws, the standard conditions of approval required by section 18.75.110 of the Morgan Hill Municipal Code, discussed in impact discussion CULT-2, would serve to mitigate potential impacts to buried human remains since, for projects permitted under the proposed General Plan located within an archaeological sensitivity area and/or containing known archaeological resources onsite would be subject to the following measures as standard conditions of project approval:

"This project may adversely impact undocumented human remains or unintentionally discover significant historic or archaeological materials. The following policies and procedures for treatment and disposition of inadvertently discovered human remains or archaeological materials shall apply. If human remains are discovered, it is probable they are the remains of Native Americans,

- i. If human remains are encountered they shall be treated with dignity and respect as due to them. Discovery of Native American remains is a very sensitive issue and serious concern. Information about such a discovery shall be held in confidence by all project personnel on a need to know basis. The rights of Native Americans to practice ceremonial observances on sites, in labs and around artifacts shall be upheld.

CULTURAL RESOURCES

- ii. Remains should not be held by human hands. Surgical gloves should be worn if remains need to be handled.
- iii. Surgical mask should also be worn to prevent exposure to pathogens that may be associated with the remains.”

For projects permitted under the proposed General Plan that are not located within an archaeological sensitivity area and/or contain known archaeological resource the following standard conditions of approval would apply and in conjunction with the state and federal laws discussed above, would serve to minimize potential impacts to the extent feasible.

“An archaeologist shall be present on-site to monitor all ground-disturbing activities. Where historical or archaeological artifacts are found, work in areas where remains or artifacts are found will be restricted or stopped until proper protocols are met, as described below:

- a) Work at the location of the find will halt immediately within thirty feet of the find. If an archaeologist is not present at the time of the discovery, the applicant shall contact an archaeologist for evaluation of the find to determine whether it qualifies as a unique archaeological resource as defined by this chapter.
- b) If the find is determined not to be a Unique Archaeological Resource, construction can continue. The archaeologist will prepare a brief informal memo/letter that describes and assesses the significance of the resource, including a discussion of the methods used to determine significance for the find.
- c) If the find appears significant and to qualify as a unique archaeological resource, the archaeologist will determine if the resource can be avoided and will detail avoidance procedures in a formal memo/letter.
- d) If the resource cannot be avoided, the archaeologist shall develop within forty-eight hours an action plan to avoid or minimize impacts. The field crew shall not proceed until the action plan is approved by the community development director. The action plan shall be in conformance with California Public Resources Code 21083.2.”

Therefore, with the mandatory regulatory procedures and compliance with the Morgan Hill Municipal Code, potential impacts related to the potential discovery or disturbance of any human remains accidentally unearthed during construction activities associated with future development resulting from implementation of the proposed General Plan would be *less than significant*.

Applicable Regulations:

- CEQA
- Morgan Hill Municipal Code

Significance Before Mitigation: Less than significant.

CULTURAL RESOURCES

Residential Development Control System

The proposed RDCS could potentially award allotments to a project on a site with human remains; however, all residential projects subject to the proposed RDCS would also be subject to the same state and local regulations described above that protect such resources. The proposed RDCS would not have any impacts to human remains separate and distinct from the less-than-significant impacts described above. Therefore, impacts would be *less than significant*.

Significance Before Mitigation: Less than significant.

4.5.4 CUMULATIVE IMPACTS

This section analyzes potential cumulative impacts to cultural resources resulting from the proposed Project.

CULT-5	Implementation of the proposed Project would not contribute to cumulative cultural resource impacts in the area.

As discussed in Chapter 4, Environmental Evaluation, of this Draft EIR, this EIR takes into account growth as projected by the proposed Project within the Morgan Hill City limits and SOI, combined with impacts from projected growth in the rest of Santa Clara County and the surrounding region, as forecast by the Association of Bay Area of Governments (ABAG).

Potential future development permitted under the proposed General Plan, in conjunction with buildout of the City and region, has the potential to cumulatively impact cultural resources. Such impacts could result from more intensive land uses, incompatible site designs that impact the historical integrity of nearby historical buildings and districts, and demolition of historical resources. Further, development within the General Plan's Planning Area also has the potential to adversely affect archaeological resources, paleontological resources, tribal cultural resources, and human remains through their destruction or disturbance. Therefore, development allowed by the proposed Project, combined with other future development in the City and the region, would have the potential to cause adverse cumulative impacts to cultural resources due to their destruction or loss of integrity. However, the federal, state, and local regulations discussed above in Section 4.5.1.1, Regulatory Framework, and Section 4.5.3, Impact Discussion would apply to projects permitted under the proposed General Plan and would avoid impacts to such resources that could occur from development and land use changes allowed by the proposed General Plan. Therefore, past, present, and reasonably foreseeable future development in Morgan Hill is not expected to have a significant effect on cultural resources. Implementation of the proposed General Plan would result in a *less-than-significant* contribution to cumulative cultural resources impacts.

Since the proposed RDCS would only serve to limit and meter the growth permitted under the proposed General Plan, it would not result in impacts greater than the impacts associated with development

CULTURAL RESOURCES

permitted under the proposed General Plan. Moreover, the proposed RDCS has been in place since 1977 and the changes to the RDCS analyzed here only seek to streamline and improve the existing system. Since the proposed RDCS would only meter the pace of residential development in the Project Area, the cumulative impact of the proposed RDCS with respect to cultural resources, a *less-than-significant* impact would result in this respect.

Applicable Regulations:

- CEQA
- Morgan Hill Municipal Code

Significance Before Mitigation: Less than significant.

4.5.5 SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION MEASURES

The proposed Project would not result in any significant impacts to cultural resources upon implementation of the state and local regulations; therefore, no mitigation measures are required.

4.5.6 FULL BUILDOUT

The full buildout anticipated under the proposed Project would include significantly more non-residential development than the 2035 horizon-year development projection analyzed in Section 4.5.3, Impact Discussion, in terms of both the amount and the extent of development. Therefore, the potential for impacts related to cultural resources would increase. However, as discussed in Chapter 3, Project Description, it is extremely unlikely that full buildout would ever occur under the proposed Project. Therefore, an analysis of full buildout is not required by CEQA.

GEOLOGY, SOILS, AND SEISMICITY

4.6 GEOLOGY, SOILS, AND SEISMICITY

This chapter describes the regulatory framework and existing conditions in the Project Area. The chapter also evaluates the potential impacts of the adoption and implementation of the proposed Project on geology, soils, and seismicity. Furthermore, policies and mitigation measures that would avoid or reduce significant impacts are considered where appropriate.

4.6.1 ENVIRONMENTAL SETTING

4.6.1.1 REGULATORY FRAMEWORK

The State of California, Santa Clara County, and the City of Morgan Hill have established laws and regulations that relate to potential geologic, soils, and seismic hazards. The following laws and regulations are relevant to the California Environmental Quality Act (CEQA) review process for this Project.

State Laws and Regulations

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning (EFZ) Act was passed in 1972 to mitigate the hazard of surface fault rupture to structures used for human occupancy.¹ The main purpose of the Act was to prevent the construction of buildings used for human occupancy on top of the traces of active faults. It was passed into law following the February 1971 moment magnitude (M_w) 6.5 San Fernando (Sylmar) Earthquake that resulted in over \$500 million in property damage and 65 deaths.² Although the Act addresses the hazards associated with surface fault rupture, it does not address other earthquake-related hazards, such as seismically-induced ground shaking, liquefaction, or landslides.

The law requires the State Geologist to establish regulatory zones (formerly known as Special Studies Zones, now referred to as Earthquake Fault Zones) around the surface traces of mapped active faults, and to publish appropriate maps that depict these zones.³ The maps are publicly available and distributed to all affected cities, counties, and state agencies for their use in planning and controlling new or renewed construction. In general, the law prohibits construction within 50 feet of an active fault trace.

¹ Originally titled the Alquist-Priolo Special Studies Zones Act until renamed in 1993, Public Resources Code Division 2, Ch. 7.5, Sect. 2621.

² S. CA Earthquake Data Center, 2014. URL: <http://www.data.scec.org/significant/sanfernando1971.html>, accessed on September 4, 2015.

³ California Geological Survey, Alquist-Priolo Earthquake Fault Zones, <http://www.conservation.ca.gov/cgs/rghm/ap/Pages/index.aspx>, accessed on August 30, 2015.

GEOLOGY, SOILS, AND SEISMICITY

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act, which was passed by the California legislature in 1990, addresses earthquake hazards related to liquefaction and seismically-induced landslides. Under the Act, seismic hazard zones are mapped by the State Geologist in order to assist local governments in land use planning. The Act states that “it is necessary to identify and map seismic hazard zones in order for cities and counties to adequately prepare the safety element of their general plans and to encourage land use management policies and regulations to reduce and mitigate those hazards to protect public health and safety.”⁴ Section 2697(a) of the Act states that “cities and counties shall require, prior to the approval of a project located in a seismic hazard zone, a geotechnical report defining and delineating any seismic hazard.”

California Building Code

The California Building Code (CBC), known as the California Building Standards Code, is included in Title 24 of the California Code of Regulations. The CBC incorporates the International Building Code, a model building code adopted across the United States. Current state law requires every local agency enforcing building regulations to adopt the provisions of the CBC within 180 days of its publication. The publication date of the CBC is established by the California Building Standards Commission. The most recent building standard adopted by the legislature and used throughout the state is the 2013 version of the CBC, that took effect on January 1, 2013. The CBC, as adopted by cities or counties, is often modified with more restrictive amendments that are based on local geographic, topographic, or climatic considerations. In general, the CBC provides minimum standards to protect property and public safety by regulating the design and construction of excavations, foundations, building frames, retaining walls, and other building elements. In so doing, the CBC helps mitigate the effects of seismic shaking and adverse soil conditions, as well as development-related soil erosion.⁵

National Pollutant Discharge Elimination System (NPDES)

The NPDES permit program was established by the Clean Water Act to regulate municipal and industrial discharges to surface waters of the US from their municipal separate storm sewer systems (MS4s). This program is a key tool in addressing erosion. Although it originates in a federal regulation, it is described here as a state regulation since it is administered by a state agency.

The NPDES permit programs in California are administered by the State Water Resources Control Board (SWRCB) and the nine Regional Water Quality Control Boards (RWQCBs). The City of Morgan Hill lies within the jurisdiction of both the San Francisco Bay RWQCB (Region 2) and the Central Coast Bay RWQCB (Region 3) and is subject to the Waste Discharge Requirements (WDRs) of the Phase II Small MS4 Permit (Order Number 2013-0001-DWQ) and NPDES Permit No. CAS000004 dated February 5, 2013.

⁴ California Public Resources Code, Division 2, Chapter 7.8, Section 2691(c).

⁵ California Building Standards Commission, <http://www.bsc.ca.gov/codes.aspx>, accessed on September 3, 2015.

GEOLOGY, SOILS, AND SEISMICITY

The City of Morgan Hill is considered to be a Renewal Traditional Small MS4 Permittee. As such, the City is required to comply with Section E of the permit, which includes implementation of a construction site stormwater runoff control program and post-construction stormwater management program. Post-construction standards must be applied to all new and redevelopment Regulated Projects, which include appropriate source control, site design, and stormwater treatment measures to address both stormwater runoff pollutant discharges and prevent increases in runoff flows. The goal is to be accomplished primarily through the implementation of low impact development (LID) techniques.

SWRCB Construction General Permit (CGP)

Construction activities that disturb one or more acres of land that could impact hydrologic resources by resulting in erosion must comply with the requirements of the SWRCB Construction General Permit (2009-0009-DWQ) as amended by 2010-0014-DWQ. Applicants must also demonstrate conformance with applicable best management practices (BMPs) and prepare a Stormwater Pollution Prevention Plan (SWPPP), containing a site map that shows the construction site perimeter, existing and proposed buildings, lots, roadways, stormwater collection, and discharge points, general topography both before and after construction, and drainage patterns across the project site. The SWPPP must list BMPs that would be implemented to prevent soil erosion. Some sites also require implementation of a Rain Event Action Plan (REAP).

Regional Regulations

San Francisco Bay and Central Coast Regional Water Quality Control Boards

Regional authority for planning, permitting, and enforcement of water quality issues, including erosion, is delegated to the nine RWQCBs. The northern portion of Morgan Hill and the sphere of influence (SOI) lies within the jurisdiction of San Francisco Bay RWQCB (Region 2), which covers watersheds that drain primarily into San Francisco Bay. The Central Coast RWQCB (Region 3) covers the state's central coast, including most of Morgan Hill and its SOI, and continues south to Santa Barbara County and Ventura County. The watersheds within the Central Coast RWQCB jurisdiction drain primarily into the Pacific Ocean.

The San Francisco Bay RWQCB addresses region-wide water quality issues through the Water Quality Control Plan for San Francisco Bay Region (Basin Plan), which is reviewed for revisions at least once every three years. The Basin Plan was adopted in 1993 and updated most recently in March 2015.⁶ The Basin Plan designates beneficial uses of the state waters within Region 2, describes the water quality that must be maintained to support such uses, and provides programs, projects, and other actions necessary to achieve the standards established in the Basin Plan.

⁶ San Francisco Bay Area Regional Water Quality Control Board, 2015. Accessed at http://www.waterboards.ca.gov/rwqcb2/basin_planning.shtml, accessed March 28, 2014.

GEOLOGY, SOILS, AND SEISMICITY

The Central Coast RWQCB addresses region-wide water quality issues through the Water Quality Control Plan for the Central Coastal Basin (Basin Plan), which was updated most recently in June 2011.⁷ The Basin Plan designates beneficial uses of the state waters within Region 3, and water quality criteria and objective necessary to protect those uses.

Santa Clara County General Plan

The Santa Clara County General Plan contains several policies and implementation programs that apply to geologic, soils, and seismic hazards. Although the Santa Clara County General Plan policies do not affect projects within the City limits, there are several areas within the Morgan Hill General Plan area that fall within the County's jurisdiction. Santa Clara County General Plan policies apply to these areas unless they are annexed by the City.

Policies pertaining to geologic, soils, or seismic hazards are found in the Health and Safety Chapter of the County's General Plan, as summarized in Table 4.6-1.

TABLE 4.6-1 MORGAN HILL GENERAL PLAN POLICIES RELEVANT TO GEOLOGY, SOILS, AND SEISMICITY

Strategy/Policy Number	Strategy/Policy Content
Policy C-HS 28	Countywide strategies for reducing the threat of natural hazards to life and property should: a.) inventory hazards and monitor changing conditions; b.) minimize the resident population within high hazard areas; c.) design, locate and regulate development to avoid or withstand hazards; d.) reduce the magnitude of the hazard, if feasible; and e.) provide public information regarding natural hazards.
Policy C-HS 29	Inventories and mapping of natural hazards should be adequately maintained for use in planning and decision-making.
Policy C-HS 30	Local jurisdictions' urban development and land use policies should minimize the resident population within areas subject to high natural hazards in order to reduce: a.) the overall risk to life and property; and b.) the cost to the general public of providing urban services.
Policy C-HS 32	Areas of significant natural hazards shall be designated in the County's General Plan as Resource Conservation Areas with low development densities in order to minimize public exposure to avoidable risks.
Policy C-HS 33	Development in areas of natural hazards should be designed, located, and otherwise regulated to reduce associated risks, by regulating the type, density, and placement of development where it will not: a.) be directly jeopardized by hazards; b.) increase hazard potential; and c.) increase risks to neighboring properties.
Policy C-HS 35	Information about the prevalence and threats of natural hazards shall be provided to the public to maintain general awareness and support for governmental actions needed to improve public safety.

⁷ Central Coast Regional Water Quality Control Board, 2011. *Water Quality Control Plan for the Central Coastal Basin*. Dated June 2011 including amendments effective through June 8, 2011.

GEOLOGY, SOILS, AND SEISMICITY

Local Plans and Regulations

City of Morgan Hill Municipal Code

Chapter 13.24 – Septic Tanks

The provision of septic tanks is regulated under the Public Services Code as set forth in Chapter 13.24 of the City of Morgan Hill Municipal Code. The City requires all existing buildings to connect to a public sewer when readably available. When connections to a sewer is not feasible, applicants who must use a septic tank for sewage disposal are required to submit detailed plans that show the overall topography and surface drainage direction; specific location of the septic tank; leaching field and other finished elevations of structures including leaching field giving all dimensions. Furthermore, the code requires that septic tanks be constructed, repaired, and maintained in accordance with City standards. These requirements set forth by the City's Public Services Code seek to reduce the risk of groundwater pollution via septic leaching.

Chapter 13.30 – Urban Storm Water Quality Management and Discharge Control

The purpose and intent of this chapter is to protect and enhance the water quality of watercourses and water bodies from erosion and other sources of contamination. Section 13.30.200, *Watercourse Protection*, requires owners or lessees to maintain structures within or adjacent to a watercourse in a manner that preserves the use, function, or physical integrity of the watercourse and to not remove bank vegetation beyond maintenance activities in a manner that would increase the vulnerability of the watercourse to erosion. Section 13.30.250, *NPDES General Permit No. CAS000002 for Construction Activities*, requires all projects disturbing one acre or more of soil to comply with the SRWCB's waste discharge requirements (WDRs) for construction activities and prepare a Storm water Pollution Prevention Plan (SWPPP), which addresses erosion. Section 13.30.270, *Water Pollution Control*, requires project applicants to submit an erosion and sediment control plan for review by the City prior to the issuance of grading permits.

Chapter 15.08 – Building Code

Effective January 1, 2014, the City of Morgan Hill adopted the 2013 CBC by reference as the basis for the City's Building Code.⁸ The provisions of the Building Code are set forth in Title 15 of the City of Morgan Hill Municipal Code. By regulating the design and construction of excavations, foundations, building frames, retaining walls, and other structures, the City's Building Code provides protections during the design, permitting, and construction of structures intended for human occupancy.

⁸ City of Morgan Hill Municipal Code, Title 15, Chapter 15.04, URL: https://www.municode.com/library/ca/morgan_hill/codes/code_of_ordinances?nodeId=TIT15BUCO_CH15.08BUCO, accessed September 8, 2015.

GEOLOGY, SOILS, AND SEISMICITY

4.6.1.2 EXISTING CONDITIONS

This section provides a discussion of the existing geologic, soil, and seismic conditions in the Project Area.

Geology

The City of Morgan Hill lies in the south part of the Santa Clara Valley, a mostly flat alluvial plain that extends southward from San Francisco Bay as far as the City of Gilroy. Major right-lateral strike-slip fault zones flank the valley, including the San Andreas and Sargent-Berrocal Fault zones on the west and the Calaveras, Silver Creek, and Coyote Creek Fault zones on the east. The general pattern of surficial geology as one traverses the City of Morgan Hill from southwest to northeast can be described as sedimentary, low-grade metamorphic, and igneous bedrock of the Late Jurassic to Early Cretaceous Franciscan Complex, transitioning to Quaternary alluvial valley fill, thence further exposures of the Franciscan Complex bedrock, followed by coarse alluvium (i.e., unconsolidated, poorly sorted gravel, silt, sand, and clay) of the lower Pleistocene to Upper Pliocene Santa Clara Formation as shown on Figure 4.6-1.⁹

The sandstones, chert, shale, limestone, low-grade metamorphic, and igneous rocks of the Late Jurassic to Early Cretaceous Franciscan Complex represent the oldest rocks exposed in the Project Area, and they occupy much of the hillsides that flank the valley to the southwest and to the northeast. The Franciscan Complex rocks appear to be geographically widespread, and they are inferred to occur at depth beneath the entire southwestern Santa Clara Valley.¹⁰ Masses of partially to completely serpentinized peridotite occur as fault-bounded bodies within the Franciscan Complex. In places, this peridotite has been hydrothermally altered to a calc-silicate metamorphic rock.

Soils

Web-accessible soil mapping data compiled by the USDA's Soil Conservation Survey and the California Soil Resource Laboratory hosted by University of California-Davis was used to identify the major soil types within the Project Area. In the Project Area, the most prevalent soil units are the Arbuckle gravelly loam formed on slopes of 0 to 2 percent; the Gilroy clay loam, formed on 30 to 75 percent slopes; the Pleasanton loam and gravelly loam, formed on slopes of 0 to 2 percent; and the San Ysidro loam developed on 0 to 2 percent slopes. In almost all instances, these soils are reportedly deep and well drained, although their respective runoff classifications vary from low to very high.¹¹

⁹ US Geological Survey, 1973. Preliminary Geologic Map of the Morgan Hill Quadrangle, Santa Clara County, California, compiled by Thomas Dibblee, Open-File Report 73-59.

¹⁰ US Geological Survey, 2002. Subsurface and Petroleum Geology of the Southwestern Santa Clara Valley ("Silicon Valley"), California, Professional Paper 1663, by Richard G. Stanley, Robert C. Jachens, Paul G. Lillis, Robert J. McLaughlin, Keith A. Kvenvolden, Frances D. Hostettler, Kristin A. McDougall, and Leslie B. Magoon.

¹¹ US Dept. of Agriculture, Natural Resources Conservation Service, 2015. Custom Soil Resource Report for Eastern Santa Clara Area, California, downloaded August 30, 2015.

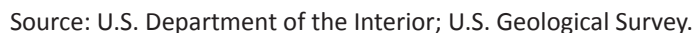


Figure 4.6-1
Geologic Map

GEOLOGY, SOILS, AND SEISMICITY

Previous geotechnical investigations have found that certain soils in the vicinity of Morgan Hill are known to be expansive.¹² A number of widely-used treatments are available to mitigate expansive soils, including soil grouting, recompaction, and replacement with a non-expansive material. The CBC requires that each construction location be evaluated to determine the most appropriate treatment for expansive soils. Local-area construction contractors and soil testing firms are well-acquainted with the procedures used to identify and mitigate expansive soils.

Regional Faulting, Seismicity, and Related Seismic Hazards

The Earth's crust includes tectonic plates that locally collide with or slide past one another along plate boundaries. California is particularly susceptible to such plate movements, notably, the largely horizontal or "strike-slip" movement of the Pacific Plate, as it impinges on and slides past the west margin of the North American Plate. In general, earthquakes occur when the accumulated stress along a plate boundary or fault is suddenly released, resulting in seismic slippage. The amount (i.e., distance) of slippage can vary widely, ranging in scale from a few millimeters or centimeters, to tens of feet.

The performance of man-made structures during a major seismic event varies widely due to a number of factors: location with respect to active fault traces or areas prone to liquefaction or seismically-induced landslides; the type of building construction (i.e., wood frame, unreinforced masonry, non-ductile concrete frame); the proximity, magnitude, and intensity of the seismic event itself; and many other factors. In general, evidence from past earthquakes shows that wood frame structures tend to perform well especially when their foundations are properly designed and anchored. Older, unreinforced masonry structures, on the other hand, do not perform as well, especially if they have not undergone appropriate seismic retrofitting. Applicable building code requirements, such as those found in the CBC and the Morgan Hill Municipal Code, include seismic requirements that are designed to ensure the satisfactory performance of building materials under prescribed seismic conditions.

Morgan Hill, like most of California, is vulnerable to seismic activity due to the presence of several active earthquake faults in the region. According to the United States Geological Survey (USGS), faults that have moved in Holocene time (the last 11,500 years) are considered the most active and dangerous faults. Based on age and historic movement, the most active seismic sources in the vicinity of the Project Area are the Calaveras, San Andreas, and Sargent-Berrocal faults. These faults are described in detail below:

- **Calaveras Fault:** This fault, located adjacent to the eastern boundary of the Project Area and is the closest active fault. It is considered a major strike-slip fault of the San Francisco Bay area that is part of the larger San Andreas fault system. The fault zone extends for approximately 93 miles from the San Ramon area southeast to approximately 18 miles south of the City of Hollister. Its last damaging earthquake was the so-called Morgan Hill earthquake of April 1984, a moderate-size M_w 6.2 event that

¹² T. K. Makdissy Consulting, Inc., 2012. Geotechnical Investigation on Proposed Residential Development, San Gregorio, Hale & Del Monte Avenues, Morgan Hill, California, dated December 19, 2012.

GEOLOGY, SOILS, AND SEISMICITY

was felt throughout central California. The earthquake resulted in property damage of approximately \$7.5 million, although no fatalities were reported. Damage was reportedly concentrated near the south end of the Anderson Reservoir and in the City of Morgan Hill.¹³

- **San Andreas Fault (Northern Segment):** This well-known, right-lateral strike-slip fault is located approximately 5 miles southwest of the Project Area. The northern segment runs from the City of Hollister, through the Santa Cruz Mountains, and then through the San Francisco Peninsula. Prominent earthquakes on this fault include the April 1906 earthquake, estimated between M_w 7.7 and 8.3, was the largest seismic event in recorded history that affected the Project Area. More recently, the M_w 6.9 Loma Prieta earthquake of October 1989 on the San Andreas fault caused 63 deaths, 3,757 injuries, and more than \$6 billion in property damage, although no deaths were reported in Santa Clara County.
- **Sargent Fault:** This fault, located approximately 3 miles west of the Project Area, is a potentially active strike-slip fault in the Santa Cruz Mountains between the Calaveras and San Andreas faults. The Sargent fault extends from the junction with the San Andreas fault near Lake Elsman through the Santa Cruz Mountains, to east of Hollister. The Sargent fault is associated with the Berrocal fault, which is also known as the Sargent-Berrocal fault zone. Its estimated maximum credible magnitude is M_w 7.4.¹⁴

In addition, other lesser, Quaternary-age faults have been mapped within the Project Area, including the Range Front, Silver Creek, and Coyote Creek faults. Of these, the Silver Creek fault may pose the greatest potential seismic risk based on recent mapping by the US Geological Survey.¹⁵ Based on deep seismic reflection surveys, geomagnetic studies, and stratigraphic reconstructions, the investigators concluded that the Silver Creek fault experienced roughly 200 meters of dip slip movement in the early Quaternary, from an associated 1.6 km or so of right slip movement was inferred.

Ground Shaking

The severity of ground shaking depends on several variables such as earthquake magnitude, hypocenter proximity, local geology including the properties of unconsolidated sediments, groundwater conditions, and topographic setting. In general, ground shaking hazards are most pronounced in areas that are underlain by loosely consolidated soil/sediment.

When earthquake faults within the Bay Area's nine-county area were considered, the USGS estimated that the probability of a M_w 6.7 or greater earthquake prior to year 2036 is 63 percent, or roughly a two-thirds probability over this timeframe.¹⁶ Individually, the forecasted probability for a given earthquake fault to

¹³ US Geological Survey, 1987. The Morgan Hill, California, Earthquake of April 24, 1984, Seena N. Hoose, Editor, Bulletin 1639.

¹⁴ US Geological Survey, 1994, Geomorphic Investigations of Deformation Along the Northeastern Margin of the Santa Cruz Mountains, by Christopher S. Hitchcock, Keith I. Kelson and Stephen C. Thompson, Open File Report 94-187.

¹⁵ US Geological Survey, 2010. The Quaternary Silver Creek Fault Beneath the Santa Clara Valley, California, by Wentworth, C.M., Williams, R.A., Jachens, R.C., Graymer, R.W., and Stephenson, W.J., Open-File Report, 2010-1010.

¹⁶ U.S. Geological Survey, 2014. 2008 Bay Area Earthquake Probabilities, <http://earthquake.usgs.gov/regional/nca/ucerf/>, accessed April 1, 2014.

GEOLOGY, SOILS, AND SEISMICITY

produce a M_w 6.7 or greater seismic event by the year 2036 is as follows: 31 percent for the Hayward Fault, 21 percent for the San Andreas Fault, 7 percent for the Calaveras Fault, and 6 percent for the San Gregorio Fault (Figure 4.6-2). Earthquakes of this magnitude can create ground accelerations severe enough to cause major damage to structures and foundations not designed to resist the forces generated by earthquakes. Underground utility lines are also susceptible where they lack sufficient flexibility to accommodate the seismic ground motion. In the event of an earthquake of this magnitude, the seismic forecasts presented on the Association of Bay Area Governments' website, developed by a cooperative working group that included the USGS and the California Geological Survey (CGS), suggest that most parts of Project Area are expected to experience "strong" shaking (i.e., Modified Mercalli Intensity [MMI] VII).¹⁷

Landslides

Landslides are gravity-driven movements of earth materials that may include rock, soil, unconsolidated sediment, or combinations of such materials. The rate of landslide movement can vary considerably. Some move rapidly as in a soil or rock avalanche, while other landslides creep or move slowly for extended periods of time. The susceptibility of a given area to landslides depends on many variables, although the general characteristics that influence landslide hazards are well understood. The factors that influence the probability of a landslide and its relative level of risk include the following:

- **Slope Material:** Loose, unconsolidated soils and soft, weak rocks are more hazardous than are firm, consolidated soils or hard bedrock.
- **Slope Steepness:** Most landslides occur on moderate to steep slopes.
- **Structure and Physical Properties of Materials:** This includes the orientation of layering and zones of weakness relative to slope direction.
- **Water Content:** Increased water content increases landslide hazard by decreasing friction and adding weight to the materials on a slope.
- **Vegetation Coverage:** Abundant vegetation with deep roots promote slope stability.
- **Proximity to Areas of Erosion or Man-made Cuts:** Undercutting slopes can greatly increase landslide potential.
- **Earthquake Ground Motions:** Strong seismic ground motions can trigger landslides in marginally stable slopes or loosen slope materials, and also increase the risk of future landslides.

Earthquake-induced landslides have the potential to occur within certain parts of the Project Area, notably on some of the hilly slopes in the extreme southeast or northeast regions. Most of the Project Area is

¹⁷ Association of Bay Area Governments, 2014. Geographic Information Systems, Earthquake Shaking Scenarios, 2012, source: USGS, 2013, <http://gis3.abag.ca.gov/Website/Shaking-Maps/viewer.htm> , accessed April 16, 2014.

GEOLOGY, SOILS, AND SEISMICITY



Source: US Geological Survey, 2008 Bay Area Earthquake Probabilities, 2014.

Figure 4.6-2
Bay Area Earthquake Probabilities

GEOLOGY, SOILS, AND SEISMICITY

underlain by unconsolidated alluvium where the topography is flat. Accordingly, the potential for landslides in these areas is considered extremely low.

Earthquake hazard maps prepared by the CGS show isolated, smaller seismic-induced landslide hazard areas, most of which are found in the northeast part of the Project Area past Hill Road.¹⁸ These zones are almost exclusively limited to steeper hillsides. Landslides are not an issue in the majority of the Project Area where the topography is flat.

Liquefaction

Liquefaction generally occurs in areas where moist, fine-grained, cohesionless sediment or fill materials are subjected to strong, seismically-induced ground shaking. Under certain circumstances, the ground shaking can temporarily transform an otherwise solid, granular material to a fluid state. Liquefaction is a serious hazard because buildings in areas that experience liquefaction may subside and suffer major structural damage. Liquefaction is most often triggered by seismic shaking, but it can also be caused by improper grading, landslides, or other factors. In dry soils, seismic shaking may cause soil to consolidate rather than flow, a process known as densification. Assuming a M_w 7.8 earthquake on the San Andreas Fault, the USGS estimated that the liquefaction potential ranges from 0 to 5 percent along most of the length of the Santa Clara Valley. This mapping notwithstanding, the CGS has designated most of the north part of the Project Area as a seismically induced liquefaction hazard zone.

The mapped zone spans the width of the valley and generally extends northwest from Cochrane Road where it joins the Highway 101 (Figure 4.6-3). By definition, this zone has been defined as an area that meets one or more of the following criteria: a) areas known to have experienced liquefaction during historical earthquakes; b) areas of uncompacted fills that are saturated, nearly saturated, or may be expected to become saturated; c) areas where analyses of existing data indicate that the soils are potentially liquefiable; and d) areas where existing subsurface data are not sufficient for quantitative evaluation of liquefaction hazard.¹⁹

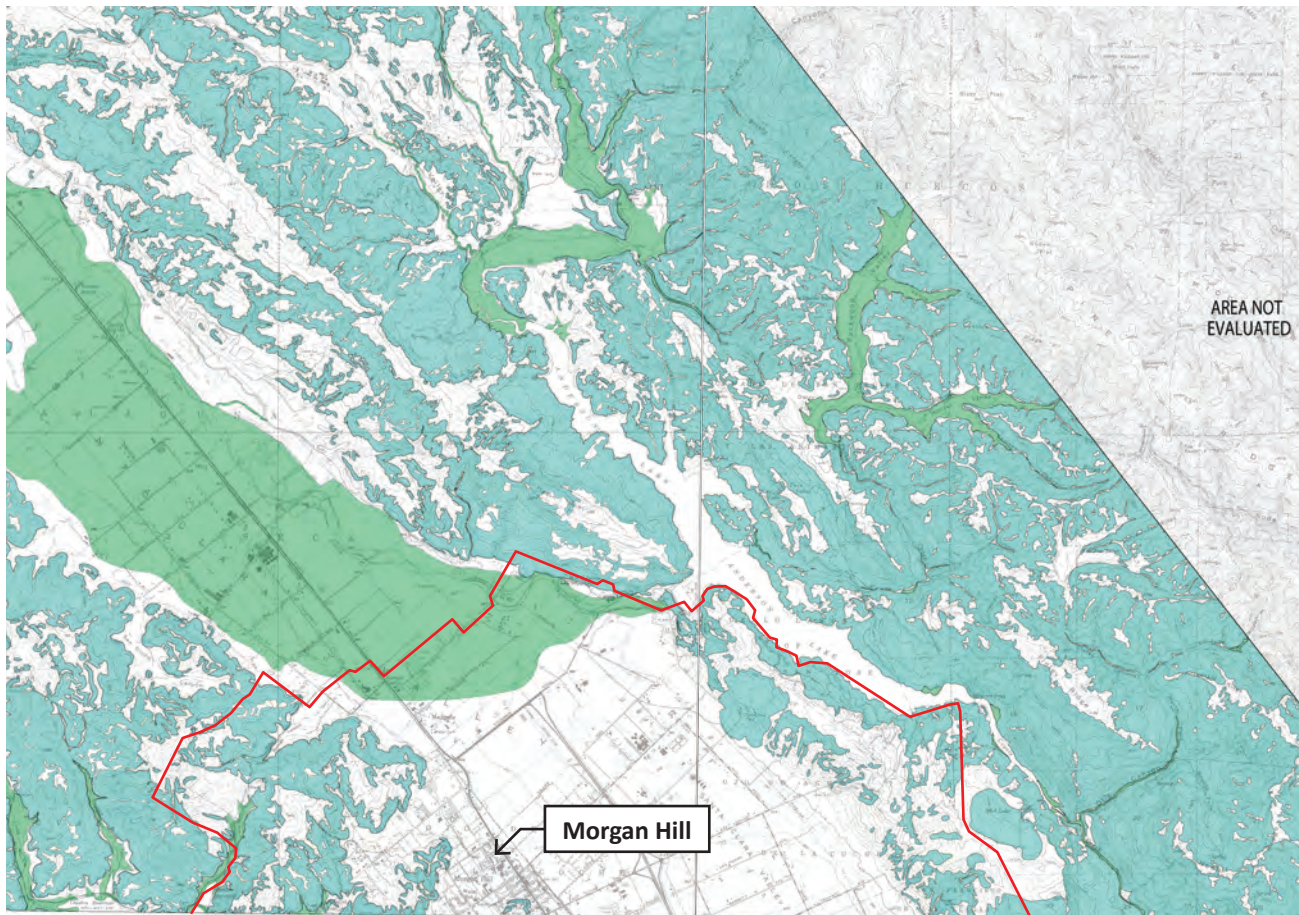
Unstable Geologic Units

Expansive soils can change dramatically in volume depending on moisture content. When wet, these soils can expand; conversely, when dry, they can contract or shrink. Sources of moisture that can trigger this shrink-swell phenomenon can include seasonal rainfall, landscape irrigation, utility leakage, and/or perched groundwater. Expansive soil can develop wide cracks in the dry season, and changes in soil volume have the

¹⁸ California Geological Survey (CGS), 2004. Seismic Hazard Zone Report for the Morgan Hill 7.5-Minute Quadrangle, Santa Clara County, California, Report No. 096.

¹⁹ CGS, 1992. Recommended Criteria for Delineating Seismic Hazard Zones in California, May 1992, Special Publication 118.

GEOLOGY, SOILS, AND SEISMICITY



Source: Source: Base Map prepared by U.S. Geological Survey, 1997; California Department of Conservation, 2004.

Note: CGS has not published a liquefaction/landslide map for the Mt. Madonna or Gilroy 7.5 minute sheets, which are the neighboring quadrangles to the south.

 Approximate Morgan Hill Sphere of Influence



Liquefaction



Areas where historical occurrence of liquefaction, or local geological, geotechnical and ground-water conditions indicate a potential for permanent ground displacements such that mitigation as defined in Public Resources Code Section 2693(c) would be required.

Earthquake-Induced Landslides



Areas where previous occurrence of landslide movement, or local topographic, geological, geotechnical and subsurface water conditions indicate a potential for permanent ground displacements such that mitigation as defined in Public Resources Code Section 2693(c) would be required.

NOTE: Seismic Hazard Zones identified on this map may include developed land where delineated hazards have already been mitigated to city or county standards. Check with your local building/planning department for information regarding the location of such mitigated areas.

Figure 4.6-3
Seismic Hazard Zones

GEOLOGY, SOILS, AND SEISMICITY

potential to damage concrete slabs, foundations, and pavement. Special building/structure design or soil treatment are often needed in areas with expansive soils.

Expansive soils are typically very fine-grained with a high to very high percentage of clay, typically montmorillonite, smectite, or bentonite clay. Two types of soil tests are used to identify expansive soils. The first is referred to as a linear extensibility test, which measures the change in length of an unconfined clod as the moisture content is decreased from a moist to dry state. The volume change is reported as a percent change for the entire sample. In the linear extensibility test, shrink-swell potential is considered low if the soil has a linear extensibility of less than 3 percent; moderate if 3 to 6 percent; high if 6 to 9 percent; and very high if more than 9 percent.²⁰ A linear extensibility of 3 percent or greater indicates that shrinking and swelling has the potential to cause damage to buildings, roads, and other structures. Previous USDA soil surveys notwithstanding, the shrink-swell potential at a given project within the Project Area may be highly site-specific, requiring careful geotechnical investigation prior to project design and construction.

4.6.2 STANDARDS OF SIGNIFICANCE

Implementation of the proposed Project would result in a significant geology and soils impact if it would:

1. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:
 - a) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo EFZ Map issued by the State Geologist for the area or based on other substantial evidence of a known fault. Refer to Division of Mines and Geology Special Publication 42.
 - b) Strong seismic ground shaking.
 - c) Seismic-related ground failure, including liquefaction.
 - d) Landslides.
2. Result in substantial soil erosion or the loss of topsoil.
3. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.
4. Be located on expansive soil, as defined in Table 18-1-b of the Uniform Building Code (1994), creating substantial risks to life or property.
5. Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of wastewater.
6. Contribute to cumulative geology and soils impacts in the area.

²⁰ Army Corps of Engineers Field Manual TM 5-818-7, 1985. http://armypubs.army.mil/eng/DR_pubs/DR_a/pdf/tm5_818_7.pdf, accessed November 2012.

GEOLOGY, SOILS, AND SEISMICITY

4.6.3 IMPACT DISCUSSION

This section analyzes potential Project-specific impacts to geology and soils.

GEO-1A	Implementation of the proposed Project would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault.

General Plan

Implementation of the proposed General Plan would have a significant environmental impact if it would expose people or structures to potentially substantial adverse effects including the risk of loss, injury, or death involving surface rupture along a known active fault. Although no CGS-designated EFZs have been mapped within the Project Area, several other known faults have been identified, including as the Silver Creek, Coyote Creek and Range Front Faults.

The Safety, Services, and Infrastructure Element of the City’s proposed General Plan identifies the locations of the above-referenced faults and broadly discusses the potential risks attached to their presence. More specifically, the Safety, Services, and Infrastructure Element includes a number of policies and actions that are relevant to these potential hazards, as summarized below:

Policy SSI-1.1	New Development and Hazards. New development should avoid hazardous and sensitive areas, and should occur only where it can be built without risking health and safety. New habitable structures should not be allowed in areas of highest hazard, such as floodways, active landslides, and active fault traces, and airport safety zones. In areas of less risk, development should be limited and designed to reduce risks to an acceptable level.
Policy SSI-1.2	Hazard Reporting. Known or potential geologic, fire, and flood hazards shall be reported disclosed as part of every real estate transaction, and recorded on documents to be reported for building permits, subdivisions, and land development reports. Mitigation of hazards shall be noted in the same manner.
Policy SSI-2.1	Land Use and Geologic Hazards. Limit uses on lands with geologic hazards, but allow uses on previously urbanized lands with proper mitigation. Keep development in hazardous areas to a minimum by encouraging low-density, low-intensity uses and the types of uses least disruptive to the soil and vegetative cover.

In addition to these provisions of the proposed General Plan, the Santa Clara County General Plan also contains relevant policies that would apply to unincorporated areas within the Project Area, as summarized below:

GEOLOGY, SOILS, AND SEISMICITY

Policy C-HS 28	Countywide strategies for reducing the threat of natural hazards to life and property should: a.) inventory hazards and monitor changing conditions; b.) minimize the resident population within high hazard areas; c.) design, locate and regulate development to avoid or withstand hazards; d.) reduce the magnitude of the hazard, if feasible; and e.) provide public information regarding natural hazards.
Policy C-HS 29	Inventories and mapping of natural hazards should be adequately maintained for use in planning and decision-making.
Policy C-HS 33	Development in areas of natural hazards should be designed, located, and otherwise regulated to reduce associated risks, by regulating the type, density, and placement of development where it will not: a.) be directly jeopardized by hazards; b.) increase hazard potential; or c.) increase risks to neighboring properties.

Finally, the CBC and Morgan Hill Building Code provide standards to protect property and public safety by regulating the design and construction of excavations, foundations, building frames, retaining walls, and other building elements, which will further mitigate the effects of fault rupture. Protections afforded by state laws and regulations, County regulations, and City laws and regulations are considered sufficient, such that the impacts of Project implementation with respect to the risk of loss, injury, or death involving rupture of a known earthquake fault would be *less than significant*.

Applicable Regulations:

- California Building Code
- Santa Clara County General Plan
- Morgan Hill Municipal Code Chapter 15.08

Significance Before Mitigation: Less than significant.

Residential Development Control System

The Residential Development Control System (RDCS) regulates population growth through the provision of residential building allotments. The RDCS, and the proposed updates to the RDCS as part of the proposed Project, would affect the rate of development in the City, but not the location, type, or intensity of development. Therefore, the proposed RDCS would not have a substantial adverse effect on the potential for risk of loss, injury, or death involving rupture of a known earthquake fault. The proposed RDCS would not have a substantial adverse effect on the potential for risk of loss, injury, or death involving rupture of a known earthquake fault and the impacts would be *less than significant*.

Significance Before Mitigation: Less than significant.

GEO-1B	Implementation of the proposed Project would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking.

GEOLOGY, SOILS, AND SEISMICITY

General Plan

Implementation of the proposed General Plan would have a significant environmental impact if it would expose people or structures to potentially substantial adverse effects including the risk of loss, injury, or death involving strong seismic ground shaking.

As previously discussed in Section 4.6.1.2, the Project Area, as well as nearly all of the San Francisco Bay area, is expected to experience significant ground shaking during a major earthquake. USGS earthquake forecasts suggest the probability for a given earthquake fault to produce a M_w 6.7 or greater seismic event by the year 2036 included a 31 percent likelihood for the Hayward Fault, which passes through the eastern edge of the Project Area.

In general, careful control of new development in earthquake hazard areas together with adherence to CBC building design and construction requirements (as embraced by the City's Building Code) will substantially mitigate these hazards.

The Safety, Services, and Infrastructure Element of the proposed General Plan includes policies (SSI-1.1, 1.2, and 2.1) that are relevant to these potential hazards, as summarized in GEO-1A above.

Finally, the CBC and Morgan Hill Building Code provide standards to protect property and public safety by regulating the design and construction of excavations, foundations, building frames, retaining walls, and other building elements, which will further mitigate the effects of fault rupture.

Policy SSI-1.5	Cluster Development. Cluster development in hazardous areas with dwellings grouped on the least hazardous portion of the property.
Action SSI-1.B	Current Information. Coordinate with local, regional, state, and federal sources to ensure the City maintains complete and current information on fire, flood, and geotechnical hazards.
Policy SSI-2.3	Site Preparation in Hazardous Areas. Require site preparation in hazardous areas to be designed to achieve long-term geologic stability.
Policy SSI-2.4	Code Requirements for Critical Structures. Design and construct critical structures above and beyond the applicable engineering and building standards, requirements, where such measures are deemed necessary from available geologic and engineering data. Critical structures are those structures: a) needed after a disaster (e.g., emergency communications, fire stations, hospitals, bridges and overpasses); b) whose continued functioning is critical (e.g., major power lines and stations, water lines, and other public utilities); or c) whose failure might be catastrophic (e.g., large dams).
Policy SSI-2.5	Design of Critical Structures. Design and construct critical structures to resist minor earthquakes without damage, resist moderate earthquakes without structural damage, and resist major earthquakes of the intensity or severity of the strongest experienced in California without collapse.

GEOLOGY, SOILS, AND SEISMICITY

In addition to these provisions of the proposed General Plan, the Santa Clara County General Plan also contains policies C-HS 28 and C-HS 33 that would apply to unincorporated areas within the Project Area, as described above under GEO-1A.

Finally, the CBC and Morgan Hill Building Code provide standards to protect property and public safety by regulating the design and construction of excavations, foundations, building frames, retaining walls, and other building elements, which will further mitigate the effects of seismic ground shaking. The protections afforded by state laws and regulations, County regulations, and City laws and regulations are considered sufficient, such that the impacts of Project implementation with respect to the risk of loss, injury, or death involving strong seismic ground shaking would be *less than significant*.

Applicable Regulations:

- California Building Code
- Santa Clara County General Plan
- Morgan Hill Municipal Code

Significance Before Mitigation: Less than significant.

Residential Development Control System

The RDCS regulates population growth through the provision of residential building allotments. The RDCS, and the proposed updates to the RDCS as part of the proposed Project, would affect the rate of development in the City, but not the location, type, or intensity of development. In light of its broad intent and lack of site-specificity, the proposed RDCS would not have a substantial adverse effect on the potential for risk of loss, injury, or death involving strong, seismically induced ground shaking. The proposed RDCS would not have a substantial adverse effect on the potential for risk of loss, injury, or death involving strong, seismically induced ground shaking and the impacts would be *less than significant*.

Significance Before Mitigation: Less than significant.

GEO-1C	Implementation of the proposed Project would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction.

General Plan

Implementation of the proposed General Plan would have a significant environmental impact if it would expose people or structures to potentially substantial adverse effects including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction. As discussed earlier in Section 4.6.1.1, the State of California has enacted an earthquake hazards program that identifies and communicates

GEOLOGY, SOILS, AND SEISMICITY

areas deemed susceptible to earthquake-generated liquefaction, and the CGS has designated most of the north part of the Project Area as a seismically induced liquefaction hazard zone. The mapped zone spans the width of the valley and generally extends northwest from Cochrane Road where it joins the Highway 101.

The Safety, Services, and Infrastructure Element of the City's proposed General Plan acknowledges the hazards associated with seismically induced liquefaction in the Project Area. Specifically, the Safety, Services, and Infrastructure Element includes a number of policies (SSI-1.1, 1.2, 2.1, and 2.3) that are relevant to these potential hazards, as described in GEO-1A and GEO-1B above. In addition, the following proposed policy would further limit exposure to seismic-related ground failure:

Policy SSI-2.2	Site: Preparation for Geologic Stability. Where urban development has already occurred and have been extensive capital improvements made, use mitigation procedures for development on lands with geologic hazards, including geologic investigations on a scale commensurate with development where geologic data indicates there is a known or suspected problem.
Policy SSI-2.9	Geologic Studies. Continue to require geologic and geotechnical studies for development in potentially hazardous areas, such as hillside areas and geotechnical studies for critical facilities in areas with liquifiable soils. The costs for consulting geologists shall be covered by a fee to the developer.

In addition to these provisions of the proposed General Plan, the Santa Clara County General Plan also contains policies C-HS 28 and C-HS 33 that would apply to unincorporated areas within the Project Area, as described above under GEO 1A.

Finally, the CBC and Morgan Hill Building Code provide standards to protect property and public safety by regulating the design and construction of excavations, foundations, building frames, retaining walls, and other building elements, which will further mitigate the effects of seismic-related ground failure, including liquefaction. The proposed General Plan would not have a substantial adverse effect on the potential for risk of loss, injury, or death involving seismic-related ground failure, including liquefaction and the impacts would be *less than significant*.

Applicable Regulations:

- California Building Code
- Santa Clara County General Plan
- Morgan Hill Municipal Code

Significance Before Mitigation: Less than significant.

Residential Development Control System

The RDCS regulates population growth through the provision of residential building allotments. The RDCS, and the proposed updates to the RDCS as part of the proposed Project, would affect the rate of development in the City, but not the location, type, or intensity of development. In light of its broad intent and lack of site-specificity, the proposed RDCS would not have a substantial adverse effect on the potential

GEOLOGY, SOILS, AND SEISMICITY

for risk of loss, injury, or death involving seismic-related ground failure, including liquefaction. The proposed RDCS would not have a substantial adverse effect on the potential for risk of loss, injury, or death involving seismic-related ground failure, including liquefaction and the impacts would be *less than significant*.

Significance Before Mitigation: Less than significant.

GEO-1D	Implementation of the proposed Project would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related landslides.

General Plan

Implementation of the proposed General Plan would have a significant environmental impact if it would expose people or structures to potentially substantial adverse effects including the risk of loss, injury, or death involving seismic-related landslides. As discussed earlier in Section 4.6.1.1, the State of California has enacted an earthquake hazards program that identifies and communicates areas deemed susceptible to such landslides. Earthquake hazard maps prepared by the CGS show only isolated, small seismic-induced landslide hazard areas in the Project Area. Most of these zones are found in the northeast part of the Project Area beyond Hill Road where they are almost exclusively limited to steeper hillsides. Landslides are not an issue in the majority of the Project Area where the topography is flat.

The Safety, Services, and Infrastructure Element of the City's proposed General Plan acknowledges the hazards associated with seismic-related landslides in the Project Area. Specifically, the Safety, Services, and Infrastructure Element includes a number of policies (SSI-1.1, 1.2, 2.1, 2.2, 2.3, and 2.9) that are relevant to these potential hazards as described in GEO-1A, GEO-1B, and GEO-1C above. In addition, the following proposed policy would further limit exposure to seismic-related landslides:

Policy SSI-2.7 **Landslides.** Prohibit development on known active landslides and limit development in areas where such development might initiate sliding or be affected by sliding on adjacent parcels.

In addition to these provisions of the proposed General Plan, the Santa Clara County General Plan also contains policies C-HS 28 and C-HS 33 that would apply to unincorporated areas within the Project Area, as described above under GEO 1A.

Finally, the CBC and Morgan Hill Building Code provide standards to protect property and public safety by regulating the design and construction of excavations, foundations, building frames, retaining walls, and other building elements, which will further mitigate the effects of seismic-related ground failure, including liquefaction. The proposed General Plan would not have a substantial adverse effect on the potential for risk of loss, injury, or death involving seismic-related landslides and the impacts would be *less than significant*.

GEOLOGY, SOILS, AND SEISMICITY

Applicable Regulations:

- California Building Code
- Santa Clara County General Plan
- Morgan Hill Municipal Code

Significance Before Mitigation: Less than significant.

Residential Development Control System

The RDCS regulates population growth through the provision of residential building allotments. The RDCS, and the proposed updates to the RDCS as part of the proposed Project, would affect the rate of development in the City, but not the location, type, or intensity of development. In light of its broad intent and lack of site-specificity, the proposed RDCS would not have a substantial adverse effect on the potential for risk of loss, injury, or death involving seismic-related landslides. The proposed RDCS would not have a substantial adverse effect on the potential for risk of loss, injury, or death involving seismic-related landslides and the impacts would be *less than significant*.

Significance Before Mitigation: Less than significant.

GEO-2	Implementation of the proposed Project would not result in substantial soil erosion or the loss of topsoil.

General Plan

Implementation of the proposed General Plan would have a significant environmental impact if it would result in substantial soil erosion or the loss of topsoil. As discussed earlier in Section 4.6.1.2, the USDA has mapped most soils in the Project Area as loams or gravelly loams, and their erodibility is judged low to moderate in light of the prevailing low topographic relief. However, clearing, grading, excavation, and construction activities associated with development allowed by the proposed General Plan would have the potential to impact water quality through soil erosion and increasing the amount of silt and debris carried in runoff.

The Safety, Services, and Infrastructure Element of the City's proposed General Plan acknowledges the negative impacts associated with substantial soil erosion or loss of topsoil in the Project Area. Specifically, the Safety, Services, and Infrastructure Element includes a number of policies (SSI-1.1 and 2.1) that are relevant to these potential hazards as summarized under GEO-1A above. In addition, the following proposed policies would further limit substantial erosion or loss of topsoil:

Policy SSI-2.6	Hillside Development. Protect hillsides and carefully control development on steep slopes. When hillside land is developed, it should be done with minimum disruption of topography and vegetative cover.
Policy SSI-2.8	Runoff and Slope Stability. Prohibit development in areas where increased runoff from the addition of

GEOLOGY, SOILS, AND SEISMICITY

impervious surfaces and drainage would increase the probability of downslope landsliding, or where additional projects would add to the cumulative effect of increased runoff, unless a downslope drainage improvement plan has been approved.

In addition to these provisions of the proposed General Plan, an extensive set of federal, state, and regional regulations address erosion and runoff, particularly during construction of development that would be allowed under the proposed General Plan. New development that disturbs one or more acres of land within the Project Area would be required to comply with the NPDES General Construction Permit (GCP) as well as prepare a SWPPP that requires the incorporation of BMPs to control sedimentation, erosion, and hazardous materials contamination of runoff during construction.

In addition, projects must comply with the City of Morgan Hill's Urban Storm Water Quality Management and Discharge Control Ordinance, as specified in Chapter 13.30 of the Municipal Code, that requires project applicants to submit an erosion and sediment control plan for review by the City prior to the issuance of grading permits (Section 13.30.270). Project applicants must also implement City-approved BMPs to control stormwater runoff and minimize potential impacts to water quality. The proposed General Plan would not have a substantial adverse effect on the potential for risk of loss, injury, or death involving substantial soil erosion or the loss of topsoil and the impacts would be *less than significant*.

Applicable Regulations:

- Central Coast RWQCB: Phase II Small MS4 Permit (Order Number 2013-0001-DWQ) and NPDES Permit No. CAS000004
- SWRCB Construction General Permit (GCP) - 2009-0009-DWQ as amended by 2010-0014-DWQ
- Central Coast RWQCB Resolution R3-2013-0032 – Post-Construction Stormwater Management Requirements for Development Projects in the Central Coast Region
- Morgan Hill Municipal Code Chapter 13.30, Urban Storm Water Quality Management and Discharge Control

Significance Before Mitigation: Less than significant.

Residential Development Control System

The RDCS regulates population growth through the provision of residential building allotments. The RDCS, and the proposed updates to the proposed RDCS as part of the proposed Project, would affect the rate of development in the City, but not the location, type, or intensity of development. Therefore, the proposed RDCS would not have a substantial adverse effect on the potential for substantial soil erosion or the loss of topsoil. The proposed RDCS would not have a substantial adverse effect on the potential for substantial soil erosion or the loss of topsoil and the impacts would be *less than significant*.

Significance Before Mitigation: Less than significant.

GEOLOGY, SOILS, AND SEISMICITY

GEO-3	Implementation of the proposed Project would not be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.

General Plan

Implementation of the proposed General Plan would have a significant environmental impact if it were located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse. As previously discussed, the State of California has enacted an earthquake hazards program that identifies and communicates areas deemed susceptible to seismic-induced landsliding or liquefaction, and any such designated areas have already been evaluated under hazards GEO-1C and GEO-1D.

With respect to areas in the Project that may be prone to lateral spreading, subsidence, or collapse, requirements for the performance of geotechnical investigations in known or suspected hazard areas would mitigate the potential adverse impacts.

The Safety, Services, and Infrastructure Element of the City's proposed General Plan acknowledges the hazards associated with on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse in the Project Area. Specifically, the Safety, Services, and Infrastructure Element includes a number of policies (SSI-1.1, 1.2, 2.1, 2.3, 2.7, and 2.8) that are relevant to these potential hazards as described under GEO-1A, GEO-1B, GEO-1D, and GEO-2 above. In addition, the following proposed policy would further limit exposure to landslides, lateral spreading, subsidence, liquefaction, or collapse:

Policy SSI-1.4	Development Regulations and Hazards. Regulate development in hazardous areas in such a way that it minimizes disruption of the environment and does not trigger or accelerate the hazardous processes which exist in South County.

In addition to these provisions of the proposed General Plan, the Santa Clara County General Plan also contains Policy CHS-33 that would apply to unincorporated areas within the Project Area, as described under GEO-1A, above.

Finally, the CBC and Morgan Hill Building Code provide standards to protect property and public safety by regulating the design and construction of excavations, foundations, building frames, retaining walls, and other building elements, which will further mitigate the effects of geologic instability. The proposed General Plan would not have a substantial adverse effect on the potential for on- or off-site landslides, lateral spreading, subsidence, liquefaction, or collapse and the impacts would be *less than significant*.

GEOLOGY, SOILS, AND SEISMICITY

Applicable Regulations:

- California Building Code
- Santa Clara County General Plan
- Morgan Hill Municipal Code

Significance Before Mitigation: Less than significant.

Residential Development Control System

The RDCS regulates population growth through the provision of residential building allotments. The RDCS, and the proposed updates to the RDCS as part of the proposed Project, would affect the rate of development in the City, but not the location, type, or intensity of development. Therefore, the proposed RDCS would not have a substantial adverse effect on the potential for on- or off-site landslides, lateral spreading, subsidence, liquefaction, or collapse. The proposed RDCS would not have a substantial adverse effect on the potential for on- or off-site landslides, lateral spreading, subsidence, liquefaction, or collapse and the impacts would be *less than significant*.

Significance Before Mitigation: Less than significant.

GEO-4	Implementation of the proposed Project would not be located on expansive soil, as defined in Table 18-1-b of the Uniform Building Code (1994), creating substantial risks to life or property.

General Plan

Implementation of the proposed General Plan would have a significant environmental impact if it were located on expansive soil, as defined in Table 18-1-b of the Uniform Building Code (1994), creating substantial risks to life or property. As previously discussed, expansive soils, while not widespread, are known to be locally present in the Project Area. Requirements for the performance of geotechnical investigations in known or suspected hazard areas would mitigate the associated potential adverse impacts.

The Safety, Services, and Infrastructure Element of the City's proposed General Plan acknowledges the hazards associated with expansive soils in the Project Area. Specifically, the Safety, Services, and Infrastructure Element includes a number of policies (SSI-1.1, 1.4, 2.1, and 2.3) that are relevant to these potential hazards as described under GEO-1A, GEO-1B, and GEO-3 above. In addition, following proposed policy would further limit exposure to expansive soils:

Policy SSA-2.11	Geotechnical Investigations. Require geotechnical investigations on all projects in unstable areas, including areas of expansive soils, prior to construction to insure that the potential hazards are identified and can be properly mitigated.

GEOLOGY, SOILS, AND SEISMICITY

In addition to these provisions of the proposed General Plan, the Santa Clara County General Plan also contains Policies C-HS 28 and C-HS 33 that would apply to unincorporated areas within the Project Area, as described under GEO-1A, above.

Finally, the CBC and Morgan Hill Building Code provide standards to protect property and public safety by regulating the design and construction of excavations, foundations, building frames, retaining walls, and other building elements, which will further mitigate the effects of expansive soils. The proposed General Plan would not have a substantial adverse effect on the potential for development on located on expansive soil and the impacts would be *less than significant*.

Applicable Regulations:

- California Building Code
- Santa Clara County General Plan
- Morgan Hill Municipal Code

Significance Before Mitigation: Less than significant.

Residential Development Control System

The RDCS regulates population growth through the provision of residential building allotments. The RDCS, and the proposed updates to the RDCS as part of the proposed Project, would affect the rate of development in the City, but not the location, type, or intensity of development. Therefore, the proposed RDCS would not have a substantial adverse effect on the potential for development on located on expansive soil. The proposed RDCS would not have a substantial adverse effect on the potential for development on located on expansive soil and the impacts would be *less than significant*.

Significance Before Mitigation: Less than significant.

GEO-5	Implementation of the proposed Project would not be located on soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater.

General Plan

The majority of the anticipated development within the Project Area is expected to be serviced by the present-day wastewater collection and treatment system. At present, the Sewer Operations Division of the City of Morgan Hill Department of Public Works is charged with protecting public health and safety by ensuring that wastewater is properly collected, treated, and discharged. This includes the planning, design, maintenance, and repair of all sanitary sewer mains and sewer lift stations within the City. Said wastewater is conveyed by an interceptor sewer to the wastewater treatment plant located in the City of Gilroy, where it is

GEOLOGY, SOILS, AND SEISMICITY

treated and discharged. This plant, built in 1990, is owned and operated by the South County Regional Wastewater Authority (SCRWA), under a Joint Powers Agreement with the City of Morgan Hill and City of Gilroy. New on-site wastewater systems (i.e., septic systems) are carefully overseen by the existing permit program that is administered by the City's Department of Public Works.

However, the City does allow installation of septic systems when a connection to the public sewer system is not readily available. When installation of a septic tank is the only option to collect sewage from a proposed project, Chapter 13.24 of the Morgan Hill Municipal Code requires applicants to submit detailed plans that show the overall topography and surface drainage direction; specific location of the septic tank; leaching field and all dimensions, as part of their permitting process. In addition, the code requires that septic tanks be constructed, repaired, and maintained in accordance with City standards. Furthermore, proposed General Plan Policy SSI 15.1 requires the City to only allow septic systems for low-intensity uses where they will not have a negative impact. In addition, the Natural Resources and Environment Element includes the following relevant policies:

Policy NRE-8.1	Contamination from Toxic Chemicals. Protect water quality from contamination, and monitor it to assure that present policies and regulations are adequate. Prohibit such uses as waste facilities, septic systems, and industries using toxic chemicals where polluting substances may come in contact with groundwater, floodwaters, and creeks or reservoir waters.
Policy NRE-8.2	Septic Systems. Continue land use policies that limit the number of individual septic systems in areas vulnerable to groundwater contamination, because of the potential for cumulative degradation of water quality.
Policy NRE-8.3	Water Quality Monitoring. Continue to monitor groundwater and surface water quality conditions to determine if changes in regulations regarding septic systems and land use are needed.
Policy NRE-9.4	Compatibility of Regulations. Where appropriate, the Regional Water Quality Boards, Cities, County and other local agencies should adopt compatible ordinances (i.e., Hazardous Materials Storage Ordinance's HMSOs), standards (i.e., septic tank and alternative treatment and disposal methods), and enforcement procedures (i.e., implementing AB 2185, California Health and Safety Code Chapter 6.95, Division 20, Section 25500 et seq.) regarding water quality so that there is no advantage for a company to locate in an area with lower standards.

The proposed General Plan would not be located on soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater. In addition, the City's Municipal Code includes provisions for proper installation of septic tanks and the proposed General Plan requires septic tanks only be installed when they will not have a negative impact. Therefore, the impacts would be *less than significant*.

Applicable Regulations:

- Morgan Hill Municipal Code

Significance Before Mitigation: Less than significant.

GEOLOGY, SOILS, AND SEISMICITY

Residential Development Control System

The RDCS regulates population growth through the provision of residential building allotments. The RDCS, and the proposed updates to the RDCS as part of the proposed Project, would affect the rate of development in the City, but not the location, type, or intensity of development. Therefore, the proposed RDCS would not have a substantial adverse effect on locations where soils are incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater. The proposed RDCS would not have a substantial adverse effect on development where soils are incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater and the impacts would be *less than significant*.

Significance Before Mitigation: Less than significant.

4.6.4 CUMULATIVE IMPACTS

GEO-6 Implementation of the proposed Project would not contribute to cumulative geology and soils impacts in the area.

This EIR takes into account the projected growth due to the implementation of the proposed Project, together with projected growth in the surrounding jurisdictions of San Jose, Gilroy, and Santa Clara County, based on existing and pending General Plan Updates for those jurisdictions. Potential cumulative geological impacts could arise from a combination of Project implementation, together with future development in the immediate vicinity.

Given the fact that active earthquake faults traverse only the extreme northeast fringe of the Project Area, the risk of primary fault rupture to occupied buildings is considered to be low. Furthermore, new development allowed by the proposed Project would be subject to CBC requirements. Compliance with these state requirements would, to the maximum extent practicable, reduce cumulative, development-related impacts that relate to seismic shaking, seismically induced landslides and liquefaction, and expansive soils. Similarly, compliance with relevant City and County General Plan policies would minimize the cumulative impacts associated with soil erosion and loss of topsoil to the maximum extent practicable. Most risks related to geologic and soil hazards tend to be site-specific, and the application of the geotechnical and engineering standards found in the CBC, the City Building Code, and County General Plan, together with the implementation of the policies in the proposed General Plan, is considered sufficient to reduce the cumulative risk to residents and other occupants of Morgan Hill and the surrounding region to a *less-than-significant* level.

GEOLOGY, SOILS, AND SEISMICITY

Applicable Regulations:

- California Building Code
- Morgan Hill General Plan
- Santa Clara County General Plan
- Morgan Hill Municipal Code

Significance Before Mitigation: Less than significant.

4.6.5 SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION MEASURES

The project would not result in any significant project-specific or cumulative impacts to geology, soils, or seismicity. Therefore, no mitigation measures are required.

4.6.6 FULL BUILDOUT

The full buildout anticipated under the proposed Project would include significantly more non-residential development than the 2035 horizon-year development projection analyzed in Section 4.6.3, Impact Discussion, in terms of both the amount and the extent of development. Therefore, the potential for impacts related to geology, soils, and seismicity would increase. However, as discussed in Chapter 3, Project Description, it is extremely unlikely that full buildout would ever occur under the proposed Project. Therefore, an analysis of full buildout is not required by CEQA.

4.7 GREENHOUSE GAS EMISSIONS

This chapter describes the regulatory framework and existing conditions related to greenhouse gas (GHG) emissions, and the potential for impacts from the adoption and implementation of the proposed Project. Because no single project is large enough individually to result in a measurable increase in global concentrations of GHG emissions, global warming impacts of a project are considered on a cumulative basis. This section is based on the methodology recommended by the Bay Area Air Quality Management District (BAAQMD). The proposed Project is evaluated using BAAQMD's plan-level review criteria, based on the preliminary information available. GHG emissions are based on modeling conducted by AECOM for the City of Morgan Hill as part of the Santa Clara County regional climate mitigation and adaptation initiative, Silicon Valley 2.0 (SV 2.0). Average vehicle miles traveled (VMT) provided by Hexagon Transportation Engineers (Hexagon) for the proposed Project were utilized by AECOM for the on-road transportation emissions section. The GHG emissions modeling is included in Appendix B, Air Quality and Greenhouse Gas Data, of this Draft EIR. The proposed General Plan addresses GHG emissions and climate change primarily in the Natural Resources Environment Element and in the Transportation Element, with policies and actions designed to minimize GHG emissions to the extent feasible.

4.7.1 ENVIRONMENTAL SETTING

4.7.1.1 GREENHOUSE GASES AND CLIMATE CHANGE

GHG emissions are various gases that are released into the atmosphere, largely as a by-product of burning fossil fuels, such as oil, natural gas, and coal, or as methane during the production and transport of fossil fuels. Scientists have concluded that human activities are contributing to global climate change by adding large amounts of heat-trapping GHG to the atmosphere. The Intergovernmental Panel on Climate Change (IPCC) has identified four major GHGs—water vapor, carbon dioxide (CO₂), methane (CH₄), and ozone (O₃)—that are the likely cause of an increase in global average temperatures observed in the 20th and 21st centuries. Other GHGs identified by the IPCC that contribute to global warming to a lesser extent are nitrous oxide (N₂O), sulfur hexafluoride (SF₆), hydrofluorocarbons, perfluorocarbons, and chlorofluorocarbons.^{1,2,3} The major GHGs are briefly described below.

- **Carbon dioxide (CO₂)** enters the atmosphere through the burning of fossil fuels (oil, natural gas, and coal), solid waste, trees and wood products, and respiration, and also as a result of other chemical

¹ Water vapor (H₂O) is the strongest GHG and the most variable in its phases (vapor, cloud droplets, ice crystals). However, water vapor is not considered a pollutant or a primary cause of change, but part of the feedback loop.

² Black carbon contributes to climate change both directly, by absorbing sunlight, and indirectly, by depositing on snow (making it melt faster) and by interacting with clouds and affecting cloud formation. Black carbon is the most strongly light-absorbing component of particulate matter (PM) emitted from burning fuels such as coal, diesel, and biomass. Reducing black carbon emissions globally can have immediate economic, climate, and public health benefits. According to the California Air Resources Board, California has been an international leader in reducing emissions of black carbon, with close to 95 percent control expected by 2020 due to existing programs that target reducing PM from diesel engines and burning activities. However, State and national GHG inventories do not yet include black carbon due to ongoing work resolving its precise global warming potential. Guidance for CEQA documents does not yet include black carbon.

³ Intergovernmental Panel on Climate Change, Third Assessment Report: Climate Change 2001, New York: Cambridge University Press.

GREENHOUSE GAS EMISSIONS

reactions (e.g., manufacture of cement). Carbon dioxide is removed from the atmosphere (i.e., sequestered) when it is absorbed by plants as part of the biological carbon cycle.

- **Methane (CH₄)** is emitted during the production and transport of coal, natural gas, and oil. Methane emissions also result from livestock and other agricultural practices, and from the decay of organic waste in landfills and water treatment facilities.
- **Nitrous oxide (N₂O)** is emitted during agricultural and industrial activities as well as during the combustion of fossil fuels and solid waste.
- **Fluorinated gases** are synthetic, strong GHGs that are emitted from a variety of industrial processes. Fluorinated gases are sometimes used as substitutes for ozone-depleting substances. These gases are typically emitted in smaller quantities, but because they are potent GHGs, they are sometimes referred to as high global-warming-potential (GWP) gases. Fluorinated gases include the following:
 - **Chlorofluorocarbons (CFCs)** are GHGs covered under the 1987 Montreal Protocol and used for refrigeration, air conditioning, packaging, insulation, solvents, or aerosol propellants. Since they are not destroyed in the lower atmosphere (i.e., troposphere), CFCs drift into the upper atmosphere where, given suitable conditions, they break down the ozone layer. These gases are therefore being replaced by other compounds that are GHGs covered under the Kyoto Protocol.
 - **Perfluorocarbons (PFCs)** are a group of human-made chemicals composed of carbon and fluorine only. These chemicals (predominantly perfluoromethane [CF₄] and perfluoroethane [C₂F₆]) were introduced as alternatives, along with HFCs, to ozone-depleting substances. In addition, PFCs are emitted as by-products of industrial processes and are used in manufacturing. PFCs do not harm the stratospheric ozone layer, but they have a high GWP.
 - **Sulfur Hexafluoride (SF₆)** is a colorless gas that is soluble in alcohol and ether and slightly soluble in water. SF₆ is a strong GHG used primarily in electrical transmission and distribution systems as an insulator.
 - **Hydrochlorofluorocarbons (HCFCs)** contain hydrogen, fluorine, chlorine, and carbon atoms. Although they are ozone-depleting substances, they are less potent than CFCs. They have been introduced as temporary replacements for CFCs.
 - **Hydrofluorocarbons (HFCs)** contain only hydrogen, fluorine, and carbon atoms. They were introduced as alternatives to ozone-depleting substances to serve many industrial, commercial, and personal needs. HFCs are emitted as by-products of industrial processes and are also used in manufacturing. They do not significantly deplete the stratospheric ozone layer, but they are strong GHGs.^{4,5}

⁴ United States Environmental Protection Agency, Greenhouse Gas Emissions, 2012, <http://www.epa.gov/climatechange/ghgemissions/gases.html>, accessed on September 24, 2014.

⁵ Intergovernmental Panel on Climate Change, Third Assessment Report: Climate Change 2001, New York: Cambridge University Press.

GREENHOUSE GAS EMISSIONS

The GWPs of GHGs are dependent on the lifetime or persistence of the gas molecule in the atmosphere. Some GHGs have a stronger greenhouse effect than others. As noted above, they are referred to as high GWP gases. The GWP of GHG emissions are shown in Table 4.7-1. The GWP is used to convert GHGs to CO₂-equivalence (CO₂e) to show the relative potential that different GHGs have to retain infrared radiation in the atmosphere and contribute to the greenhouse effect. For example, under IPCC's Second Assessment Report, the GWP value for CH₄ is 21; a project that generates 10 metric tons (MT) of CH₄ would be equivalent to 210 MT of CO₂.⁶

4.7.1.1 REGULATORY FRAMEWORK

This section describes the federal, state, and local regulations applicable to GHG emissions.

Federal Regulations

The United States Environmental Protection Agency (US EPA) announced on December 7, 2009, that GHG emissions threaten the public health and welfare of the American people and that GHG emissions from on-road vehicles contribute to that threat. The US EPA's final findings respond to the 2007 US Supreme Court ruling that GHG emissions fit within the Clean Air Act definition of air pollutants. The findings did not in and of themselves impose any emission reduction requirements, but allowed the US EPA to finalize the GHG standards proposed in 2009 for new light-duty vehicles as part of the joint rulemaking with the Department of Transportation.⁷

The US EPA's endangerment finding covers emissions of six key GHGs—CO₂, CH₄, N₂O, hydrofluorocarbons, perfluorocarbons, and SF₆—that have been the subject of scrutiny and intense analysis for decades by scientists in the United States and around the world. The first three constitute the majority of GHG emissions from land uses in the City and, per Bay Area Air Quality Management District (BAAQMD) guidance, are the GHG emissions that should be evaluated as part of a community GHG emissions inventory.

United States Mandatory Report Rule for GHGs (2009)

In response to the endangerment finding, the US EPA issued the Mandatory Reporting of GHG Rule that requires substantial emitters of GHG emissions (e.g., large stationary sources) to report GHG emissions data. Facilities that emit 25,000 MTCO₂e per year are required to submit an annual report.

⁶ CO₂-equivalence is used to show the relative potential that different GHGs have to retain infrared radiation in the atmosphere and contribute to the greenhouse effect. The global warming potential of a GHG is also dependent on the lifetime, or persistence, of the gas molecule in the atmosphere.

⁷ United States Environmental Protection Agency, 2009, EPA: Greenhouse Gases Threaten Public Health and the Environment, Science overwhelmingly shows greenhouse gas concentrations at unprecedented levels due to human activity, December, <http://yosemite.epa.gov/opa/admpress.nsf/0/08D11A451131BCA585257685005BF252>.

GREENHOUSE GAS EMISSIONS

TABLE 4.7-1 GHG EMISSIONS AND THEIR RELATIVE GLOBAL WARMING POTENTIAL COMPARED TO CO₂

Greenhouse Gases	Atmospheric Lifetime (Years)	Second Assessment Report (SAR) Global Warming Potential Relative to CO ₂ ^a	Fourth Assessment Report (AR4) Global Warming Potential Relative to CO ₂ ^b
Carbon Dioxide (CO ₂)	50 to 200	1	1
Methane (CH ₄) ^c	12 (±3)	21	25
Nitrous Oxide (N ₂ O)	120	310	298
Hydrofluorocarbons:			
HFC-23	264	11,700	14,800
HFC-32	5.6	650	675
HFC-125	32.6	2,800	3,500
HFC-134a	14.6	1,300	1,430
HFC-143a	48.3	3,800	4,470
HFC-152a	1.5	140	124
HFC-227ea	36.5	2,900	3,220
HFC-236fa	209	6,300	9,810
HFC-4310mee	17.1	1,300	1,030
Perfluoromethane: CF ₄	50,000	6,500	7,390
Perfluoroethane: C ₂ F ₆	10,000	9,200	12,200
Perfluorobutane: C ₄ F ₁₀	2,600	7,000	8,860
Perfluoro-2-methylpentane: C ₆ F ₁₄	3,200	7,400	9,300
Sulfur Hexafluoride (SF ₆)	3,200	23,900	22,800

Notes: The IPCC has published updated GWP values in its Fifth Assessment Report (2013) that reflect new information on atmospheric lifetimes of GHGs and an improved calculation of the radiative forcing of CO₂ (radiative forcing is the difference between energy from sunlight received by the earth and radiated back into space). However, GWP values identified in the Second Assessment Report are still used to maintain consistency in GHG emissions modeling and thresholds used in BAAQMD's CEQA Guidelines. In addition, the 2008 Scoping Plan was based on the GWP values in the Second Assessment Report.

a. Based on a 100-Year Time Horizon of the GWP of the air pollutant relative to CO₂. Intergovernmental Panel on Climate Change. 2001. Third Assessment Report: Climate Change 2001. New York: Cambridge University Press.

a. Based on a 100-Year Time Horizon of the GWP of the air pollutant relative to CO₂. Intergovernmental Panel on Climate Change. 2007. Fourth Assessment Report: Climate Change 2001. New York: Cambridge University Press.

c. The methane GWP includes direct effects and indirect effects due to the production of tropospheric ozone and stratospheric water vapor. The indirect effect due to the production of CO₂ is not included.

Sources: Intergovernmental Panel on Climate Change, 2001, Third Assessment Report: Climate Change 2001, New York: Cambridge University Press; Intergovernmental Panel on Climate Change, 2007, Fourth Assessment Report: Climate Change 2001, New York: Cambridge University Press.

GREENHOUSE GAS EMISSIONS

Update to Corporate Average Fuel Economy Standards (2010/2012)

The current Corporate Average Fuel Economy (CAFE) standards (for model years 2011 to 2016) incorporate stricter fuel economy requirements promulgated by the federal government and California into one uniform standard. Additionally, automakers are required to cut GHG emissions in new vehicles by roughly 25 percent by 2016 (resulting in a fleet average of 35.5 miles per gallon [mpg] by 2016). Rulemaking to adopt these new standards was completed in 2010. California agreed to allow auto makers who show compliance with the national program to be considered in compliance with state requirements. The federal government issued new standards in 2012 for model years 2017 to 2025, which will require a fleet average of 54.5 mpg in 2025.

US EPA Regulation of Stationary Sources under the Clean Air Act (Ongoing)

Pursuant to its authority under the Clean Air Act, the US EPA has been developing regulations for new stationary sources such as power plants, refineries, and other large sources of emissions. Pursuant to the President's 2013 Climate Action Plan, the US EPA will be directed to develop regulations for existing stationary sources.

State Laws

Current State of California guidance and goals for reductions in GHG emissions are generally embodied in Executive Order S-03-05, Executive Order B-30-15, Assembly Bill 32 (AB 32), and Senate Bill 375 (SB 375).

Executive Order S-03-05

Executive Order S-3-05, signed June 1, 2005, set the following GHG reduction targets for the state:

- Reduce statewide GHG emissions to 2000 levels by 2010.
- Reduce statewide GHG emissions to 1990 levels by 2020.
- Reduce statewide GHG emissions to 80 percent below 1990 levels by 2050.

Executive Order B-30-15

Executive Order B-30-15, signed April 29, 2015, sets a goal of reducing GHG emissions within the state to 40 percent of 1990 levels by year 2030. Executive Order B-30-15 also directs CARB to update the Scoping Plan to quantify the 2030 GHG reduction goal for the state and requires state agencies to implement measures to meet the interim 2030 goal of Executive Order B-30-15 as well as the long-term goal for 2050 in Executive Order S-03-5. It also requires the Natural Resources Agency to conduct triennial updates of the California adaption strategy, Safeguarding California, in order to ensure climate change is accounted for in state planning and investment decisions.

GREENHOUSE GAS EMISSIONS

Assembly Bill 32, the Global Warming Solutions Act (2006)

Current State of California guidance and goals for reductions in GHG emissions are generally embodied in AB 32, the Global Warming Solutions Act. AB 32 was passed by the California state legislature on August 31, 2006, to place the state on a course toward reducing its contribution of GHG emissions. AB 32 follows the 2020 tier of emissions reduction targets established in Executive Order S-3-05.

CARB 2008 Scoping Plan

The final Scoping Plan was adopted by CARB on December 11, 2008. AB 32 directed CARB to adopt discrete early action measures to reduce GHG emissions and outline additional reduction measures to meet the 2020 target. In order to effectively implement the emissions cap, AB 32 directed CARB to establish a mandatory reporting system to track and monitor GHG emissions levels for large stationary sources that generate more than 25,000 MTCO₂e per year, prepare a plan demonstrating how the 2020 deadline can be met, and develop appropriate regulations and programs to implement the plan by 2012.

The 2008 Scoping Plan identified that GHG emissions in California are anticipated to be approximately 596 million metric tons (MMT) of CO₂e in 2020. In December 2007, CARB approved a 2020 emissions limit of 427 MMTCO₂e (471 million tons) for the state. The 2020 target requires a total emissions reduction of 169 MMTCO₂e, 28.5 percent from the projected emissions of the business-as-usual (BAU) scenario for the year 2020 (i.e., 28.5 percent of 596 MMTCO₂e) (CARB 2008).⁸

Key elements of CARB's GHG reduction plan that may be applicable to the proposed Project include:

- Expanding and strengthening existing energy efficiency programs as well as building and appliance standards (adopted and cycle updates in progress).
- Achieving a mix of the state's energy generation in which 33 percent is from renewable sources (anticipated by 2020).
- A California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system for large stationary sources (adopted 2011).
- Establishing targets for transportation-related GHG emissions for regions throughout California and pursuing policies and incentives to achieve those targets (several Sustainable Communities Strategies have been adopted).
- Adopting and implementing measures pursuant to state laws and policies, including California's clean car standards (amendments to the Pavley Standards adopted 2009; Advanced Clean Car standard adopted 2012), goods movement measures, and the Low Carbon Fuel Standard (adopted 2009).

⁸ CARB defines BAU in its Scoping Plan as emissions levels that would occur if California continued to grow and add new GHG emissions but did not adopt any measures to reduce emissions. Projections for each emission-generating sector were compiled and used to estimate emissions for 2020 based on 2002–2004 emissions intensities. Under CARB's definition of BAU, new growth is assumed to have the same carbon intensities as was typical from 2002 through 2004.

GREENHOUSE GAS EMISSIONS

- Creating target fees, including a public goods charge on water use, fees on high GWP gases, and a fee to fund the administrative costs of the state's long-term commitment to AB 32 implementation (in progress).

Table 4.7-2 shows the anticipated reductions from regulations and programs outlined in the 2008 Scoping Plan. Although local government operations were not accounted for in achieving the 2020 emissions reduction, CARB estimates that land use changes implemented by local governments that integrate jobs, housing, and services result in a reduction of 5 MMTCO₂e, which is approximately 3 percent of the 2020 GHG emissions reduction goal. In recognition of the critical role local governments play in the successful implementation of AB 32, the 2008 Scoping Plan cited a GHG reduction goal for local governments that is 15 percent of current levels (2005-2008) by 2020 to ensure that municipal and community-wide emissions match the state's reduction target.⁹ Measures that local governments take to support shifts in land use patterns are anticipated to emphasize compact, low-impact growth over development in greenfields, resulting in fewer VMT.¹⁰

First Update to the Scoping Plan

CARB recently completed a five-year update to the 2008 Scoping Plan, as required by AB 32. CARB adopted the First Update to the Scoping Plan at the May 22, 2014, board hearing. The Update to the Scoping Plan defines CARB's climate change priorities for the next five years and lays the groundwork to reach post-2020 goals in Executive Orders S-3-05 and B-16-2012. The update includes the latest scientific findings related to climate change and its impacts, including short-lived climate pollutants.

The GHG target identified in the 2008 Scoping Plan is based on IPCC's GWPs identified in the Second Assessment Report (see Table 4.7-1). IPCC's Fourth and Fifth Assessment Reports identified more recent GWP values based on the latest available science. CARB recalculated the 1990 GHG emission levels with the updated GWPs in the Fourth Assessment Report, and the 427 MMTCO₂e 1990 emissions level and 2020 GHG emissions limit, established in response to AB 32, is slightly higher, at 431 MMTCO₂e.¹¹

In the First Update to the Scoping Plan, CARB projects that statewide BAU emissions in 2020 would be approximately 509 MMTCO₂e.¹² Therefore, to achieve the AB 32 target of 431 MMTCO₂e (i.e., 1990 emissions levels) by 2020, the state would need to reduce emissions by 78 MMTCO₂e compared to BAU conditions, a reduction of 15.3 percent from BAU in 2020. The data from the First Update to the Scoping Plan regarding GHG emissions and reductions needed to achieve the 1990 emissions target are shown in Table 4.7-3.

⁹ The Scoping Plan references a goal for local governments to reduce community GHG emissions by 15 percent from current (interpreted as 2008) levels by 2020, but it does not rely on local GHG reduction targets established by local governments to meet the State's GHG reduction target of AB 32.

¹⁰ California Air Resources Board, *Climate Change Scoping Plan: A Framework for Change*, 2008.

¹¹ California Air Resources Board (CARB), 2014. *First Update to the Climate Change Scoping Plan: Building on the Framework, Pursuant to AB 32, The California Global Warming Solutions Act of 2006, May 15*.

¹² The BAU forecast includes GHG reductions from Pavley and the 33% Renewable Portfolio Standard (RPS).

GREENHOUSE GAS EMISSIONS

TABLE 4.7-2 SCOPING PLAN GHG REDUCTION MEASURES AND REDUCTIONS TOWARD 2020 TARGET

Recommended Reduction Measures	Reductions Counted toward 2020 Target of 169 MMT CO ₂ e	Percentage of Statewide 2020 Target
Cap and Trade Program and Associated Measures		
California Light-Duty Vehicle GHG Standards	31.7	19%
Energy Efficiency	26.3	16%
Renewable Portfolio Standard (33 percent by 2020)	21.3	13%
Low Carbon Fuel Standard	15	9%
Regional Transportation-Related GHG Targets ^a	5	3%
Vehicle Efficiency Measures	4.5	3%
Goods Movement	3.7	2%
Million Solar Roofs	2.1	1%
Medium/Heavy Duty Vehicles	1.4	1%
High Speed Rail	1.0	1%
Industrial Measures	0.3	0%
Additional Reduction Necessary to Achieve Cap	34.4	20%
<i>Total Cap and Trade Program Reductions</i>	<i>146.7</i>	<i>87%</i>
Uncapped Sources/Sectors Measures		
High Global Warming Potential Gas Measures	20.2	12%
Sustainable Forests	5	3%
Industrial Measures (for sources not covered under cap and trade program)	1.1	1%
Recycling and Waste (landfill methane capture)	1	1%
<i>Total Uncapped Sources/Sectors Reductions</i>	<i>27.3</i>	<i>16%</i>
<i>Total Reductions Counted toward 2020 Target</i>	<i>174</i>	<i>100%</i>
Other Recommended Measures – Not Counted toward 2020 Target		
State Government Operations	1.0 to 2.0	1%
Local Government Operations ^b	To Be Determined	NA
Green Buildings	26	15%
Recycling and Waste	9	5%
Water Sector Measures	4.8	3%
Methane Capture at Large Dairies	1	1%

GREENHOUSE GAS EMISSIONS

TABLE 4.7-2 SCOPING PLAN GHG REDUCTION MEASURES AND REDUCTIONS TOWARD 2020 TARGET

Recommended Reduction Measures	Reductions Counted toward 2020 Target of 169 MMT CO ₂ e	Percentage of Statewide 2020 Target
<i>Total Other Recommended Measures – Not Counted toward 2020 Target</i>	42.8	NA

Notes: The percentages in the right-hand column add up to more than 100 percent because the emissions reduction goal is 169 MMTCO₂e and the Scoping Plan identifies 174 MTCO₂e of emissions reductions strategies. Based on the SAR GWPs.

MMTCO₂e = million metric tons of CO₂e

a. Reductions represent an estimate of what may be achieved from local land use changes. It is not the SB 375 regional target.

b. According to the Measure Documentation Supplement to the Scoping Plan, local government actions and targets are anticipated to reduce vehicle miles by approximately 2 percent through land use planning, resulting in a potential GHG reduction of 2 million metric tons of CO₂e (or approximately 1.2 percent of the GHG reduction target). However, these reductions were not included in the Scoping Plan reductions to achieve the 2020 target.

Source: California Air Resources Board, 2008, Climate Change Scoping Plan: A Framework for Change.

TABLE 4.7-3 STATE BAU FORECAST IN THE FIRST UPDATE TO THE SCOPING PLAN

Category	2020 MMTCO ₂ e – Fourth Assessment Report GWPs
AB 32 Baseline 2020 Forecast Emissions (2020 BAU) with Pavley I and the Renewable Electricity Standard (RPS)	539
AB 32 Baseline 2020 Forecast Emissions (2020 BAU) ^a	509
Expected Reductions from Sector-Based Measures	
Energy	25
Transportation	23
High-GWPs	5
Waste	2
Cap-and-Trade Reductions _b	23
2020 Limit	431
Percent Reduction from BAU with Pavley I and RPS	20.0%
Percent Reduction from BAU without Pavley and RPS	15.3%

a. The total projected emissions in the 2020 BAU scenario accounts for reductions anticipated from Pavley I and the Renewable Electricity Standard (30 million MTCO₂e total).

b. The cap-and-trade reductions depend on the emissions forecast.

Sources: CARB 2014, First Update to the Climate Change Scoping Plan: Building on the Framework, Pursuant to AB 32, The California Global Warming Solutions Act of 2006, May 15.

The update highlights California's progress toward meeting the near-term 2020 GHG emission reduction goals defined in the original 2008 Scoping Plan. As identified in the Update to the Scoping Plan, California is on track to meeting the goals of AB 32. However, the Update to the Scoping Plan also addresses the state's

GREENHOUSE GAS EMISSIONS

longer-term GHG goals within a post-2020 element. The post-2020 element provides a high level view of a long-term strategy for meeting the 2050 GHG goals, including a recommendation for the state to adopt a mid-term target. According to the Update to the Scoping Plan, local government reduction targets should chart a reduction trajectory that is consistent with, or exceeds, the trajectory created by statewide goals.¹³

According to the Update to the Scoping Plan, reducing emissions to 80 percent below 1990 levels will require a fundamental shift to efficient, clean energy in every sector of the economy. Progressing toward California's 2050 climate targets will require significant acceleration of GHG reduction rates. Emissions from 2020 to 2050 will have to decline several times faster than the rate needed to reach the 2020 emissions limit.¹⁴

The new Executive Order B-30-15 requires CARB to prepare another update to the Scoping Plan to address the 2030 target for the state. During the October 1, 2015 CARB workshop, CARB announced that the next update to the Scoping Plan to address the new 2030 interim target to achieve a 40 percent reduction below 1990 levels by 2030 would be adopted by late 2016.

Senate Bill 375

In 2008, Senate Bill 375 (SB 375), the Sustainable Communities and Climate Protection Act, was adopted to connect the GHG emissions reductions targets established in the Scoping Plan for the transportation sector to local land use decisions that affect travel behavior. Its intent is to reduce GHG emissions from light-duty trucks and automobiles (excludes emissions associated with goods movement) by aligning regional long-range transportation plans, investments, and housing allocations to local land use planning to reduce VMT and vehicle trips. Specifically, SB 375 required CARB to establish GHG emissions reduction targets for each of the 18 regions in California managed by a metropolitan planning organization (MPO). The Metropolitan Transportation Commission (MTC) is the MPO for the nine-county San Francisco Bay Area region. MTC's targets are a 7 percent per capita reduction in GHG emissions from 2005 by 2020, and 15 percent per capita reduction from 2005 levels by 2035.¹⁵

Plan Bay Area: Strategy for a Sustainable Region

Plan Bay Area is the Bay Area's Regional Transportation Plan (RTP)/Sustainable Community Strategy (SCS). The *Plan Bay Area* was adopted jointly by the Association of Bay Area Governments and MTC on July 18, 2013. The SCS lays out a development scenario for the region, which, when integrated with the transportation network and other transportation measures and policies, would reduce GHG emissions from transportation (excluding goods movement) beyond the per capita reduction targets identified by CARB.

¹³ California Air Resources Board (CARB), 2014. *First Update to the Climate Change Scoping Plan: Building on the Framework, Pursuant to AB 32, The California Global Warming Solutions Act of 2006*, May 15.

¹⁴ California Air Resources Board (CARB), 2014. *First Update to the Climate Change Scoping Plan: Building on the Framework, Pursuant to AB 32, The California Global Warming Solutions Act of 2006*, May 15.

¹⁵ California Air Resources Board, 2010, Staff Report Proposed Regional Greenhouse Gas Emission Reduction Targets for Automobiles and Light Trucks Pursuant to Senate Bill 375, August.

GREENHOUSE GAS EMISSIONS

The Plan meets a 16 percent per capita reduction of GHG emissions by 2035 and a 10 percent per capita reduction by 2020 from 2005 conditions.

As part of the implementing framework for *Plan Bay Area*, local governments have identified Priority Development Areas (PDAs) to focus growth. PDAs are transit-oriented infill development opportunity areas within existing communities. Overall, well over two-thirds of all regional growth in the Bay Area by 2040 is allocated within PDAs. PDAs are expected to accommodate 80 percent (or over 525,570 units) of new housing and 66 percent (or 744,230) of new jobs in the region.¹⁶ There is one PDA within the City of Morgan Hill:

- Morgan Hill Downtown Transit Town Center PDA (see Figure 4.12-1 in Chapter 4.12, Population and Housing) encompasses the downtown area of Morgan Hill. *Plan Bay Area* allocated 1,420 new housing units to this PDA as a result of the forecasted increase in multi-family and mixed-use development in this PDA.^{17,18}

Assembly Bill 1493

California vehicle GHG emission standards were enacted under AB 1493 (Pavley I). Pavley I is a clean-car standard that reduces GHG emissions from new passenger vehicles (light-duty auto to medium-duty vehicles) from 2009 through 2016 and is anticipated to reduce GHG emissions from new passenger vehicles by 30 percent during the same time. California implements the Pavley I standards through a waiver granted to California by the US EPA. In 2012, the US EPA issued a Final Rulemaking that sets even more stringent fuel economy and GHG emissions standards for model years 2017 through 2025 light-duty vehicles (see also the discussion on the update to the CAFE standards under “Federal Laws,” above). In January 2012, CARB approved the Advanced Clean Cars program (formerly known as Pavley II) for model years 2017 through 2025. The program combines the control of smog, soot, and global warming gases and requirements for a greater number of zero-emission vehicles into a single package of standards. Under California’s Advanced Clean Car program, by 2025, new automobiles will emit 34 percent fewer global warming gases and 75 percent fewer smog-forming emissions.¹⁹

¹⁶ Metropolitan Transportation Commission and Association of Bay Area Governments, 2013, *Plan Bay Area: Strategy for a Sustainable Region*, July 18.

¹⁷ Metropolitan Transportation Commission (MTC) and Association of Bay Area Governments (ABAG), 2013. *Final Priority Development Area Development Feasibility and Readiness Assessment*, July.

¹⁸ Metropolitan Transportation Commission (MTC) and Association of Bay Area Governments (ABAG), 2013. *Plan Bay Area*, <http://geocommons.com/maps/141979>.

¹⁹ See also the discussion on the update to the CAFE standards under Federal Laws, above. In January 2012, CARB approved the Advanced Clean Cars program (formerly known as Pavley II) for model years 2017 through 2025. The program combines the control of smog, soot and global warming gases and requirements for greater numbers of zero-emission vehicles into a single package of standards. Under California’s Advanced Clean Car program, by 2025, new automobiles will emit 34 percent fewer global warming gases and 75 percent fewer smog-forming emissions.

GREENHOUSE GAS EMISSIONS

Executive Order S-01-07

On January 18, 2007, the state set a new low carbon fuel standard (LCFS) for transportation fuels sold in the state. Executive Order S-1-07 sets a declining standard for GHG emissions, measured in CO₂e grams per unit of fuel energy sold in California. The LCFS requires a reduction of 2.5 percent in the carbon intensity of California's transportation fuels by 2015 and a reduction of at least 10 percent by 2020. The standard applies to refiners, blenders, producers, and importers of transportation fuels, and would use market-based mechanisms to allow providers to choose how they reduce emissions during the "fuel cycle" using the most economically feasible methods.

Executive Order B-16-2012

On March 23, 2012, the state directed CARB, the California Energy Commission (CEC), the Public Utilities Commission, and other relevant agencies to work with the Plug-in Electric Vehicle Collaborative and the California Fuel Cell Partnership to establish benchmarks to accommodate zero-emissions vehicles in major metropolitan areas, including infrastructure to support them (e.g., electric vehicle charging stations). The executive order also directs the number of zero-emission vehicles in California's state vehicle fleet to increase through the normal course of fleet replacement so that at least 10 percent of fleet purchases of light-duty vehicles are zero-emission by 2015 and at least 25 percent by 2020. The executive order also establishes a target for the transportation sector of reducing GHG emissions to 80 percent below 1990 levels by 2050.

Senate Bills 1078 and 107, and Executive Order S-14-08

A major component of California's Renewable Energy Program is the renewable portfolio standard (RPS) established under Senate Bills 1078 (Sher)²⁰ and 107 (Simitian)²¹. Under the RPS, certain retail sellers of electricity were required to increase the amount of renewable energy each year by at least 1 percent in order to reach at least 20 percent by December 30, 2010. Executive Order S-14-08 was signed in November 2008 and expands the state's Renewable Energy Standard to 33 percent renewable power by 2020. This Executive Order was adopted by the legislature in 2011 under SBX1-2. Renewable sources of electricity include wind, small hydropower, solar, geothermal, biomass, and biogas. The increase in renewable sources for electricity production will decrease indirect GHG emissions from development projects because electricity production from renewable sources is generally considered carbon neutral.

California Building Code: Building and Energy Efficiency Standards

Energy conservation standards for new residential and nonresidential buildings were originally adopted by the California Energy Resources Conservation and Development Commission (now the CEC) in June 1977

²⁰ Official California Legislative Information, http://www.leginfo.ca.gov/pub/01-02/bill/sen/sb_1051-1100/sb_1078_bill_20020912_chaptered.html, accessed September 24, 2014.

²¹ Official California Legislative Information, http://www.leginfo.ca.gov/pub/05-06/bill/sen/sb_0101-0150/sb_107_bill_20060926_chaptered.html, accessed September 24, 2014.

GREENHOUSE GAS EMISSIONS

(California Code of Regulations [CCR], Title 24, Part 6). Title 24 requires the design of building shells and building components to conserve energy. The standards are updated about every three years to allow for consideration of new energy efficiency technologies and methods. In 2012, the CEC adopted the 2013 Building and Energy Efficiency Standards, which went into effect on July 1, 2014. Buildings that are constructed in accordance with the 2013 Building and Energy Efficiency Standards are 25 percent (residential) to 30 percent (nonresidential) more energy efficient than the 2008 standards as a result of changes in requirements for windows, insulation, lighting, ventilation systems, and other features that reduce energy consumption in homes and businesses.

Most recently, the CEC adopted the 2016 Building and Energy Efficiency Standards. The 2016 standards will continue to improve upon the current 2013 standards for new construction of, and additions and alterations to, residential and nonresidential buildings. These standards will go into effect on January 1, 2017. Under the 2016 standards, residential buildings are 28 percent more energy efficient than the 2013 standards, and non-residential buildings are 5 percent more energy efficient.²²

The 2016 standards will not attain zero net energy (ZNE). However, they do get us very close to the state's goal and make important steps toward changing residential building practices in California. The 2019 standards will take the final step to achieve ZNE for newly constructed residential buildings throughout California.²³

California Building Code: CALGreen

On July 17, 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code (Title 24 CCR, Part 11, known as "CALGreen") was adopted as part of the California Building Standards Code (Title 24 CCR). CALGreen established planning and design standards for sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and indoor air contaminants.²⁴ The mandatory provisions of CALGreen became effective January 1, 2011, and were updated most recently in 2013. The building efficiency standards are enforced through the local building permit process.

2006 Appliance Efficiency Regulations

The 2006 Appliance Efficiency Regulations (Title 20 CCR, §§ 1601–1608) were adopted by the CEC on October 11, 2006, and approved by the California Office of Administrative Law on December 14, 2006. The regulations include standards for both federally regulated appliances and non-federally regulated

²² California Energy Commission (CEC). 2015. 2016 Building Energy Efficiency Standards, Adoption Hearing Presentation. <http://www.energy.ca.gov/title24/2016standards/rulemaking/documents/>, accessed September 23, 2015.

²³ California Energy Commission (CEC). 2015. 2016 Building Energy and Efficiency Standards Frequently Asked Questions. http://www.energy.ca.gov/title24/2016standards/rulemaking/documents/2016_Building_Energy_Efficiency_Standards_FAQ.pdf, accessed September 23, 2015.

²⁴ The green building standards became mandatory in the 2010 edition of the code.

GREENHOUSE GAS EMISSIONS

appliances. Though these regulations are now often viewed as “business as usual,” they exceed the standards imposed by any other state, and they reduce GHG emissions by reducing energy demand.

Solid Waste Regulations

California’s Integrated Waste Management Act of 1989 (AB 939, Public Resources Code 40050 et seq.) set a requirement for cities and counties throughout the state to divert 50 percent of all solid waste from landfills by January 1, 2000, through source reduction, recycling, and composting. In 2008, the requirements were modified to reflect a per capita requirement rather than tonnage. To help achieve this, the act requires that each City and County prepare and submit a source reduction and recycling element. AB 939 also established the goal for all California counties to provide at least 15 years of ongoing landfill capacity.

AB 341 (Chapter 476, Statutes of 2011) increased the statewide goal for waste diversion to 75 percent by 2020 and requires recycling of waste from commercial and multifamily residential land uses.

The California Solid Waste Reuse and Recycling Access Act (AB 1327, California Public Resources Code Sections 42900 et seq.) requires areas to be set aside for collecting and loading recyclable materials in development projects. The act required the California Integrated Waste Management Board to develop a model ordinance for adoption by any local agency requiring adequate areas for collection and loading of recyclable materials as part of development projects. Local agencies are required to adopt the model or an ordinance of their own.

Section 5.408 of the 2013 California Green Building Standards Code (Title 24, California Code of Regulations, Part 11) also requires that at least 50 percent of the nonhazardous construction and demolition waste from nonresidential construction operations be recycled and/or salvaged for reuse.

Water Efficiency Regulations

The 20x2020 Water Conservation Plan was issued by the Department of Water Resources (DWR) in 2010 pursuant to Senate Bill 7, which was adopted during the 7th Extraordinary Session of 2009–2010 and therefore dubbed “SBX7-7.” SBX7-7 mandated urban water conservation and authorized the DWR to prepare a plan implementing urban water conservation requirements (20x2020 Water Conservation Plan). In addition, it required agricultural water providers to prepare agricultural water management plans, measure water deliveries to customers, and implement other efficiency measures. SBX7-7 requires urban water providers to adopt a water conservation target of 20 percent reduction in urban per capita water use by 2020 compared to 2005 baseline use.

The Water Conservation in Landscaping Act of 2006 (AB 1881) requires local agencies to adopt the updated DWR model ordinance or equivalent. AB 1881 also requires the Energy Commission, in consultation with the department, to adopt, by regulation, performance standards and labeling requirements for landscape irrigation equipment, including irrigation controllers, moisture sensors, emission devices, and valves to reduce the wasteful, uneconomic, inefficient, or unnecessary consumption of energy or water.

GREENHOUSE GAS EMISSIONS

Regional Regulations

Bay Area Air Quality Management District

BAAQMD is the agency responsible for ensuring that the National and California ambient air quality standards are attained and maintained in the San Francisco Bay Area Air Basin. Building on state and other regional climate protection efforts, BAAQMD has adopted a resolution to reduce GHG emissions by:

- Setting a goal for the Bay Area region to reduce GHG emissions by 2050 to 80 percent below 1990 levels.
- Developing a Regional Climate Protection Strategy to make progress towards the 2050 goal, using the Air District's Clean Air Plan to initiate the process.
- Developing a 10-point work program to guide the Air District's climate protection activities in the near term.²⁵

BAAQMD is working on a Regional Climate Protection Strategy for achieving the 2050 goal for GHG emission reductions that complements existing planning efforts at the state, regional, and local levels, and uses the Air District's 2015 Draft Clean Air Plan to initiate the process. Based on BAAQMD's 10-Point Climate Action Work Program, the Regional Climate Protection Strategy will include an updated GHG emissions inventory and forecast and GHG reduction goals and interim targets for the Bay Area.²⁶

Santa Clara County

Local Regulations and Policies

The City of Morgan Hill has a wide range of policies and programs that target GHG emissions reductions in City operation and the community at large. This section describes some of the principal plans, policies, and regulations.

Morgan Hill Municipal Code: Sustainable Building Regulations

The City of Morgan Hill has adopted sustainable building regulations as part of the City's Municipal Code, Chapter 15.65, to create a more sustainable community by incorporating sustainable building measures into the design, construction, and maintenance of new and existing buildings. The sustainable building regulations are designed to achieve the following objectives:

- Increase energy efficiency in buildings.

²⁵ Bay Area Air Quality Management District (BAAQMD), 2013. Resolution No. 2013-11: Resolution Adopting a Greenhouse House Gas Reduction Goal and Commitment to Develop a Regional Climate Protection Strategy. <http://www.baaqmd.gov/~media/files/planning-and-research/climate-protection-program/climate-resolution.pdf?la=en>, accessed September 23, 2015.

²⁶ Bay Area Air Quality Management District (BAAQMD), 2014. 10-Point Climate Action Work Program. <http://www.baaqmd.gov/~media/files/planning-and-research/climate-protection-program/10-point-work-program-pdf.pdf?la=en>, accessed September 23, 2015.

GREENHOUSE GAS EMISSIONS

- Encourage water and resource conservation.
- Reduce waste generated by construction projects.
- Provide durable buildings that are efficient and economical to own and operate.
- Promote healthy and productive indoor environments for residents, workers, and visitors to the City.
- Recognize and conserve the energy embodied in existing buildings.

In addition to complying with the California Building Energy Efficiency Standards (Title 24 CCR, part 6) of the California Building Code, new additions, renovations, and new construction must meet the minimum standards in the City's Municipal Code (see Table 4.7-4) as a condition of approval for design review issued by the City.

As identified in this table, new residential construction or renovations are required to use the most current Build It Green (BIG) or LEED® rating system for homes when applying for a building permit. Residential projects that meet the size criteria must also meet the minimum category points in energy, water, resource, and indoor air quality in the BIG checklist or any other required points in the LEED or BIG checklist. New commercial development is required to use the most current version of the LEED rating system. New mixed use development is required use the most current version of the LEED or BIG rating system.

However, the City also has commercial and residential incentives for compliance. LEED verification is not required for commercial renovation and addition projects if the project applicant installs a renewable energy system that supplies over 60 percent of the energy use for the building. A BIG verification is not required for residential renovation and addition projects when the project applicant installs a renewable energy system that supplies over 60 percent of the energy use for the building or installs a solar water heating system. The City also allows exceptions when unique circumstances make compliance a hardship and/or it not feasible to complete the requisite number of points.

4.7.1.2 EXISTING CONDITIONS

California's Greenhouse Gas Sources and Relative Contribution

California is the tenth largest GHG emitter in the world and the second largest emitter of GHG in the United States, surpassed only by Texas; however, California also has over 12 million more people than the state of Texas.²⁷ Because of more stringent air emission regulations, in 2001 California ranked fourth lowest in carbon emissions per capita and fifth lowest among states in CO₂ emissions from fossil fuel consumption per unit of Gross State Product (total economic output of goods and services).²⁸

²⁷ California Energy Commission, 2005, Climate Change Emissions Estimates from Bemis, Gerry and Jennifer Allen, Inventory of California Greenhouse Gas Emissions and Sinks: 1990 to 2002 Update, California Energy Commission Staff Paper CEC-600-2005-025, Sacramento, California, June.

²⁸ California Energy Commission, 2006, Inventory of California Greenhouse Gas Emissions and Sinks 1990 to 2004, Report CEC-600-2006-013-SF, December.

GREENHOUSE GAS EMISSIONS**TABLE 4.7-4 MORGAN HILL SUSTAINABLE DEVELOPMENT REGULATIONS**

Applicable Project	Size	Requirement	Party Verification
Residential, New Single or Multi-Family	≤2,000 sf per unit	70 BIG points or LEED® Certified	Internal GreenPoint Rated Verification for BIG checklist or
	>2,000 sf per unit	70 BIG points + 1 point per additional 70 sf (150 point maximum) ^a If using the LEED rating system, must obtain LEED Silver Certification	Internal LEED AP Verification for LEED checklist
Residential, New Construction Additions	Additions <250 sf	Not Applicable	Not Applicable
	Additions ≥250 sf	25 points on BIG existing homes checklist ^a	Internal GreenPoint Rated Verification
	Additions ≥200 sf	50 points on BIG existing homes checklist ^a	
Residential, Renovations and Remodels ^b	Permit valuation <\$100,000	Not Applicable	Not Applicable
	Permit valuation ≥\$100,000	25 points on BIG existing homes checklist ^a	Internal GreenPoint Rated Verification
	Permit valuation ≥\$250,000	50 points on BIG existing homes checklist ^a	
Commercial, New Construction and Additions	Additions <1,000 sf	Not Applicable	Not Applicable
	New/Additions ≥1,000 sf	16 LEED Points	Internal LEED AP Verification
	New/Additions ≥5,000 sf	Built to LEED Silver	
Commercial, Renovations/ Tenant Improvements ^b	Permit valuation <\$350,000	Not Applicable	Not Applicable
	Small, renovations ≥\$350,000 permit valuation	10 LEED Points	Internal LEED AP Verification
	Medium, renovations ≥\$500,000 permit valuation	Build to LEED Certified	
	Large, renovations ≥\$1,500,000	Build to LEED Silver	
Mixed-Use, New Construction	New ≤10,000 sf	The project shall comply with residential minimum sustainability standards for the residential portion of the development; and For the commercial portion, the development shall be required to:	Internal GreenPoint rated verification and/or LEED AP Verification
		- Exceed California Title 24 energy requirements by 10–15% - Provide a built-in recycling center per LEED standards in an easily accessible location, such as the kitchen facility. - Use LEED-approved renewable or 10 to 20 percent recycled content carpeting and/or flooring to the extent that it is included within the project's scope of work. - Use LEED-approved low VOC adhesives, paints, flooring, and furnishings to the extent that it is	

GREENHOUSE GAS EMISSIONS

TABLE 4.7-4 MORGAN HILL SUSTAINABLE DEVELOPMENT REGULATIONS

Applicable Project	Size	Requirement	Party Verification
		included within the project's scope of work.	
	New ≥10,000 sf	Same standards apply as in Mixed Use New Construction ≤10,000. In addition, the development shall provide bicycle storage and a changing room facility that includes shower(s.) The changing room can be in the restroom instead of a separate room.	
Mixed Use, Additions, Tenant Improvements, and Remodels	Any	For additions and remodels, only that component of the project triggering compliance with the minimum standards for compliance for commercial and/or residential listed above shall apply. If the project is a major renovation of both residential and commercial components, the applicant shall be allowed to use standards for new mixed use buildings.	Internal GreenPoint rated verification and/or LEED AP Verification

a. Community points in Build It Green's checklist are excluded from the sustainability standard, and the project is required to meet minimum point requirements within the checklist categories (energy, water, resource, and indoor air quality). The Build It Green multi-family checklist shall only be used when: the attached units share mechanical or electrical features; or attached units share enclosed common space, such as hallways for condominiums; or there are four or more attached units or single-family dwelling units within the building envelope. Community points from Build It Green's checklist are excluded from the minimum sustainability standard.

b. Valuations are subject to change based on the annual Consumer Price Index (CPI) for new construction or another adopted valuation method adopted by the City of Morgan Hill.

Source: City of Morgan Hill. Morgan Hill Municipal Code, Chapter 15.65, Sustainable Building Regulations.

CARB's latest update to the statewide GHG emissions inventory using the GWPs from IPCC's Second Assessment Report was conducted in 2012 for year 2009 emissions.²⁹ In 2009, California produced 457 MMTCO₂e GHG emissions. California's transportation sector is the single largest generator of GHG emissions, producing 37.9 percent of the state's total emissions. Electricity consumption is the second largest source, comprising 22.7 percent. Industrial activities are California's third largest source of GHG emissions, comprising 17.8 percent of the state's total emissions. Other major sectors of GHG emissions include commercial and residential energy use, recycling and waste, high global warming potential GHGs, agriculture, and forestry.^{30,31}

In 2015, the statewide GHG emissions inventory was updated for 2000 to 2013 emissions using the GWPs in IPCC's Fourth Assessment Report. Based on these GWPs, California produced 459 MMTCO₂e GHG

²⁹ Methodology for determining the statewide GHG inventory is not the same as the methodology used to determine statewide GHG emissions under Assembly Bill 32 (AB 32) (2006).

³⁰ CO₂-equivalence is used to show the relative potential that different GHGs have to retain infrared radiation in the atmosphere and contribute to the greenhouse effect. The global warming potential of a GHG is also dependent on the lifetime, or persistence, of the gas molecule in the atmosphere.

³¹ California Air Resources Board, 2012, California Greenhouse Gas Inventory for 2000–2009: By Category as Defined by the Scoping Plan, April.

GREENHOUSE GAS EMISSIONS

emissions in 2013. California's transportation sector remains the single largest generator of GHG emissions, producing 36.8 percent of the state's total emissions. Electricity consumption made up 19.7 percent, and industrial activities produced 20.2 percent. Other major sectors of GHG emissions include commercial and residential, recycling and waste, high global warming potential GHGs, and agriculture.³²

Human Influence on Climate Change

For approximately 1,000 years before the Industrial Revolution, the amount of GHGs in the atmosphere remained relatively constant. During the 20th century, however, scientists observed a rapid change in the climate and climate change pollutants that is attributable to human activities. The amount of CO₂ has increased by more than 35 percent since preindustrial times and has increased at an average rate of 1.4 parts per million per year since 1960, mainly due to combustion of fossil fuels and deforestation.³³ These recent changes in climate change pollutants far exceed the extremes of the ice ages, and the global mean temperature is rising at a rate that cannot be explained by natural causes alone.³⁴ Human activities are directly altering the chemical composition of the atmosphere through the buildup of climate change pollutants.³⁵

Projections of climate change depend heavily on future human activity. Therefore, climate models are based on different emission scenarios that account for historical trends in emissions as well as observations on the climate record that assess the human influence on the trend and projections for extreme weather events. Climate-change scenarios are affected by varying degrees of uncertainty, including uncertainty regarding the magnitude of the direction of the trends for:

- warmer and fewer cold days and nights over most land areas;
- warmer and more frequent hot days and nights over most land areas;
- an increase in frequency of warm spells/heat waves over most land areas;
- an increase in frequency of heavy precipitation events (or proportion of total rainfall from heavy falls) over most areas;
- areas affected by drought increases;
- an increase in intense tropical cyclone activity;
- increased incidence of extreme high sea level (excludes tsunamis).

³² California Air Resources Board (CARB), 2015. California Greenhouse Gas Inventory for 2000–2013: By Category as Defined by the Scoping Plan, April 24.

³³ Intergovernmental Panel on Climate Change, Fourth Assessment Report: Climate Change 2007, New York: Cambridge University Press.

³⁴ At the end of the last ice age, the concentration of CO₂ increased by around 100 ppm (parts per million) over about 8,000 years, or approximately 1.25 ppm per century. Since the start of the industrial revolution, the rate of increase has accelerated markedly. The rate of CO₂ accumulation currently stands at around 150 ppm/century—more than 200 times faster than the background rate for the past 15,000 years.

³⁵ California Climate Action Team, 2006. Climate Action Team Report to Governor Schwarzenegger and the Legislature, March.

GREENHOUSE GAS EMISSIONS

IPCC's 2007 IPCC Fourth Assessment Report projects that the global mean temperature increase from 1990 to 2100 under different climate-change scenarios will range from 1.4 to 5.8 degrees Celsius (°C; 2.5 to 10.4 degrees Fahrenheit [°F]). In the past, gradual changes in the Earth's temperature changed the distribution of species, availability of water, etc. However, human activities are accelerating this process so that environmental impacts associated with climate change no longer occur in a geologic time frame, but within a human lifetime.³⁶

Potential Climate Change Impacts for California

Like the variability in the projections of the expected increase in global surface temperatures, the environmental consequences of gradual changes in the Earth's temperature are hard to predict. In California and western North America, observations of the climate have shown: 1) a trend toward warmer winter and spring temperatures, 2) a smaller fraction of precipitation falling as snow, 3) a decrease in the amount of spring snow accumulation in the lower and middle elevation mountain zones, 4) an advanced snowmelt of 5 to 30 days earlier in the springs, and 5) a similar shift (5 to 30 days earlier) in the timing of spring flower blooms.³⁷ According to the California Climate Action Team—a committee of state agency secretaries and the heads of agencies, boards, and departments, led by the Secretary of the California Environmental Protection Agency—even if actions could be taken to immediately curtail climate change emissions, the potency of emissions that have already built up, their long atmospheric lifetimes, and the inertia of the Earth's climate system could produce as much as 0.6°C (1.1°F) of additional warming. Consequently, some impacts from climate change are now considered unavoidable. Global climate change risks to California are shown in Table 4.7-5 and include public health impacts, water resources impacts, agricultural impacts, coastal sea level impacts, forest and biological resources impacts, and energy impacts.

Specific climate change impacts that could affect Morgan Hill include health impacts from a deterioration in air quality, water resources impacts from a reduction in water supply, and increased energy demand.

Morgan Hill General Plan Communitywide GHG Emissions

Table 4.7-6 shows community-wide GHG emissions in the City of Morgan Hill conducted by AECOM³⁸. Morgan Hill's baseline emissions inventory totaled 279,407 MTCO₂e in 2010. As shown in this table, the on-road transportation sector is the largest contributor of GHG emissions in the City (58 percent), with energy emissions contributing the majority of the remainder (34 percent). The energy and transportation sectors account for approximately 91 percent of total emissions. Off-road sources provide 6 percent of the inventory, and solid waste emissions provide another 2 percent. Potable water use and wastewater treatment are both small contributors by comparison, making up the remaining 1 percent of the inventory.

³⁶ Intergovernmental Panel on Climate Change, Fourth Assessment Report: Climate Change 2007, New York: Cambridge University Press.

³⁷ California Climate Action Team, 2006, Climate Action Team Report to Governor Schwarzenegger and the Legislature, March.

³⁸ The transportation emissions inventory has been updated to reflect the revised VMT provided by Hexagon (see Appendix B).

GREENHOUSE GAS EMISSIONS

TABLE 4.7-5 SUMMARY OF GHG EMISSIONS RISKS TO CALIFORNIA

Impact Category	Potential Risk
Public Health Impacts	Poor air quality made worse More severe heat
Water Resources Impacts	Decreasing Sierra Nevada snow pack Challenges in securing adequate water supply Potential reduction in hydropower Loss of winter recreation
Agricultural Impacts	Increasing temperature Increasing threats from pests and pathogens Expanded ranges of agricultural weeds Declining productivity Irregular blooms and harvests
Coastal Sea Level Impacts	Accelerated sea level rise Increasing coastal floods Worsened impacts on infrastructure
Forest and Biological Resource Impacts	Increased risk and severity of wildfires Lengthening of the wildfire season Movement of forest areas Conversion of forest to grassland Declining forest productivity Increasing threats from pest and pathogens Shifting vegetation and species distribution Altered timing of migration and mating habits Loss of sensitive or slow-moving species
Energy Demand Impacts	Potential reduction in hydropower Increased energy demand

Sources: California Energy Commission, 2006, Our Changing Climate: Assessing the Risks to California, 2006 Biennial Report, California Climate Change Center, CEC-500-2006-077; California Energy Commission, 2008, The Future Is Now: An Update on Climate Change Science, Impacts, and Response Options for California, CEC-500-2008-0077.

4.7.2 STANDARDS OF SIGNIFICANCE

The proposed Project would result in a significant GHG emissions impact if it would:

1. Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment.
2. Conflict with an applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of GHGs.
3. Significantly contribute to cumulative GHG impacts.

GREENHOUSE GAS EMISSIONS

TABLE 4.7-6 CITY OF MORGAN HILL BASELINE YEAR GHG EMISSIONS

Sector	2010 MTCO₂e	Percentage of Inventory
Energy	93,635	33.5%
<i>Residential Electricity</i>	18,999	6.8%
<i>Commercial Electricity</i>	27,753	9.9%
<i>Residential Natural Gas</i>	33,025	11.8%
<i>Commercial Natural Gas</i>	13,858	5.0%
Transportation	160,923	57.6%
Off-Road Sources	16,166	5.8%
Solid Waste	5,876	2.1%
Wastewater	1,926	0.7%
Potable Water	881	0.3%
Total Community Emissions	279,407	100%
Service Population ^a	51,720	—
MTCO ₂ e/SP	5.4	—

Notes: Emissions may not total to 100 percent due to rounding. Based on GWPs in the IPCC Fourth Assessment Report (AR4).

^a Based on 38,200 people and 13,520 employees.

Source: AECOM 2015. The transportation emissions inventory has been updated to reflect the revised VMT provided by Hexagon (see Appendix B).

4.7.2.1 BAAQMD PLAN-LEVEL SIGNIFICANCE CRITERIA

The BAAQMD CEQA Air Quality Guidelines were prepared to assist in the evaluation of air quality and GHG emissions impacts of projects and plans proposed within the Bay Area. The guidelines provide recommended procedures for evaluating potential air impacts during the environmental review process, consistent with CEQA requirements, and include recommended thresholds of significance, mitigation measures, and background air quality information. They also include recommended assessment methodologies for air toxics, odors, and GHG emissions.

Chapter 4.3 of this Draft EIR, Air Quality, contains a detailed discussion of the adoption, subsequent legal challenges, and most recent court decisions regarding BAAQMD's CEQA Guidelines. As explained in that chapter, the City of Morgan Hill has independently determined that use of BAAQMD's CEQA Guidelines is supported by substantial evidence, and those guidelines have been found by the courts to be valid guidelines for use in the CEQA environmental review process. In addition, CEQA grants local agencies broad discretion to develop their own thresholds of significance, or to rely on thresholds previously adopted or recommended by other public agencies or experts so long as they are supported by substantial evidence.

GREENHOUSE GAS EMISSIONS

Accordingly, the City is using the BAAQMD's 2011 thresholds to evaluate project impacts in order to evaluate the potential effects of the project on GHG emissions.

The BAAQMD CEQA Guidelines include methodology and thresholds for GHG impacts for general plan analyses that are consistent with the GHG reduction goals of AB 32. Therefore, the impact of a project that is a general plan is less than significant if it:

- Complies with a qualified GHG emissions reduction strategy, or
- Meets BAAQMD's efficiency target plan efficiency threshold based on the project's service population, discussed below. Service population is the total number of employees and residents in the City.

Consistency with a Qualified GHG Reduction Plan

CEQA allows cities to tier from plans adopted to mitigate the effects of GHG emissions on a City level, consistent with AB 32 goals. An AB 32 consistency determination is considered equivalent to a qualified GHG reduction strategy so long as it achieves one of the following GHG emissions reduction goals within its jurisdiction:

1. Reduces emissions to 1990 GHG emission levels by 2020; or
2. Reduces emissions to 15 percent below 2008 or earlier emission levels by 2020; or
3. Meets the plan efficiency threshold of 6.6 MTCO₂e per service population per year.

Plan-Level Efficiency Target

For general plan level analyses, BAAQMD CEQA Guidelines recommend that GHG emissions from direct and indirect community-wide emission sources be quantified for the baseline year, the year 2020, and the projected year of buildout. Direct sources of emissions include on-site combustion of energy such as natural gas used for heating and cooking, emissions from industrial processes, and fuel combustion from mobile sources. Indirect emissions are emissions produced off-site from energy production and water conveyance due to a project's energy use and water consumption. Biogenic CO₂ emissions are not included in the quantification of a project's GHG emissions because biogenic CO₂ is derived from living biomass (e.g., organic matter present in wood, paper, vegetable oils, animal fat, food, animal, and yard waste) as opposed to fossil fuels.

For the City of Morgan Hill, a 1990 emissions inventory was not available, and therefore this potential significance criterion was not used. An existing emissions inventory for year 2010 was compiled by AECOM, which could be used to evaluate the second criterion. Achieving a 15 percent reduction from existing emissions was not used as a significance criteria because the CEQA Guidelines do not establish a net

GREENHOUSE GAS EMISSIONS

zero threshold of significance.³⁹ Furthermore, the City of Morgan Hill is experiencing substantial growth, and the 15 percent reduction from existing conditions cited by CARB in the 2008 Scoping Plan was never intended to apply to individual cities but to the state as a whole. While the second criterion identified by BAAQMD was not applied as the CEQA significance criteria, the overall change in GHG emissions from existing conditions has been evaluated in order to quantify GHG emissions impacts due to the project. BAAQMD's third criterion, which evaluates the efficiency of the plan, has been determined to be the applicable threshold for the proposed Project. Consequently, for the reasons described above, total emissions are compared to the GHG efficiency targets described below.

- The City's 2020 GHG estimated efficiency target would be 6.6 MTCO₂e per service population per year, to align with BAAQMD's efficiency target, identified in their CEQA Guidelines, that is consistent with AB 32.
- The City's 2035 GHG estimated efficiency target would be 3.3 MTCO₂e per service population per year, to align with the mid-term GHG reduction goal of Executive Order B-30-15 and Executive Order S-03-05.⁴⁰
- The City's 2050 GHG estimated efficiency target would be 1.3 MTCO₂e per service population per year, to align with the long-term GHG reduction goals of Executive Order S-03-05.

4.7.3 IMPACT DISCUSSION

This section analyzes potential project-specific and cumulative impacts to GHG emissions.

GHG-1	Implementation of the proposed Project would directly or indirectly generate GHG emissions that may have a significant impact on the environment.

General Plan

Development under the proposed Project would contribute to climate change through direct and indirect emissions of GHG from energy (natural gas and purchased electricity), on-road transportation sources, potable water use, wastewater generation, solid waste disposal, and off-road sources (e.g., equipment used for landscaping, commercial activities, and construction). GHG emissions are based on modeling conducted by AECOM for the City of Morgan Hill as part of the Santa Clara County regional climate mitigation and adaptation initiative, Silicon Valley 2.0 (SV 2.0). The collaborative climate mitigation part of SV 2.0 involved

³⁹ As explained by the California Natural Resources Agency's "Final Statement of Reasons for Regulatory Action, Amendments to the State CEQA Guidelines Addressing Analysis and Mitigation of Greenhouse Gas Emissions Pursuant to Senate Bill 97" (2009), the CEQA Guidelines do not establish a zero emissions threshold of significance because there is no one-molecule rule in CEQA.

⁴⁰ The proposed Project horizon year is 2035; therefore, the BAAQMD efficiency target has been extrapolated to 2035 based on the GHG reduction goal of Executive Order B-30-15, which is to reduce GHG emissions 40 percent below 1990 levels by 2030, and Executive Order S-03-05, which is to reduce GHG emissions 80 percent below 1990 levels by 2050.

GREENHOUSE GAS EMISSIONS

the cities of Cupertino, Gilroy, Morgan Hill, Mountain View, San José, and Saratoga, and unincorporated Santa Clara County. PG&E and the Santa Clara County Office of Sustainability provided the grant funding to support the process.

The community-wide GHG emissions inventory for the proposed General Plan scenarios compared to existing conditions is included in Table 4.7-7 and Table 4.7-8 for years 2020 and 2035, respectively. Emissions are estimated for the year 2020 in order to evaluate consistency with AB 32, which sets a statewide target for 2020. Emissions are estimated for the year 2035 since that is the horizon year of the proposed General Plan.

Magnitude of GHG Emissions

Table 4.7-7 shows emissions in 2020, and Table 4.7-8 shows emissions in 2035 and beyond. Table 4.7-7 shows that state and federal reductions by year 2020 would negate much of the emissions increase as a result in population and employment growth in the City. However, past 2020, the effect of the GHG reductions is lessened as the City experiences additional growth that would surpass the GHG reductions benefits from the adopted state and federal regulations. As a result, Table 4.7-8 shows that despite state and federal regulations, the proposed Project would result in a substantial increase in GHG emissions from existing conditions by the proposed General Plan horizon year 2035. This is considered a *significant impact*.

GHG Emissions Compared to the AB 32 and Executive Order Efficiency Targets

BAAQMD has not adopted a 2035 per capita GHG threshold for operation-related GHG emissions. However, a 2035 goal can be interpolated from Executive Order B-30-15, which calls for a 40 percent reduction from 1990 levels by 2030, and from Executive Order S-03-05, which calls for an 80 percent reduction from 1990 levels by 2050. A 2035 efficiency target was derived for the proposed Project based on these Interpolations. Tables 4.7-7 and 4.7-8 show that the proposed Project would achieve the BAAQMD efficiency metric for year 2020 with state measures alone but would not achieve the efficiency target for year 2035 without additional state, federal, and local reductions.

While per capita emissions under the proposed General Plan would be on a decline that is consistent with the interim GHG reductions for the state, additional state and federal actions are necessary to ensure that state and federally regulated sources (i.e., sources outside the City's jurisdictional control) achieve the deep cuts needed to meet the 2050 target. Emissions from 2020 to 2050 will have to decline several times faster than the current rate needed to reach the 2020 emissions limit.⁴¹ According to the California Council on Science and Technology's (CCST) 2011 report, this includes switching from gasoline-powered cars and trucks to plug-in hybrid, all electric vehicles, or alternative fuels (hydrogen-fuel and/or biofuels); switching

⁴¹ California Air Resources Board (CARB), 2014. *First Update to the Climate Change Scoping Plan: Building on the Framework, Pursuant to AB 32, The California Global Warming Solutions Act of 2006, May 15.*

GREENHOUSE GAS EMISSIONS

TABLE 4.7-7 PROPOSED GENERAL PLAN GHG EMISSIONS 2020 FORECAST

Sector	2010 MTCO ₂ e	2020 BAU MTCO ₂ e	2020 MTCO ₂ e with State Reductions	Change from Existing
Energy	93,635	119,656	93,566	-69
Transportation	160,923	198,836	155,631	-5,292
Off-Road Sources	16,166	19,968	19,968	3,802
Solid Waste	5,876	7,238	7,238	1,362
Wastewater	1,926	2,461	2,461	535
Potable Water	881	1,126	1,126	245
Total Community Emissions	279,407	349,285	279,990	583
Service Population ^{a, b}	51,720	71,169	71,169	—
MTCO ₂ e/SP	5.4	5.2	4.2	—
2020 Plan-Level Efficiency Target	—	6.6	6.6	—
Achieves 2020 Plan-Level Efficiency Target	—	Yes	Yes	—

Notes: Emissions may not total to 100 percent due to rounding. Based on GWPs in the IPCC Fourth Assessment Report (AR4).

a. 2010 is based on 38,200 people and 13,520 employees. 2020 is based on 50,510 people and 16,700 employees.

Source: AECOM, 2015. The transportation emissions inventory has been updated to reflect the revised VMT provided by Hexagon (see Appendix B).

from fuel to electricity to heat building space; de-carbonizing electricity⁴² while maintaining a reliable electricity grid; and aggressive efficiency measures.⁴³ According to the CCST, emissions reductions of 80 percent can be achieved with feasible technology implementation plus research, development, and innovation. Approximately 60 percent of emissions reductions below 1990 levels can be achieved with current technology in use or in the demonstration phase. The remainder of the emission cuts to obtain the full 80 percent reduction below 1990 levels will require development and deployment of new technology.

Achieving this second cut will thus require a substantial commitment to technology development and innovation. Several subsequent studies have also highlighted the variables that drive future scenario studies and challenges to meeting the 2050 target.^{44, 45, 46} Because no single technological approach will allow the

⁴² In general, there are three ways to de-carbonize electricity: nuclear power, fossil fuel with carbon storage, and renewable energy.

⁴³ California Council on Science and Technology, 2011, California's Energy Future – The View to 2050. <http://www.ccst.us/publications/2011/2011energy.pdf>, May

⁴⁴ Greenblatt JB, and Long J. 2012. California's Energy Future - Portraits of Energy Systems for Meeting Greenhouse Gas Reduction Requirements, California Council on Science and Technology, September. <http://ccst.us/publications/2012/2012ghg.pdf>.

⁴⁵ Morrison, Geoff M., Sonia Yeh, Anthony R. Eggert, Christopher Yang, James H. Nelson, 3 Alphabetic: Jeffery B. Greenblatt, Raphael Isaac, Mark Z. Jacobson, Josiah Johnston, Daniel M. Kammen, Ana Mileva, Jack Moore, David Roland-Holst, Max Wei, John P. Weyant, James H. Williams, Ray Williams, Christina B. Zapata. Long-term Energy Planning In California: Insights and Future Modeling Needs. UC-Davis Institute of Transportation Studies. Research Report – UCD-ITS-RR-14-08. Available: http://www.its.ucdavis.edu/research/publications/publication-detail/?pub_id=2217

GREENHOUSE GAS EMISSIONS**TABLE 4.7-8 PROPOSED GENERAL PLAN GHG EMISSIONS 2035 FORECAST AND POST-2035 ESTIMATE**

Sector	2010 MTCO ₂ e	2035 BAU MTCO ₂ e	2035 MTCO ₂ e with State Reductions	Change from Existing	Post-2035 MTCO ₂ e Estimate
Energy	93,635	158,688	118,333	24,698	134,252
Transportation	160,923	227,204	163,662	2,739	177,988
Offroad Sources	16,166	25,672	25,672	9,506	27,919
Solid Waste	5,876	10,327	10,327	4,451	11,231
Wastewater	1,926	3,262	3,262	1,336	3,548
Potable Water	881	1,492	1,492	611	1,623
Total Community Emissions	279,407	426,645	322,748	43,341	356,560
Service Population ^a	51,720	90,470	90,470	—	103,675
MTCO ₂ e/SP	5.4	4.7	3.6	—	3.4
2035/Post-2035 Plan-Level Efficiency Target ^b	—	3.3	3.3	—	1.3
Achieves Plan-Level Efficiency Target	—	No	No	—	No

Notes: Emissions may not total to 100 percent due to rounding. Based on GWPs in the IPCC Fourth Assessment Report (AR4).

a. 2010 is based on 38,200 people and 13,520 employees. 2035 is based on 69,000 people and 21,470 employees.

b. BAAQMD's 2020 GHG efficiency target of 6.6 MTCO₂e/SP is based on the GHG target of AB 32, which is 1990 levels by 2020. BAAQMD's 2020 GHG emissions efficiency target was interpolated from the GHG reduction goals of Executive Order S-03-05 (80% below 2020 by 2050) and Executive Order B-30-15 (40% below 1990 by 2030).

c. The post-2035 emissions inventory is an estimate only based on the change in non-residential square footage (non-residential energy) and the change in service population for other GHG emissions sectors. It does not include additional state or federal reductions post-2035.

Source: AECOM 2015. The transportation emissions inventory has been updated to reflect the revised VMT provided by Hexagon (see Appendix B).

state to accomplish its 2050 goal, obtaining an 80 percent reduction below 1990 levels will require a portfolio of solutions.⁴⁷

The General Plan Update incorporates GHG reduction measures into the Plan to ensure the City maintains a trajectory that is consistent with the GHG reduction target of Executive Order B-30-15. Table 4.7-9 lists the GHG reduction measures incorporated into the General Plan Update and the AECOM quantified emissions reductions.

Although Table 4.7-9 identifies that buildout of the proposed General Plan scenarios would achieve the BAAQMD 2035 performance criteria with implementation of the goals and policies of the General Plan Update. However, the overall goal in the state is to achieve an 80 percent reduction from 1990 levels by

⁴⁶ Energy+Environmental Economics (E3), 2015. Summary of the California State Agency's PATHWAYS Project: Long-term Greenhouse Gas Reduction Scenarios http://www.energy.ca.gov/commission/fact_sheets/documents/E3_Project_Overview_20150130.pdf, January 26

⁴⁷ California Council on Science and Technology, 2011, California's Energy Future: The View to 2050. <http://www.ccst.us/publications/2011/2011energy.pdf>, May.

GREENHOUSE GAS EMISSIONS

TABLE 4.7-9 GHG REDUCTION MEASURES AND QUANTIFIED REDUCTIONS

GHG Reduction Measures/Strategies	2020 MTCO ₂ e	2035 MTCO ₂ e
Energy		
Energy Use Data and Analysis	225	650
Retrofit Financing	5,165	11,130
Building Retrofit Related Regulations	300	1,775
Parking Lot Lighting Efficiency	20	430
Shade Tree Program	20	50
Solar Photovoltaic Development	1,430	3,400
Solar Thermal Development	0	400
Community Choice Aggregations	5,500	7,275
Energy Subtotal	7,160	25,110
Transportation Strategy^a		
Pedestrian Environmental Enhancements	*	*
Bicycle Infrastructure Expansion	45	160
Bicyclist Accommodations	*	*
Bicycle Outreach Program	*	*
Transportation Demand Management	615	1,890
Transit-Oriented Development	*	*
Mixed-Use Development	*	*
Community-Wide Alternative Fuel Vehicles	1,250	3,900
Municipal Fleet Alternative Fuel Vehicles	*	*
Subtotal Transportation	1,910	5,950
Water Strategy		
SB-7X-7	300	410
Subtotal Water	300	410
Solid Waste Strategy		
Zero Waste Goal	*	*
Food Scrap and Yard Waste Diversion	600	1,830
Construction & Demolition Waste Diversion	200	775

GREENHOUSE GAS EMISSIONS**TABLE 4.7-9 GHG REDUCTION MEASURES AND QUANTIFIED REDUCTIONS**

GHG Reduction Measures/Strategies	2020 MTCO ₂ e	2035 MTCO ₂ e
Subtotal Solid Waste	800	2,605
Green Infrastructure		
Urban Forest Program	175	800
Subtotal Green Infrastructure	175	800
Total Local Reductions	10,345	34,875
Total GHG Emissions with State and Local Reductions	269,645	287,873
Service Population ^{a,b}	71,169	90,470
MTCO ₂ e/SP	4.2	3.2
2020 Plan-Level Efficiency Target	6.6	3.3
Achieves 2020 Plan-Level Efficiency Target with Local Reductions	Yes	Yes

Notes: Emissions may not total to 100 percent due to rounding. Based on GWPs in the IPCC Fourth Assessment Report (AR4).

a. The transportation emissions reductions are likely higher than identified based on the revised VMT provided by Hexagon. Therefore, modeling of VMT reductions in the CAP is conservative.

b. Supporting Measure

Source: AECOM, 2015.

2050. CARB's 2014 Update to the Scoping Plan identified that California continues to build its climate policy framework, and there is a need for local government climate action planning to adopt mid- and long-term reduction targets that are consistent with scientific assessments and the statewide goal of reducing emissions 80 percent below 1990 levels by 2050. CARB states that local government reduction targets should chart a reduction trajectory that is consistent with or exceeds the trajectory created by statewide goals as shown in Table 4.7-10, *Statewide Trajectory to Achieve Interim Goal under Executive Orders B-30-15 and S-03-05*.

The policies identified in the General Plan would place the City on a trajectory to achieve the efficiency target for 2035. However, additional state and federal actions are necessary to ensure that state and federally regulated sources (i.e. sources outside the City's jurisdictional control) take similar aggressive measures to ensure the deep cuts needed to achieve the 2050 target. Therefore, GHG impacts for consistency with the more aggressive long-term targets of Executive Order S-30-15 are conservatively considered *significant*.

Applicable Regulations:

- California Global Warming Solutions Act (AB 32)
- Sustainable Communities and Climate Protection Act (SB 375)
- Greenhouse Gas Emission Reduction Targets (Executive Order S-3-05)
- Clean Car Standards – Pavley (AB 1493)

GREENHOUSE GAS EMISSIONS

TABLE 4.7-10 STATEWIDE TRAJECTORY TO ACHIEVE INTERIM GOAL UNDER EXECUTIVE ORDERS B-30-15 AND S-03-05

Year	Description	CARB 2008 Scoping Plan (MMTCO ₂ e) ^a		CARB Inventory Update (MMTCO ₂ e) ^b	
		Second Assessment Report GWP ^b	Percent Reduction to Target	Fourth Assessment Report GWP ^b	Percent Reduction to Target
1990	AB 32, Executive Order B-30-15, and Executive Order S-03-05 base year	433.29	—	431.00	—
2008	Percent Reduction from 2008 to meet AB 32	512.40	15%	487.10	12%
2013	Percent Reduction from 2012 to meet AB 32	—	—	458.68	6%
2030	Percent Reduction from 2012 to meet Executive Order B-30-15	259.97	40%	258.60	40%
2050	Percent Reduction from 2012 to meet Executive Order S-03-05	86.66	80%	86.20	80%

Notes: The 1990 emissions limit was set at 427 MMTCO₂e (426.60) based on the 2007 Inventory. The target includes the net reductions from sinks and rangelands of 6.69 MMTCO₂e for a total of 433.29 MMTCO₂e in 1990. The reductions from the sinks and rangelands category is not available in the First Update to the Scoping Plan. Therefore, the percentage reduction from 1990 for the 2014 Inventory Update is conservative.

GWP: global warming potential; MTCO₂e: metric tons of carbon dioxide-equivalent; MMTCO₂e: million metric tons of carbon dioxide-equivalent

Sources:

a. CARB. 2008, October. Climate Change Proposed Scoping Plan: A Framework for Change.

b. CARB. 2015, April 24. California Greenhouse Gas Inventory for 2000–2013: By Category as Defined by the Scoping Plan, April 24.

- Renewable Portfolio Standards (SB 1078)
- California Integrated Waste Management Act of 1989 (AB 939)
- California Mandatory Commercial Recycling Law (AB 341)
- California Advanced Clean Cars CARB/ Low-Emission Vehicle Program – LEV III (Title 13 CCR)
- Heavy-Duty Vehicle Greenhouse Gas Emissions Reduction Measure (Title 17 CCR)
- Low Carbon Fuel Standard (Title 17 CCR)
- California Water Conservation in Landscaping Act of 2006 (AB 1881)
- California Water Conservation Act of 2009 (SBX7-7)
- Airborne Toxics Control Measure to Limit School Bus Idling and Idling at Schools (13 CCR 2480)
- Airborne Toxic Control Measure to Limit Diesel-Fuel Commercial Vehicle Idling (13 CCR 2485)
- In-Use Off-Road Diesel Idling Restriction (13 CCR 2449)
- Building Energy Efficiency Standards (Title 24, Part 6)
- California Green Building Code (Title 24, Part 11)
- Appliance Energy Efficiency Standards (Title 20)

The proposed General Plan establishes the framework for future growth and development in Morgan Hill. A general plan does not directly result in development without additional approvals. Before any development can occur in the City, it is required to be analyzed for consistency with the proposed General Plan, zoning requirements, and other applicable local and state requirements; comply with the requirements of CEQA; and obtain all necessary clearances and permits. As identified in Table 4.7-8, the proposed Project would achieve the 2035 performance criteria that would ensure the City is on a trajectory to achieve the GHG

GREENHOUSE GAS EMISSIONS

reductions target of Executive Order B-30-15. However, the proposed Project would result in a substantial increase in GHG emissions from existing conditions by the proposed General Plan horizon year 2035 and would not achieve an efficiency target that is 80 percent reduction from 1990 levels.

Significance Before Mitigation: Significant.

Residential Development Control System

The Residential Development Control System, known as the RDCS, regulates population growth through the provision of residential building allotments. The RDCS and the proposed updates to the RDCS as part of the proposed Project affect the pace of development in the City but do not determine the location, type, or intensity of development. Therefore, the RDCS would not have the potential to generate an increase in GHG emissions. Therefore, the RDCS would have *no impact*.

GHG-2	Implementation of the proposed Project would not conflict with an applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of GHGs.

General Plan

This section considers the proposed General Plan's consistency with the following applicable plans, policies, and regulations:

- CARB Scoping Plan
- ABAG/MTC *Plan Bay Area*

The state's GHG emissions reductions objectives are embodied in AB 32, Executive Order B-30-15, Executive Order S-03-05, and SB 375. ABAG and MTC have prepared *Plan Bay Area*, the Bay Area's first SCS, to address the per capita passenger vehicle GHG reduction targets identified in SB 375. The First Update to the Scoping Plan identifies that the state is on track to achieve the GHG reductions identified in AB 32. Additionally, CARB is tasked with updating the Scoping Plan to address the near-term GHG reduction targets of Executive Order B-30-15 for 2030. However, there is no current plan for 2030 or the long-term GHG reduction goals for 2050 identified in Executive Order S-03-05.

CARB's Scoping Plan

In accordance with AB 32, CARB developed the 2008 Scoping Plan to outline the state's strategy to achieve 1990 level emissions by year 2020. To estimate the reductions necessary, CARB projected statewide 2020 BAU GHG emissions (i.e., GHG emissions in the absence of statewide emission reduction measures). CARB identified that California as a whole would be required to reduce GHG emissions by 28.5 percent from

GREENHOUSE GAS EMISSIONS

year 2020 BAU to achieve the targets of AB 32.⁴⁸ The GHG emissions forecast was updated as part of the First Update to the Scoping Plan. In that update, CARB projected that statewide BAU emissions in 2020 would be approximately 509 MMTCO₂e.⁴⁹ Therefore, to achieve the AB 32 target of 431 MMTCO₂e (i.e., 1990 emissions levels) by 2020, the state would need to reduce emissions by 78 MMTCO₂e compared to BAU conditions, a reduction of 15.3 percent from BAU in 2020.^{50,51}

Statewide strategies to reduce GHG emissions identified in the 2008 Scoping Plan include the LCFS; California Appliance Energy Efficiency regulations; California Building Standards (i.e., CALGreen and the 2008 Building and Energy Efficiency Standards); California Renewable Energy Portfolio standard (33 percent RPS); changes in the corporate average fuel economy standards (e.g., Pavley I and Pavley II, which is now known as the California Advanced Clean Cars Program); and other measures. Statewide GHG emissions reduction measures that are being implemented would reduce the City's GHG emissions because they directly affect vehicles, buildings, and energy use within the Study Area.

GHG emissions mitigation measures identified through the regional climate mitigation initiative SV 2.0 were integrated into the proposed General Plan policies to support collaborative opportunities for plan implementation.

Policy NRE-7.1	Water Standards for Private Development. Promote water conservation and efficient water use in all private development projects. Require development to exceed state standards for the use of water.
Policy NRE-7.2	Water Standards for Public Development. Promote water conservation and efficient water use in all public development projects. All new public buildings shall be designed to exceed state standards for water efficiency.
Policy NRE-7.3	Water Efficiency and Landscaping. Promote water conservation and efficient water use in all public and private landscaping plans.
Policy NRE-7.4	Non-Potable Water for Irrigation. Encourage use of non-potable water for landscape irrigation.
Policy NRE-7.5	Dual Plumbing. Explore installation of dual plumbing in large, new commercial and/or residential developments to enable future use of recycled non-potable water generated on- or off-site.
Action NRE-7.C	Water Fixture Retrofitting. Create incentives for homeowners of older residential buildings to retrofit water fixtures to improve water efficiency and conservation. Explore ways to link homeowners with incentive programs offered by other agencies or organization. Options for creating a City-sponsored retrofit program could include using Residential Development Control funds or creating Citywide fees for water usage. Work with utility providers and City departments to market the program owners who own older homes, are undertaking renovations, or are new owners.

⁴⁸ California Air Resources Board (CARB). 2008. October. *Climate Change Proposed Scoping Plan, a Framework for Change*.

⁴⁹ The BAU forecast includes GHG reductions from Pavley and the 33% Renewable Portfolio Standard (RPS).

⁵⁰ California Air Resources Board (CARB), 2014. *First Update to the Climate Change Scoping Plan: Building on the Framework, Pursuant to AB 32, The California Global Warming Solutions Act of 2006*, May 15.

⁵¹ If the GHG emissions reductions from Pavley I and the Renewable Electricity Standard are accounted for as part of the BAU scenario (30 million MTCO₂e total), then the State would need to reduce emissions by 108 million MTCO₂e, which is a 20-percent reduction from BAU.

GREENHOUSE GAS EMISSIONS

Policy CNR-8.9	Commercial Landscaping. Encourage new commercial development to provide outdoor areas and landscaping and tree canopy to enhance the surroundings.
Action CNF-8.C	Parking Lot Lighting Efficiency Retrofit Ordinance. Develop a parking lot lighting retrofit ordinance requiring property owners or managers to replace inefficient parking lot or parking structure lighting with high-efficiency lighting technologies where feasible.
Policy CNF-11.8	Multi-Modal Transportation System. Require new subdivisions to contain a network of streets, sidewalks, trails, and transit facilities that accommodate all modes of transportation. Methods to achieve this may include: ▪ Incorporating complete streets designed for low vehicle speeds. ▪ Planting trees along both sides of streets. ▪ Installing bus stops, shelters, and benches in or adjacent to the project. ▪ Providing safe walking and bicycling routes to schools, parks, and other youth destinations.
Policy CNF-11.28	Bicycles and Pedestrians. Require attached residential sites to be designed to accommodate the needs of bicyclists and pedestrians. This may be accomplished by: ▪ Providing bicycle and pedestrian connections to adjacent uses with paseos, trails, sidewalks, paths, and similar amenities. ▪ Creating attractive connections through landscaping, lighting, benches, other amenities to create safe and visually interesting spaces. ▪ Installing bicycle racks and lockers near building entrances, integrated into the design of the project and screened with appropriate landscaping.
Policy NRE-10.1	Regional and Subregional Cooperation. Cooperate with regional agencies in developing and implementing air quality management plans. Support subregional coordination with other cities, counties, and agencies in the Santa Clara Valley and adjacent areas to address land use, jobs/housing balance, and transportation planning issues as a means of improving air quality.
Policy NRE-10.2	State and Federal Regulation. Encourage effective regulation of mobile and stationary sources of air pollution and support state and federal regulations to improve automobile emission controls.
Policy NRE-10.3	Automobile Emissions. Encourage the use of and infrastructure for alternative fuel, hybrid, and electric vehicles. Encourage new and existing public and private development to include electric vehicle charging stations.
Policy NRE-10.4	Reduced Automobile Use. To reduce air pollution the frequency and length of automobile trips and the amount of traffic congestion by controlling sprawl, promoting infill development, and encouraging mixed uses and higher density development near transit. Support the expansion and improvement of alternative modes of transportation. Encourage development project designs that protect and improve air quality and minimize direct and indirect air pollutant emissions by including components that reduce vehicle trips.
Policy NRE-15.1	Greenhouse Gas Emission Reduction Targets. Maintain a greenhouse gas reduction trajectory that is consistent with the greenhouse gas reduction targets of Executive Orders B-30-15 (40 percent below 1990 levels by 2030) and S-03-05 (80 percent below 1990 levels by 2050) to ensure the City is consistent with statewide efforts to reduce greenhouse gas emissions.
Policy NRE-15.2	Linking Land Use and Transportation. Encourage land use and transportation patterns that reduce dependence on automobiles.
Policy NRE-15.3	Climate Action Plan. Utilize policies in this General Plan denoted with the green leaf symbol as the City's greenhouse gas emissions reduction strategy.

GREENHOUSE GAS EMISSIONS

Policy NRE-15.4	Sustainable Land Use. Promote land use patterns that reduce the number and length of motor vehicle trips.
Policy NRE-15.5	Jobs Housing Balance. To the extent feasible, encourage a balance and match between jobs and housing.
Policy NRE-15.6	Residential Near Transit. Encourage higher density residential and mixed-use development adjacent to commercial centers and transit corridors – the land along or within walking distance of a street served by transit.
Policy NRE-15.7	Mix of Uses in Employment Centers. Encourage employment areas to include a mix of support services to minimize the number of employee trips.
Policy NRE-15.8	Walkable City. Encourage retail and office areas to be located within walking and biking distance of existing and proposed residential developments.
Policy NRE-15.9	Urban Forest. Support development and maintenance of a healthy, vibrant urban forest through outreach, incentives, and strategic leadership.
Policy NRE-15.10	VTM Reduction. Continue to work with the Santa Clara Valley Transportation Authority on regional transportation solutions that will reduce vehicle miles traveled and greenhouse gas emissions.
Policy NRE-15.11	Green Building. Promote green building practices in new development.
Policy NRE-15.12	Municipal Fleet Alternative Fuel Vehicles. Shift municipal vehicle fleet from gasoline- and diesel-powered vehicles to alternative fueled vehicles, to the extent possible.
Action NRE-15.A	Long-term GHG Reduction Monitoring. Regularly monitor progress made towards the City’s 2035 and additional future targets through inventory updates and review of implementation success related to statewide actions.
Policy NRE-16.1	Energy Standards for New Development. New development, including public buildings, should be designed to exceed state standards for the use of energy.
Policy NRE-16.2	Energy Conservation. Promote energy conservation techniques and energy efficiency in building design, orientation, and construction.
Policy NRE-16.3	Energy Use Data and Analysis. Provide information to increase building owner, tenant, and operator knowledge about how, when, and where building energy is used.
Policy NRE-16.4	Retrofit Financing. Promote existing and support development of new private financing options for building retrofits and renewable energy development.
Policy NRE-16.5	Energy Efficiency. Encourage development project designs that protect and improve air quality and minimize direct and indirect air pollutant emissions by including components that promote energy efficiency.
Policy NRE-16.6	Landscaping for Energy Conservation. Encourage landscaping plans for new development to address the planting of trees and shrubs that will provide shade to reduce the need for cooling systems and allow for winter daylighting.
Policy NRE-16.7	Renewable Energy. Encourage new and existing development to incorporate renewable energy generating features, like solar panels.
Policy NRE-16.8	Residential Development Code. Emphasize energy conservation building techniques for new residential construction through the implementation of Chapter 18.78 of the Municipal Code.

GREENHOUSE GAS EMISSIONS

Policy NRE-16.9	Subdivision Design. In compliance with Section 66473.1 of the State Subdivision Map Act, promote subdivision design that provides for passive solar heating and natural cooling through the Development Review Committee subdivision review procedures.
Action NRE-16.A	Community Choice Aggregation. Partner with other Santa Clara County jurisdictions to determine the feasibility for development of a regional CCA program, including identification of the geographic scope, potential costs to participating jurisdictions and residents, and potential liabilities.
Action NRE-16.C	Local Energy Ordinances. Develop local ordinances that promote energy conservation and efficiency. Examples of such ordinances include: energy audits, solar access, solar swimming pool heating, insulation and solar retrofit, and solar water heating.
Policy TR-8.1	Bikeways for All Abilities. The bikeways system shall recognize and reflect the needs and abilities of cyclists with a diverse range of age and experience, from children learning to ride bicycles to experienced adult commute cyclists.
Policy TR-8.2	Bicycle Commuting. Encourage increased use of bicycles for adults commuting to work and for students traveling to school through a safe and efficient bikeways system, enhanced bicycle parking facilities, and bicycle safety and promotion programs, including showers for bicycle commuters at places of employment.
Policy TR-8.3	Alternative Routes. Establish alternative routes, with direct routes on busy streets for experienced cyclists, and less direct routes on bicycle paths and quieter streets for less experienced and recreational cyclists.
Policy TR-8.4	Coordinated Bicycle Planning. Coordinate development of the bikeways system with the Santa Clara Countywide Trails Master Plan, the Santa Clara Countywide Bicycle Plan, the South County Joint Area Plan, the Santa Clara County Bicycle Technical Guidelines, and the California Department of Transportation Highway Design Manual.
Policy TR-8.5	Bicycle Facility Standards. Where feasible, incorporate the Bicycle Technical Guidelines prepared by the Valley Transportation Authority into City standards for bicycle facility planning and design, including intersection striping, signalization, and railroad crossings.
Policy TR-8.6	Multi-Use Trail Accessibility. All multi-use bicycle/pedestrian trails shall comply with state and federal accessibility codes and standards, such as those established by the Americans with Disability Act (ADA) and California Access Code (Title 24, California Code of Regulation).
Policy TR-8.7	Bikeways and Private Roads. Private roads shall be designated as part of the bikeways plan only if there is an agreement between the City and the appropriate owner for such a designation.
Policy TR-8.8	Priorities for Bikeways Implementation. Where feasible, implement the bikeways system concurrent with adjacent development. Establish priorities for bikeway implementation based on improving safety and enhancing both commute and recreational cycling. These priorities shall be considered in directing resources and efforts to obtain funding for implementation. Priorities shall be regularly reviewed and updated as implementation proceeds. Current priorities for implementation of the bikeways plan include the following: ▪ Live Oak High School Access ▪ Little Llagas Creek Trail ▪ Santa Teresa and Monterey Highway Corridor Improvements ▪ East West Connection to Coyote Creek Trail
Policy TR-8.9	Emergency Services Review for Bikeways. Incorporate emergency services (fire and police) into the review process for new bikeways.

GREENHOUSE GAS EMISSIONS

Policy TR-8.10	Safe Routes to Schools. Define safe pedestrian and bicycle routes to all new schools (public and private) during the planning and design process so that these routes can be developed and in place prior to opening the school.
Policy TR-8.11	Multi-Jurisdictional Bikeway Alignments. For multi-jurisdictional alignments, develop partnerships with Santa Clara County to plan, finance, implement, and maintain the bikeways system.
Policy TR-8.12	Bicycle Parking. Bicycle parking facilities shall be provided at all schools, parks, recreation facilities, commercial centers, civic buildings (including the library), transit centers, and work places based on the recommendations and standards in the Bikeways Master Plan.
Policy TR-8.13	Cul-de-Sac Connectivity. Where safety permits, improve connectivity by requiring pedestrian and bicycle public access from a cul-de-sac to an adjacent public amenity, such as a park or school, or from a cul-de-sac to an adjacent street.
Policy TR-8.14	Bikeways Master Plan. Implement and maintain the City's bikeways system based on standards established in the Bikeways Master Plan.
Policy TR-8.15	Bicycle Outreach. Continue to encourage bicycle safety and promotion programs, in partnership with other agencies and organizations.
Policy TR-8.16	Bicycle Paths and Flood Control. Promote extension of bicycle paths in conjunction with flood control efforts.
Action TR-8.A	Bicycle Outreach Program. Develop a bicycle outreach program to promote community-wide "bikeability" through safety programs, bicycle tune-up clinics/training, partnerships with bicycle advocacy groups and cycling clubs, and/or local bicycle maps (e.g., "Bike Downtown").
Policy TR-9.1	Private Development Connections. Ensure adequate pedestrian access in all developments, with special emphasis on pedestrian connections in the downtown area, in shopping areas, and major work centers, including sidewalks in industrial areas in accordance with the Trails and Natural Resources Master Plan.
Policy TR-9.2	Walking as an Alternate Mode. Promote walking as an alternate transportation mode for its contribution to health and the reduction of energy consumption and pollution. (SCJAP 11.03).
Policy TR-9.3	Pedestrian System for Diverse Users. The trails and pedestrian system shall recognize and reflect the needs and abilities of pedestrians with a diverse range of age and ability.
Policy TR-9.4	Coordination with Pedestrian Planning. Development of the trails and pedestrian system shall be coordinated with the City's Bikeways Master Plan, City standard details, Santa Clara Countywide Trails Master Plan, the Santa Clara Countywide Bicycle Plan, the South County Joint Area Plan, the Santa Clara County Bicycle Technical Guidelines, and the California Department of Transportation Highway Design Manual.
Policy TR-9.5	Trail Guidelines. Trails shall comply with the Trail Guidelines included in the Trails and Natural Resources Master Plan.
Policy TR-9.6	Pedestrian Facility Accessibility. All trails and pedestrian access shall comply with state and Federal accessibility codes and standards, such as those established by the Americans with Disability Act (ADA) and California Access Code (Title 24, California Code of Regulation).
Policy TR-9.7	Concurrent Implementation. Where feasible, implement the trails and pedestrian system concurrent with adjacent developments.
Policy TR-9.8	Emergency Services Review for Trails. Incorporate emergency services (fire and police) into the review process for new trails.

GREENHOUSE GAS EMISSIONS

Policy TR-9.9	Multi-Jurisdictional Trail Alignments. For multi-jurisdictional alignments, develop partnerships with Santa Clara County to plan, finance, implement, and maintain the trail system.
Policy TR-9.10	Sidewalk Connectivity. Improve sidewalk connectivity by installing new sidewalks where they do not exist, consistent with the Trails and Natural Resources Master Plan.
Policy TR-9.11	Trail System Standards. Implement and maintain the City's trails system based on standards established in the Trails and Natural Resources Master Plan.
Policy TR-9.12	Trails and Flood Control. Promote new trails and extend existing trails in conjunction with flood control efforts.
Policy TR-10.1	Transportation Demand Management. Provide informational resources to local business subject to SB 1339 and BAAQMD transportation demand management program requirements and encourage additional voluntary participation in the program.
Policy TR-10.2	Flexible Work Hours. Encourage employers to provide a flexible set of working hours to ease traffic congestion.
Policy TR-10.3	Carpooling. Support a Countywide car/vanpool matching program.
Policy TR-10.4	Air Quality and Transportation Demand Management. Investigate opportunities for preparing and implementing Air Quality and Transportation Demand Management Plans by employers and developers of new residential and non-residential developments.
Policy SSI-10.4	Heat Island Mitigation. Encourage design and landscaping features that reduce the intensification of heat due to the urban heat island effect, including tree canopy, cool pavement, and living roofs.
Policy SSI-14.2	Water Conservation. Support water conservation measures that comply with state and federal legislation and that are consistent with measures adopted in the Urban Water Management Plan.
Policy SSI-14.3	SB-X7-7. Implement water conservation policies contained within Morgan Hill's Urban Water Management Plan to achieve 20 percent per capita water reductions by 2020.
Policy SSI-14.12	Water Reclamation Facilities. Encourage the development of water reclamation facilities where feasible, in order to make reclaimed water available to help meet the growing water needs of the South County region.
Policy SSI-14.13	Use of Recycled Water. Increase use of recycled water in development projects and landscaping; implement best practices (e.g., dual plumbing) to expand recycled water use when safe, practical, and available.
Policy SSI-17.4	Food Scrap and Yard Waste Diversion. Promote the collection of food scraps and compostable paper in yard waste bins through public outreach campaigns.
Policy SSI-17.12	Building Reuse. Promote the use of recycled materials, including reuse of existing building shells and elements, as part of new construction or renovations.
Action SSI-17.A	Zero Waste Goal. Prepare a zero-waste strategic plan to maximize solid waste diversion community-wide.

The General Plan includes policies to reduce GHG emissions and is consistent with the programs identified within the CARB Scoping Plan. Therefore, the proposed Project would not conflict with the CARB Scoping Plan and impacts would be *less than significant*.

GREENHOUSE GAS EMISSIONS

MTC's Plan Bay Area

To achieve ABAG's/MTC's sustainable vision for the Bay Area, the *Plan Bay Area* land use concept plan for the region concentrates the majority of new population and employment growth in the region in PDAs. PDAs are transit-oriented, infill development opportunity areas within existing communities. Overall, well over two-thirds of all regional growth by 2040 is allocated within PDAs. PDAs are expected to accommodate 80 percent (or over 525,570 units) of new housing and 66 percent (or 744,230) of new jobs. In Morgan Hill, *Plan Bay Area* includes the Morgan Hill Downtown Transit Town Center PDA. *Plan Bay Area* allocated 1,420 new housing units to this PDA as a result of the forecast increase in multi-family and mixed use development in this PDA under the adopted Downtown Specific Plan.^{52,53} The proposed General Plan would encourage development consistent with the goals and objectives for this PDA. The proposed General Plan also includes policies that, once adopted, would reduce GHG emissions from transportation sources to the maximum extent practicable.

The General Plan is consistent with the objectives of *Plan Bay Area* for growth within this PDA. Therefore, the proposed Project is consistent with land use concept plan for Morgan Hill identified in *Plan Bay Area*. Therefore, impacts would be *less than significant*.

Applicable Regulations:

- California Global Warming Solutions Act (AB 32)
- Sustainable Communities and Climate Protection Act (SB 375)
- Greenhouse Gas Emission Reduction Targets (Executive Order S-3-05)
- Clean Car Standards – Pavley (AB 1493)
- Renewable Portfolio Standards (SB 1078)
- California Integrated Waste Management Act of 1989 (AB 939)
- California Mandatory Commercial Recycling Law (AB 341)
- California Advanced Clean Cars CARB/ Low-Emission Vehicle Program – LEV III (Title 13 CCR)
- Heavy-Duty Vehicle Greenhouse Gas Emissions Reduction Measure (Title 17 CCR)
- Low Carbon Fuel Standard (Title 17 CCR)
- California Water Conservation in Landscaping Act of 2006 (AB 1881)
- California Water Conservation Act of 2009 (SBX7-7)
- Statewide Retail Provider Emissions Performance Standards (SB 1368).
- Airborne Toxics Control Measure to Limit School Bus Idling and Idling at Schools (13 CCR 2480)
- Airborne Toxic Control Measure to Limit Diesel-Fuel Commercial Vehicle Idling (13 CCR 2485)
- In-Use Off-Road Diesel Idling Restriction (13 CCR 2449)
- Building Energy Efficiency Standards (Title 24, Part 6)

⁵² Metropolitan Transportation Commission (MTC) and Association of Bay Area Governments (ABAG), 2013. Final Priority Development Area Development Feasibility and Readiness Assessment, July.

⁵³ Metropolitan Transportation Commission (MTC) and Association of Bay Area Governments (ABAG), 2013. *Plan Bay Area*, <http://geocommons.com/maps/141979>.

GREENHOUSE GAS EMISSIONS

- California Green Building Code (Title 24, Part 11)
- Appliance Energy Efficiency Standards (Title 20)

Significance Before Mitigation: Less than significant.

Residential Development Control System

The RDCS regulates population growth through the provision of residential building allotments. The RDCS and the proposed updates to the RDCS as part of the proposed Project affect the pace of development in the City but do not determine the location, type, or intensity of development. Therefore, the RDCS would not have the potential to generate an increase in GHG emissions or conflict with plans adopted for the purpose of reducing GHG emissions. The RDCS would have *no impact*.

4.7.4 CUMULATIVE IMPACTS

GHG-3	Implementation of the proposed Project would contribute to cumulative GHG impacts.

As described above, GHG emissions related to the proposed Project are not confined to a particular air basin but are dispersed worldwide. Therefore, the analysis of impacts in Section 4.7.3, Impact Discussion, above, also addresses cumulative impacts. While the policies of the proposed General Plan ensure substantial progress toward the long term-goals of Executive Order S-03-05, GHG impacts for consistency with the more aggressive 2050 targets are conservatively considered to be cumulatively considerable and therefore potentially *significant*. This is the same impact identified above as GHG-1.

Applicable Regulations and Conditions of Approval:

- California Global Warming Solutions Act (AB 32)
- Sustainable Communities and Climate Protection Act (SB 375)
- Greenhouse Gas Emission Reduction Targets (Executive Order S-3-05)
- Clean Car Standards – Pavley (AB 1493)
- Renewable Portfolio Standards (SB 1078)
- California Integrated Waste Management Act of 1989 (AB 939)
- California Mandatory Commercial Recycling Law (AB 341)
- California Advanced Clean Cars CARB/ Low-Emission Vehicle Program – LEV III (Title 13 CCR)
- Heavy-Duty Vehicle Greenhouse Gas Emissions Reduction Measure (Title 17 CCR)
- Low Carbon Fuel Standard (Title 17 CCR)
- California Water Conservation in Landscaping Act of 2006 (AB 1881)
- California Water Conservation Act of 2009 (SBX7-7)
- Statewide Retail Provider Emissions Performance Standards (SB 1368).
- Airborne Toxics Control Measure to Limit School Bus Idling and Idling at Schools (13 CCR 2480)

GREENHOUSE GAS EMISSIONS

- Airborne Toxic Control Measure to Limit Diesel-Fuel Commercial Vehicle Idling (13 CCR 2485)
- In-Use Off-Road Diesel Idling Restriction (13 CCR 2449)
- Building Energy Efficiency Standards (Title 24, Part 6)
- California Green Building Code (Title 24, Part 11)
- Appliance Energy Efficiency Standards (Title 20)

Significance Before Mitigation: Significant.

4.7.5 SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION MEASURES

GHG-1	Implementation of the proposed Project would directly or indirectly generate GHG emissions that may have a significant impact on the environment.

The City achieves the 2020 and 2035 GHG efficiency targets. The City has integrated the GHG reduction measures identified in the regional SV 2.0 effort in conjunction with the proposed General Plan to ensure that the City is on a trajectory to achieve the interim GHG reduction targets of Executive Orders B-30-15 and S-03-15. However, there are no additional feasible GHG reduction measures that would mitigate impacts for the long-term GHG emissions scenario. The majority of the post-2035 reductions needed to reach the 2050 target will likely come from state measures (e.g., additional vehicle emissions standards), but the City does not have authority over such measures. The state has not identified plans to reduce emissions beyond 2020. In addition, as part of the proposed General Plan, GHG emissions mitigation measures identified through the regional climate mitigation initiative SV 2.0 were integrated into the proposed General Plan policies to support collaborative opportunities for plan implementation. Despite inclusion of these measures in the proposed General Plan, additional statewide reductions are needed to achieve the long-term GHG reduction goals identified in Executive Order S-03-05, and the impact is considered *significant and unavoidable*.

Significance After Mitigation: Significant and unavoidable.

4.7.6 FULL BUILDOUT

The full buildout anticipated under the proposed Project would include significantly more non-residential development than the 2035 horizon-year development projection analyzed in Section 4.7.3, Impact Discussion, in terms of both the amount and the extent of development. Therefore, the potential for impacts related to greenhouse gas emissions would increase (see Table 4.7-8). However, as discussed in Chapter 3, Project Description, it is extremely unlikely that full buildout would ever occur under the proposed Project. Therefore, an analysis of full buildout is not required by CEQA.

HAZARDS AND HAZARDOUS MATERIALS

4.8 HAZARDS AND HAZARDOUS MATERIALS

This chapter describes the potential impacts associated with the adoption and implementation of the proposed Project that are related to hazardous materials, airport hazards, emergency response plans, and wildland fires. Additionally, this chapter describes the environmental setting, including regulatory framework and existing conditions, identifies policies and mitigation measures that would avoid or reduce significant impacts.

4.8.1 ENVIRONMENTAL SETTING

4.8.1.1 REGULATORY FRAMEWORK

Hazardous materials refer generally to hazardous substances, hazardous waste, and other materials that exhibit corrosive, poisonous, flammable, and/or reactive properties and have the potential to harm human health and/or the environment. Hazardous materials are used in products (e.g. household cleaners, industrial solvents, paint, pesticides, etc.) and in the manufacturing of products (e.g. electronics, newspapers, plastic products, etc.). Hazardous materials can include petroleum, natural gas, synthetic gas, acutely toxic chemicals, and other toxic chemicals that are used in agriculture, commercial, and industrial uses; businesses; hospitals; and households. Accidental releases of hazardous materials have a variety of causes, including highway incidents, warehouse fires, train derailments, shipping accidents, and industrial incidents.

The term “hazardous materials” as used in this section includes all materials defined in the California Health and Safety Code (H&SC):

“A material that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment. ‘Hazardous materials’ include, but are not limited to, hazardous substances, hazardous waste, and any material that a handler or the unified program agency has a reasonable basis for believing that it would be injurious to the health and safety of persons or harmful to the environment if released into the workplace or the environment.”

The term includes chemicals regulated by the United States Department of Transportation (USDOT), the United States Environmental Protection Agency (USEPA), the California Department of Toxic Substances Control (DTSC), the California Governor’s Office of Emergency Services (CalOES), and other agencies as hazardous materials, wastes, or substances. “Hazardous waste” is any hazardous material that has been discarded, except those materials specifically excluded by regulation. Hazardous materials that have been intentionally disposed of or inadvertently released fall within the definition of “discarded” materials and can result in the creation of hazardous waste. Hazardous wastes are broadly characterized by their ignitability, toxicity, corrosivity, reactivity, radioactivity, or bioactivity. Federal and state hazardous waste definitions are similar, but contain enough distinctions that separate classifications are in place for federal Resource

HAZARDS AND HAZARDOUS MATERIALS SITES

Conservation and Recovery Act (RCRA) hazardous wastes and state non-RCRA hazardous wastes. Hazardous wastes require special handling and disposal because of their potential to impact public health and the environment. Some materials are designated “acutely” or “extremely” hazardous under relevant statutes and regulations.

Hazardous materials and wastes can pose a significant actual or potential hazard to human health and the environment when improperly treated, stored, transported, disposed of, or otherwise managed. Many federal, state, and local programs that regulate the use, storage, and transportation of hazardous materials and hazardous waste are in place to prevent these unwanted consequences. These regulatory programs are designed to reduce the danger that hazardous substances may pose to people and businesses under normal daily circumstances and as a result of emergencies and disasters.

Federal Regulations

The following federal agencies oversee hazards and hazardous materials concerns.

United States Environmental Protection Agency

The USEPA laws and regulations ensure the safe production, handling, disposal, and transportation of hazardous materials. Laws and regulations established by the USEPA are enforced in Santa Clara County by the California Environmental Protection Agency (CalEPA).

United States Department of Transportation

The USDOT has the regulatory responsibility for the safe transportation of hazardous materials between states and to foreign countries. The USDOT regulations govern all means of transportation, except for those packages shipped by mail, which are covered by United States Postal Service regulations. The federal Resource Conservation and Recovery Act of 1976 (RCRA) imposes additional standards for the transport of hazardous wastes.

Occupational Safety and Health Administration

The Occupational Safety and Health Administration (OSHA) oversees the administration of the Occupational Safety and Health Act, which requires specific training for hazardous materials handlers, provision of information to employees who may be exposed to hazardous materials, and acquisition of material safety data sheets (MSDS) from materials manufacturers. The MSDS describe the risks, as well as proper handling and procedures, related to particular hazardous materials. Employee training must include response and remediation procedures for hazardous materials releases and exposures.

HAZARDS AND HAZARDOUS MATERIALS

State Regulations

California Health and Safety Code and Code of Regulations

California Health and Safety Code Chapter 6.95 and California Code of Regulations, Title 19, Section 2729 set out the minimum requirements for business emergency plans and chemical inventory reporting. These regulations require businesses to provide emergency response plans and procedures, training program information, and a hazardous material chemical inventory disclosing hazardous materials stored, used, or handled on-site. A business which uses hazardous materials or a mixture containing hazardous materials must establish and implement a business plan if the hazardous material is handled in certain quantities.

California Environmental Protection Agency

One of the primary agencies that regulate hazardous materials is the CalEPA. The state, through CalEPA, is authorized by the USEPA to enforce and implement certain federal hazardous materials laws and regulations. Within the California EPA, the California Department of Toxic Substances Control (DTSC) has primary regulatory responsibility for the management of hazardous materials and the generation, transport, and disposal of hazardous waste under the authority of the RCRA, the California Health and Safety Code,¹ and the Hazardous Waste Control Law. Since August 1, 1992, the DTSC has been authorized to implement the state's hazardous waste management program for the California EPA. The DTSC requirements include the need for written programs and response plans, such as Hazardous Materials Business Plans (HMBPs). The DTSC programs include dealing with aftermath clean-ups of improper hazardous waste management, evaluation of samples taken from sites, enforcement of regulations regarding use, storage, and disposal of hazardous materials, and encouragement of pollution prevention.

California Division of Occupational Safety and Health

Like OSHA at the federal level, the California Division of Occupational Safety and Health (CalOSHA) is the responsible state-level agency for ensuring workplace safety. The CalOSHA assumes primary responsibility for the adoption and enforcement of standards regarding workplace safety and safety practices. In the event that a site is contaminated, a Site Safety Plan must be crafted and implemented to protect the safety of workers. Site Safety Plans establish policies, practices, and procedures to prevent the exposure of workers and members of the public to hazardous materials originating from the contaminated site or building.

California Building Code

The State of California provided a minimum standard for building design through the California Building Code (CBC), which is located in Part 2 of Title 24 of the California Code of Regulations (CCR). The CBC is

¹Hazardous Substance Account, Chapter 6.5 (Section 25100 et seq.) and the Hazardous Waste Control Law, Chapter 6.8 (Section 25300 et seq.) of the Health and Safety Code.

HAZARDS AND HAZARDOUS MATERIALS SITES

based on the 1997 Uniform Building Code, but has been modified for California conditions. The CBC is updated every three years, and the current CBC went into effect in January 2014. It is generally adopted on a jurisdiction-by-jurisdiction basis, subject to further modification based on local conditions. Commercial and residential buildings are plan-checked by local city and county building officials for compliance with the CBC typical fire safety requirements of the CBC included; the installation of sprinklers in all high-rise buildings; the establishment of fire resistance standards for fire doors, building materials, and particular types of construction; and the clearance of debris and vegetation within a prescribed distance from occupied structures in wildlife hazard areas.

California Emergency Management Agency

The California Emergency Management Agency (CalEMA) was established as part of the Governor's Office on January 1, 2009 – created by Assembly Bill 38 (Nava), which merged the duties, powers, purposes, and responsibilities of the former Governor's Office of Emergency Services with those of the Governor's Office of Homeland Security. The CalEMA is responsible for the coordination of overall state agency response to major disasters in support of local government. The agency is responsible for assuring the state's readiness to respond to and recover from all hazards – natural, manmade, emergencies, and disasters – and for assisting local governments in their emergency preparedness, response, recovery, and hazard mitigation efforts.

California Department of Forestry and Fire Protection

The California Department of Forestry and Fire Protection (CAL FIRE) has mapped fire threat potential throughout California.² The CAL FIRE ranks fire threat based on the availability of fuel and the likelihood of an area burning (based on topography, fire history, and climate). The rankings include no fire threat, moderate, high, and very high fire threat. Additionally, the CAL FIRE produced the *2010 Strategic Fire Plan for California*, which contains goals, objectives, and policies to prepare for and mitigate for the effects of fire on California's natural and built environments.³

California Fire Code

California Code of Regulations, Title 24, also known as the California Building Standards Code, contains the California Fire Code (CFC), included as Part 9 of that Title. Updated every three years, the CFC includes provisions and standards for emergency planning and preparedness, fire service features, fire protection systems, hazardous materials, fire flow requirements, and fire hydrant locations and distribution. Similar to the CBC, the CFC is generally adopted on a jurisdiction-by-jurisdiction basis, subject to further modification based on local conditions.

² CalFIRE, http://www.fire.ca.gov/fire_prevention/fire_prevention_wildland_zones_development.php, accessed on September 23, 2015.

³ CalFIRE, *2010 Strategic Fire Plan for California*, <http://cdfdata.fire.ca.gov/pub/fireplan/fpupload/fpppdf668.pdf>, accessed on September 23, 2015.

HAZARDS AND HAZARDOUS MATERIALS

California Department of Transportation and California Highway Patrol

Two state agencies have primary responsibility for enforcing federal and state regulations and responding to hazardous materials transportation emergencies: the California Highway Patrol (CHP) and the California Department of Transportation (Caltrans). Caltrans manages more than 50,000 miles of California's highway and freeway lanes, provides intercity rail services, permits more than 400 public-use airports and special-use hospital heliports, and works with local agencies. Caltrans is also the first responder for hazardous material spills and releases that occur on those highway and freeway lanes and intercity rail services.

The CHP enforces hazardous materials and hazardous waste labeling and packing regulations designed to prevent leakage and spills of materials in transit and to provide detailed information to cleanup crews in the event of an accident. Vehicle and equipment inspection, shipment preparation, container identification, and shipping documentation are all part of the responsibility of the CHP, which conducts regular inspections of licensed transporters to assure regulatory compliance. In addition, the State of California regulates the transportation of hazardous waste originating or passing through the state.

Common carriers are licensed by the CHP, pursuant to the California Vehicle Code, Section 32000. This section requires licensing every motor (common) carrier who transports, for a fee, in excess of 500 pounds of hazardous materials at one time and every carrier, if not for hire, who carries more than 1,000 pounds of hazardous material of the type requiring placards. Common carriers conduct a large portion of the business in the delivery of hazardous materials.

Federal and State Hazardous Materials-Specific Programs and Regulations

Asbestos-Containing Materials Regulations

Asbestos-containing materials (ACM) are materials that contain asbestos, a naturally occurring fibrous mineral that has been mined for its useful thermal properties and tensile strength. ACM is generally defined as either friable or non-friable. Friable ACM is defined as any material containing more than one percent asbestos. Friable ACM is more likely to produce airborne fibers than non-friable ACM, and can be crumpled, pulverized, or reduced to powder by hand pressure. Non-friable ACM is defined as any material containing one percent or less asbestos. Non-friable ACM cannot be crumpled, pulverized, or reduced to powder by hand pressure. When left intact and undisturbed, ACM does not pose a health risk to building occupants. Potential for human exposure occurs when ACM becomes damaged to the extent that asbestos fibers become airborne and are inhaled. Inhalation of asbestos airborne fibers can lead to various health problems, the most serious of which includes lung disease.

State-level agencies, in conjunction with the USEPA and OSHA, regulate removal, abatement, and transport procedures for ACMs. Releases of asbestos from industrial, demolition, or construction activities are prohibited by these regulations and medical evaluation and monitoring is required for employees performing activities that could expose them to asbestos. Additionally, the regulations include warnings that must be heeded and practices that must be followed to reduce the risk for asbestos emissions and exposure.

HAZARDS AND HAZARDOUS MATERIALS SITES

Finally, federal, state, and local agencies must be notified prior to the onset of demolition or construction activities with the potential to release asbestos. Specifically, BAAQMD Regulation 11, Rule 2, requires a written plan or notification of intent to demolish or renovate be provided to the District at least ten working days prior to commencement of demolition or renovation.

Lead-based Paint

Lead-based paint (LBP), which can result in lead poisoning when consumed or inhaled, was widely used in the past to coat and decorate buildings. Lead poisoning can cause anemia and damage to the brain and nervous system, particularly in children. Like ACM, LBP generally does not pose a health risk to building occupants when left undisturbed; however, deterioration, damage, or disturbance will result in hazardous exposure. In 1978, the use of LBP was federally banned by the Consumer Product Safety Commission. Therefore, only buildings built before 1978 are presumed to contain LBP, as well as buildings built shortly thereafter, as the phase-out of LBP was gradual.

CalOSHA's Lead in Construction Standard is contained in Title 8, Section 1532.1 of the California Code of Regulations. The regulations address all of the following areas: permissible exposure limits (PELs); exposure assessment; compliance methods; respiratory protection; protective clothing and equipment; housekeeping; medical surveillance; medical removal protection (MRP); employee information, training, and certification; signage; record keeping; monitoring; and agency notification.

Polychlorinated Biphenyls

The USEPA prohibited the use of polychlorinated biphenyls (PCBs) in the majority of new electrical equipment starting in 1979, and initiated a phase-out for much of the existing PCB-containing equipment. The inclusion of PCBs in electrical equipment and the handling of those PCBs are regulated by the provisions of the Toxic Substances Control Act (TSCA), 15 United States Code Section 2601 et seq. Relevant regulations include labeling and periodic inspection requirements for certain types of PCB-containing equipment and outline highly specific safety procedures for their disposal. The State of California likewise regulates PCB-laden electrical equipment and materials contaminated above a certain threshold as hazardous waste; these regulations require that such materials be treated, transported, and disposed accordingly. At lower concentrations for non-liquids, regional water quality control boards may exercise discretion over the classification of such wastes.

HAZARDS AND HAZARDOUS MATERIALS

Regional Regulations

Central Coast Regional Water Quality Control Board

The Porter-Cologne Water Quality Act⁴ established the State Water Resources Control Board (SWRCB) and divided the state into nine regional basins, each under the jurisdiction of a Regional Water Quality Control Board (RWQCB). The Central Coast Region (Region 2) is the Regional Water Quality Control Board that regulates water quality in the Project Area. The Central Coast RWQCB has the authority to require groundwater investigations when the quality of groundwater or surface waters of the state is threatened, and to require remediation actions, if necessary.

Bay Area Air Quality Management District

The Bay Area Air Quality Management District (BAAQMD) has primary responsibility for control of air pollution from sources other than motor vehicles and consumer products (which are the responsibility of CalEPA and California Air Resources Board [CARB]). The BAAQMD is responsible for preparing attainment plans for non-attainment criteria pollutants, control of stationary air pollutant sources, and the issuance of permits for activities including demolition and renovation activities affecting asbestos containing materials (District Regulation 11, Rule 2) and lead (District Regulation 11, Rule 1).

Santa Clara County Department of Environmental Health

The routine management of hazardous materials in California is administered under the Unified Hazardous Waste and Hazardous Materials Management Program (“Unified Program”), and most of the City of Morgan Hill’s hazardous materials programs are administered and enforced under the Unified Program.⁵ The CalEPA has granted responsibilities to the Santa Clara County Department of Environmental Health (DEH) Hazardous Materials Compliance Division (HMCD) for implementation and enforcement of hazardous material regulations under the Unified Program as a Certified Unified Program Agency (CUPA). The HMCD also enforces additional hazardous materials storage requirements in accordance with the Santa Clara County Hazardous Materials Storage Ordinance and Toxic Gas Ordinance.⁶

Under authority from the RWQCB, the Santa Clara County DEH implements the Local Oversight Program (LOP) to oversee the investigation and remediation of leaking underground storage tank (LUST) Sites in Santa Clara County, including the City of Morgan Hill. Businesses storing hazardous materials over threshold quantities are required to submit Hazardous Materials Business Plans (HMBPs) to the HMCD. A HMBP must include measures for safe storage, transportation, use, and handling of hazardous materials. A

⁴ California Water Code Sections 13000 et seq.

⁵ California Health and Safety Code, Chapter 6.11, Sections 25404-25404.8.

⁶ Santa Clara County Ordinance Code, Division B11, Chapters XIII – XIV.

HAZARDS AND HAZARDOUS MATERIALS SITES

HMBP must also include a contingency plan that describes the facility's response procedures in the event of a hazardous materials release.

Santa Clara County Fire Department

The Santa Clara Fire Department (SCCFD), through a formal agreement with the HMCD, implements hazardous materials programs for the City of Morgan Hill as a Participating Agency within the Unified Program.⁷ The HMCD also enforces storage, handling, and dispensing requirements for hazardous materials and other regulated materials according to the City of Morgan Hill Hazardous Materials Storage Ordinance, described below.⁸

Santa Clara County Office of Emergency Services

The Santa Clara County Office of Emergency Services (OES) is responsible for preparing the County's Emergency Operations Plan (County EOP). The most recent County EOP was adopted by the County Board of Supervisors in March 2008. The County EOP identifies the range and degree of probable emergency situations, the full range of emergency services which may be needed under multiple scenarios, and the timing and coordination of emergency service delivery, including recovery operations. The County EOP also establishes an emergency organization and assigns tasks to all responsible service agencies so that they may be applied effectively where and when they are needed.

South County Airport Comprehensive Land Use Plan (ACLUP)

A small portion of Morgan Hill and its SOI extends into the Airport Influence Area (AIA) of the South County Airport, which is located in the unincorporated community of San Martin between Morgan Hill and Gilroy.

The AIA includes all areas surrounding the airport that are affected by noise, height, and safety considerations. All development projects within the AIA must be reviewed by the Santa Clara County Airport Land Use Commission (ALUC) to ensure consistency with the ACLUP. A small portion of the Morgan Hill City limits and SOI near Llagas Creek are located within the AIA. The Morgan Hill City limits and SOI are located outside of the airport's noise contours and safety zones.

The ACLUP also establishes height restrictions for structures, and the area subject to these height restrictions is slightly greater than the AIA. Per Figure 6, FAR Part 77 Surfaces, of the ACLUP, structures in

⁷ Santa Clara County Department of Environmental Health. Unidocs. *Who Regulates What in Santa Clara County*. <http://www.unidocs.org/members/whoregulateswhat.html>, accessed November 22, 2013.

⁸ Morgan Hill City Code, Chapter 15.44. *Morgan Hill Fire Code*.

HAZARDS AND HAZARDOUS MATERIALS

the southern portion of the Morgan Hill City limits and SOI should not exceed the height limits of between 481 feet and 631 feet above mean sea level depending on the location of the structure.⁹

Santa Clara County General Plan

The Santa Clara County General Plan contains several policies and implementation programs that apply to environmental resources, agricultural resources, and natural hazards. Even though the Santa Clara County General Plan policies do not affect projects within the City limits, there are areas within the Morgan Hill General Plan area that currently fall within County jurisdiction. Santa Clara County General Plan policies apply to these areas unless they become annexed into the City.

Policies supporting emergency preparedness and hazard mitigation are in the Health and Safety Chapter. These policies as listed below (Table 4.8-1) encourage cities to prepare and adopt emergency response plans, and discourage cities from extending urban services or urban development into high hazard areas.

TABLE 4.8-1 SANTA CLARA COUNTY GENERAL PLAN POLICIES RELEVANT TO HAZARDS AND HAZARDOUS MATERIALS

Strategy/Policy Number	Strategy/Policy Content
Policy C-HS 14	All feasible measures to safely and effectively manage hazardous materials and site hazardous materials treatment facilities should be used, including complying with all federal and state mandates.
Policy C-HS 15.2	The cities and County of Santa Clara shall ensure that all relevant discretionary land use and development decisions: a. Are consistent with the intent and provisions of the Countywide Hazardous Waste Management Plan (CHWMP), especially the facilities siting map and criteria, which identify potentially suitable areas for siting needed waste management facilities; and, b. Do not unnecessarily limit the availability of sites suitable for potential hazardous waste management facilities, as identified in the CHWMP facilities siting criteria and map.
Policy C-HS 36	General strategies for airport safety in Santa Clara County include the following: a. Limit population densities and land uses within designated safety zones. b. Regulate structures and objects which could be hazardous or distracting to air navigation.

Local Regulations***Morgan Hill Municipal Code***

The City has adopted, by reference, the California Code of Regulations, Title 24, Part 9 (2010 CFC), some portions of which are deleted, modified, or amended by Chapter 15.44 of the Morgan Hill Municipal Code (Morgan Hill Fire Code). The Morgan Hill Fire Code is intended to regulate and govern the safeguarding of

⁹ Santa Clara County, South County Airport Comprehensive Land Use Plan, November 19, 2008.

HAZARDS AND HAZARDOUS MATERIALS SITES

life and property from fire and explosion hazards arising from the storage, handling and use of hazardous substances, materials and devices, and from conditions hazardous to life or property in the occupancy of buildings in Morgan Hill.

Morgan Hill Emergency Operation Plan

The City of Morgan Hill adopted an Emergency Operation Plan (City EOP) in 2005, which outlines the roles and responsibilities of City staff and volunteers during a disaster. The City developed the City EOP to better prepare for responses to emergency situations that could result from natural disasters and technological incidents. The Morgan Hill Office of Emergency Services (City OES) staff maintains the City EOP in accordance with the State of California's Standardized Emergency Management System (SEMS).¹⁰

4.8.1.2 EXISTING CONDITIONS

Hazardous Materials Sites

California Government Code Section 65962.5 requires the CalEPA to compile, maintain, and update specified lists of hazardous material release sites. CEQA (California Public Resources Code Section 21092.6) require the lead agency to consult the lists compiled pursuant to Government Code Section 65962.5 to determine whether the project and any alternatives are identified on any of the following lists:

- **EPA NPL:** The EPA's National Priorities List includes all sites under the USEPA's Superfund program, which was established to fund cleanup of contaminated sites that pose risk to human health and the environment.
- **EPA CERCLIS and Archived Sites:** The EPA's Comprehensive Environmental Response, Compensation, and Liability Information System includes a list of 15,000 sites nationally identified as hazardous sites. This would also involve a review for archived sites that have been removed from CERCLIS due to No Further Remedial Action Planned (NFRAP) status.
- **EPA RCRIS (RCRA Info):** The Resource Conservation and Recovery Act Information System (RCRIS or RCRA Info) is a national inventory system about hazardous waste handlers. Generators, transporters, handlers, and disposers of hazardous waste are required to provide information for this database.
- **DTSC Cortese List:** The DTSC maintains the Hazardous Waste and Substances Sites (Cortese) list as a planning document for use by the state and local agencies to comply with the CEQA requirements in providing information about the location of hazardous materials release sites. This list includes the Site Mitigation and Brownfields Reuse Program Database (CalSites).

¹⁰ City of Morgan Hill, <http://www.morgan-hill.ca.gov/index.aspx?NID=133>, accessed on September 8, 2015.

HAZARDS AND HAZARDOUS MATERIALS

- **DTSC HazNet:** The DTSC uses this database to track hazardous waste shipments.
- **SWRCB LUSTIS:** This stands for the Leaking Underground Storage Tank Information System and the SWRCB maintains an inventory of USTs and leaking USTs, which tracks unauthorized releases.

The required lists of hazardous material release sites are commonly referred to as the “Cortese List” after the legislator who authored the legislation. Because the statute was enacted more than 20 years ago, some of the provisions refer to agency activities that were conducted many years ago and are no longer being implemented and, in some cases, the information required in the Cortese List does not exist. Those requesting a copy of the Cortese Lists are now referred directly to the appropriate information resources contained on internet websites hosted by the boards or departments referenced in the statute, including DTSC’s online EnviroStor database and the SWRCB’s online GeoTracker database. These two databases include sites where historical or ongoing activities have resulted in known or suspected release of hazardous materials to soil and groundwater.

A search of the online databases on September 4, 2015 identified 88 sites within the Project Area, as listed in Table 4.8-2 and shown on Figure 4.8-1. The majority of the listed sites are classified as LUST Sites; most are associates with gasoline and diesel and most are closed cases or eligible for closure. However, one site of note is Olin Corporation’s (Olin) property at 425 Tennant Avenue (Site). Olin and Standard Fuse manufactured signal flares from 1965 to 1995, which resulted in the discharge of perchlorate to soil and groundwater beneath the 13-acre site. Olin began investigation the perchlorate release shortly after its discovery beneath the Site in 2000. In 2003, Olin initiated a program under the direction of the Central Coast Regional Water Quality Control Board to provide replacement water users of water from domestic wells impacted by perchlorate. In 2003, 188 domestic wells had perchlorate that exceeded drinking water standards (which has declined to six wells since that time). By 2004, Olin constructed and began operating the onsite groundwater extraction and treatment system (GETS) to control migration of perchlorate from the site. The current GETS is operating successfully and captures the elevated concentrations of perchlorate that remain in groundwater aquifers to depths of approximately 350 feet below ground surface from the Site to approximately 4,000 feet south of the Site. In July 2015, the RWQCB issued a notification of an upcoming groundwater cleanup study to test cleanup and control of perchlorate using groundwater cleanup technology call gradient driven remediation (GDR) below Tennant Avenue near US Highway 101. The GDR technology is a green technology that promises to locally clean up and control perchlorate without the need for energy to operate pumps and will not require construction of pipelines. A more detailed description of GDR can be found in Olin’s May 10, 2012 Gradient Driven Remediation Work Plan.

Airport Hazards

A small portion of Morgan Hill and its Sphere of Influence (SOI) extends into the Airport Influence Area (AIA) of the South County Airport, which is located in the unincorporated community of San Martin between Morgan Hill and Gilroy. The airport is operated by Santa Clara County, and is used for general aviation, which includes all aviation activities other than commercial passenger flights, commuter/air taxi,

HAZARDS AND HAZARDOUS MATERIALS SITES

TABLE 4.8-2 HAZARDOUS MATERIAL SITES IN THE BAY AREA

Map ID	Site Name	Address	Site Type	Potential Contaminants	Cleanup Status
Envirostor Cleanup Program Sites					
1.	A French Cleaner	602 Tennant Station Way	Voluntary Cleanup	Tetrachloroethylene (PCE)	Active
2.	Alien Technology Corporation	18410 Butterfield Rd	Tiered Permit	None Specified	Inactive - Needs Evaluation
3.	Asco Air Conditioning	16250 Railroad Ave.	Historical	Solvents, Lead	Refer: Other Agency
4.	Barrett Avenue Elementary	895 Barrett Avenue	School Cleanup	Metals, Pesticides	Certified
5.	Bas Precision Sheet Metal, Inc.	16170 Jaqueline Ct	Tiered Permit	None Specified	Inactive - Needs Evaluation
6.	Borello Property	Cochran Road and Peet Road	Voluntary Cleanup	Pesticides	Certified
7.	Borello St. Marks Property	Cochran Rd and Saint Marks Ave	Voluntary Cleanup	Pesticides	No Further Action
8.	Castle A.L. Inc	190 Mast	Historical	None Specified	Refer: RWQCB
9.	Depressurized Technologies Int	335 Cochrane Cir	Inspection	None Specified	No Action
10	Depressurized Technologies Int	335 Cochrane Cir	Haz Waste - Standardized	None Specified	Closed
11.	Jackson Family Trust	235 Tennant Ave	Tiered Permit	Gasoline, Diesel, Jet Fuel, Motor Oil	Certified
12.	Joleen Way Groundwater Remediation	S. End of Joleen Way	Historical	Solvents	Refer: RWQCB
13.	Madrone Land Corp./San Jose Trap & Skeet	645 Cochrane Rd.	Historical	Waste Oil, Lead	Refer: RWQCB
14.	New Morgan Hill High School	Burnett Avenue	School Cleanup	Pesticides, Arsenic, Lead	Certified
15.	Phototek	18450 Sutter Boulevard	Tiered Permit	None Specified	Inactive - Needs Evaluation
16.	Ryan Properties	E. Main Ave. & East Lane	Evaluation	None Specified	No Further Action

HAZARDS AND HAZARDOUS MATERIALS**TABLE 4.8-2 HAZARDOUS MATERIAL SITES IN THE BAY AREA**

Map ID	Site Name	Address	Site Type	Potential Contaminants	Cleanup Status
17.	Sunsweet	91 East 4th Street	Historical	None Specified	Refer: Other Agency
18.	Unaxis Materials, Inc./ Contraves, Inc.	16035 Vineyard Boulevard	Tiered Permit	None Specified	No Further Action
GeoTracker Sites					
19.	Aguilar Trucking	535 E Dougherty Ave	LUST Cleanup Site	Diesel	Completed - Case Closed
20.	Associated Concrete	130 E. Main Avenue	LUST Cleanup Site	Diesel	Completed - Case Closed
21.	Bonner Packing Co.	550 Monterey	Land Disposal Site	Gasoline, Benzene (B), Toluene (T), Ethylbenzene €, Xylene (X), Fuel Oxygenates (FO)	Open
22.	Bp Facility #11224	16995 Monterey	LUST Cleanup Site	Gasoline, BTEX, FO	Open - Remediation
23.	Castle Vegtech	16470 Vineyard Blvd	Cleanup Program Site	Pesticides, Solvents	Open - Site Assessment
24.	Chevron #9-2060	825 E Dunne Ave	LUST Cleanup Site	Gasoline	Completed - Case Closed
25.	Cienega Trust Property	95 E Central Ave	LUST Cleanup Site	Gasoline	Completed - Case Closed
26.	Colombini Ranch	675 Peebles Ave	LUST Cleanup Site	Gasoline	Completed - Case Closed
27.	Diana Avenue	665 Diana Avenue	Cleanup Program Site	Lead	Completed - Case Closed
28.	Don Love Auto	17090 Monterey Hwy	LUST Cleanup Site	Gasoline	Completed - Case Closed
29.	Don Love Exxon	16990 Monterey Rd	LUST Cleanup Site	Gasoline	Completed - Case Closed
30.	Former White Gasoline	Monterey Road And Watsonville Road	LUST Cleanup Site	Gasoline	Completed - Case Closed

HAZARDS AND HAZARDOUS MATERIALS SITES

TABLE 4.8-2 HAZARDOUS MATERIAL SITES IN THE BAY AREA

Map ID	Site Name	Address	Site Type	Potential Contaminants	Cleanup Status
31.	Gladys Jackson Maintenance Yard	13600 Murphy Ave	LUST Cleanup Site	Diesel	Completed - Case Closed
32.	Glass Tek/Balcunas	16840 Joleen Way	Cleanup Program Site	Solvents	Open - Remediation
33.	Gunter Brothers	17620 Monterey Street	LUST Cleanup Site	Gasoline, BTEX, FO	Completed - Case Closed
34.	Henry T. And Hisako Higashi	620 San Pedro Ave	LUST Cleanup Site	Gasoline	Completed - Case Closed
35.	Hudson Gas Station (Former)	10950 Monterey	LUST Cleanup Site	Gasoline, BTEX, FO	Open - Site Assessment
36.	Isaacson Grain Company	17500 Depot St	LUST Cleanup Site	Waste Oil	Completed - Case Closed
37.	Kajiko Nursery	15725 Hill Rd	LUST Cleanup Site	Gasoline	Completed - Case Closed
38.	Kikunaga Nursery	Rt. 2 Box 542 B Miramonte Avenue	LUST Cleanup Site	Gasoline	Completed - Case Closed
39.	Kirby Canyon Landfill	910 Coyote Creek Golf Drive	Land Disposal Site	BTEX	Open
40.	Knopf Residence	14692 Knopf Ct	LUST Cleanup Site	Diesel	Completed - Case Closed
41.	KSBW TV Transmitter Site	1000 Summit Road	LUST Cleanup Site	Diesel	Completed - Case Closed
42.	Madrone Land Corporation	645 Cochrane Road	Cleanup Program Site	None Specified	Completed - Case Closed
43.	Madrone Landfill	Hwy 101 N. Of Burnette Ave	Land Disposal Site	None Specified	Open - Remediation
44.	Mason Electric (Rhino Gym)	70 E 4th St	LUST Cleanup Site	Gasoline	Completed - Case Closed
45.	Millhouse Mall	17485 Monterey Rd	LUST Cleanup Site	Waste Oil	Completed - Case Closed

HAZARDS AND HAZARDOUS MATERIALS**TABLE 4.8-2 HAZARDOUS MATERIAL SITES IN THE BAY AREA**

Map ID	Site Name	Address	Site Type	Potential Contaminants	Cleanup Status
46.	Morgan Hill Cdf	15670 Monterey Road	LUST Cleanup Site	Gasoline	Open - Site Assessment
47.	Morgan Hill Corporation Yard	105 Edes Court	LUST Cleanup Site	Gasoline, BTEX, FO	Completed - Case Closed
48.	Morgan Hill Sports Field	Tennant Avenue And Fisher Avenue	Cleanup Program Site	Pesticides, Waste Oil, Lead	Completed - Case Closed
49.	Morgan Hill Unif School District	11230 Monterey Road	Lust Cleanup Site	Diesel	Completed - Case Closed
50.	Nematollah Ghassemkhami	16380 Monterey Hwy	Lust Cleanup Site	Waste Oil	Completed - Case Closed
51.	Olin Corporation	425 Tennant Ave.	Cleanup Program Site	Perchlorate	Open - Remediation
52.	Once Over Farm	13905 Watsonville Rd	Lust Cleanup Site	Gasoline	Completed - Case Closed
53.	Pico Ranch	17085 Uvas Rd	Lust Cleanup Site	Gasoline	Completed - Case Closed
54.	Private Residence	13575 Struzenberg Ct	Lust Cleanup Site	Diesel	Completed - Case Closed
55.	Private Residence	195 Scheller Ave	Lust Cleanup Site	Gasoline	Completed - Case Closed
56.	Private Residence	15848 Walter Bretton Dr	Lust Cleanup Site	Gasoline	Completed - Case Closed
57.	Private Residence	Route 20/Richmond Ave	Lust Cleanup Site	Gasoline	Completed - Case Closed
58.	Private Residence	14905 Santa Teresa Blvd	Lust Cleanup Site	Gasoline	Completed - Case Closed
59.	Rancho Canada De Oro	325 Casa Loma Rd	Lust Cleanup Site	Diesel	Completed - Case Closed
60.	Redtree Properties	140 San Pedro Ave	Lust Cleanup Site	Diesel	Completed - Case Closed

HAZARDS AND HAZARDOUS MATERIALS SITES

TABLE 4.8-2 HAZARDOUS MATERIAL SITES IN THE BAY AREA

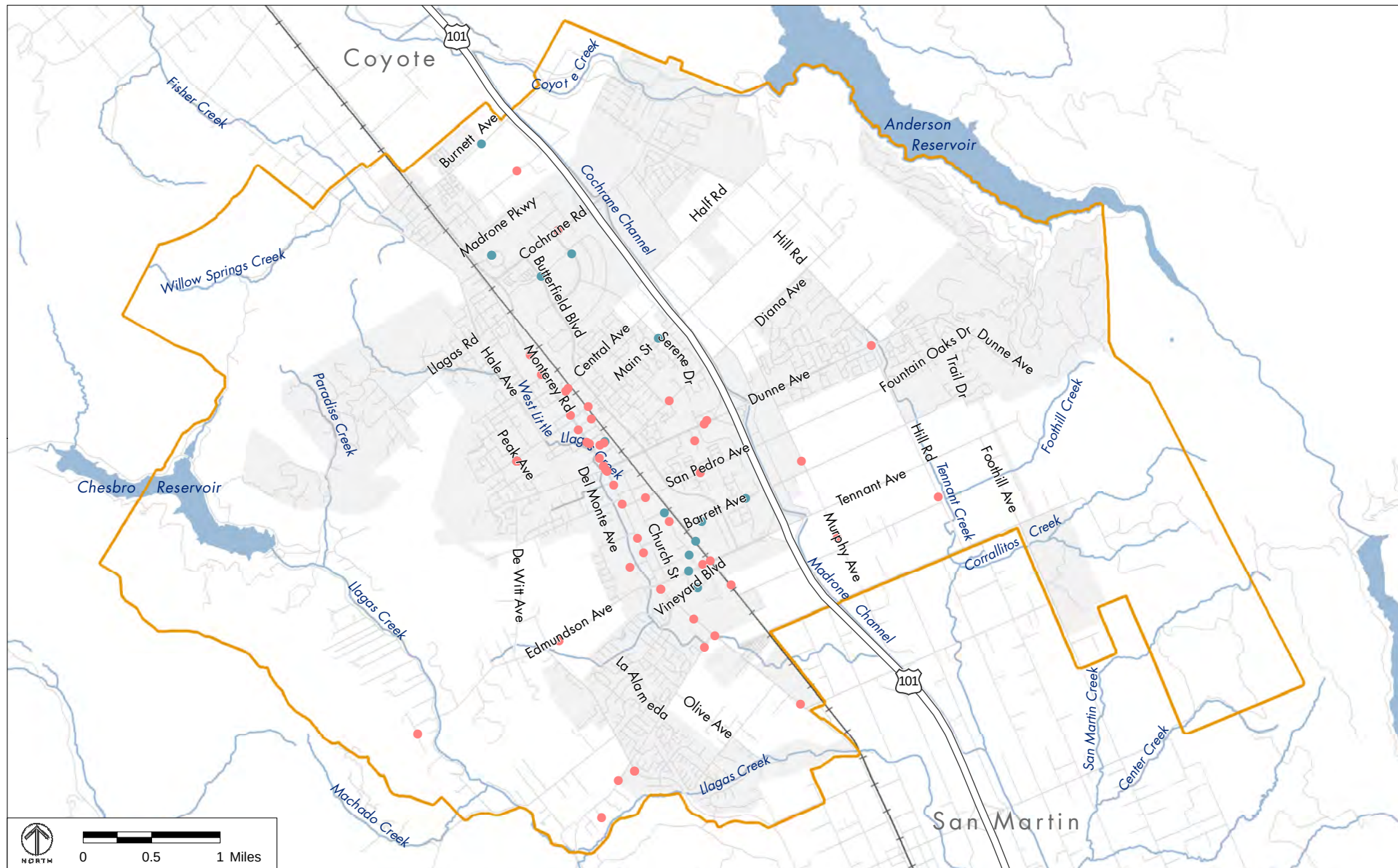
Map ID	Site Name	Address	Site Type	Potential Contaminants	Cleanup Status
61.	Redwood Empire Inc.	10 Madrone Ave	Lust Cleanup Site	Diesel	Completed - Case Closed
62.	Rist Quarry	14905 Watsonville Rd	Lust Cleanup Site	Waste Oil	Completed - Case Closed
63.	Riverside Golf Course	9770 Monterey Rd	Lust Cleanup Site	Gasoline	Completed - Case Closed
64.	Rosicrucian Order	15780 Murphy Ave	Lust Cleanup Site	Gasoline	Completed - Case Closed
65.	Royal Oak Mushroom	15480 Watsonville Rd	Lust Cleanup Site	Gasoline	Completed - Case Closed
66.	Ruth Jones Residence	14905 Santa Teresa Blvd	Lust Cleanup Site	Gasoline	Completed - Case Closed
67.	Rutherford Property	15975 Monterey Hwy	Lust Cleanup Site	None Specified	Completed - Case Closed
68.	Rutherford/Vineyard Ctr	15975 Monterey Hwy	Lust Cleanup Site	Gasoline	Completed - Case Closed
69.	Sabek Gas Station	16270 Monterey Road	Lust Cleanup Site	Gasoline, BTEX, FO	Open - Remediation
70.	Shell	810 E Dunne Ave	Lust Cleanup Site	Gasoline	Completed - Case Closed
71.	Shell - 17905 Monterey	17905 Monterey Rd.	Lust Cleanup Site	Gasoline, BTEX, FO	Open - Eligible For Closure
72.	Simple Beverages	17290 Monterey St.	Lust Cleanup Site	Diesel, Gasoline	Completed - Case Closed
73.	Sunsweet Dryers	91 4th St E	Lust Cleanup Site	None Specified	Completed - Case Closed
74.	Thompson Residence	13575 Spring Valley Rd	Lust Cleanup Site	Gasoline	Completed - Case Closed
75.	Tm Cobb Company	375 Tennant Ave	Lust Cleanup Site	None Specified	Completed - Case Closed

HAZARDS AND HAZARDOUS MATERIALS**TABLE 4.8-2 HAZARDOUS MATERIAL SITES IN THE BAY AREA**

Map ID	Site Name	Address	Site Type	Potential Contaminants	Cleanup Status
76.	Tony Kristovich Property	860 W Edmundson Ave	Lust Cleanup Site	None Specified	Completed - Case Closed
77.	Tri-Pallet Site (Former)	60 E Central Ave	Lust Cleanup Site	Gasoline	Completed - Case Closed
78.	U-Save Rockery	15760 Railroad Ave	Lust Cleanup Site	Gasoline	Completed - Case Closed
79.	Ultramar	14660 Monterey Avenue	Lust Cleanup Site	Gasoline	Completed - Case Closed
80.	Unocal #6169	17015 Monterey St	Lust Cleanup Site	Gasoline	Completed - Case Closed
81.	Unocal #6169	17015 Monterey	Lust Cleanup Site	Gasoline	Completed - Case Closed
82.	Ushiba Property	2055 E Dunne Ave	Lust Cleanup Site	Diesel	Completed - Case Closed
83.	Vacant Lot	17305 Monterey Hwy	Lust Cleanup Site	Waste Oil	Completed - Case Closed
84.	Villa Ciolino	16873 Monterey Road	Lust Cleanup Site	Gasoline	Completed - Case Closed
85.	Volpi/Gaither Prop.	17995 Monterey Rd	Lust Cleanup Site	Waste Oil	Completed - Case Closed
86.	Williams Tank Lines Truck Spill	Hwy 101 And Tennant Avenue	Cleanup Program Site	Gasoline, BTEX, FO	Open - Eligible For Closure
87.	World Oil #52	16720 Monterey	Lust Cleanup Site	Gasoline	Open - Eligible For Closure
88.	Wright Mercury Mine, Rancho Canada De Oro	Casa Loma Road	Land Disposal Site	Metals	Open - Inactive

Source: DTSC EnviroStor 2015 and SWRCB GeoTracker 2015.

HAZARD & HAZARDOUS MATERIALS



Hazardous Material Sites
 ● EnviroStor Cleanup Program Sites
 ● GeoTracker Sites

○ Sphere of Influence
 ■ City Boundary

Source: City of Morgan Hill, 2015; California Department of Toxic Substances Control, 2015; State Water Resources Control Board, 2015.

Figure 4.8-1

Hazardous Material Sites

HAZARDS AND HAZARDOUS MATERIALS

and military uses. General aviation activity typically includes single-engine and small twin-engine aircraft holding six or fewer people. The South County Airport is the smallest and least active airport in the county.

Additionally, the Norman Y. Mineta San Jose International Airport is located approximately 25 miles north of Morgan Hill. There are no private airstrips in the vicinity of the locations where future development could occur as a result of implementation of the proposed Project.

Wildland Fire Hazard

CAL FIRE describes “wildland/urban interface” as the condition where highly flammable native vegetation, such as trees and grasses, meets high-value structures, such as homes. Historically, homes in these wildland/urban intermix boundary areas were particularly vulnerable to wildfires because they were built with a reliance on fire department response for protection rather than fire resistance, survivability, and self-protection. However, in the recent past, a number of serious wildfires have highlighted the need for regulating development in these hazardous areas.

The severity of the wildfire hazard is based on fuel classification, topography (steepness of slope), and critical fire weather frequency. CAL FIRE defines Fire Hazard Severity Zones for areas within the state; a fire hazard is defined as a “measure of the likelihood of an area burning and how it burns.”

As shown in Figure 4.8-2, Morgan Hill’s Fire Hazard Severity Zones range from Moderate to High. These zones are primarily located in hillside areas. Of the 19,573 total acres in the Project Area, approximately:

- 5,191 acres are located in a Very High Fire Hazard Severity Zone;
- 5,056 acres are located in a High Fire Hazard Severity Zone; and
- 367 acres are located in a Moderate Fire Hazard Severity Zone.¹¹

CAL FIRE Fire Hazard Severity Zone maps indicate areas for which the Board of Forestry has determined that the State of California has fiscal responsibility for wildland fire protection services as the State Responsibility Area (SRA), and areas for which local jurisdictions have fiscal responsibility as the Local Responsibility Area (LRA). SRAs include areas covered by forest or trees capable of producing forest products, and lands used for range or forage purposes. SRAs do not include lands owned by the federal government or lands within City boundaries.¹² Thus, in Morgan Hill, the areas within the City limits primarily fall into the LRA category while the areas within the SOI are considered SRAs, as shown in Figure 4.8-2.

¹¹ This was analyzed based on CAL FIRE’s Fire Hazard Severity Zone GIS data provided by the City of Morgan Hill in January 2013.

¹² State of California Resources Agency, State Responsibility Area Classification System, http://frap.fire.ca.gov/projects/sra_review/downloads/2015_SRA_Review/SRA_Classification_System_Update.pdf, accessed September 23, 2015.

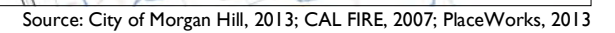


Figure 4.8-2

Fire Hazard Severity Zones

Fire Hazard Severity Zone

Very High
High
Moderate

 Local Responsibility Area

 State Responsibility Area

 Sphere of Influence
 City Boundary

HAZARDS AND HAZARDOUS MATERIALS

4.8.2 THRESHOLDS OF SIGNIFICANCE

According to Appendix G, Environmental Checklist, of the CEQA Guidelines, the proposed Project would have a significant impact regarding hazards and hazardous materials if it would:

1. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.
2. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.
3. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.
4. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment.
5. Be located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport it results in a safety hazard for people residing or working in the project area.
6. Be within the vicinity of a private airstrip and result in a safety hazard for people residing or working in the project area.
7. Impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan.
8. Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

4.8.3 IMPACT DISCUSSION

This section analyzes the proposed Project's potential impacts and cumulative impacts related to hazards and hazardous materials.

HAZ-1	Implementation of the proposed Project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

General Plan

Hazardous materials are routinely used, transported, and handled throughout the City of Morgan Hill. Companies located in the Industrial or Commercial/Industrial land use designation of the proposed General

HAZARDS AND HAZARDOUS MATERIALS SITES

Plan could use, store, or generate hazardous materials for research, manufacturing, cleaning, or other commercial uses, and the proposed General Plan would allow agricultural uses within the Project Area that may also use or transport hazardous materials such as pesticides. These activities are subject to a variety of federal, state, and local laws, policies, and regulations, as described in Section 4.8.1.1, Regulatory Framework, of this chapter. Future development under the proposed Project would be subject to regulatory programs such as those overseen by RWQCB and DTSC. In addition, Santa Clara County HMCDD has responsibility in the City of implementation and enforcement of hazardous material regulations as a CUPA. The HMCDD also enforces additional hazardous materials storage requirements in accordance with Santa Clara County Hazardous Materials Storage Ordinance and Toxic Gas Ordinance.

In addition, the proposed General Plan contains the following policies and strategies that, once adopted, would further ensure that new development would not create a significant hazard to the public or the environment through routine transport, use, or handling of hazardous materials.

Policy SSI-1.3	Safety Public Education Programs. Continue and improve public education programs that: a) increase awareness of the safety hazards present in South County, b) provide information on mitigation techniques, and c) strengthen public support for adopted policies which might restrict development in hazardous areas.
Policy SSI-1.4	Development Regulations and Hazards. Regulate development in hazardous areas in such a way that it minimizes disruption of the environment and does not trigger or accelerate the hazardous processes which exist in South County.
Policy SSI-1.A	Management of Hazardous Areas. Continue existing development regulations and policies regarding management of hazardous areas, with monitoring to determine their effectiveness. Make policy changes only after review by all three South County jurisdictions. (SCJAP 15.10 & 15.11) [Action PHS-2.4]
Policy SSI-4-3	Use and Handling Requirements. Continue a program of regular inspections and monitoring to ensure compliance with local, state, and federal regulations, in order to reduce the risks associated with the use and handling of hazardous materials and wastes. (SCJAP 9.00) [Policy PHS-3b]
Policy SSI-4-4	Industrial and Commercial Users and Generators. Continue to implement the Joint Powers Pretreatment Program for industrial and commercial hazardous material users and/or hazardous waste generators, and coordinate as appropriate with Memoranda of Understanding (MOU) inspections, Hazardous Materials Storage Ordinance (HMSO) regulations, and implementation of applicable state laws. (SCJAP 9.01) [Policy PHS-3c]
Policy SSI-4-5	Storage and Usage. Continue to regularly inspect regularly activities that store and/or use hazardous materials, including above-ground and underground storage tanks and related equipment, to ensure compliance with the City's Hazardous Materials Storage Ordinance (HMSO). (SCJAP 9.02) [Policy PHS-3d]
Policy SSI-4-6	Short-Term Storage. Regularly inspect those facilities which store hazardous waste on site for less than 90 days (a time period for which a hazardous materials storage permit is not required). (SCJAP 9.03) [Policy PHS-3e]
Policy SSI-4-7	Handling. Require submittal of a hazardous materials handling plan as a prerequisite for developments requiring zone changes and use permits. (SCJAP 9.04) [Policy PHS-3f]

Compliance, with applicable federal, state, and local laws and regulations regarding handling of these materials, as described in Section 4.8.1.1, Regulatory Framework, of this chapter, combined with the

HAZARDS AND HAZARDOUS MATERIALS

proposed General Plan policies listed above, would ensure the risks associated with release of hazardous materials into the environment due to upset and accident from the routine transport, use, storage, and handling of hazardous materials would be *less than significant*.

Applicable Regulations:

- DOT Hazardous Materials Transport Act-Code of Federal Regulations (CFR) 49
- EPA Resource Conservation and Recovery Act (RCRA)
- EPA Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)
- CAL/OSHA
- California Health and Safety Code (Chapter 6.95 and 19)
- California Code of Regulations (Section 2729)
- California Building Code
- Santa Clara County DEH HMCD
- Santa Clara County (Health and Safety Chapter)
- Morgan Hill Municipal Code (Chapter 15.44)

Significance Before Mitigation: Less than significant.

Residential Development Control System

The Residential Development Control System, known as the RDCS, regulates population growth through the provision of residential building allotments. RDCS, and the proposed updates to the RDCS as part of the proposed Project, affect the pace of development in the City but do not determine the location, type, or intensity of development. Therefore, the proposed RDCS would not have a substantial adverse effect on the routine transport, use, or handling of hazardous materials.

Significance Before Mitigation: Less than significant.

HAZ-2	Implementation of the proposed Project would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.

General Plan

The proposed General Plan would facilitate new development, including residential, mixed-use, and commercial uses, within Morgan Hill. Some of the new development could occur on properties that possibly are contaminated and inactive, undergoing evaluation, and/or undergoing corrective action, as indicated in Table 4.8.1. Construction of new buildings and improvements could have the potential to release potentially hazardous soil-based materials into the environment during site grading and excavation

HAZARDS AND HAZARDOUS MATERIALS SITES

operations. Likewise, demolition of existing structures could potentially result in release of hazardous building materials (e.g. asbestos, lead paint, etc.) into the environment. Use of hazardous materials on newly developed properties after construction could potentially include cleaning solvents, fertilizers, pesticides, and other materials used in the regular maintenance and operation of the proposed uses. In addition, as noted in the discussion of HAZ-1, above, companies located in the Industrial or Commercial/Industrial land use designation of the proposed General Plan could use, store, or generate hazardous materials for research, manufacturing, cleaning, or other commercial uses, and the proposed General Plan would allow agricultural uses within the Project Area that may also use or transport hazardous materials such as pesticides.

Compliance with applicable federal, state, and local laws and regulations regarding handling of these materials described in Section 4.8.1.1, Regulatory Framework, the proposed General Plan policies listed under Impact HAZ-1, and compliance with the Stormwater Pollution Prevention Plan and Best Management Practices required for the proposed Project (see Chapter 4.9, Hydrology and Water Quality, for additional detail), would ensure future development under the proposed General Plan would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment; therefore, impacts would be *less than significant*.

Applicable Regulations:

- DOT Hazardous Materials Transport Act-Code of Federal Regulations (CFR) 49
- EPA Resource Conservation and Recovery Act (RCRA)
- EPA Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)
- CAL/OSHA
- California Health and Safety Code (Chapter 6.95 and 19)
- California Code of Regulations (Section 2729)
- California Building Code
- Santa Clara County DEH HMCD
- Santa Clara County (Health and Safety Chapter)
- Morgan Hill Municipal Code (Chapter 15.44)

Significance Before Mitigation: Less than significant.

Residential Development Control System

The Residential Development Control System, known as the RDSCS, regulates population growth through the provision of residential building allotments. RDSCS, and the proposed updates to the RDSCS as part of the proposed Project, affect the pace of development in the City but do not determine the location, type, or intensity of development. Therefore, the proposed RDSCS would not have a substantial adverse effect on foreseeable upset and accident conditions involving the release of hazardous materials into the environment.

HAZARDS AND HAZARDOUS MATERIALS

Significance Before Mitigation: Less than significant.

HAZ-3	Implementation of the proposed Project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within ¼-mile of an existing or proposed school.

General Plan

As discussed in Section 4.13.3, Schools, Morgan Hill is served by the Morgan Hill Unified School District (MHUSD), which has ten elementary schools, two middle schools, and three high schools all within the Project Area. In addition, there are a number of other private schools not operated by MHUSD. Development allowed under the proposed General Plan would allow land uses that could be reasonably expected to handle hazardous materials or generate hazardous emissions, as described under HAZ-1, above. It is possible that such uses could occur within ¼ mile of existing or proposed schools. However, as discussed under HAZ-1 and HAZ-2, the storage, use, and handling of these materials would be subject to existing federal, state, and local regulations.

In terms of new public schools that may result from implementation of the proposed Project, DTSC's School Property Evaluation and Cleanup Division is responsible for assessing, investigating, and cleaning-up proposed school sites. The Division's goal is to ensure that proposed school properties are 'free' of contamination or that they have been 'cleaned' to a level that protects the students and staff who will occupy the new school. School sites that will receive state funding for acquisition or construction are required to go through an environmental review and cleanup process under DTSC's oversight.

Compliance with applicable federal, state, and local laws and regulations regarding storage, use, and handling of hazardous materials as described in Section 4.8.1.1, Regulatory Framework, and the proposed General Plan policies listed under HAZ-1 would ensure future development under the proposed General Plan does not emit hazardous emissions within ¼ mile of an existing or proposed school site; therefore, impacts would be *less than significant*.

Applicable Regulations:

- DOT Hazardous Materials Transport Act-Code of Federal Regulations (CFR) 49
- EPA Resource Conservation and Recovery Act (RCRA)
- EPA Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)
- CAL/OSHA
- California Health and Safety Code (Chapter 6.95 and 19)
- California Code of Regulations (Section 2729)
- California Building Code
- Santa Clara County DEH HMCD
- Santa Clara County (Health and Safety Chapter)

HAZARDS AND HAZARDOUS MATERIALS SITES

- Morgan Hill Municipal Code (Chapter 15.44)
- DTSC (School Property Evaluation and Cleanup Program)
- California Department of Education (School Facility)

Significance Before Mitigation: Less than significant.

Residential Development Control System

The Residential Development Control System, known as the RDCS, regulates population growth through the provision of residential building allotments. RDCS, and the proposed updates to the RDCS as part of the proposed Project, affects the pace of development in the City but does not determine the location, type, or intensity of development. Therefore, the proposed RDCS would not have a substantial adverse effect on an existing or proposed school site.

Significance Before Mitigation: Less than significant.

HAZ-4	Implementation of the proposed Project would be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment.

General Plan

As discussed in Section 4.8.1.2, Hazards Material sites, a number of hazardous materials sites are listed on databases compiled pursuant to Government Code Section 65962.5. Most of the sites are listed as closed, indicating that they have been investigated and/or remediated to the satisfaction of the lead responsible agency (i.e., RWQCB, DTSC, SCCFD, SCCDEH) based on land use at the time of closure. The proposed General Plan would facilitate new development including residential, mixed-use, commercial, parks, and recreational open spaces, within the City of Morgan Hill. Some of the new development could occur on properties that are included in the databases listed above. Construction of new buildings and improvements on these listed sites could have the potential to release potentially hazardous soil-based materials into the environment during site grading and excavation operations. Demolition of any existing structures likewise could potentially result in the release hazardous building material (e.g., asbestos, lead paint, etc.) into the environment. Use of hazardous materials on newly developed properties after construction could potentially include cleaning solvents, fertilizers, pesticides, and other materials used in the regular maintenance and operation of the proposed uses. Compliance, however, with applicable federal, state and local laws and regulations regarding cleanup and reuse of a listed hazardous materials site described in Section 4.8.1.1, Regulatory Framework, the proposed General Plan policies listed under HAZ-1, would ensure future development under the proposed General Plan would not create a significant hazard to the public or the environment; therefore, impacts would be *less than significant*.

HAZARDS AND HAZARDOUS MATERIALS

Applicable Regulations:

- DOT Hazardous Materials Transport Act-Code of Federal Regulations (CFR) 49
- EPA Resource Conservation and Recovery Act (RCRA)
- EPA Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)
- CAL/OSHA
- California Health and Safety Code (Chapter 6.95 and 19)
- California Code of Regulations (Section 2729)
- California Building Code
- Santa Clara County DEH HMCD
- Santa Clara County (Health and Safety Chapter)
- Morgan Hill Municipal Code (Chapter 15.44)
- RWQCB (Porter- Cologne Water Quality Act)
- DTSC (2011-2016 Strategic Plan)

Significance With Mitigation: Less than significant.

Residential Development Control System

The Residential Development Control System, known as the RDCS, regulates population growth through the provision of residential building allotments. RDCS, and the proposed updates to the RDCS as part of the proposed Project, affects the pace of development in the City but does not determine the location, type, or intensity of development. Therefore, the proposed RDCS would not have a substantial adverse effect on to the public or the environment as a result of the proposed Project being located on a listed hazardous materials site.

Significance Before Mitigation: Less than significant.

HAZ-5	Implementation of the proposed Project would not result in a safety hazard for people residing or working in the project area within an airport land use plan or within 2 miles of a public airport or public use airport.

General Plan

A small portion of Morgan Hill and its Sphere of Influence (SOI) extends into the Airport Influence Area (AIA) of the South County Airport, which is located in the unincorporated community of San Martin between Morgan Hills and Gilroy. The airport is operated by Santa Clara County, and is used for general aviation, which includes all aviation activities other than commercial passenger flights, commuter/air taxi, and military uses. General aviation activity typically includes single-engine and small twin-engine aircraft holding size or fewer people. The south County Airport is the smallest and least active airport in the county.

HAZARDS AND HAZARDOUS MATERIALS SITES

The AIA includes all areas surrounding the airport that are affected by noise, height, and safety, considerations. All development projects within the AIA must be reviewed by the Santa Clara County Airport Land Use Commissions (ALUC) to ensure consistency with the Airport Comprehensive Land Use Plan (ACLUP). The ACLUP establishes height restrictions for structures within the portion of the Morgan Hill City Limits and SOI that extends into the AIA. The Morgan Hill City limits and SOI are located outside of the airport's noise contours and safety zones.

In addition, the proposed General Plan contains the following policies that, once adopted, would further ensure the proposed General Plan would not result in incompatible land uses with airport operations.

Policy SSI-7.1	Airport Land Use Compatibility Plan. Work closely with appropriate agencies, including the Santa Clara County Airport Land Use Commission, to ensure compatibility of land uses with airport facilities and operations.
Policy SSI-7.2	Airspace Protection. Limit building heights for airspace protection in accordance with Federal Aviation Regulations Part 77.

The proposed General Plan, therefore, would not interfere with any airport land use plan or otherwise create and airport-related safety hazard and. Risk to people residing or working in the Project Area therefore would be *less than significant*.

Applicable Regulations:

- Santa Clara County ALUCP

Significance Before Mitigation: Less than significant.

Residential Development Control System

The Residential Development Control System, known as the RDCS, regulates population growth through the provision of residential building allotments. RDCS, and the proposed updates to the RDCS as part of the proposed Project, affects the pace of development in the City but does not determine the location, type, or intensity of development. Therefore, the proposed RDCS would not have a substantial adverse effect on people residing or working in the Project Area.

Significance Before Mitigation: Less than significant.

HAZ-6	Implementation of the proposed Project would not result in a safety hazard for people residing or working in the project area within the vicinity of a private airstrip.

HAZARDS AND HAZARDOUS MATERIALS**General Plan and Residential Development Control System**

As discussed in Section 4.8.1.2., there are no private airstrips in the vicinity of the locations where future development could occur as a result of implementation of the proposed Project. The risk to people residing or working in the Project Area would therefore be *less than significant*.

Applicable Regulations:

- None

Significance Before Mitigation: Less than significant.

HAZ-7	Implementation of the proposed Project would not impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan.

General Plan

As discussed in Section 4.8.1.1, Regulatory Framework, the City of Morgan Hill Office of Emergency Services is responsible for coordinating agency response to disasters or other large-scale emergencies in the City of Morgan Hill with assistance from the Santa Clara County Office of Emergency Services and the SCCFD. The Morgan Hill EOP establishes policy direction for emergency planning, mitigation, response, and recovery activities within the City. The Morgan Hill EOP addresses interagency coordination, procedures to maintain communications with county and state emergency response teams, and methods to assess the extent of damage and management of volunteers.

In addition, the proposed General Plan contains the following policies and strategies that, once adopted, would ensure that new development would not conflict with emergency operations in Morgan Hill.

Policy SSI-12.4	Maintenance of Emergency Access Routes. Require that emergency access routes be kept free of traffic impediments.
Policy SSI-12.5	Emergency Response Plan. Maintain comprehensive Emergency Response Plans.
Policy SSI-12.6	Accessibility. Continue restricting development in areas of poor accessibility. Discourage Development should not be allowed in areas where access is provided by a single road that could be damaged by faulting or landslides, or where access could be cut off by wildfires, trapping residents or workers. (SCJAP 15.07) [Policy PHS-4d]
Action SSI-12.A	Emergency Access. Where appropriate, allow development in areas where a second improved access road has been provided for emergency escape. (SCJAP 15.07) [Action PHS-2.8]
Action SSI-12.B	Safety Drills. Conduct periodic drills using emergency response systems to test the effective-ness of City procedures.

HAZARDS AND HAZARDOUS MATERIALS SITES

Compliance with applicable federal, state, and local laws and regulations regarding handling of these materials, as described in Section 4.8.1.1, Regulatory Framework, of this chapter, and the proposed General Plan policies listed above that require adequate access and prompt response time, would ensure future development under the proposed General Plan would not interfere with an adopted emergency response plan, or emergency evacuation plan and impacts would be *less than significant*.

Applicable Regulations:

- DOT Hazardous Materials Transport Act-Code of Federal Regulations (CFR) 49
- California Health and Safety Code (Chapter 6.95 and 19)
- California Code of Regulations (Section 2729)
- Santa Clara County (Health and Safety Chapter)
- Morgan Hill Emergency Operation Plan (2005)

Significance Before Mitigation: Less than significant.

Residential Development Control System

The Residential Development Control System, known as the RDCS, regulates population growth through the provision of residential building allotments. RDCS, and the proposed updates to the RDCS as part of the proposed Project, affects the pace of development in the City but does not determine the location, type, or intensity of development. Therefore, the proposed RDCS would not have a substantial adverse effect on an adopted emergency response plan or emergency evacuation plan. As such, the proposed RDCS would have no impact.

Significance Before Mitigation: Less than significant.

HAZ-8	Implementation of the proposed Project would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

General Plan

According to CAL FIRE and as discussed in Section 4.8.1.2 (Wildland Fire Hazard), the areas within the City Limits primarily fall into the there are no very high fire hazard severity zones within the Local Responsibility Areas of Morgan Hill. Morgan Hill's Fire Severity Zones range from moderate to high. Although this information indicates that the wildfire risk in the Project Area is present, there are many resources available to address wildland fires should they arise, including the aforementioned CAL FIRE Strategic Plan, the CFC, and cooperative fire services from SCCFD. Because the overall Project Area is located in a highly urbanized area at a distance from regional open space areas, they are not subjected to wildland fires.

HAZARDS AND HAZARDOUS MATERIALS

In addition, the proposed General Plan contains the following policies that, once adopted, would further ensure that wildfire hazards would be minimized.

Policy SSI-3-1	Development in Fire Hazard Areas. Minimize development in fire hazard areas and plan and construct permitted development so as to reduce exposure to fire hazards and to facilitate fire suppression efforts in the event of a wildfire.
Policy SSI-3-2	Wildfire Risks. Avoid actions which increase fire risk, such as increasing public access roads in fire hazard areas, because of the great environmental damage and economic loss associated with a large wildfire.
Policy SSI-3-3	Public Facilities Location. Locate, when feasible, new essential public facilities outside of high fire risk areas, including, but not limited to, hospitals and health care facilities, emergency shelters, emergency command centers, and emergency communications facilities, or identify construction methods or other methods to minimize damage if these facilities are located in a state responsibility area or very high fire hazard severity zone.
Policy SSI-3-4	Adequate Infrastructure. Design adequate infrastructure if a new development is located in a state responsibility area (SRA) or in a very high fire hazard severity zone (VHFHSZ) or high fire hazard severity zone (HFHSZ) as indicated on the City of Morgan Hill Wildland Urban Interface map (adopted March 18, 2009), including safe access for emergency response vehicles, visible street signs, and water supplies for structural fire suppression.
Policy SSI-3-5	Fire Risks. Work cooperatively with CAL FIRE and other public agencies with responsibility for fire protection to reduce fire risks in Morgan Hill.
Policy SSI-3-6	Fire Hazard Severity Zones. Continue to support special High Risk Fire Hazard Severity Zones requirements.

Compliance with applicable federal, state, and local laws and regulations these proposed General Plan policies and strategies, combined with the policies listed under HAZ-5, would ensure that impacts from wildland hazards would be *less than significant*.

Applicable Regulations:

- California Fire Code (Part 9 CCR)
- CAL FIRE (2012 Strategic Plan)
- California Code of Regulations (Section 2729)
- California Building Code (part 2 CCR)
- Santa Clara County (Health and Safety Chapter)
- Morgan Hill Municipal Code (Chapter 15.44)

Significance Before Mitigation: Less than significant.

Residential Development Control System

The Residential Development Control System, known as the RDSCS, regulates population growth through the provision of residential building allotments. RDSCS, and the proposed updates to the RDSCS as part of the proposed Project, affects the pace of development in the City but does not determine the location, type, or

HAZARDS AND HAZARDOUS MATERIALS SITES

intensity of development. Therefore, the proposed RDCS would not have a substantial adverse effect on wildland fires.

Significance Before Mitigation: Less than significant.

4.8.4 CUMULATIVE IMPACTS

HAZ-9	Implementation of the proposed Project would not contribute to cumulative hazards and hazardous materials impacts in the area.

As discussed in Chapter 4, Environmental Evaluation, of this Draft EIR, this EIR takes into account potential future development under the proposed Project, in combination with impacts from projected growth. This chapter analyzes potential cumulative hazardous impacts that could arise from a combination of the development of the proposed Project together with the regional growth in the immediate vicinity of the Project Area.

As discussed previously, development allowed by the proposed Project would not result in significant impacts from the increased use of hazardous household materials and would not increase exposure to potential hazards associated with wildland fires. The proposed Project would not interfere with implementation of emergency response plans. In addition, potential project-level impacts associated with hazards and hazardous materials would be further reduced through compliance with proposed General Plan policies and strategies, other local, regional, state, and federal regulations. Since impacts associated with hazardous materials and wildland fire, are, by their nature, focused on specific sites or areas, the less-than-significant impacts within the Project Area from the proposed Project would not contribute to a cumulative increase in hazards in the immediate vicinity of the Project Area or throughout the region. Therefore, the potential for cumulative impacts associated with hazards and hazardous materials would be *less than significant*.

Significance With Mitigation: Less than significant.

4.8.5 SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION MEASURES

The project would not result in any significant project-specific or cumulative impacts to hazards and hazardous materials and therefore no mitigation measures are required.

4.8.6 FULL BUILDOUT

The full buildout anticipated under the proposed Project would include significantly more non-residential development than the 2035 horizon-year development projection analyzed in Section 4.8.3, Impact

HAZARDS AND HAZARDOUS MATERIALS

Discussion, in terms of both the amount and the extent of development. Therefore, the potential for impacts related to hazards and hazardous materials would increase. However, as discussed in Chapter 3, Project Description, it is extremely unlikely that full buildout would ever occur under the proposed General Plan. Therefore, an analysis of full buildout is not required by CEQA.

HAZARDS AND HAZARDOUS MATERIALS SITES

HYDROLOGY AND WATER QUALITY

4.9 HYDROLOGY AND WATER QUALITY

This chapter describes the regulatory framework and existing conditions in Morgan Hill and its Sphere of Influence (SOI) (Project Area) and evaluates the potential environmental impacts to hydrology and water quality associated with development of the proposed Project.

4.9.1 ENVIRONMENTAL SETTING

4.9.1.1 REGULATORY FRAMEWORK

This section summarizes federal, state and local laws, regulations and policies that apply to hydrology and water quality in the Project Area.

Federal Regulations

Clean Water Act

Under the Clean Water Act (CWA) of 1977, the United States Environmental Protection Agency (USEPA) seeks to restore and maintain the chemical, physical, and biological integrity of the nation's waters. The CWA uses a variety of regulatory and non-regulatory tools to reduce direct pollutant discharges into waterways, finance municipal wastewater treatment facilities, and manage polluted runoff. The CWA authorizes the USEPA to implement water quality regulations. The National Pollutant Discharge Elimination System (NPDES) permit program under Section 402(p) of the CWA controls water pollution by regulating stormwater discharges into the waters of the United States (US). California has an approved state NPDES program. The USEPA has delegated authority for water permitting to the State Water Resources Control Board (SWRCB), which has nine regional boards.

Sections 401 and 404 of the CWA are administered through the Regulatory Program of the United States Army Corps of Engineers (USACE) and regulate the water quality of all discharges of fill or dredged material into waters of the US including wetlands and intermittent stream channels. Section 401, Title 33, Section 1341, of the CWA sets forth water-quality certification requirements for "any applicant applying for a federal license or permit to conduct any activity including, but not limited to, the construction or operation of facilities, which may result in any discharge into the navigable waters." If there are ephemeral drainages and wetlands identified within the City of Morgan Hill and SOI, construction and other activities may require the acquisition of a permit from the USACE under Section 404 of the CWA and water quality certification from either the San Francisco Bay Regional Water Quality Board (RWQCB) or the Central Coast RWQCB prior to final issuance of Section 404 permits by the USACE.

Section 303(d) of the CWA requires that each state identify water bodies or segments of water bodies that are "impaired" (i.e., not meeting one or more of the water quality standards established by the state). These waters are identified in the Section 303(d) list as waters that are polluted and need further attention to

HYDROLOGY AND WATER QUALITY

support their beneficial uses. Once the water body or segment is listed, the state is required to establish Total Maximum Daily Load (TMDL) for the pollutant causing the conditions of impairment. TMDL is the maximum amount of a pollutant that a water body can receive and still meet water quality standards. Typically, TMDL is the sum of the allowable loads of a single pollutant from all contributing point and non-point sources. The intent of the 303(d) list is to identify water bodies that require future development of a TMDL to maintain water quality. In accordance with Section 303(d), the RWQCB has identified impaired water bodies within its jurisdiction, and the pollutant or stressor responsible for impairing the water quality.

Federal Emergency Management Agency

The Federal Emergency Management Agency (FEMA) administers the National Flood Insurance Program (NFIP), which provides subsidized flood insurance to communities that comply with FEMA regulations limiting development in floodplains. FEMA also issues Flood Insurance Rate Maps (FIRMs) that identify which land areas are subject to flooding. These maps provide flood information and identify flood hazard zones in the community. The design standard for flood protection is established by FEMA, with the minimum level of flood protection for new development set as the 100-year flood event, also described as a flood that has a 1-in-100 chance of occurring in any given year.

National Pollutant Discharge Elimination System

As previously discussed, the NPDES permit program was established by the CWA to regulate municipal and industrial discharges to surface waters of the US from their municipal separate storm sewer systems (MS4s). Under the NPDES Program, all facilities which discharge pollutants from any point source into waters of the U.S. are required to obtain an NPDES permit. Point source discharges include discharges from publicly owned treatment works (POTWs), discharges from industrial facilities, and discharges associated with urban runoff, such as stormwater. The NPDES permit programs in California are administered by the SWRCB and the nine RWQCBs.

The City of Morgan Hill lies within the jurisdiction of both the San Francisco Bay RWQCB (Region 2) and the Central Coast Bay RWQCB (Region 3) and is subject to the Waste Discharge Requirements (WDRs) of the Phase II Small MS4 Permit (Order Number 2013-0001-DWQ) and NPDES Permit No. CAS000004 dated February 5, 2013. The City of Morgan Hill is considered to be a Renewal Traditional Small MS4 Permittee. As such, the City is required to comply with Section E of the permit, which includes implementation of a construction site stormwater runoff control program and post-construction stormwater management program. Post-construction standards must be applied to all new and redevelopment Regulated Projects, which include appropriate source control, site design, and stormwater treatment measures to address both stormwater runoff pollutant discharges and prevent increases in runoff flows. The goal is to be accomplished primarily through the implementation of low impact development (LID) techniques.

HYDROLOGY AND WATER QUALITY

State Regulations

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Act (Water Code Sections 13000 et seq.) is the basic water quality control law for California. This Act established the SWRCB, which has ultimate control over state water rights and water quality policy. The state is divided into nine regions based on water quality and quantity characteristics. The SWRCB through its nine RWQCBs carries out the regulation, protection, and administration of water quality in each region. The Porter-Cologne Act also authorizes the SWRCB and RWQCBs to issue and enforce WDRs, NPDES permits, Section 401 water quality certifications, or other approvals.

Other state agencies with jurisdiction over water quality regulation in California include the California Department of Health Services (DHS) (for drinking water regulations), the California Department of Pesticide Regulation (DPR), and the Office of Environmental Health and Hazard Assessment (OEHHA).

California Fish and Game Code

The California Department of Fish and Wildlife (CDFW) protects streams, water bodies, and riparian corridors through the streambed alteration agreement process under Section 1600 to 1616 of the California Fish and Game Code. The Fish and Game Code states that “an entity may not substantially divert or obstruct the natural flow, or substantially change the bed, channel, or bank, of any river, stream or lake, or deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake” (Fish and Game Code Section 1602(a)) without notifying the CDFW, incorporating necessary mitigation and obtaining a streambed alteration agreement. The CDFW’s jurisdiction extends to the top of banks and often includes the outer edge of riparian vegetation canopy cover.

SWRCB Construction General Permit

Construction activities that disturb one or more acres of land that could impact hydrologic resources must comply with the requirements of the SWRCB Construction General Permit (CGP) (2009-0009-DWQ) as amended by 2010-0014-DWQ. Under the terms of the permit, applicants must file Permit Registration Documents (PRDs) with the SWRCB prior to the start of construction. The PRDs include a Notice of Intent (NOI), risk assessment, site map, Stormwater Pollution Prevention Plan (SWPPP), annual fee, and a signed certification statement. The PRDs are submitted electronically to the SWRCB via the Stormwater Multiple Application and Report Tracking System (SMARTS) website.

Applicants must also demonstrate conformance with applicable best management practices (BMPs) and prepare a SWPPP, containing a site map that shows the construction site perimeter, existing and proposed buildings, lots, roadways, stormwater collection, and discharge points, general topography both before and after construction, and drainage patterns across the project site. The SWPPP must list BMPs that would be

HYDROLOGY AND WATER QUALITY

implemented to prevent soil erosion and discharge of other construction-related pollutants that could contaminate nearby water resources. Additionally, the SWPPP must contain a visual monitoring program, a chemical monitoring program for nonvisible pollutants if there is a failure of the BMPs, and a sediment-monitoring plan if the site discharges directly to a water body listed on the 303(d) list for sediment. Some sites also require implementation of a Rain Event Action Plan (REAP). The updated CGP (2010-0014-DWQ), effective on September 2, 2012, also requires applicants to comply with post-construction runoff reduction requirements.

Emergency Services Act

The Emergency Services Act, under California Government Code Section 8589.5(b), calls for public safety agencies whose jurisdiction contains populated areas below dams, to adopt emergency procedures for the evacuation and control of these areas in the event of a partial or total failure of the dam. The Governor's Office of Emergency Services (OES), formerly the California Emergency Management Agency (CalEMA), is responsible for the coordination of overall state agency response to major disasters and assisting local governments in their emergency preparedness, response, recovery, and hazard mitigation efforts. In addition, the OES Dam Safety Program provides assistance and guidance to local jurisdictions on emergency planning for dam failure events and is also the designated repository of dam failure inundation maps.

Division of Safety of Dams

Since 1929, the State of California has supervised all non-federal dams in California through the Dam Safety Program under the jurisdiction of the Department of Water Resources, Division of Safety of Dams (DSOD). The DSOD came into existence as a direct result of the failure of St. Francis Dam in southern California in 1928, causing the deaths of more than 450 people.

The DSOD engineers and engineering geologists review and approve plans and specifications for the design of dams and oversee their construction to ensure compliance with the approved plans and specifications. Reviews include site geology, seismic setting, site investigations, construction material evaluation, dam stability, hydrology, hydraulics, and structural review of appurtenant structures. In addition, the DSOD engineers inspect over 1,200 dams on a yearly schedule to ensure they are performing and being maintained in a safe manner.

Water Conservation Act of 2009

The Water Conservation Act of 2009 (Senate Bill X7 7), requires a statewide 20 percent reduction in urban per capita water use by 2020. The SB X7 7 requires that urban water retail suppliers determine baseline water use and set reduction targets according to specified standards, and requires that agricultural water suppliers prepare plans and implement efficient water management practices.

HYDROLOGY AND WATER QUALITY

State Updated Model Water Efficient Landscape Ordinance

Assembly Bill 1881 (AB 1881) required cities and counties to adopt the Model Water Efficient Landscape Ordinance (WELO) by January 31, 2010 or to adopt a different ordinance that is at least as effective in conserving water as the Model WELO. In accordance with AB 1881, Morgan Hill adopted its WELO on June 3, 2009; it was amended on July 28, 2010. The ordinance is codified in the Morgan Hill Municipal Code, Chapter 18.73 – *Water Conservation in Landscaping*.

Executive Order B-29-15 required the Department of Water Resources to prepare an updated Model WELO. In July 2015, the California Water Commission adopted an updated Model WELO. Local jurisdictions have until December 1, 2015 to adopt the Model WELO or adopt an equally effective ordinance and have until December 31, 2015 to meet reporting requirements. Local jurisdictions, such as Morgan Hill, that are working together to develop a regional ordinance have until February 1, 2016 to adopt the ordinance but must still meet the reporting deadline. The City of Morgan Hill is considering adoption of an updated local WELO in early 2016.

Regional Regulations and Agencies

San Francisco Bay and Central Coast Regional Water Quality Control Boards

Regional authority for planning, permitting, and enforcement is delegated to the nine RWQCBs. Each regional board is required to adopt a water quality control plan or basin plan that recognizes and reflects the regional differences in existing water quality, the beneficial uses of the region's ground and surface water, and local water quality conditions and problems. As previously stated, Morgan Hill is within the jurisdiction of both the San Francisco Bay RWQCB (Region 2) and the Central Coast RWQCB (Region 3). The northern portion of Morgan Hill and the SOI lies within the jurisdiction of San Francisco Bay RWQCB, which covers watersheds that drain primarily into San Francisco Bay. The Central Coast RWQCB covers the state's central coast, including most of Morgan Hill and its SOI and continues south to Santa Barbara County and Ventura County. The watersheds within the Central Coast RWQCB jurisdiction drain primarily into the Pacific Ocean.

The San Francisco Bay RWQCB addresses region-wide water quality issues through the Water Quality Control Plan for San Francisco Bay Region (Basin Plan), which is reviewed for revisions at least once every three years. The Basin Plan was adopted in 1993 and updated most recently in March 2015.¹ The Basin Plan designates beneficial uses of the state waters within Region 2, describes the water quality that must be maintained to support such uses, and provides programs, projects, and other actions necessary to achieve the standards established in the Basin Plan.

¹ San Francisco Bay Area Regional Water Quality Control Board, 2015. Accessed at http://www.waterboards.ca.gov/rwqcb2/basin_planning.shtml, accessed March 28, 2014.

HYDROLOGY AND WATER QUALITY

The Central Coast RWQCB addresses region-wide water quality issues through the Water Quality Control Plan for the Central Coastal Basin (Basin Plan), which was updated most recently in June 2011.² The Basin Plan designates beneficial uses of the state waters within Region 3, and water quality criteria and objective necessary to protect those uses.

Santa Clara Valley Water District

The Santa Clara Valley Water District (SCVWD) is a water resources agency responsible for balancing flood protection needs with the protection of natural watercourses and habitat in the Santa Clara Valley. The SCVWD serves 16 cities and 1.8 million residents, provides wholesale water supply, operates three water treatment plants, and provides flood protection along the creeks and rivers within the county. The Clean, Safe Creeks and Natural Flood Protection (CSC) Plan was approved by Santa Clara County voters in November 2000 to create a countywide special parcel tax to accomplish the following four goals:³

- 100-year flood protection for homes, schools, businesses, and transportation;
- Clean, safe water in Santa Clara County creeks and bays;
- Healthy creek and bay ecosystems; and
- Trails, parks, and open space along waterways.

In addition, the SCVWD has developed the Water Supply and Infrastructure Master Plan, which provides the strategy for meeting the County's future water demands to the year 2035 with a combination of reliable water supply sources and conservation programs. Groundwater in the Santa Clara Basin is also managed by SCVWD through its 2012 Groundwater Management Plan.⁴ The SCVWD also prepares an Urban Water Management Plan (UWMP) that provides information on water supply sources, historical water usage, water conservation programs, demand projections, water shortage contingencies, and water quality. The current SCVWD UWMP is dated 2010; however, the UWMP is required to be updated every 5 years.⁵

The SCVWD reviews plans for development projects near streams to ensure that the proposed storm drain systems and wastewater disposal systems will not adversely impact water quality in the streams. In addition, the SCVWD reviews projects for conformance to SCVWD flood control design criteria, stream maintenance and protection plans, and groundwater protection programs.

SCVWD's Ordinance 90-1 requires permits for the construction, destruction and maintenance of wells and other deep excavations. The standards for construction and destruction are based on "Standards for the

² Central Coast Regional Water Quality Control Board, 2011. *Water Quality Control Plan for the Central Coastal Basin*. Dated June 2011 including amendments effective through June 8, 2011.

³ Santa Clara Valley Water District (SCVWD) website: www.valleywater.org accessed on September 8, 2015.

⁴ Santa Clara Valley Water District (SCVWD), 2012. *2012 Groundwater Management Plan*.

⁵ Santa Clara Valley Water District (SCVWD), 2010. *Urban Water Management Plan 2010*.

HYDROLOGY AND WATER QUALITY

Construction and Destruction of Wells and Other Deep Excavations in Santa Clara County” and the “California Well Standards.”⁶

Finally, SCVWD is responsible for a comprehensive dam safety program to monitor, inspect, and maintain Anderson, Coyote, and Chesbro dams. Through the dam safety program, SCVWD coordinates with the City of Morgan Hill on emergency response and preparedness and preparing and communication inundation maps.

Santa Clara Basin Watershed Management Initiative

The Watershed Management Initiative (WMI) was initiated in 1996 by the USEPA, the SWRCB, and the San Francisco Bay RWQCB to address all sources of pollution that threaten the Bay and to protect water quality throughout Santa Clara Basin watersheds. In the past, specific issues affecting watersheds had been addressed by separate regulatory actions, resulting in a "patchwork" approach. A major aim of the WMI is to coordinate existing regulatory activities on a basin-wide scale, ensuring that problems are addressed efficiently and cost-effectively.

The Santa Clara Basin WMI consists of 34 collaborative groups from regional and local public agencies; civic, environmental, resource conservation and agricultural groups; professional and trade organizations; business and industrial sectors; and the general public. The purpose of the WMI is “to develop and implement a comprehensive watershed management program – one that recognizes that healthy watersheds mean addressing water quality problems and quality of life issues for the people, animals, and plants that live in the watershed.” The WMI has continued to develop its foundation by producing a watershed assessment report (2003), a watershed action plan (2003), plastics pollution prevention summit (2011), impacts of homelessness on creeks (2011), and educational materials to reduce water usage by the general public.⁷

Santa Clara County General Plan

The Santa Clara County General Plan contains the goals, strategies, policies, and implementing actions that guide in the overall land use development of the county. Unincorporated lands within Santa Clara County that are within Morgan Hill’s SOI are subject to land use jurisdiction and regulatory authority by the County. In addition, the Santa Clara Valley Water District and the Santa Clara Basin Watershed Management Initiative have jurisdiction for streams and watersheds within the City boundaries and the SOI. Therefore, the Santa Clara County General Plan goals and policies relevant to hydrology and water quality are listed in Table 4.9-1.

⁶ Santa Clara Valley Water District (SCVWD), <http://www.valleywater.org/Programs/WellPermitsInspections.aspx>, accessed on September 21, 2015,

⁷ Santa Clara Basin Watershed Management Initiative (WMI), 2013. Website: <http://www.scbwmi.org/> accessed on September 9, 2015.

HYDROLOGY AND WATER QUALITY

TABLE 4.9-1 SANTA CLARA COUNTY GENERAL PLAN POLICIES RELEVANT TO HYDROLOGY AND WATER QUALITY

Strategy/Policy Number	Strategy/Policy Content
Strategy #1	Reduce non-point source pollution.
Policy C-RC 22	Countywide, compliance should be achieved with the requirements of the National Pollution Discharge Elimination System (NPDES) permit for discharges into S.F. Bay, and to that end, the Countywide Nonpoint Source Pollution Control Program should receive the full support and participation of each member jurisdiction.
Policy C-RC 23	The Countywide Stormwater Management Plan should be routinely reviewed and updated as additional information is collected on the effectiveness of prescribed control measures.
Policy C-RC 24	Efforts to increase public awareness and education concerning nonpoint source pollution control should be encouraged.
Strategy #2	Restore wetlands, riparian areas, and other habitats which improve Bay water quality.
Policy C-RC 25	Wetlands restoration for the purpose of enhancing municipal wastewater treatment processes, improving habitat and passive recreational opportunities should be encouraged and developed where cost-effective and practical.
Strategy #3	Prepare and implement comprehensive watershed management plan.
Policy C-RC 26	Comprehensive watershed management plans should be developed and implemented through intergovernmental coordination. Water supply watersheds should receive special consideration and additional protection.

Source: Santa Clara County General Plan, 1994, <http://www.sccgov.org/portal/site/dpd/>, accessed on September 9, 2015.

Water Resources Protection Collaborative

On October 24, 2006, the SCVWD adopted the Water Resources Protection Ordinance (Ordinance 06-1).⁸ Beginning on February 28, 2007, this ordinance established the policy through which the SCVWD issues permits for modifications, entry, use, or access to SCVWD facilities or easements. This Ordinance was adopted following the creation of the Guidelines and Standards for Land Use Near Streams: A Manual of Tools, Standards, and Procedures to Protect Streams and Streamside Resource in Santa Clara County (Guidelines) by the Santa Clara Valley Water Resources Protection Collaborative (Collaborative). The Collaborative includes the SCVWD and representatives from the County of Santa Clara, the 15 cities within the County, the Guadalupe-Coyote Resource Conservation District, the San Francisco Bay RWQCB, and representatives of various community interests.⁹ The Collaborative members share the water and watershed resources protection goals of flood management, drinking water quality and adequate quantity, surface and groundwater quality and quantity, and habitat protection and enhancement throughout the county.

⁸ Santa Clara Valley Water District, 2006, Water Resource Protection Ordinance 06-1, <http://www.valleywater.org/uploadedFiles/Programs/BusinessInformationPermits/Permits/Ordinance071213%281%29.pdf>, accessed on September 8, 2015.

⁹ Santa Clara Valley Water District, 2007, Water Resources Protection Collaboration, <http://www.valleywater.org/index.htm>, accessed on September 9, 2015.

HYDROLOGY AND WATER QUALITY

The City of Morgan Hill adopted these Guidelines and integrated them into their zoning/development/review process, as codified in Chapter 13.30.200 (Watercourse Protection) of the Municipal Code. The property owner is responsible for maintaining and stabilizing that portion of a watercourse within their property lines in order to protect against erosion and degradation of the watercourse.

Local Regulations

Morgan Hill Municipal Code

Besides the General Plan, the City of Morgan Hill's Municipal Code is one of the tools that guides development in the City. The City's Municipal Code identifies land use categories, site development regulations, and other general provisions that ensure consistency between the General Plan and proposed development projects. The Municipal Code contains all ordinances for the City. The Municipal Code is organized by Title, Chapter, and Section. The following four chapters of the Morgan Hill's Municipal Code contain directives pertaining to hydrology and water quality issues.

Chapter 13.12 – Water, Sewer, and Drainage Charges

This chapter outlines the requirements for the payment of fees to conserve and protect the City's storm drain system from the burden placed on it by the increasing flow of non-point source runoff and is known as the "Service Connection Charge Ordinance." It includes charges for installing storm drain facilities and connection fees to the storm drainage facilities.

Chapter 13.30 – Urban Storm Water Quality Management and Discharge Control

The purpose and intent of this chapter is to protect and enhance the water quality of watercourses and water bodies in a manner consistent with the federal Clean Water Act and the Porter-Cologne Water Quality Control Act by reducing pollutants in stormwater discharges to the maximum extent practicable and by prohibiting non-stormwater discharges to the storm drain system. Section 13.30.200, *Watercourse Protection*, requires owners or lessees to maintain structures within or adjacent to a watercourse in a manner that preserves the use, function, or physical integrity of the watercourse and to not remove bank vegetation beyond maintenance activities in a manner that would increase the vulnerability of the watercourse to erosion. Section 13.30.250, *NPDES General Permit No. CAS000002 for Construction Activities*, requires all projects disturbing one acre or more of soil to comply with the SRWCB's waste discharge requirements (WDRs) for construction activities and prepare a Storm water Pollution Prevention Plan (SWPPP). Section 13.30.270, *Water Pollution Control*, requires project applicants to submit an erosion and sediment control plan for review by the City prior to the issuance of grading permits.

Chapter 18.42 – Flood Damage Prevention

Chapter 18.42 of the Morgan Hill Municipal Code establishes flood damage prevention measures, which seek to promote public health and safety and to minimize losses due to flooding. This chapter applies to all

HYDROLOGY AND WATER QUALITY

areas of special flood hazard (i.e., 100-year floodplain) within the City or SOI. It also contains construction standards that must be implemented within the 100-year floodplain to protect buildings and redevelopment projects from flood damage. The ordinance also restricts or prohibits uses which are dangerous to health, safety, and property due to water or erosion hazards or result in damaging increases in erosion, flood heights, or velocities. The construction of flood barriers, which unnaturally divert flood waters or increase flood hazards in other areas is also restricted and prohibited. The areas of special flood hazard to which this ordinance applies are designated on FEMA's Flood Insurance Study (FIS), Flood Boundary and Floodway Maps (FBFMs) and Flood Insurance Rate Maps (FIRMs).

Chapter 18.71 – Post-Construction Stormwater Pollution Prevention

This chapter establishes the minimum stormwater management requirements in compliance with NPDES permits issued to the City of Morgan Hill. The purpose of the regulations are to minimize increases in stormwater runoff from development, reduce flooding, siltation, and streambank erosion, and minimize surface water runoff volumes during and following development to not exceed pre-development rates to the maximum extent practicable. Projects that meet the criteria specified in section 18.71.030A (i.e., new development or redevelopment projects that create or replace 5,000 square feet of parking area or 10,000 square feet of impervious surface) are required to prepare and submit a Stormwater Management Plan (SWMP) to the City of Morgan Hill for approval early in the permitting process that describes in detail how runoff and water quality from the site will be controlled and managed. The City of Morgan Hill in conjunction with the City of Gilroy and Santa Clara County has developed a *Stormwater Management Guidance Manual for Low Impact Development and Post-Construction Requirements* (2015) that describes the source control, site design, and stormwater treatment control measures that must be implemented for new and redevelopment projects in more detail.

Chapter 18.73 – Water Conservation in Landscaping

This chapter establishes landscaping practices to reduce water waste by promoting the use of region-appropriate plants that require minimal supplemental irrigation and establishes standards for irrigation efficiency. This chapter implements the California Water Conservation in Landscaping Act of 2006, which is currently in the process of being revised due to Governor Brown's Drought Executive Order. New development projects that include landscape area of 500 square feet or more will be subject to these requirements as of December 1, 2015. Applicants are required to submit a water-efficient design checklist to the City as well as landscape and irrigation design plans, water budget calculations, a soil analysis report, and landscape project review fee prior to design review. Prior to the issuance of the final building permit clearance, a landscape installation report must also be submitted.

Capital Improvement Program (FY 2015-16 through FY 2019-20)

The City of Morgan Hill's Capital Improvement Program (CIP) is a comprehensive document that includes descriptions and the status of City project scopes, budgets, and schedules. It identifies major capital needs over a multiyear period and reflects the overall priorities of the City. The CIP addresses the infrastructure

HYDROLOGY AND WATER QUALITY

needs of the City, including storm drain improvements and local drainage issues. Planned storm drain projects through FY 2019-2020 include the construction of storm drains, storm inlets and miscellaneous improvements at various locations in the City to address localized drainage problems as well as new drainage facilities to alleviate flooding in the West Little Llagas watershed as part of the Upper Llagas Creek Flood Protection Project (ULCFPP).

City of Morgan Hill Storm Drain Master Plan

The capacity of the storm drain facilities within the City of Morgan Hill was evaluated and documented in the 2002 Storm Drain Master Plan.¹⁰ The City collects Storm Drain Fees for new construction projects to fund improvements to the storm drain system. The analysis indicated that the City's vast system of retention and detention ponds function well to meet the City's drainage needs and the capacities of the Butterfield Channel, West Little Llagas Creek Channel, Madrone Channel, and Tennant Channel would accommodate 100-year design storms at buildout land use conditions. The study recommended new or increased capacity storm drain pipelines and new ponds in currently undeveloped areas and operational modifications at both stormwater pump stations. According to the CIP, the City is planning to update the Storm Drain Master Plan in the near future.

4.9.1.2 EXISTING CONDITIONS

Climate

Morgan Hill has a Mediterranean semi-arid climate, with temperate temperatures year round and warm, dry weather lasting from late spring through early fall.¹¹ The wet season typically occurs from late October through early April, with the largest historical storm events occurring in the December-February time period. Typically, precipitation arises from storms originating in the Pacific Ocean and rainfall amounts reach their maximum at the higher elevations of the coastal ranges, decreasing in the lower elevations of the valley.¹² The average annual rainfall in Morgan Hill is 21.68 inches.¹³ Temperatures in Morgan Hill tend to be fairly mild, with an average annual high of 73 degrees Fahrenheit (°F) and an average annual low of 50°F. The hottest temperatures occur in July, with average maximum temperatures of 88°F, and the coldest temperatures occur in December and January with average minimum temperatures of 42°F.¹⁴

¹⁰ Corollo Engineers, 2002, *City of Morgan Hill Storm Drainage System Master Plan*. Dated January 2002.

¹¹ City of Morgan Hill, 2010, *City of Morgan Hill 2010 Urban Water Management Plan*. Prepared by Risk Management Professionals.

¹² Corollo Engineers, 2002, *City of Morgan Hill Storm Drainage System Master Plan*. Dated January 2002.

¹³ Monthly Climate Summary, Morgan Hill, California, 2015, <http://www.wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca5853> accessed on September 11, 2015.

¹⁴ US Climate Data, 2015, *Climate Morgan Hill – California*, <http://www.usclimatedata.com/climate/morgan-hill/california/united-states/usca2058> on September 11, 2015.

HYDROLOGY AND WATER QUALITY

Hydrology and Surface Drainage

Watersheds

A watershed refers to the entire area that drains to a common waterway, such as a stream, lake, or ocean. Morgan Hill and its SOI lie within two watersheds: the Coyote Creek Watershed and the Uvas-Llagas Watershed.¹⁵ The majority of the City and surrounding area lies within the Uvas-Llagas Watershed, which drains southward to Monterey Bay. The Coyote Creek Watershed covers the northern portion of the City. Figure 4.9-1 shows the location of Morgan Hill and its SOI with respect to the two watersheds.

The Uvas-Llagas Watershed encompasses 104 square miles and includes parts of the cities of San Jose, Morgan Hill, and Gilroy. It is part of the larger Pajaro River Watershed. The creeks within this watershed are the only waterways in Santa Clara County that flow southward, ultimately draining into the Pajaro River and out to Monterey Bay. The watershed also contains two reservoirs: Chesbro and Uvas. Within the City of Morgan Hill and SOI, this watershed is further divided into the following sub-watersheds:¹⁶

- East Little Llagas Creek Watershed
- Butterfield Channel/Fisher Creek Watershed
- West Little Llagas Creek Watershed
- Llagas Creek Watershed
- West Branch Llagas Creek Watershed

The Coyote Creek Watershed is the largest watershed in Santa Clara County, encompassing 322 square miles, and Coyote Creek is the longest creek in the County. Coyote Creek originates in the mountains northeast of Morgan Hill and flows northwest for approximately 42 miles before entering Lower South San Francisco Bay. At the base of the Diablo Range, the creek is impounded by two dams, which form Coyote and Anderson Reservoirs. The watershed includes portions of Morgan Hill, San Jose, Milpitas, and unincorporated land in Santa Clara County.

Local Creeks and Drainage Channels

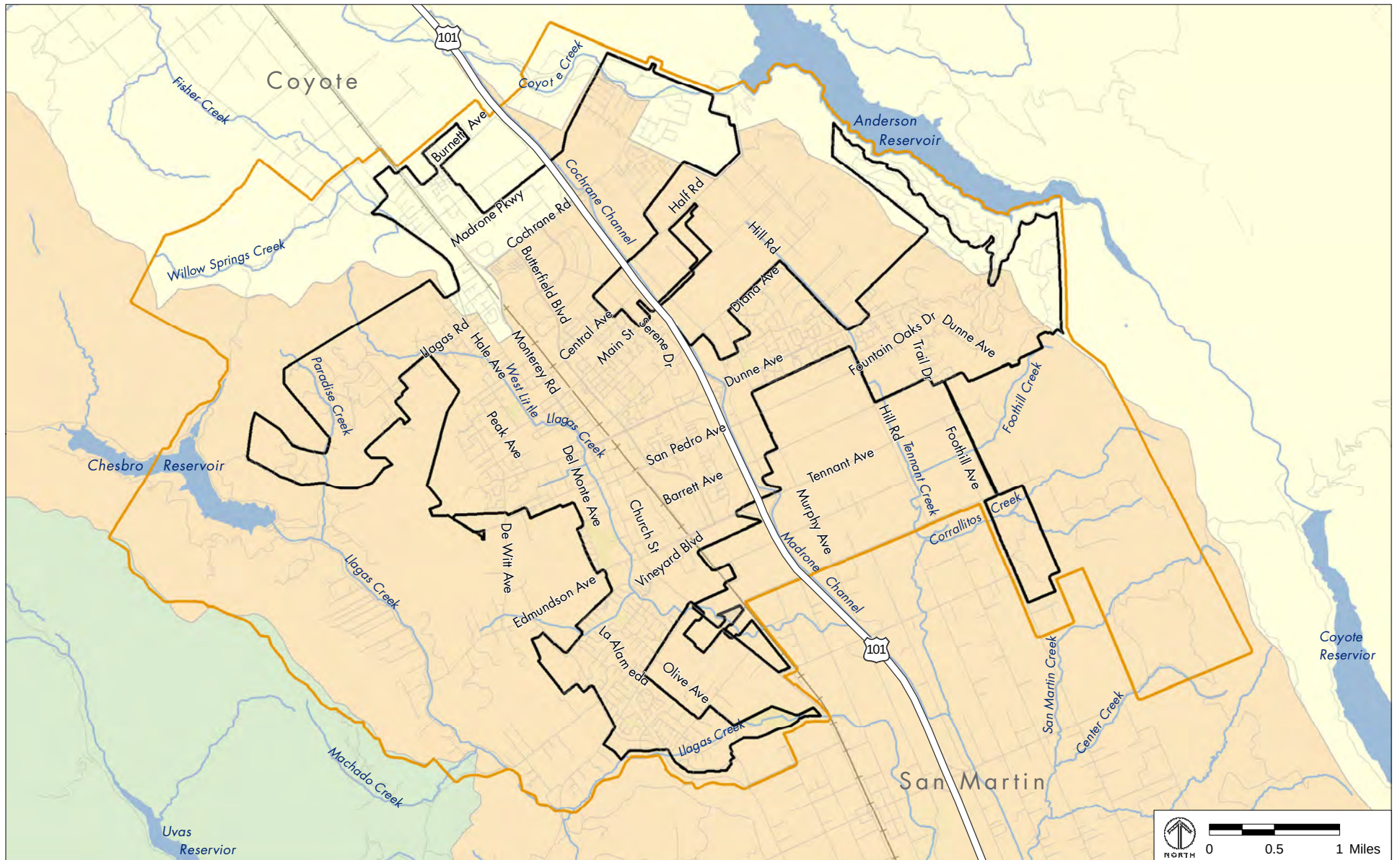
As shown in Figure 4.9-1, numerous creeks flow through Morgan Hill and the SOI. Three creeks, Willow Springs Creek, Fisher Creek, and Coyote Creek flow north to San Francisco Bay. The following creeks flow south and eventually drain into Monterey Bay:

- Foothill Creek
- Maple Creek
- Tennant Creek
- Corralitos Creek

¹⁵ Santa Clara Valley Water District, 2014. *Watershed Information*. <http://www.valleywater.org/Services/WatershedInformation.aspx> accessed on September 23, 2015.

¹⁶ Oakland Museum of California, 2009, *Creek and Watershed Map of Morgan Hill and Gilroy*.

HYDROLOGY AND WATER QUALITY



Source: City of Morgan Hill, 2013; Santa Clara Valley Water District, 1996.

- Coyote Creek Watershed
- Llagas Watershed
- Uvas Watershed
- Sphere of Influence
- City Boundary

Figure 4.9-1
Watersheds

HYDROLOGY AND WATER QUALITY

- South Corralitos Creek
- San Martin Creek
- Center Creek
- West Little Llagas Creek
- East Little Llagas Creek
- Paradise Creek
- Llagas Creek
- Dewitt Creek
- Edmundson Creek
- Tilton Creek

While creeks in the hills remain generally natural and provide riparian habitats, most creeks in the developed areas have been straightened and channelized to prevent flooding. Engineered drainage channels that flow through the City include Butterfield, Madrone, and Cochrane Channels and some parts of West Llagas Creek and Tennant Creek.

Storm Drain System

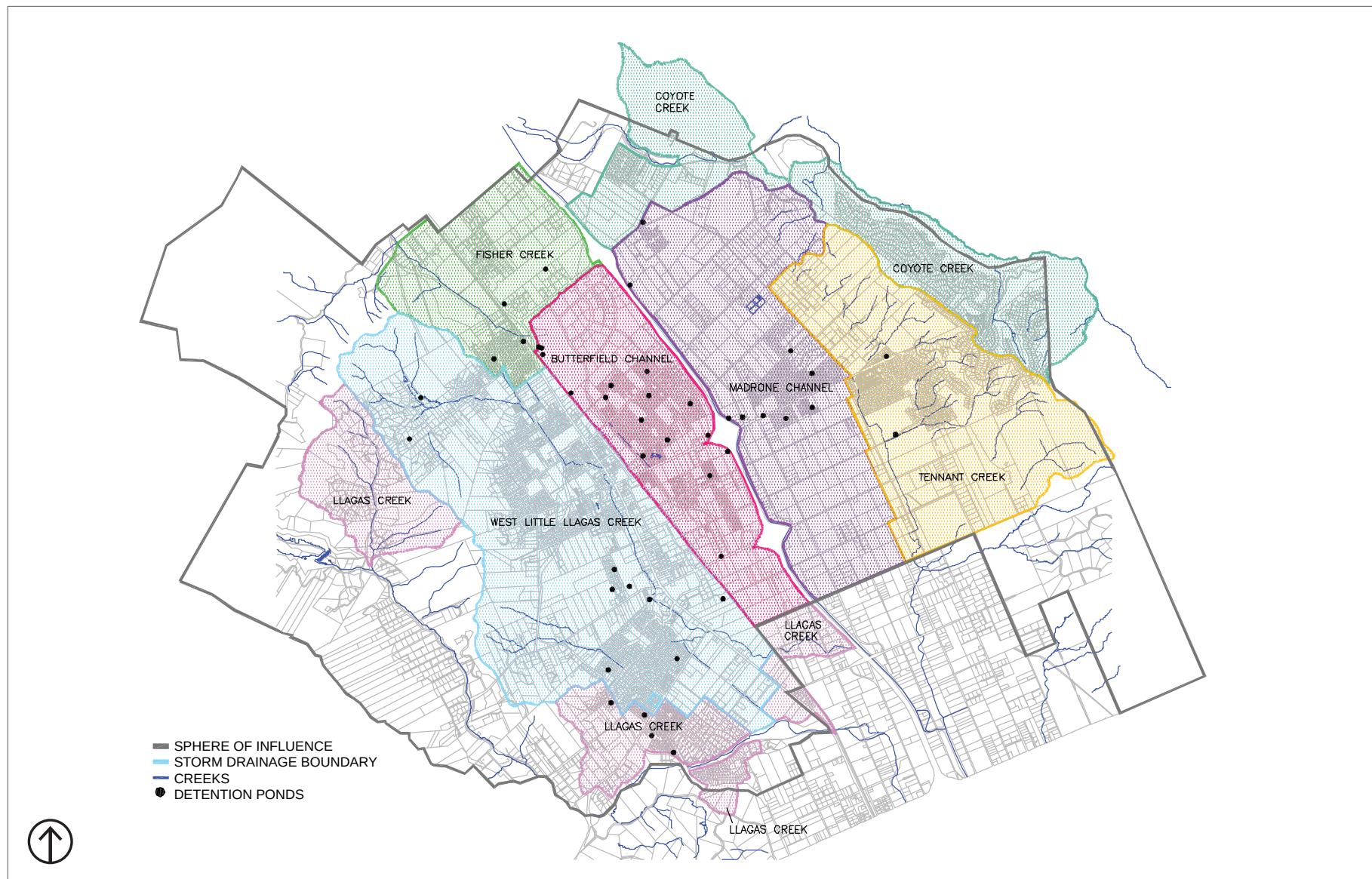
In addition to the natural drainage system, a network of storm drains collects runoff from City streets and carries it to the creeks, where it ultimately drains to Monterey Bay or San Francisco Bay. The City of Morgan Hill Public Works and Community Services Departments are responsible for the design, construction, and maintenance of the City-owned storm drain system. The existing storm drain system consists of curbs and gutters, curb inlets, underground drainage pipes, and bubblers draining to nearby creeks or man-made retention/detention areas. The SCVWD supports regional storm drainage for the Santa Clara Valley and maintains many of the creeks and channels to which rainwater runoff is discharged.

The City is divided into several hydrologically distinct drainage areas, as shown on Figure 4.9-2. Each of these areas consists of conveyance facilities, pumps, and detention basins to collect and dispose of the runoff. The runoff from these areas is discharged into creeks that flow through the City and that are tributaries to either Monterey Bay or San Francisco Bay. The main drainage areas include Coyote Creek, Fisher Creek, Tennant Creek, Madrone Channel, Butterfield Channel, West Little Llagas Creek, and Llagas Creek.

Fisher Creek Basin and Coyote Creek Basin drain the northern portion of the City and continue in a northerly direction to San Francisco Bay. Fisher Creek generally drains the area north of Llagas Road and Cochrane Road and west of Highway 101. Coyote Creek drains the area north of Cochrane Road and east of Highway 101.

West Little Llagas Creek, Butterfield Channel, Madrone Channel, Tennant Creek, and Llagas Creek drain the majority of the City and SOI and merge with Llagas Creek, which eventually discharges into Monterey Bay. To mitigate the impact of stormwater flooding caused by urban development within the City,

HYDROLOGY AND WATER QUALITY



Source: City of Morgan Hill Storm Water Master Plan, 2002.

Figure 4.9-2
Storm Drainage Basins

HYDROLOGY AND WATER QUALITY

developers have been required by City staff to construct new retention or detention ponds when constructing new subdivisions.

Groundwater

Morgan Hill and its SOI lie within two groundwater subbasins of the Santa Clara Valley Groundwater Basin: the Santa Clara Subbasin and the Llagas Subbasin, as shown on Figure 4.9-3. The Santa Clara Subbasin extends from the southern edge of San Francisco Bay through the Coyote Valley, with the subbasin boundary located near Cochrane Road in Morgan Hill. The thickness of the aquifer materials ranges from about 150 feet near the Coyote Narrows to more than 1,500 feet in the interior of the subbasin. Groundwater movement generally follows surface water patterns flowing from the interior of the subbasin northerly toward San Francisco Bay.¹⁷

The Coyote Valley subarea comprises the southern portion of the Santa Clara Subbasin and extends from the Coyote Narrows in the north to Cochrane Road in the south, where it borders the Llagas Subbasin. Groundwater occurs in this area under unconfined conditions and the area is not vulnerable to land subsidence. Groundwater is often quite shallow and is typically found between 5 and 40 feet below ground surface (bgs). Groundwater is often the only source of water for users in this area and most residents rely on private wells. Groundwater levels in Coyote Valley respond rapidly to changes in hydrology and pumping.¹⁸ Groundwater quality is generally good, with only three of the tested private and public supply wells containing pollutants above the Maximum Contaminant Levels (MCLs) for aluminum or nitrate.¹⁹

Recharge areas are primarily comprised of high permeability aquifer materials such as sands and gravels that allow surface water to infiltrate into the aquifers. In the Santa Clara Valley, the areas with the highest recharge are along the creeks and on the western edge of the valley floor, just below the toe of the foothills. The northern portion of Morgan Hill is within the Coyote Valley recharge area. Recharge within Coyote Valley includes Anderson Reservoir and Coyote Reservoir and in-stream recharge from Coyote Creek.

The Llagas Subbasin extends from a groundwater divide at Cochrane Road to the Pajaro River to the south. The Llagas Subbasin is the source of approximately 75 percent of Morgan Hill's water supply.²⁰ The subbasin is divided into three general areas: a forebay area, confined area, and Uvas Creek area. The City of Morgan Hill overlies the forebay area, which is composed of four alluvial horizons, consisting of sandy gravel to cobbly basin fill materials. Groundwater in this area occurs under unconfined conditions. Typical groundwater levels in the downtown Morgan Hill area are typically found at 15 feet bgs. Groundwater within Llagas Subbasin generally follows surface water patterns, draining south toward the Pajaro River toward San Benito County. Groundwater quality in the Llagas Subbasin is good, with the exception of

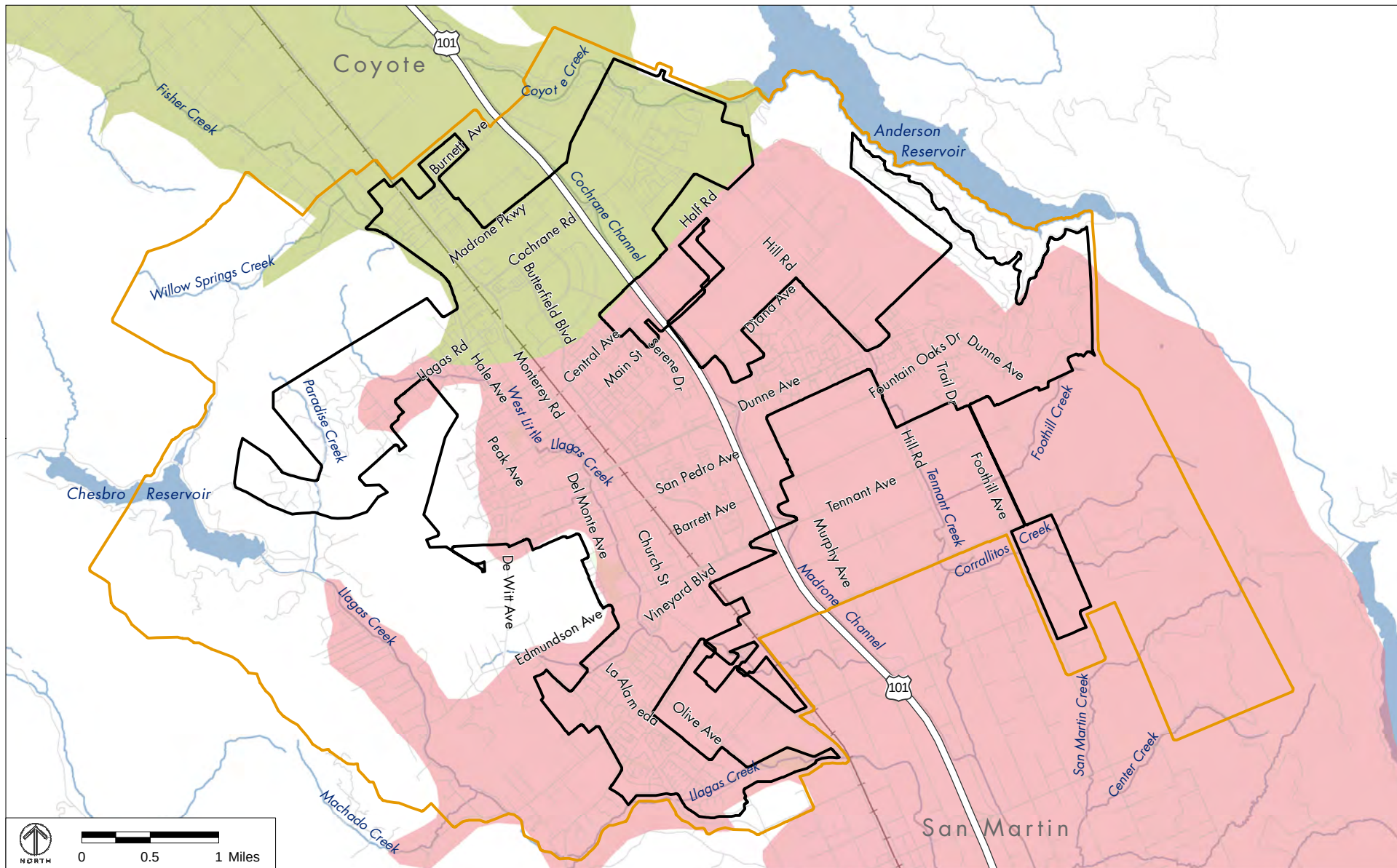
¹⁷ Santa Clara Valley Water District, 2012, *2012 Groundwater Management Plan*.

¹⁸ Santa Clara Valley Water District, 2012, *2012 Groundwater Management Plan*.

¹⁹ Santa Clara Valley Water District, 2011, *2010 Groundwater Quality Report*.

²⁰ City of Morgan Hill, 2010, *City of Morgan Hill 2010 Urban Water Management Plan*. Prepared by Risk Management Professionals.

HYDROLOGY AND WATER QUALITY



Source: City of Morgan Hill, 2013; California Department of Water Resources, 2005.

Figure 4.9-3

Groundwater Subbasins

HYDROLOGY AND WATER QUALITY

nitrate and perchlorate, which was present above the MCL in 13 percent and 3 percent of the 69 private and public supply wells that were tested, respectively.²¹

Major recharge facilities within the Llagas Subbasin include the Uvas and Chesbro Reservoirs, in-stream recharge in Llagas and Uvas Creeks, the Madrone Channel, the San Pedro and Main Avenue groundwater recharge ponds, and the Uvas-Llagas pipeline which can divert water from Uvas Reservoir to Llagas Creek. The Main Avenue and San Pedro groundwater recharge ponds are located in Morgan Hill along with the Madrone Channel.

The City of Morgan Hill obtains all of its water supply from groundwater. About 25 percent of its supply is extracted from the Coyote Valley subarea of the Santa Clara Subbasin; about 75 percent is extracted from the Llagas Subbasin.²² The City's water system consists of 17 groundwater wells ranging in depth from 220 feet to 530 feet bgs. The SCVWD manages all groundwater basins within Santa Clara County and uses a Groundwater Recharge Program to maintain groundwater levels. The SCVWD provides about 26 percent of recharge with imported raw water and about 34 percent via releases from local reservoir storage. Rainfall percolation accounts for the remaining 40 percent of replenishment. Since the basins are not adjudicated, the maximum supply available to the City is its maximum pumping capacity. According to the *2010 Morgan Hill Urban Water Management Plan*, the groundwater basins are not in a condition of overdraft and groundwater levels are not expected to drop. Water supply is addressed in more detail in the Utilities section of the Draft EIR.

Water Quality

Surface water quality is affected by point source and non-point source pollutants. Point source pollutants are those emitted at a specific point, such as a pipe, while non-point source pollutants are typically generated by surface runoff from diffuse sources, such as streets, paved areas, and landscaped areas. Point source pollutants are mainly controlled with pollutant discharge regulations and the issuance of waste discharge requirements (WDRs) to industrial sources. Non-point source (NPS) pollutants are more difficult to monitor and control although they are important contributors to surface water quality in urban areas.

Stormwater runoff pollutants vary based on land use, topography, the amount of impervious surface, and the amount and frequency of rainfall and irrigation practices. Runoff in developed areas typically contain oil, grease, and metals accumulated in streets, driveways, parking lots, and rooftops, as well as pesticides, herbicides, particulate matter, nutrients, animal waste, and other oxygen-demanding substances from landscaped areas. The highest pollutant concentrations usually occur at the beginning of the wet season during the “first flush.”

²¹ Santa Clara Valley Water District, 2012, *2012 Groundwater Management Plan*.

²² City of Morgan Hill, 2010, *2010 Urban Water Management Plan*. Prepared by Rick Management Professionals.

HYDROLOGY AND WATER QUALITY

Santa Clara Valley streams do not receive discharges from industrial or municipal wastewater.²³ Industrial and municipal wastewater discharges are routed to the City's sanitary sewer system and then to the regional municipal wastewater treatment plant located in the City of Gilroy where it is treated and discharged. In general, pollutant concentrations in stormwater runoff do not vary significantly within an urbanized watershed. However, pollutant concentrations do increase when impervious cover is more than 40 to 50 percent of the drainage area.²⁴ Runoff volume is the most important variable in predicting pollutant loads.

The San Francisco Bay RWQCB and Central Coast RWQCB monitor surface water quality through implementation of the Basin Plans and designate beneficial uses for surface water bodies and groundwater within the Santa Clara Valley. These designated beneficial uses for water bodies and groundwater within the City and SOI are listed in Table 4.9-2.

TABLE 4.9-2 DESIGNATED BENEFICIAL USES OF WATER BODIES IN MORGAN HILL AND SOI

Water Body	Designated Beneficial Use
Surface Water	
Coyote Creek	GWR, COMM, COLD, MIGR, RARE, SPWN, WARM, WILD, REC-1, REC-2
Fisher Creek	WARM, WILD, REC-1, REC-2
Llagas Creek (above Chesbro Reservoir)	MUN, AGR, GWR, COMM, COLD, RARE, WARM, FRESH, WILD, REC-1, REC-2
Little Llagas Creek	MUN, AGR, GWR, COLD, WARM, WILD, REC-1, REC-2
Corallitos Creek	MUN, AGR, IND, GWR, COMM, COLD, WARM, MIGR, SPWN, WILD, REC-1, REC-2
Groundwater	
Santa Clara Valley (Santa Clara Subbasin)	MUN, PROC, IND, AGR
Gilroy-Hollister Valley (Llagas Subbasin)	MUN, PROC, IND, AGR
Notes:	
AGR	Agricultural Supply
COMM	Commercial and Sport Fishing
GWR	Groundwater Recharge
MIGR	Fish Migration
PROC	Industrial Process Water Supply
REC-1	Water Contact Recreation
SPWN	Fish Spawning
WILD	Wildlife Habitat (WILD)
COLD	Cold Freshwater Habitat
FRSH	Freshwater Replenishment
IND	Industrial Service Water Supply
MUN	Municipal and Domestic Water Supply
RARE	Preservation of Rare and Endangered Species
REC-2	Noncontact Water Recreation
WARM	Warm Freshwater Habitat

Source: San Francisco Bay RWQCB, 2013. Water Quality Control Plan (Basin Plan) and Central Coast RWQCB, 2011. Water Quality Control Plan for the Central Coastal Basin.

In addition to the establishment of beneficial uses and water quality objectives, another approach to improving water quality is a watershed-based methodology that focuses on all potential pollution sources and not just those associated with point sources. If a body of water does not meet established water quality

²³ Santa Clara Basin Watershed Initiative, 2003, *Volume 1, Watershed Characteristics Report*, at <http://www.scbwmi.org/> accessed on September 10, 2015.

²⁴ Santa Clara Basin Watershed Initiative, 2003, *Volume 1, Watershed Characteristics Report*, at <http://www.scbwmi.org/> accessed on September 10, 2015.

HYDROLOGY AND WATER QUALITY

standards under traditional point source controls, then it is listed as an impaired water body under Section 303(d) of the CWA. For 303(d) listed water bodies, a limit is established, which defines the maximum amount of pollutants (or TMDL) that can be received by that water body. Impaired water bodies in Morgan Hill and its SOI and the status of TMDL implementation and USEPA approval dates are listed in Table 4.9-3.

TABLE 4.9-3 303(D) LIST OF IMPAIRED WATER BODIES IN MORGAN HILL

Water Body	Pollutant	Status of TMDL Implementation
Coyote Creek	Diazinon	Approved (2007)
	Trash	Planned (2021)
Llagas Creek (below Chesbro Reservoir)	Chloride	Planned (2021)
	Chlorpyrifos	Approved (2013)
	Electrical Conductivity	Planned (2021)
	E. coli	Planned (2011)
	Fecal Coliform	Approved (2010)
	Low dissolved oxygen	Planned (2021)
	Nutrients	Approved (2006)
	Sedimentation/Siltation	Approved (2007)
	Sodium	Planned (2021)
	Total dissolved solids	Planned (2021)
	Turbidity	Planned (2021)
Chesbro Reservoir	Mercury	Planned (2012)

Source: State Water Resources Control Board. 2010 Integrated Report, Clean Water Act, Section 303(d) List, Accessed on September 12, 2015, http://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2010.shtml.

The Basin Plans also contain water quality criteria for groundwater. Groundwater quality in the Santa Clara subbasin is generally considered to be good and water quality objectives are met in at least 95 percent of the County water supply wells without the use of treatment methods.²⁵ The groundwater in the major aquifers within the Santa Clara Subbasin is generally characterized as of a bicarbonate type with sodium and calcium being the primary cations.²⁶ The groundwater within the Llagas Subbasin is characterized as generally being hard, which can result in scaly residues on fixtures and difficulty in soap lathering, but suitable for most beneficial uses.²⁷ Since 1991, the SCVWD has been investigating the source of elevated concentrations of nitrate in over 50 percent of the private wells tested in the Llagas and Coyote Subbasins; all public wells

²⁵ Santa Clara Valley Water District, 2012, Santa Clara Valley Water District, 2012. 2012 Groundwater Management Plan.

²⁶ California Department of Water Resources (DWR), 2004, *California's Groundwater Bulletin 118, Santa Clara Valley Groundwater Basin, Santa Clara Subbasin*.

²⁷ California Department of Water Resources (DWR), 2004, *California's Groundwater Bulletin 118, Gilroy-Hollister Groundwater Basin, Llagas Subbasin*.

HYDROLOGY AND WATER QUALITY

meet drinking water standards. In 2012, the voters of Santa Clara County supported Measure B, the Safe, Clean Water and Natural Flood Protection Program, which through SCVWD provides up to \$500 in rebates to domestic well used for the purchase and installation of nitrate treatment systems.²⁸

Groundwater contamination can result from releases of hazardous materials from leaking underground storage tanks (LUST) or historical industrial activities. There are various RWQCB or Department of Toxic Substance Control (DTSC) hazardous waste cleanup sites within Morgan Hill, most of which have been closed and have been granted no further action letters by the agencies.²⁹ However, the Olin Corporation, a former highway flare manufacturer at 425 Tennant Avenue, had a release of perchlorate to groundwater, creating a plume that extends south to the San Martin Airport area and is currently being remediated. Additional information is provided in Chapter 4.8, Hazards and Hazardous Materials, of this Draft EIR. Future development within the boundaries of the groundwater plume should consider potential impacts if construction dewatering is required.

Flooding

FEMA prepares maps of the 100-year flood hazard area of U.S. communities and establishes standards for development within the 100-year floodplain. For areas within the 100-year flood hazard zone, the risk of flooding in the designated area is 1 percent for any given year. Maps are also available for 500-year floods, which mean that in any given year, the risk of flooding in the designated area is 0.2 percent. A floodway is a smaller area within the floodplain, such as a river or stream, as well as the area in immediate proximity to the river or stream that is capable of conveying the 100-year flood with no more than a 1-foot rise in the water level.

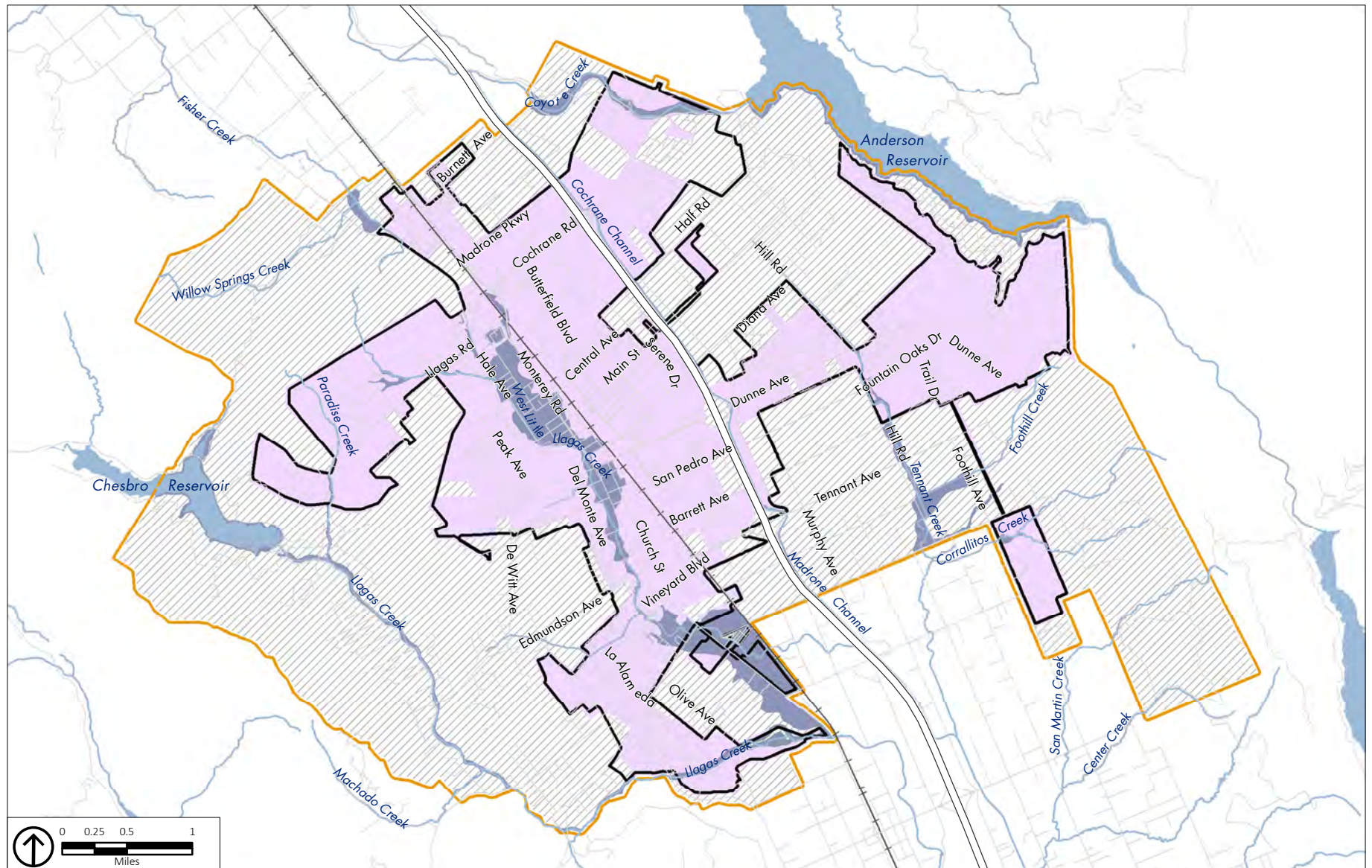
In some locations, FEMA also provides a measurement of base flood elevation for the 100-year flood, which is the minimum height of the floodwaters during a 100-year event; base flood elevation is reported in feet above sea level. Depth of flooding is determined by subtracting the land's elevation above mean sea level from the base flood elevation. Areas within the 100-year flood hazard area that are financed by federally backed mortgages are subject to mandatory federal insurance requirements and building standards to reduce flood damage.

According to FEMA FIRM maps, as shown on Figure 4.9-4, a portion of Morgan Hill along and west of Monterey Road is within the 100-year floodplain. The 100-year flood zone is also known as a Special Flood Hazard Area (SFHA); homeowners with mortgages within the SFHA are required to be protected by flood insurance. Also, the areas along Llagas Creek to the south and Coyote Creek to the north are within the 100-year floodplain. Areas within the SOI that are within the 100-year floodplain include the area to the

²⁸ Santa Clara Valley Water District, 2015, *Nitrate Treatment System Rebate Program*. <http://www.valleywater.org/nitraterebate/>, accessed September 12, 2015.

²⁹ State Water Resources Control Board (SWRCB), *Geotracker Database*, <http://geotracker.waterboards.ca.gov/>, accessed September 23, 2015.

HYDROLOGY AND WATER QUALITY



- Flood Hazard Area
- 500-Year Flood Zone
- 100-Year Flood Zone
- Unstudied Area
- Sphere of Influence
- City Boundary

Source: City of Morgan Hill, 2013 and Federal Emergency Management Agency, 2009.
Note: The 2009 FEMA flood data does not reflect the Llagas Creek Flood Protection Project.

Figure 4.9-4

FEMA Flood Zones

HYDROLOGY AND WATER QUALITY

south along Monterey Highway and the area along Tennant Creek and Foothill Creek. Most of the City is within the 500-year floodplain, which is considered to be a moderate to low risk area, where flood insurance is not required. All of the 100-year floodplain areas within Morgan Hill are immediately adjacent to creeks and streams that travel through the City.

Areas of historic flooding within the City and SOI are shown on Figure 4.9-5. Major creeks that have caused flooding during storm events include Llagas, West Little Llagas, Edmundson, Foothill, Paradise, Tennant, Coyote, Maple, and Corallitos Creeks.³⁰

Dam Inundation

Dam failure is the uncontrolled release of impounded water behind a dam. Flooding, earthquakes, blockages, landslides, lack of maintenance, improper operation, poor construction, vandalism, and terrorism can all cause a dam to fail.³¹ Dam failure can occur with little warning. Intense storms may produce floods in a few hours or even minutes for upstream locations. Flash floods occur within 6 hours of the beginning of heavy rainfall, and dam failure may occur within hours of the first signs of breaching. Other failures and breaches can take much longer to occur, from days to weeks. However, dam failure is a very rare occurrence. There is no historic record of dam failure in Santa Clara County or the City of Morgan Hill.³² In addition, there is minimal risk for dam failure for cities in the Bay Area due to safety protocols established by the California Division of Safety of Dams (DSOD), according to the ABAG *Regional Hazard Mitigation Plan* (2010).

The California Office of Emergency Services (OES) is required by state law to work with state and federal agencies, dam owners and operators, municipalities, floodplain managers, planners, and the public to make available dam inundation maps.³³ Dam inundation maps are used in the preparation of Local Hazard Mitigation Plans (LHMPs) and General Plan Safety Element updates. In addition, OES requires all dam owners to develop Emergency Action Plans (EAPs) for warning, evacuation, and post-flood actions in the event of a dam failure.

Much of the City of Morgan Hill is subject to potential dam inundation from the Anderson Reservoir. In addition, a small portion of the City south of Monterey Highway and the southern portion of the SOI are subject to potential dam inundation from Chesbro Reservoir. A map of the dam inundation zones is provided in Figure 4.9-6. Coyote Reservoir operates in conjunction with Anderson Reservoir and a dam failure of the Coyote Reservoir would result in water flowing into Anderson Reservoir. Therefore, a release from Coyote Reservoir would have the same dam inundation zone as Anderson Reservoir within the Study Area.

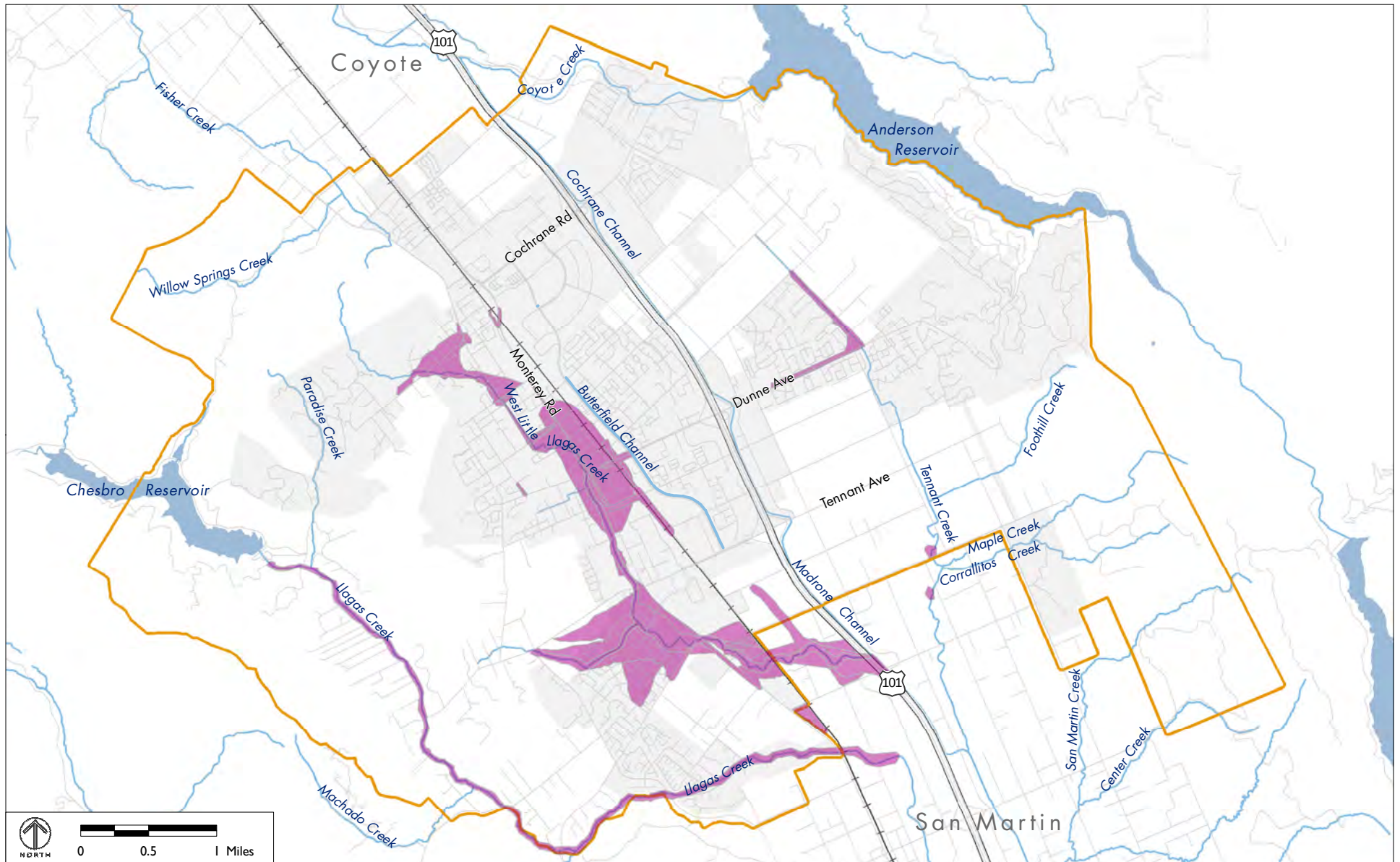
³⁰City of Morgan Hill, <http://www.morgan-hill.ca.gov/index.aspx?NID=748>, accessed September 23, 2013.

³¹California Emergency Management Agency (CalEMA), 2010, *State of California Multi-Hazard Mitigation Plan*.

³²Santa Clara County, 2011, *Santa Clara County Hazard Mitigation Plan*.

³³CalEMA, 2010, *State of California Multi-Hazard Mitigation Plan*

HYDROLOGY AND WATER QUALITY

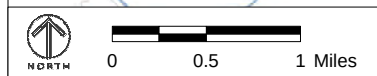
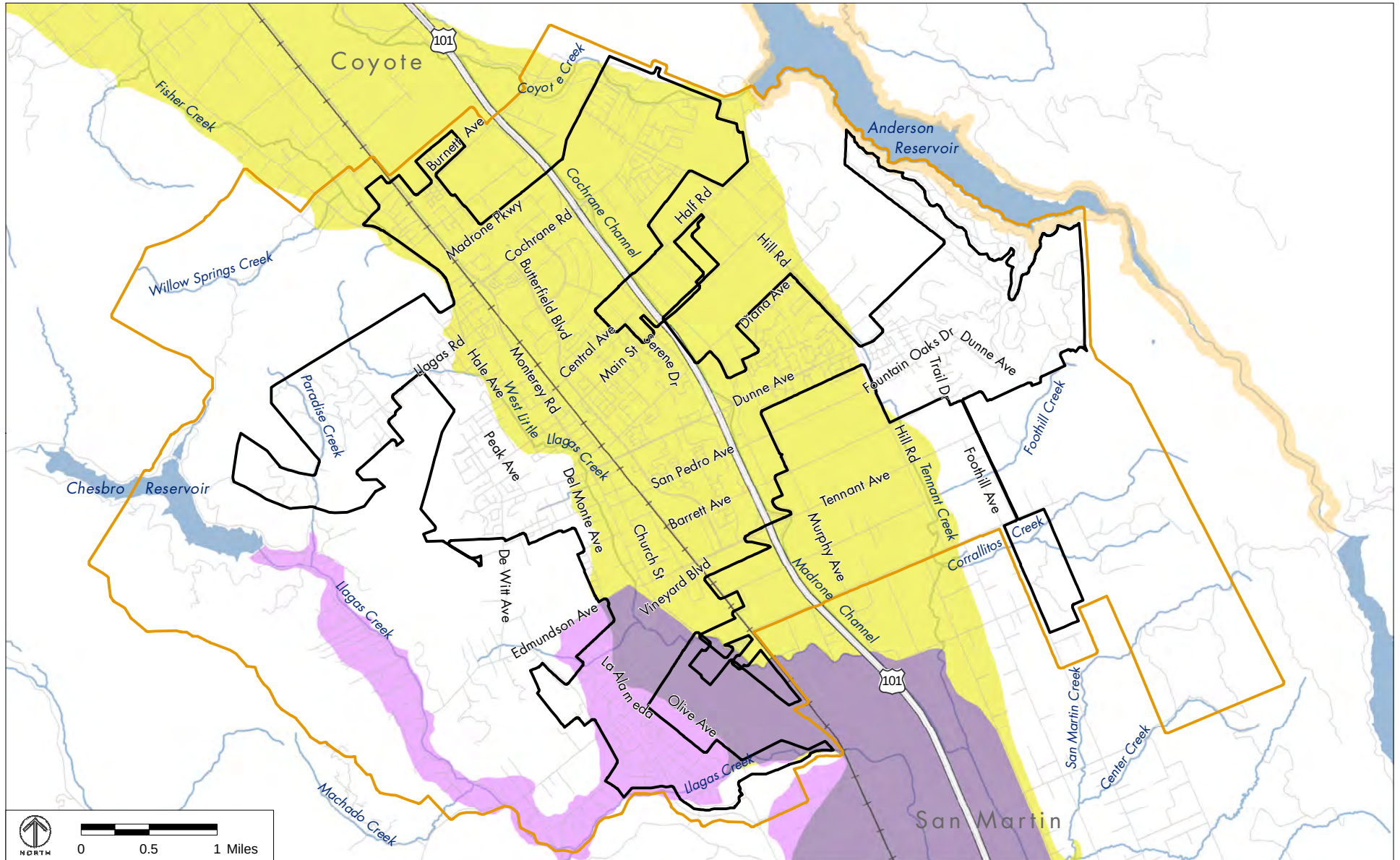


Source: City of Morgan Hill; Santa Clara Valley Water District, and PlaceWorks, 2014.

Figure 4.9-5

Historic Flooding

HYDROLOGY AND WATER QUALITY



- Anderson Reservoir
- Anderson/Chesbro Reservoirs
- Chesbro Reservoir
- Coyote Reservoir
- Sphere of Influence
- City Boundary

Source: City of Morgan Hill, 2013; Association of Bay Area Governments, 1995; CalOES, 2009

Figure 4.9-6

Dam Inundation Areas

HYDROLOGY AND WATER QUALITY

Anderson Dam and Coyote Dam operate in tandem with controlled releases to minimize the potential for downstream flooding along Coyote Creek. Coyote Dam is an earth and rock dam built in 1936 by SCVWD for water supply. Anderson Dam was built in 1950 by SCVWD for water supply and also is constructed of earth and rock. In 2011, a seismic study of Anderson Dam indicated that the foundation and base of the dam could weaken due to liquefaction from a 7.25 magnitude earthquake along the Calaveras Fault, which is located about 2 kilometers from the dam. As a result, the DSOD has established operating restrictions, reducing the amount of allowable storage to 68 percent of capacity. The dam is scheduled for seismic retrofit and the reservoir will be drained with construction beginning in 2017. The project will take approximately three years to complete.

The latest dam inundation maps prepared by SCVWD in 2009 indicate that the arrival time of the peak flood waves at a distance of approximately 0.5 mile downstream of the dam would be about 2 hours with estimated water depths up to 26 feet.³⁴ Since the dam is currently operating at 68 percent of capacity, these dam inundation zones, which assume the dam to be 100 percent full, overestimate the flooding impact in the unlikely event that a dam failure occurs. The City has established an Office of Emergency Services (OES), which is responsible for the Emergency Operations Plan (EOP). The EOP establishes the framework for implementation of the California Standardized Emergency Management System (SEMS), which would notify residents in the event of a disaster. The City also participates in Alert SCC, Santa Clara County's emergency alert system. Details regarding the EOP and responsibilities of the OES are provided in the City's annex to the 2010 Association of Bay Government's Local Hazard Mitigation Plan – *Taming Natural Disasters*.

Coyote Dam is located upstream of Anderson Dam and has a dam inundation zone that is the same as Anderson Reservoir. Operating restrictions have also been implemented for this dam with a maximum allowable storage of 53 percent of its capacity, due to the presence of the Calaveras Fault under the dam. As a result, the dam inundation zone also would be much smaller than the mapped area.

The third dam with a dam inundation zone within the City or SOI is Chesbro Dam, which is located partially within the SOI. Portions of Morgan Hill south of Monterey Highway and most of Paradise Valley within the SOI are within the dam inundation zone. The dam was constructed in 1955 by damming Llagas Creek; Chesbro Reservoir is owned and operated by SCVWD. The reservoir has a capacity of 8,086 acre-feet. However, because of the drought, the storage capacity in 2014 was only 907 acre-feet, or approximately 11 percent of its capacity.³⁵

According to the OES dam inundation map, released water from Chesbro Dam would flow south through Paradise Valley and eventually turning west to enter the City limits at a flood time of 50 minutes and a water depth of about 10 feet. The dam inundation map overestimates the current flooding impact because the dam

³⁴ Santa Clara Valley Water District, 2009, *Anderson Dam EAP 2009 Flood Inundation Maps*.

³⁵ Examiner.com, 2014, *California's Drought: South Bay's Chesbro Dam reaches zero percent capacity*. <http://www.examiner.com/article/california-s-drought-south-bay-s-chesbro-dam-reaches-zero-percent-capacity>, accessed September 12, 2015.

HYDROLOGY AND WATER QUALITY

is currently operating at 11 percent of capacity due to the drought, although this status is temporary and this level could increase in the future.

The State of California supervises all non-federal dams in California through the Dam Safety Program under the jurisdiction of DSOD. Engineers and engineering geologists review and approve plans and specifications for the design of dams and oversee their construction. In addition, the dams are inspected twice a year and continually monitored for seepage and settling. The Morgan Hill Office of Emergency Services (OES) and the SCVWD coordinate preparedness efforts to mitigate against, plan for, respond to, and recover from natural hazards, including the possibility of dam failure.

Tsunami, Seiche, and Mudflows

Tsunami

A tsunami is a series of traveling ocean waves generated by a rare, catastrophic event, including earthquakes, submarine landslides, and volcanic eruptions. Tsunamis can travel over the ocean surface at speeds of 400 to 500 miles per hour (mph) or more, and wave heights at the shore can range from inches to an excess of 50 feet. Factors influencing the size and speed of a tsunami include the source and magnitude of the triggering event, as well as offshore and onshore topography. The City of Morgan Hill and its SOI are more than 25 miles southeast of San Francisco Bay and almost 15 miles from the Pacific Ocean. The City is also more than 300 feet above mean sea level (msl), which places the City at a distance that is considered too far to be affected by a tsunami.³⁶

Seiche

A seiche is an oscillation wave generated in a closed or partially closed body of water, which can be compared to the back-and-forth sloshing in a bathtub. Seiches can be caused by winds, changes in atmospheric pressure, underwater earthquakes, tsunamis, or landslides into the water body. Bodies of water such as bays, harbors, reservoirs, ponds, and swimming ponds can experience seiche waves up to several feet in height during a strong earthquake. There are two large bodies of water adjacent to or partially within the City or SOI. A seiche could theoretically occur in these reservoirs as the result of an earthquake or other disturbance, but the flooding impact would be less than that for the dam inundation zones.

Mudflow

Mud and debris flows are mass movements of dirt and debris that occur after intense rainfall, earthquakes, and severe wildfires. The speed of a slide depends on the amount of precipitation, steepness of the slope, and

³⁶ Association of Bay Area Governments (ABAG), 2014, *Interactive Tsunami Inundation Map*, <http://gis.abag.ca.gov/website/Tsunami/index.html>, accessed September 12, 2015.

HYDROLOGY AND WATER QUALITY

alternate freezing and thawing of the ground. Most debris flows occur during intense rainfall in areas with steep slopes.

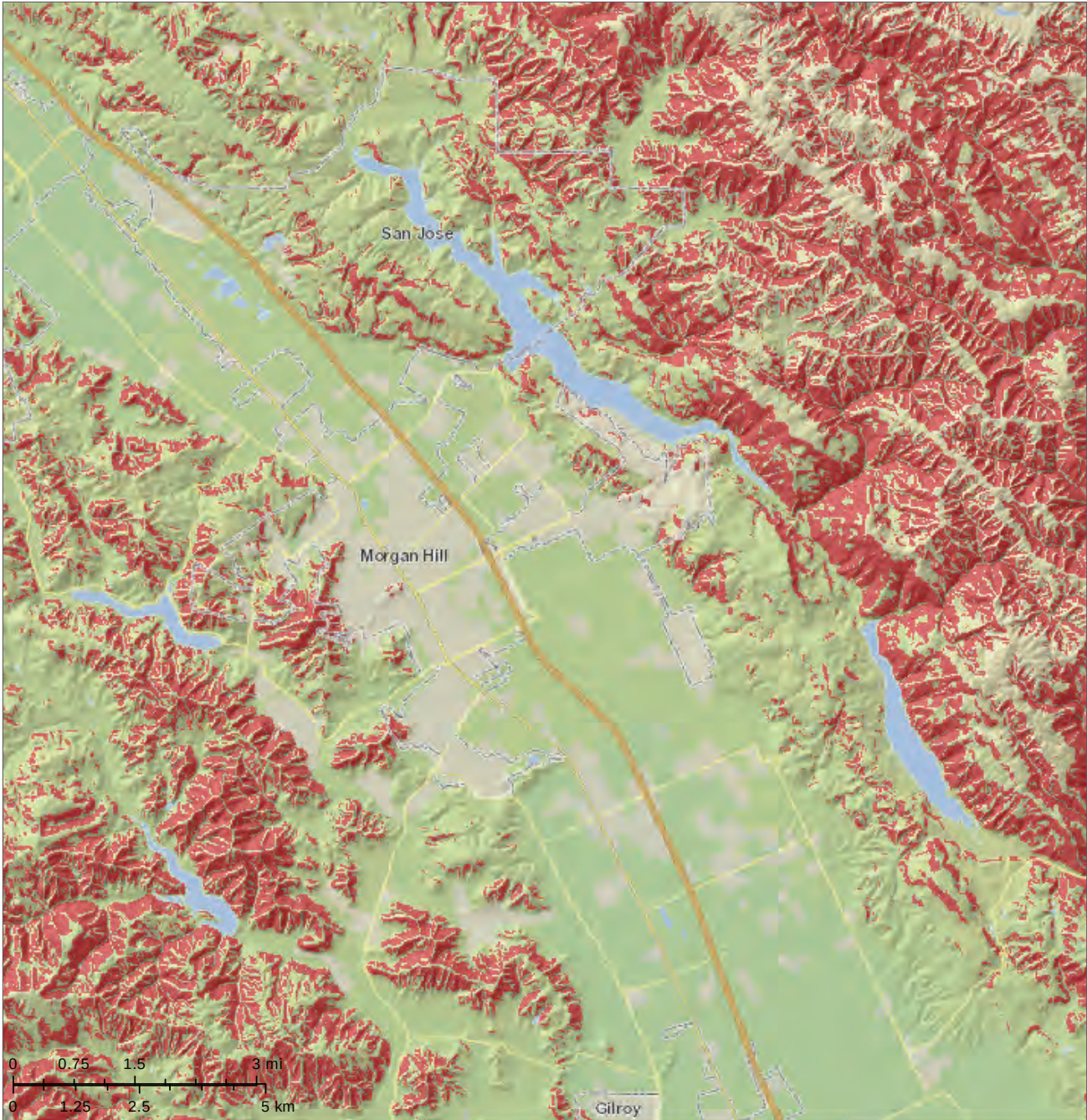
Areas at risk of landslides or mudflows are hillsides with steep slopes. Although the landslide risk within Morgan Hill is generally low in the valley area, potential risk exists in the foothills and mountainous terrain of the upland areas within the SOI to the west and east. The hillsides with a slope of 10 percent or greater, especially in the SOI area, are at greatest risk of mudflows during a major storm event. A map of potential landslide areas is provided in Figure 4.9-7.

4.9.2 STANDARDS OF SIGNIFICANCE

Implementation of the proposed Project would result in a significant hydrology and water quality impact if it would:

1. Violate any water quality standards or waste discharge requirements.
2. Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g. the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted).
3. Substantially alter the existing drainage pattern of the area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on or off site.
4. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off site.
5. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.
6. Otherwise substantially degrade water quality.
7. Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map, or place within a 100-year flood hazard area structures which would impede or redirect flood flows.
8. Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam.
9. Expose people or structures to a significant risk of inundation by seiche, tsunami, or mudflow.
10. Contribute to cumulative hydrology and water quality impacts in the area.

HYDROLOGY AND WATER QUALITY



Source: Association of Bay Area Governments Resilience Program, September 20, 2015.



 Rainfall-Induced Landslides - Debris Flow Source Areas

Figure 4.9-7
Potential Landslide Areas

HYDROLOGY AND WATER QUALITY

4.9.3 IMPACT DISCUSSION

This section analyzes potential Project-specific impacts to hydrology and water quality.

HYDRO-1	Implementation of the proposed Project would not violate any water quality standards or waste discharge requirements.

General Plan

Development or redevelopment allowed by the proposed Project could affect drainage patterns and increase the overall amount of impervious surfaces, thus creating changes to stormwater flows and water quality. Increasing the total area of impervious surfaces can result in a greater potential to introduce pollutants to receiving waters. Urban runoff can carry a variety of pollutants, such as oil and grease, metals, sediments, and pesticide residues from roadways, parking lots, rooftops, and landscaped areas, and deposit them into an adjacent waterway via the storm drain system. New construction allowed by the proposed Project could also result in the degradation of water quality with the clearing and grading of sites, releasing sediment, oil and greases, and other chemicals to nearby water bodies.

New development will occur in areas that are already covered with impervious surfaces but there are areas scheduled for future development that are currently vacant land. With the implementation of development standards and regional and local regulatory requirements, water quality issues will be addressed as described in the following sections.

Construction Impacts

Clearing, grading, excavation, and construction activities allowed by the proposed Project would have the potential to impact water quality through soil erosion and increasing the amount of silt and debris carried in runoff. Additionally, the use of construction materials such as fuels, solvents, and paints may present a risk to surface water quality. Finally, the refueling and parking of construction vehicles and other equipment on site during construction may result in oil, grease, or related pollutant leaks and spills that may discharge into the storm drain system.

To minimize these potential impacts, new development that disturbs one or more acres of land within the City and SOI would be required to comply with the NPDES General Construction Permit (GCP) as well as prepare a SWPPP that requires the incorporation of BMPs to control sedimentation, erosion, and hazardous materials contamination of runoff during construction. The GCP also requires that prior to the start of construction activities, a project applicant must file Permit Registration Documents (PRDs) with the SWRCB, which includes a Notice of Intent (NOI), risk assessment, site map, annual fee, signed certification statement, SWPPP, and post-construction water balance calculations. In addition, projects must comply with the City of Morgan Hill's Erosion and Sediment Control Ordinance, as specified in Chapter 13.30 of the Municipal Code, that requires project applicants to submit an erosion and sediment control plan for

HYDROLOGY AND WATER QUALITY

review by the City prior to the issuance of grading permits (Section 13.30.270). Project applicants must also implement City-approved BMPs to control stormwater runoff and minimize potential impacts to water quality.

Operational Impacts

Runoff from residential and commercial properties and parking lots typically contain oils, grease, fuel, antifreeze, and byproducts of combustion (such as lead, cadmium, nickel, and other metals), as well as fertilizers, herbicides, pesticides, and other pollutants. Precipitation at the beginning of the rainy season may result in an initial stormwater runoff (first flush) with high pollutant concentrations.

Post-construction control of stormwater runoff and water quality is regulated through the Phase II Small MS4 Permit. The City of Morgan Hill in conjunction with the City of Gilroy and Santa Clara County has developed a Stormwater Management Guidance Manual for Low Impact Development and Post-Construction Requirements.³⁷ Post-construction controls are permanent features of a new development or redevelopment project designed to reduce pollutants in stormwater and/or erosive flows during the life of the project. Types of post-construction controls include low impact development (LID) site design, pollutant source control, stormwater treatment, and hydromodification management measures. The LID approach reduces stormwater runoff impacts by minimizing disturbed areas and impervious surfaces, maximizing opportunities for infiltration and evapotranspiration, and using stormwater as a resource (e.g., rainwater harvesting for non-potable uses).

All new and redevelopment projects that create or replace 2,500 square feet or more of impervious surface are subject to the Central Coast RWQCB's Post-Construction Requirements and must implement LID measures. Projects that create or replace 5,000 square feet or more of impervious surface must treat runoff with an approved and appropriately sized LID treatment system prior to off-site discharge. Projects that create or replace 15,000 square feet or more of impervious surface must prevent discharge from events up to the 95th percentile rainfall event using stormwater control measures, and projects that create or replace 22,500 feet or more of impervious surface must control post-project peak flows to not exceed pre-project peak flows for the 2-year through 10-year storm events. Owners of properties with structural stormwater control measures are also required to have an Operation and Maintenance (O&M) Plan and Maintenance Agreement that clearly establishes responsibility for maintenance of the facilities for the lifetime of the project. In addition, a Stormwater Management Plan (SWMP) must be submitted to the City that describes how runoff and associated water quality impacts from the project will be controlled by the project's post-construction requirements (PCRs).

³⁷ City of Gilroy, City of Morgan Hill, and County of Santa Clara, 2015. *Stormwater Management Guidance Manual for Low Impact Development & Post-Construction Requirements*.

HYDROLOGY AND WATER QUALITY

The following General Plan policies and action in Chapter 8, Natural Resources and Environment (NRE) Element and Chapter 9, Safety, Services and Infrastructure (SSI) Element, of the General Plan would ensure potential impacts to water quality would not occur with the implementation of the Project.

Policy NRE-8.1	Contamination from Toxic Chemicals. Protect water quality from contamination, and monitor it to assure that present policies and regulations are adequate. Prohibit such uses as waste facilities, septic systems, and industries using toxic chemicals where polluting substances may come in contact with groundwater, floodwaters, and creeks or reservoir waters.
Policy NRE-8.2	Septic Systems. Continue land use policies that limit the number of individual septic systems in areas vulnerable to groundwater contamination, because of the potential for cumulative degradation of water quality.
Policy NRE-8.3	Water Quality Monitoring. Continue to monitor groundwater and surface water quality conditions to determine if changes in regulations regarding septic systems and land use are needed.
Policy NRE-8.6	Percolation Rates. Protect properties located in area that have soils with rapid water percolation from future development in order to ensure existing water quality. Permit development (including commercial and industrial uses) in such areas only under strict safety limitations according to the City's Hazardous Materials Storage Ordinance section specifically related to high percolation rates.
Policy NRE-8.7	Aquifer Protection. In order to provide greater protection of the aquifers which supply drinking water to the South County, give special consideration to the management of contaminants (e.g., hazardous materials, sanitary effluents) in groundwater recharge areas where no protective aquitard layer exists.
Policy NRE-8.8	Water Quality Compliance. Implement Best Management Practices to improve water quality, in conformance with the South Santa Clara County and City of Morgan Hill Total Maximum Daily Load (TMDL) Monitoring Plan for the Pajaro River Watershed (2015) and findings in subsequent annual status updates, as required for compliance with community standards and applicable state and federal provisions.
Policy NRE-9.1	Interjurisdictional Coordination. Maintain close coordination with the following agencies and organizations which share jurisdiction and interest relative to South County's water supply and water quality: the Regional Water Quality Control Boards, Santa Clara Valley Water District, Santa Clara County, City of Gilroy Planning Department, and San Martin Planning Committee.
Policy NRE-9.2	Water Board Standards. Encourage the two Regional Water Quality Control Boards which have jurisdiction in South County to agree upon compatible water quality standards and consistent approaches to implementing the State Board's nondegradation policy, so as not to confuse developers and jurisdictions which must carry out the Board's regulations.
Policy NRE-9.4	Compatibility of Regulations. Where appropriate, the Regional Water Quality Boards, Cities, County and other local agencies should adopt compatible ordinances (i.e., Hazardous Materials Storage Ordinance's HMSOs), standards (i.e., septic tank and alternative treatment and disposal methods), and enforcement procedures (i.e., implementing AB 2185, California Health and Safety Code Chapter 6.95, Division 20, Section 25500 et seq.) regarding water quality so that there is no advantage for a company to locate in an area with lower standards.
Action NRE-9.A	Intergovernmental Coordination. Consider intergovernmental coordination between the Cities, the County, and local agencies as an effective means of resolving issues of concern and investigating the feasibility of compatible standards, ordinances, and enforcement procedures.
Policy SSI-5.9	Riparian Natural Functions. Restore and maintain the natural functions of riparian corridors, creeks, and channels to reduce flooding, convey stormwater flows, and improve water quality.

HYDROLOGY AND WATER QUALITY

Required compliance with the Central Coast RWQCB's permit requirements; implementation of site design, source control, and treatment control measures for new development or redevelopment projects within the City and SOI; and adherence to General Plan policies and actions would render any potential construction and operational impacts to water quality *less than significant*.

Applicable Regulations:

- California Water Code Sections 13000 et seq.: Porter-Cologne Water Quality Act
- Central Coast RWQCB: Phase II Small MS4 Permit (Order Number 2013-0001-DWQ) and NPDES Permit No. CAS000004
- SWRCB Construction General Permit (GCP) – 2009-0009-DWQ) as amended by 2010-0014-DWQ
- Central Coast RWQCB Resolution R3-2013-0032 – *Post-Construction Stormwater Management Requirements for Development Projects in the Central Coast Region*
- Morgan Hill Municipal Code 13.30 – *Urban Stormwater Quality Management and Discharge Control*
- Morgan Hill Municipal Code 18.71 – *Post Construction Stormwater Pollution Prevention*
- City of Gilroy, City of Morgan Hill, and Santa Clara County *Stormwater Management Guidance Manual for Low Impact Development & Post-Construction Requirements*

Significance Before Mitigation: Less than significant.

Residential Development Control System

The Residential Development Control System, known as the RDCS, regulates population growth through the provision of residential building allotments. The RDCS, and the proposed updates to the RDCS as part of the proposed Project, affect the pace of development in the City but do not determine the location, type, or intensity of development. Therefore, the proposed RDCS would not have a substantial adverse effect on water quality or waste discharge requirements and the impact would be *less than significant*.

Significance Before Mitigation: Less than significant.

HYDRO-2	Implementation of the proposed Project would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level.

General Plan

Planned future development allowed under the proposed General Plan could result in an increase in impervious surfaces, which would reduce infiltration and could lead to reduced groundwater recharge. Much of the future development permitted by the proposed General Plan would be located on sites that have already been developed and currently have a high percentage of impervious surfaces, but the General

HYDROLOGY AND WATER QUALITY

Plan also encourages infill, which could take place on undeveloped and unpaved sites. In addition, the General Plan would allow development in some locations within the Study Area, such as the East of 101 Area Plan Overlay or the area south of Tennant Avenue between Monterey Road and Highway 101 that are currently agricultural or contain only sparse development. Overall, development allowed under the proposed General Plan would be expected to increase impervious surfaces above the current amount in the Study Area. However, applicants for new development and redevelopment would be required to implement site design measures, LID, and BMPs, which include infiltration features such as detention and retention basins, that will contribute to groundwater recharge and minimize stormwater runoff.

While development allowed under the proposed General Plan could lead to an increased demand for water, which could lead to an increase in groundwater pumping, water supply impacts are discussed in Chapter 4.15, Utilities and Service Systems, of this Draft EIR. As discussed in Chapter 4.15, the City of Morgan Hill obtains all of its water supply from groundwater. However, Morgan Hill's 2010 UWMP indicates that there is a sufficient supply of water through 2035 even for multiple dry years.³⁸ Water supply exceeds demand by at least 6,000 acre-feet per year (or greater than 38 percent) under all scenarios. In addition, the SCVWD operates and maintains an active groundwater recharge program with four reservoirs, in-stream recharge, and various groundwater recharge ponds. Runoff is captured in the SCVWD's reservoirs and released into both in-stream and off-stream recharge ponds for percolation into the groundwater basin. In addition, imported water is delivered by the raw water conveyance system to streams and ponds.³⁹

In addition, the following proposed General Plan policies and action in Chapter 8, Natural Resources and Environment (NRE) Element and Chapter 9, Safety, Services and Infrastructure (SSI) Element, of the General Plan would ensure potential impacts to groundwater would not occur with the implementation of the proposed Project.

Policy NRE-8.3	Water Quality Monitoring. Continue to monitor groundwater and surface water quality conditions to determine if changes in regulations regarding septic systems and land use are needed.
Policy NRE-8.6	Percolation Rates. Protect properties located in area that have soils with rapid water percolation from future development in order to ensure existing water quality. Permit development (including commercial and industrial uses) in such areas only under strict safety limitations according to the City's Hazardous Materials Storage Ordinance section specifically related to high percolation rates.
Policy NRE-8.7	Aquifer Protection. In order to provide greater protection of the aquifers which supply drinking water to the South County, give special consideration to the management of contaminants (e.g., hazardous materials, sanitary effluents) in groundwater recharge areas where no protective aquitard layer exists.
Policy SSI-14.1	Efficient Water Management. Manage the supply and use of water more efficiently through appropriate means, such as watershed protection, percolation, conservation, and reclamation.

³⁸ Santa Clara Valley Water District, 2010. *Urban Water Management Plan*.

³⁹ Santa Clara Valley Water District, 2010. *Urban Water Management Plan*.

HYDROLOGY AND WATER QUALITY

Policy SSI-14.6	Well Pumping. Support cooperation among all jurisdictions and agencies pumping water from wells in order to manage the aquifer to preserve the natural ecology of the region, secure the aquifer's utility as a water resource, and ensure the water's quality.
Policy SSI-14.7	Water District Programs. Encourage the Santa Clara Valley Water District to continue developing programs to assure effective management of water resources, such as well monitoring, percolation of imported water, reclamation, and conservation.
Policy SSI-14.9	Well Monitoring. Continue to monitor wells and provide the results to the Santa Clara Valley Water District which would coordinate the data and make it available to all jurisdictions and agencies.
Policy SSI-14.11	Urban Encroachment. Protect streambeds and other appropriate percolation areas from encroachment by urban development.
Action SSI-14.E	Well Pumping Impacts. Partner with other South County jurisdictions to assess the demand that the City's well pumping imposes on the direction of flow of water and how it affects others that are pumping from the same aquifer, in order to prevent adverse impacts on existing groundwater contamination problems.
Action SSI-14.H	Monitoring Programs. Work with other South County jurisdictions to track existing water quality, water supply, and water flow monitoring programs. This information should be used to evaluate current regulations and procedures, and to assess the need for new monitoring programs or for revisions or consolidation of existing programs.
Action SSI-14.I	Water District Programs. Work with the Santa Clara Valley Water District to encourage water use efficiency and conservation programs for residences, businesses, and agriculture and to increase public awareness of the need for efficient management of water resources, including but not limited to, conservation and reuse practices.

The use of retention and detention design features with new and redevelopment projects and compliance with the proposed General Plan policies would reduce the impact of increased impervious surfaces on groundwater recharge and groundwater quality. Also, there is sufficient water supply for normal, single-dry, and multiple-dry years with implementation of the proposed General Plan. Therefore, implementation of the proposed General Plan would have a *less-than-significant* impact with respect to groundwater supplies or groundwater recharge.

Applicable Regulations:

- California Water Code Sections 13000 et seq.: Porter-Cologne Water Quality Act
- SCVWD Well Ordinance Program
- SCVWD Abandoned Well Destruction Assistance Program

Significance Before Mitigation: Less than significant.

Residential Development Control System

The RDCS regulates population growth through the provision of residential building allotments. The RDCS, and the proposed updates to the RDCS as part of the proposed Project, affect the pace of development in the City but do not determine the location, type, or intensity of development. Therefore, the proposed

HYDROLOGY AND WATER QUALITY

RDCS would not have a substantial adverse effect on groundwater recharge or groundwater supply and the impact would be *less than significant*.

Significance Before Mitigation: Less than significant.

HYDRO-3	Implementation of the proposed Project would not substantially alter the existing drainage pattern of the area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site.

General Plan

Development within the Project Area and the change in land uses will result in an increase in impervious surfaces. This could result in an increase in storm water runoff, higher peak discharges to drainage channels, and the potential to cause erosion or sedimentation in drainage swales and streams. Increased runoff volumes and velocities could create nuisance flooding in areas without adequate drainage facilities. However, future development is not anticipated to require alteration of the course of an existing stream or river. In addition, adherence to local regulations would ensure that in the course of development, watercourse and drainage patterns would not be altered in a manner that would significantly increase the rate or amount of erosion or siltation.

Within the City of Morgan Hill, all new development and redevelopment projects will be required to implement construction phase BMPs as well as post-construction site design measures, source control measures, and stormwater treatment measures. Typical construction BMPs to minimize erosion and siltation include silt fences, fiber rolls, catch basin inlet protection, water trucks, street sweeping, and stabilization of truck entrance/exits. Also, each project applicant who disturbs one or more acre of land would be required to prepare and submit a SWPPP to the SWRCB that describes the measures to control discharges from construction sites. The City of Morgan Hill also requires preparation and submittal of an Erosion and Sediment Control Plan for review by the Director of Public Works prior to the issuance of grading permits.

There also are required post-construction control measures to minimize the potential for erosion and siltation. The impervious area thresholds that trigger these requirements are 2,500 square feet for site design and runoff reduction; 5,000 square feet for water quality treatment; 15,000 square feet for runoff retention; and 22,500 square feet for peak management. Site design and runoff reduction measures include minimizing the compaction of highly permeable soils, limit clearing and grading of native vegetation, minimize impervious surface, and minimize stormwater runoff by directing roof runoff into cisterns or rain barrels or onto vegetated area, and construct bike lanes, driveways, uncovered parking lots, sidewalks, walkways, and patios with permeable surfaces. Regulated projects subject to water treatment measures would require LID features, such as harvesting and reuse, infiltration, evapotranspiration, bioretention, flow-through planters, tree well filters, and media filters. Systems must be designed to treat stormwater runoff from the 85th percentile, 24-hour storm event or a flow design basis of 0.2 in./hr intensity. In

HYDROLOGY AND WATER QUALITY

addition, these regulated projects must submit a Stormwater Management Plan (SWMP) to the City for review and approval, including an O&M Plan and maintenance agreement.

Regulated project that create or replace 15,000 square feet or more of impervious surface are required to retain stormwater runoff on-site from the 95th percentile, 24-hour storm event and projects that create or replace 22,500 square feet of impervious surfaces would be required to match pre-project 2- to 10-year peak flows. These projects would also be required to submit a SWMP to the City for review and approval.

The following proposed General Plan policies and action in Chapter 8, Natural Resources and Environment (NRE) Element and Chapter 9, Safety, Services and Infrastructure (SSI) Element, of the proposed General Plan would ensure potential impacts regarding erosion and siltation would not occur with the implementation of the Project.

Policy NRE-5.5	Flood Control Projects. Where flood control projects are needed to protect existing developments, minimize disruption of streams and riparian systems, maintaining slow flow and stable banks through design and other appropriate mitigation measures.
Policy NRE-5.6	Stream Channel Protection. Protect existing stream channels and riparian vegetation by requiring buffering or landscaped setbacks and storm runoff interception, with setback distances specified in the General Plan.
Policy NRE-6.5	Soil and Erosion. Require development to be designed to conserve soil and avoid erosion.
Action NRE-6.A	Standard Measures for Construction Activities. Develop a set of standard measures requiring construction activities to avoid disturbance to natural features to the extent feasible.

The regulatory requirement for implementation of construction and post-construction BMPs; submittal of erosion control plans, SWPPPs, and SWMPs; and compliance with the City of Morgan Hill General Plan policies would reduce the potential impacts of erosion and siltation. Therefore, implementation of the proposed Project would have a *less-than-significant* impact with respect to the alteration of existing drainage patterns in a manner that would result in significant erosion or siltation.

Applicable Regulations:

- California Water Code Sections 13000 et seq.: Porter-Cologne Water Quality Act
- Central Coast RWQCB: Phase II Small MS4 Permit (Order Number 2013-0001-DWQ) and NPDES Permit No. CAS000004
- SWRCB Construction General Permit (GCP) – 2009-0009-DWQ) as amended by 2010-0014-DWQ
- Central Coast RWQCB Resolution R3-2013-0032 – *Post-Construction Stormwater Management Requirements for Development Projects in the Central Coast Region*
- Morgan Hill Municipal Code 13.30 – *Urban Stormwater Quality Management and Discharge Control*
- Morgan Hill Municipal Code 18.71 – *Post Construction Stormwater Pollution Prevention*

HYDROLOGY AND WATER QUALITY

- City of Gilroy, City of Morgan Hill, and Santa Clara County *Stormwater Management Guidance Manual for Low Impact Development & Post-Construction Requirements*

Significance Before Mitigation: Less than significant.

Residential Development Control System

The RDCS regulates population growth through the provision of residential building allotments. The RDCS, and the proposed updates to the RDCS as part of the proposed Project, affect the pace of development in the City but do not determine the location, type, or intensity of development. Therefore, the proposed RDCS would not have a substantial adverse effect on existing drainage patterns with respect to erosion and siltation and the impact would be *less than significant*.

Significance Before Mitigation: Less than significant.

HYDRO-4	Implementation of the proposed Project would not substantially alter the existing drainage pattern of the area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site.

General Plan

During the life of any development project allowed under the proposed General Plan, the increase in impervious surfaces could result in a change in drainage patterns that could increase the rate and/or volume of stormwater runoff, contributing to on-site or off-site flooding. However, as discussed in Impact HYDRO-3, all new and redevelopment projects that create or replace 2,500 square feet or more of impervious space would be required to comply with the Phase II Small MS4 permit requirements and implement various post-construction requirements (PCRs) that include site design, stormwater treatment, runoff retention, and peak flow management. All projects that create or replace 5,000 square feet of impervious surfaces must submit a SWMP and implement LID treatment measures to retain the 85th percentile, 24-hour storm volume.

For projects creating or replacing 15,000 square feet or more of impervious surface, runoff must be retained using structural stormwater control measures and submit a SWMP to the City for review. For projects that create or replace 22,500 square feet or more of impervious surface, post-project stormwater peak flows discharged from the site must not exceed pre-project peak flows for the 2-year through 10-year storm events. Hydrology calculations demonstrating that this requirement is met must be included in a hydrology report and/or SWMP. This will ensure that new development and redevelopment projects treat and regulate flow from the sites by gradually releasing stormwater to the storm drain system, thus ensuring that there is no net increase in runoff from the sites and flooding would not occur.

HYDROLOGY AND WATER QUALITY

The City of Morgan Hill prohibits development in floodways and regulates development in floodplains, as per the *Flood Damage Prevention* chapter of Morgan Hill’s municipal code. Within the City of Morgan Hill, the 100-year floodplains are generally located in and around existing creeks and drainage channels. Flooding within the City often occurs with a creek overtopping its banks. This occurred during the October 2009 storm with the overflow of West Little Llagas Creek and the drainage channel along Butterfield Boulevard. The City of Morgan Hill and SCVWD are working to reduce the risk of flooding, most recently with implementation of the Upper Llagas Creek Flood Protection Project. With the requirement that new development or redevelopment must implement stormwater control measures as well as pay drainage impact fees for storm drain improvements, the potential for the Project to result in a substantial increase in the rate or amount of surface runoff in a manner that would result in flooding is *less than significant*.

The following proposed General Plan policies and action in Chapter 8, Natural Resources and Environment (NRE) Element and Chapter 9, Safety, Services and Infrastructure (SSI) Element, of the General Plan would ensure potential impacts regarding changes in drainage patterns and flooding would not occur with the implementation of the proposed Project.

Policy NRE-5.5	Flood Control Projects. Where flood control projects are needed to protect existing developments, minimize disruption of streams and riparian systems, maintaining slow flow and stable banks through design and other appropriate mitigation measures.
Policy SSI-1.1	New Development and Hazards. New development should avoid hazardous and sensitive areas, and should occur only where it can be built without risking health and safety. New habitable structures should not be allowed in areas of highest hazard, such as floodways, active landslides, and active fault traces, and airport safety zones. In areas of less risk, development should be limited and designed to reduce risks to an acceptable level.
Policy SSI-5.1	Development in Floodways and Floodplains. Prohibit development in floodways and regulate development in floodplains to minimize flood damage and be consistent with the federal flood insurance program and Santa Clara Valley Water District regulations.
Policy SSI-5.2	Private Development in Flood-Prone Areas. If development is allowed in flood-prone areas, provide flood control facilities or appropriate flood-proofing prior to or in conjunction with development at developers' expense.
Policy SSI-5.4	Floodwater Diversion. Require that new developments within flood hazard areas are done in a manner that will not cause floodwaters to be diverted onto adjacent property or increase flood hazards to properties located elsewhere unless secured through a flood easement or fee title buyout.
Policy SSI-5.5	Off-Site Impacts. Require all local development to provide appropriate mitigation of off-site flooding impacts, including limiting runoff to pre-development levels and/or complete solutions to flooding and local drainage problems in the vicinity of the development, using such methods as detention or retention.
Policy SSI-5.6	New Development in Hazard Areas. Consider risk of flood hazards and damage in new development proposals within flood hazard areas. Ensure that new construction is consistent with federal flood protection regulations.
Policy SSI-5.8	Water District Project Review. Send all subdivisions and private and public project referrals where activity is located near to floodplain areas to Santa Clara Valley Water District for review prior to City approval.

HYDROLOGY AND WATER QUALITY

Policy SSI-6.1	Flood Control Projects. Minimize disruption of natural riparian areas by flood control projects needed to protect presently existing development by maintaining slow flow and stable banks through design and other appropriate mitigation measures.
Policy SSI-6.2	Minimize Future Flood Control Costs. As flooding affects substantial areas of South County, and the flood control projects now being constructed are designed to protect only existing developed and currently planned urban areas, manage land development to mitigate flooding problems and minimize the need for local public funding for additional flood control and local drainage facilities.
Policy SSI-6.3	Existing and Planned Development. Areas which are developed or planned for development should be protected by the construction of flood control facilities.
Policy SSI-6.4	Flood Protection Priority. Give highest priority for construction of flood protection facilities as follows: 1) to areas of existing development subject to the highest potential flood damage; 2) to undeveloped areas planned for urban development which would be subject to the highest potential of flood damage; 3) to agricultural lands; and 4) to other undeveloped areas.
Policy SSI-6.5	Flood Risks. Work with the Santa Clara Valley Water District and other agencies with the responsibility for flood protection to reduce flooding risks in Morgan Hill.
Policy SSI-6.6	Flood Management Design. Encourage flood management designs that respect the natural topography and vegetation of waterways while retaining dynamic flow and functional integrity.
Policy SSI-6.7	Urban Creeks and Channels. Preserve the existing floodplain capacity of urban creeks and channels.
Policy SSI-6.8	Increased Capacity. Encourage increased stormwater and flood management infrastructure capacity in order to accommodate changes in climate, precipitation, and extreme weather events.
Policy SSI-13.2	System Assessment. Evaluate the capacity and condition of water, wastewater, and stormwater facilities on a regular basis to assess each system's ability to withstand increased wet and dry weather events, meet changes in demand, and determine system deficiencies.
Action SSI-13.D	Inspections. Regularly inspect infrastructure more vulnerable to storms (e.g. wooden utilities poles) to ensure reliability during storm events.
Action SSI-16.C	Drainage Impact Mitigation. Require developers of individual projects to mitigate drainage impacts and protect groundwater quality. Such mitigation may include limiting runoff to pre-development levels and/or complete solutions to local drainage problems in the vicinity of the development or downstream, possibly using detention or retention methods
Action SSI-16.D	Drainage Maintenance Funding. Since County maintenance is limited to maintaining local storm drainage facilities which may affect County roads, study the available mechanisms for acquiring additional funding from residents and/or developers for any additional storm drain-related maintenance beyond that which is currently provided.

Applicable Regulations:

- Central Coast RWQCB: Phase II Small MS4 Permit (Order Number 2013-0001-DWQ) and NPDES Permit No. CAS000004
- SWRCB Construction General Permit (GCP) – 2009-0009-DWQ) as amended by 2010-0014-DWQ
- Central Coast RWQCB Resolution R3-2013-0032 – *Post-Construction Stormwater Management Requirements for Development Projects in the Central Coast Region*
- Morgan Hill Municipal Code 13.30 – *Urban Stormwater Quality Management and Discharge Control*

HYDROLOGY AND WATER QUALITY

- Morgan Hill Municipal Code 18.42 – *Flood Damage Prevention*
- Morgan Hill Municipal Code 18.71 – *Post Construction Stormwater Pollution Prevention*
- Morgan Hill Municipal Code 18.73 – *Water Conservation in Landscaping*
- City of Gilroy, City of Morgan Hill, and Santa Clara County *Stormwater Management Guidance Manual for Low Impact Development & Post-Construction Requirements*

Significance Before Mitigation: Less than significant.

Residential Development Control System

The RDCS regulates population growth through the provision of residential building allotments. The RDCS, and the proposed updates to the RDCS as part of the proposed Project, affect the pace of development in the City but do not determine the location, type, or intensity of development. Therefore, the proposed RDCS would not have a substantial adverse effect on existing drainage patterns with respect to flooding and the impact would be *less than significant*.

Significance Before Mitigation: Less than significant.

HYDRO-5	Implementation of the proposed Project would not create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.

General Plan

As discussed previously, an increase in impervious surfaces with implementation of the proposed General Plan could result in an increase in stormwater runoff that could exceed the capacity of existing or planned stormwater drainage systems. According to the City's *Storm Drainage System Master Plan*, Morgan Hill has a system of retention and detention ponds that are well planned to meet the City's drainage needs and design capacities for the drainage channels can accommodate the 100-year design storms for buildout land use conditions. In addition, substantial improvements to storm drain facilities have been completed over the last ten years and projects scheduled for completion in the next five years include the Upper Llagas Creek Flood Protection Project. The City also collects storm drain impact fees from developers and subdividers to defray the costs of constructing additional storm drain facilities. The City coordinates with surrounding jurisdictions and the SCVWD to provide regional storm drainage for the creeks and channels within the City and its SOI. The SCVWD maintains the creeks through which stormwater runoff is channeled.

In areas subject to the jurisdiction by the City of Morgan Hill or SCVWD, projects must be designed such that the stormwater runoff generated from the 10-year storm is conveyed in the storm drainage system (underground pipes or open channels) and the stormwater runoff generated from the 100-year design storm must be safely conveyed away from the site without creating and/or contributing to downstream or

HYDROLOGY AND WATER QUALITY

upstream flooding conditions.⁴⁰ Also, In addition, on-site detention facilities must be designed for the 25-year storm capacity and on-site retention facilities must be designed for the 100-year storm capacity. For all projects creating or replacing 22,500 square feet or more of impervious surface, post-project stormwater runoff rates must be less than or equal to pre-project values. All new projects would be required to provide hydrologic and hydraulic calculations comparing existing and post-development conditions in the SWMP. The site design and hydrology calculations would be subject to City review to verify that any increased project flows could be accommodated by the existing drainage system. In addition, there are post-construction requirements (PCRs) in the Phase II Small MS4 permit that require the implementation of on-site stormwater treatment measures to contain site runoff, using specific numeric sizing criteria based on volume and flow rates. With implementation of these measures, impacts to storm drain capacities would be *less than significant*.

New development and redevelopment allowed under the proposed General Plan would not create substantial additional sources of polluted runoff. During the construction phase, projects would be required to prepare SWPPPs and erosion and sediment control plans, thus limiting the discharge of pollutants from the site. During operation, projects must implement BMPs and LID measures that minimize the amount of stormwater runoff and associated pollutants. Additionally, new development or redevelopment projects would be required to pay storm drainage fees pursuant to Chapter 13.12 of the City's Municipal Code to support expansion and improvements to the existing storm drain system.

In addition, the following proposed General Plan policies and action in Chapter 8, Natural Resources and Environment (NRE) Element and Chapter 9, Safety, Services and Infrastructure (SSI) Element, of the General Plan would ensure potential impacts regarding the capacity of the storm drain system and water quality would not occur with the implementation of the proposed Project.

Action NRE-7.A	Infrastructure Maintenance. Correct known deficiencies in the City's sewer, storm drain, and water systems and work toward environmentally sustainable systems. Maintain the City's infrastructure to ensure that facilities are up to date and incorporate efficiency and conservation mechanisms.
Policy SSI-5.3	Off-Site Impacts. Require all local development to provide appropriate mitigation of off-site flooding impacts, including limiting runoff to pre-development levels and/or complete solutions to flooding and local drainage problems in the vicinity of the development, using such methods as detention or retention.
Policy NRE-5.5	Flood Control Projects. Where flood control projects are needed to protect existing developments, minimize disruption of streams and riparian systems, maintaining slow flow and stable banks through design and other appropriate mitigation measures.
Policy SSI-6.1	Flood Control Projects. Minimize disruption of natural riparian areas by flood control projects needed to protect presently existing development by maintaining slow flow and stable banks through design and other appropriate mitigation measures.
Policy SSI-6.7	Urban Creeks and Channels. Preserve the existing floodplain capacity of urban creeks and channels.

⁴⁰ Santa Clara County, 2007, *Drainage Manual*, adopted August 14, 2007.

HYDROLOGY AND WATER QUALITY

Policy SSI-6.8	Increased Capacity. Encourage increased stormwater and flood management infrastructure capacity in order to accommodate changes in climate, precipitation, and extreme weather events.
Policy SSI-13.2	System Assessment. Evaluate the capacity and condition of water, wastewater, and stormwater facilities on a regular basis to assess each system's ability to withstand increased wet and dry weather events, meet changes in demand, and determine system deficiencies.
Action SSI-13.D	Inspections. Regularly inspect infrastructure more vulnerable to storms (e.g. wooden utilities poles) to ensure reliability during storm events.
Policy SSI-16.1	Drainage Facilities Payment. Ensure that those residents who benefit from, as well as those who contribute to the need for, local drainage facilities pay for them.
Policy SSI-16.2	Drainage System Capacity. Ensure that the level of detention or retention provide on the site of any new development is compatible with the capacity of the regional storm drainage system.
Policy SSI-16.3	Stormwater Management Plans. Require a storm water management plan for each proposed development, to be presented early in the development process and describe the design, implementation, and maintenance of the local drainage facilities.
Policy SSI-16.4	Regional System Compatibility. Coordinate with the Santa Clara Valley Water District to ensure compatibility of the local and regional storm drainage systems.
Action SSI-16.A	Drainage Impacts. Require developers of individual projects to mitigate on- and off-site drainage impacts and, where appropriate, install local drainage facilities which would contribute to an eventual area-wide solution to local drainage problems.
Action SSI-16.B	South County Drainage. Work with the City of Gilroy and Santa Clara County to develop a coordinated, interjurisdictional master plan for local drainage in the South County, which includes consideration of the interface between unincorporated areas and City drainage systems.
Action SSI-16.C	Drainage Impact Mitigation. Require developers of individual projects to mitigate drainage impacts and protect groundwater quality. Such mitigation may include limiting runoff to pre-development levels and/or complete solutions to local drainage problems in the vicinity of the development or downstream, possibly using detention or retention methods.
Action SSI-16.D	Drainage Maintenance Funding. Since County maintenance is limited to maintaining local storm drainage facilities which may affect County roads, study the available mechanisms for acquiring additional funding from residents and/or developers for any additional storm drain-related maintenance beyond that which is currently provided.

Because of the City and County regulatory requirements for new development and redevelopment projects, storm drain impacts associated with future development allowed by the proposed General Plan would be *less than significant*.

Applicable Regulations:

- Central Coast RWQCB: Phase II Small MS4 Permit (Order Number 2013-0001-DWQ) and NPDES Permit No. CAS000004
- SWRCB Construction General Permit (GCP) – 2009-0009-DWQ) as amended by 2010-0014-DWQ
- Central Coast RWQCB Resolution R3-2013-0032 – *Post-Construction Stormwater Management Requirements for Development Projects in the Central Coast Region*

HYDROLOGY AND WATER QUALITY

- Morgan Hill Municipal Code 13.12 – *Water, Sewer, and Drainage Charges*
- Morgan Hill Municipal Code 13.30 – *Urban Stormwater Quality Management and Discharge Control*
- Morgan Hill Municipal Code 18.71 – *Post Construction Stormwater Pollution Prevention*
- City of Gilroy, City of Morgan Hill, and Santa Clara County *Stormwater Management Guidance Manual for Low Impact Development & Post-Construction Requirements*

Significance Before Mitigation: Less than significant.

Residential Development Control System

The RDCS regulates population growth through the provision of residential building allotments. The RDCS, and the proposed updates to the RDCS as part of the proposed Project, affect the pace of development in the City but do not determine the location, type, or intensity of development. Therefore, the proposed RDCS would not have a substantial adverse effect on the capacity of the existing or planned storm drain systems or provide additional sources of polluted runoff and the impact would be *less than significant*.

Significance Before Mitigation: Less than significant.

HYDRO-6	Implementation of the proposed Project would not otherwise substantially degrade water quality.

General Plan

As discussed previously in Impact HYDRO-1, the principal sources of water pollutants from future development within the City and SOI that would be allowed under the proposed General Plan are oil and grease, metals, sediment, and chemicals from roadways, parking lots, rooftops, and landscaped areas. Each project would be required to include source control, site design, LID, and stormwater treatment measures, such as retention and/or detention ponds, flow-through planters, permeable pavement, roof runoff to landscaped areas, tree well filters, and media filters in compliance with the Phase II MS4 permit requirements. Implementation of these stormwater control measures would provide natural filtration of pollutants from stormwater runoff prior to entry into the storm drain system. As such, new development and redevelopment projects should improve the treatment of stormwater on-site and reduce stormwater pollution, thus reducing impacts to *less than significant*. In addition, the proposed General Plan policies and actions listed under Impact HYDRO-1 will further reduce potential impacts to water quality.

Applicable Regulations:

- California Water Code Sections 13000 et seq.: Porter-Cologne Water Quality Act
- Central Coast RWQCB: Phase II Small MS4 Permit (Order Number 2013-0001-DWQ) and NPDES Permit No. CAS000004
- SWRCB Construction General Permit (GCP) – 2009-0009-DWQ) as amended by 2010-0014-DWQ

HYDROLOGY AND WATER QUALITY

- Central Coast RWQCB Resolution R3-2013-0032 – *Post-Construction Stormwater Management Requirements for Development Projects in the Central Coast Region*
- Morgan Hill Municipal Code 13.30 – *Urban Stormwater Quality Management and Discharge Control*
- Morgan Hill Municipal Code 18.71 – *Post Construction Stormwater Pollution Prevention*
- City of Gilroy, City of Morgan Hill, and Santa Clara County *Stormwater Management Guidance Manual for Low Impact Development & Post-Construction Requirements*

Significance Before Mitigation: Less than significant.

Residential Development Control System

The RDCS regulates population growth through the provision of residential building allotments. The RDCS, and the proposed updates to the RDCS as part of the proposed Project, affect the pace of development in the City but do not determine the location, type, or intensity of development. Therefore, the proposed RDCS would not have a substantial adverse effect on water quality and the impact would be *less than significant*.

Significance Before Mitigation: Less than significant.

HYDRO-7	Implementation of the proposed Project could place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map. Implementation of the proposed Project could place within a 100-year flood hazard area structures which would impede or redirect flood flows.

General Plan

Implementation of the proposed General Plan could result in the development of housing or structures within existing FEMA-designated 100-year floodplains or Special Flood Hazard Areas (SFHAs), as shown on Figure 4.9-4. This could expose residents to flood hazards and could also impede or redirect flood flows. However, the areas within Morgan Hill and the SOI that are within the 100-year floodplain are limited and located immediately adjacent to creeks and streams that travel through the City.

The City of Morgan Hill has adopted local standards for construction in floodplain areas,⁴¹ and the SCVWD requires construction/encroachment permits for construction or grading within 50 feet of the bank of a watercourse.⁴² Future development within the 100-year floodplain would require the placement of fill to elevate structures one foot above the 100-year floodplain elevation. In order for the future development to

⁴¹ City of Morgan Hill, Municipal Code Chapter 18.42, *Flood Damage Prevention*.

⁴² SCVWD Ordinance 83-2.

HYDROLOGY AND WATER QUALITY

be considered outside of the floodplain and no longer subject to special flood hazard requirements, the applicant would have to submit an application to FEMA for a Letter of Map Revision – Fill (LOMR-F) after the fill has been placed. After FEMA has revised the FIRM to show that the future development is now outside of the SFHA, the City would no longer be required to apply the minimum NFIP floodplain management standards to structures built on the land and the mandatory flood insurance requirements would no longer apply. The City would review and approve the plans prior to the issuance of building permits.

Construction within SFHAs is governed by the City’s Municipal Code Chapter 18.42 – *Flood Damage Prevention*. Section 18.42.160 sets forth construction requirements for development that would minimize flood hazard risks, including anchoring, elevation, and flood-proofing, and standards for utilities, subdivisions, residential and non-residential construction. Proposed General Plan Policy SSI-5.3 would require residential buildings in the 100-year floodplain to have their lowest floor elevation (excluding garages) floodproofed or raised a minimum of one foot above the base flood elevation (BFE). In addition, substantially improved structures within the 100-year floodplain would be required to meet the same floodplain construction requirements as new buildings.

The following proposed General Plan policies and action in Chapter 8, Natural Resources and Environment (NRE) Element and Chapter 9, Safety, Services and Infrastructure (SSI) Element, of the proposed General Plan would reduce potential impacts regarding placement of housing within a 100-year flood hazard area with the implementation of the proposed Project.

Policy NRE-5.5	Flood Control Projects. Where flood control projects are needed to protect existing developments, minimize disruption of streams and riparian systems, maintaining slow flow and stable banks through design and other appropriate mitigation measures.
Policy SSI-1.2	Hazard Reporting. Known or potential geologic, fire, and flood hazards should be disclosed as part of every real estate transaction, and recorded on documents to be reported for building permits, subdivisions, and land development reports. Mitigation of hazards should be noted in the same manner.
Action SSI-1.B	Current Information. Coordinate with local, regional, state, and federal sources to ensure the City maintains complete and current information on fire, flood, and geotechnical hazards.
Policy SSI-5.1	Development in Floodways and Floodplains. Prohibit development in floodways and regulate development in floodplains to minimize flood damage and be consistent with the federal flood insurance program and Santa Clara Valley Water District regulations.
Policy SSI-5.2	Private Development in Flood-Prone Areas. If development is allowed in flood-prone areas, provide flood control facilities or appropriate flood-proofing prior to or in conjunction with development at developers' expense.
Policy SSI-5.3	Flood Clearance. Prior to the start of construction, a Flood Clearance shall be obtained from the Floodplain Administrator for the City of Morgan Hill that provides plans drawn to scale showing the nature, location, dimensions, and elevation of the area; existing or proposed structures, fill, storage of material, and drainage facilities, and floodproofing provisions. Specifically, the following information shall be required: ■ Proposed elevation in relation to mean sea level of the lowest floor (including basement) of all structures.

HYDROLOGY AND WATER QUALITY

- Proposed elevation in relation to mean sea level to which any structure will be floodproofed.
- Appropriate elevation and floodproofing certifications.
- Description of the extent to which any water course will be altered or relocated as a result of the proposed development.

New residential buildings in the 100-year floodplain shall have their lowest floor elevation (excluding garage) floodproofed or raised a minimum of one foot above the base flood elevation (BFE). Substantially improved structures within the 100-year floodplain shall meet the same floodplain construction requirements as new buildings.

Policy SSI-5.4	Floodwater Diversion. Require that new developments within flood hazard areas are done in a manner that will not cause floodwaters to be diverted onto adjacent property or increase flood hazards to properties located elsewhere unless secured through a flood easement or fee title buyout.
Policy SSI-5.5	Off-Site Impacts. Require all local development to provide appropriate mitigation of off-site flooding impacts, including limiting runoff to pre-development levels and/or complete solutions to flooding and local drainage problems in the vicinity of the development, using such methods as detention or retention.
Policy SSI-5.6	New Development in Hazard Areas. Consider risk of flood hazards and damage in new development proposals within flood hazard areas. Ensure that new construction is consistent with federal flood protection regulations.
Policy SSI-5.7	Raised Structures. Where other mitigation measures do not solve the flooding problem, permit raising individual foundations (padding up structures) in appropriate situations; however, its use must be restricted in order to minimize the cumulative effects on adjacent areas.
Policy SSI-5.8	Water District Project Review. Send all subdivisions and private and public project referrals where activity is located near to floodplain areas to Santa Clara Valley Water District for review prior to City approval.
Policy SSI-5.12	Public Facilities Maintenance. Design and locate essential public facilities so that their structural and operational integrity can be maintained during flooding.
Policy SSI-5.13	Public Facilities Location. Locate, when feasible, new public facilities outside of flood hazard zones, including hospitals and health care facilities, emergency shelters, fire stations, emergency command centers, and emergency communication facilities or identify construction methods or other methods to minimize damage if these facilities are located in flood hazard zones.
Action SSI-5.A	Floodway and Floodplain Dedication. Continue to require dedication of floodway and floodplain areas pursuant to the PL566 Drainage Program.
Action SSI-5.C	Floodplain Regulations. Develop, enact, and enforce regulations for all floodplains, with specific standards to minimize flooding of existing structures and surrounding properties.
Policy SSI-6.1	Flood Control Projects. Minimize disruption of natural riparian areas by flood control projects needed to protect presently existing development by maintaining slow flow and stable banks through design and other appropriate mitigation measures.
Policy SSI-6.2	Minimize Future Flood Control Costs. As flooding affects substantial areas of South County, and the flood control projects now being constructed are designed to protect only existing developed and currently planned urban areas, manage land development to mitigate flooding problems and minimize the need for local public funding for additional flood control and local drainage facilities.
Policy SSI-6.3	Existing and Planned Development. Areas which are developed or planned for development should be protected by the construction of flood control facilities.

HYDROLOGY AND WATER QUALITY

Policy SSI-6.4	Flood Protection Priority. Give highest priority for construction of flood protection facilities as follows: 1) to areas of existing development subject to the highest potential flood damage; 2) to undeveloped areas planned for urban development which would be subject to the highest potential of flood damage; 3) to agricultural lands; and 4) to other undeveloped areas.
Policy SSI-6.5	Flood Risks. Work with the Santa Clara Valley Water District and other agencies with the responsibility for flood protection to reduce flooding risks in Morgan Hill.
Policy SSI-6.6	Flood Management Design. Encourage flood management designs that respect the natural topography and vegetation of waterways while retaining dynamic flow and functional integrity.
Policy SSI-6.7	Urban Creeks and Channels. Preserve the existing floodplain capacity of urban creeks and channels.
Policy SSI-6.8	Increased Capacity. Encourage increased stormwater and flood management infrastructure capacity in order to accommodate changes in climate, precipitation, and extreme weather events.

With federal and local regulatory requirements regarding construction of new development within 100-year floodplains to reduce potential risk from flooding and proposed General Plan policies and actions to address this concern, this impact is considered to be *less than significant*.

Applicable Regulations:

- FEMA – National Flood Insurance Program
- Morgan Hill Municipal Code 18.42 – *Flood Damage Prevention*

Significance Before Mitigation: Less than significant.

Residential Development Control System

The RDCS regulates population growth through the provision of residential building allotments. The RDCS, and the proposed updates to the RDCS as part of the proposed Project, affect the pace of development in the City but do not determine the location, type, or intensity of development. Therefore, the proposed RDCS would not impact construction of housing within the 100-year floodplain and the impact would be *less than significant*.

Significance Before Mitigation: Less than significant.

HYDRO-8	Implementation of the proposed Project would not expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam.

HYDROLOGY AND WATER QUALITY

General Plan

According to maps compiled by OES, much of the City of Morgan Hill is within the Anderson Reservoir dam inundation zone and a small portion of the City south of Monterey Highway and the southern portion of the SOI are within the Chesbro Reservoir dam inundation zone, as shown on Figure 4.9-6.⁴³ Coyote Reservoir operates in tandem with Anderson Reservoir and a release from the Coyote Reservoir would have the same dam inundation zone as Anderson Reservoir. Chesbro Reservoir is located partially within the SOI and also has a dam inundation zone that impacts the City or SOI. The dam inundation zone includes most of Paradise Valley within the SOI and the area of the City south of Monterey Highway.

Failure of these dams could result in the release of water held behind the dams and result in flooding of parts of the City and surrounding area. A major seismic event, if sufficiently intense, would be the most likely cause of dam failure. In 2011, a seismic study of Anderson Dam by SCVWD indicated that the foundation and base of the dam could weaken due to liquefaction from a 7.25 magnitude earthquake along the Calaveras Fault, which is located about 2 kilometers from the dam. As a result, the DSOD has established operating restrictions, reducing the amount of allowable storage to 68 percent of capacity. The dam is scheduled for seismic retrofit and the reservoir will be drained with construction beginning in 2017. The project will take approximately 3 years to complete. Operating restrictions have also been implemented for Coyote dam with a maximum allowable storage of 53 percent of its capacity, due to the presence of the Calaveras Fault under the dam. There are no operational restrictions for Chesbro Reservoir; however, because of the drought, the storage of water behind the reservoir in 2014 was only 11 percent of its capacity, or 907 acre-feet.⁴⁴

Dam inundation zones are based on the highly unlikely event of a total catastrophic dam failure occurring in a very short period of time. Also, the dam inundation zones for Anderson and Coyote Reservoirs are based on the reservoirs being completely full (i.e., 100 percent storage capacity). As a result of the storage restrictions, the dam inundation zones in the unlikely event of a dam failure would be smaller than the mapped areas. In addition, the dam inundation map for Chesbro Reservoir overestimates the flooding impact because the dam is currently operating at 11 percent of its capacity due to drought (although levels may be increased in the future).

The probability of dam failure is extremely low and there is no historic record of dam failure in Santa Clara County or the City of Morgan Hill.⁴⁵ Dams in California are continually monitored by various governmental agencies, including SCVWD and DSOD, which conduct inspections twice a year and review all aspects of dam safety. The SCVWD also maintains Emergency Action Plans (EAPs) for each dam that include procedures for damage assessment and emergency warnings. SCVWD inspection teams are immediately

⁴³ California Office of Emergency Services, 2009, *Dam Inundation Hazard Maps for Anderson Reservoir and Chesbro Reservoir*.

⁴⁴ Examiner.com, 2014, *California's Drought: South Bay's Chesbro Dam reaches zero percent capacity*. <http://www.examiner.com/article/california-s-drought-south-bay-s-chesbro-dam-reaches-zero-percent-capacity>, accessed September 12, 2015.

⁴⁵ Santa Clara County, 2011, *Santa Clara County Hazard Mitigation Plan*.

HYDROLOGY AND WATER QUALITY

dispatched to each dam after a significant earthquake to assess for damage, such as seepage or settling. In addition, the City of Morgan Hill, in conjunction with Santa Clara County, addresses the possibility of dam failure in the Local Hazard Mitigation Plan, which also provides emergency response actions. The Morgan Hill Office of Emergency Services (OES) and the SCVWD coordinate preparedness efforts to mitigate against, plan for, respond to, and recover from natural hazards, including the possibility of dam failure. The City also participates in Alert SCC, Santa Clara County's emergency alert system. Therefore, implementation of the proposed Plan would not expose people or structures to a significant risk of loss, injury, or death in the case of dam failure and impacts are considered to be *less than significant*.

In addition, the following proposed General Plan policies and action in Chapter 9, Safety, Services and Infrastructure (SSI) Element, of the proposed General Plan would reduce potential impacts regarding dam failure with the implementation of the proposed Project.

Policy SSI-1.2	Hazard Reporting. Known or potential geologic, fire, and flood hazards should be disclosed as part of every real estate transaction, and recorded on documents to be reported for building permits, subdivisions, and land development reports. Mitigation of hazards should be noted in the same manner.
Action SSI-1.B	Current Information. Coordinate with local, regional, state, and federal sources to ensure the City maintains complete and current information on fire, flood, and geotechnical hazards.
Policy SSI-5.10	Development along Reservoirs. Limit development along the shores of reservoirs which can be expected to sustain damage from seismically-induced seiche waves.
Policy SSI-5.11	New Development in Dam Inundation Areas. Consider risk of dam inundation in new development proposals within the Anderson, Chesbro, and Coyote dam inundation areas.
Policy SSI-5.14	Evacuation and Rescue Maps. Maintain, update, and make available to the public, as appropriate, community flood evacuation and rescue maps.
Action SSI-5.C	Critical Facilities. Conduct a study to identify critical facilities, such as levees, in flood hazard areas and within the dam inundation area, and seek ways to improve their level of protection, if possible.

Applicable Regulations:

- Emergency Services Act – California Government Code Section 8589.5(b)
- California Division of Safety of Dams – Dam Inspection Program
- Santa Clara County Local Hazard Mitigation Plan – City of Morgan Hill Annex

Significance Before Mitigation: Less than significant.

Residential Development Control System

The RDCS regulates population growth through the provision of residential building allotments. The RDCS, and the proposed updates to the RDCS as part of the proposed Project, affect the pace of development in the City but do not determine the location, type, or intensity of development. Therefore, the proposed RDCS would not impact the potential for dam or levee failure and the impact would be *less than significant*.

Significance Before Mitigation: Less than significant.

HYDROLOGY AND WATER QUALITY

HYDRO-9	Implementation of the proposed Project would not expose people or structures to a significant risk of inundation by seiche, tsunami, or mudflow.

General Plan

Because the City of Morgan Hill is more than 15 miles from the Pacific Ocean and more than 25 miles from San Francisco Bay, and also more than 300 feet above msl, there is no potential for a tsunami to impact the City or SOI.⁴⁶ The City is located just immediately downstream of Anderson Reservoir and also is within the dam inundation zone of Chesbro Reservoir. A seiche could theoretically occur in these reservoirs as the result of an earthquake or other disturbance, but the flooding impact would be less than that of the dam inundation zone. There are no other large bodies of water within the City of Morgan Hill or its SOI that could generate seiches.

Only limited portions within the City limits of Morgan Hill are within areas that could result in debris flows.⁴⁷ These areas are located in the western and eastern portions of the City adjacent to Anderson Reservoir and Chesbro Reservoir and consist primarily of open space and hillside homes. The proposed General Plan would designate two areas within ABAG mapped potential debris flow source areas located north and south of Llagas Road as Residential Estate. Building design and construction in hillside areas would require a geotechnical investigation with approval by the Building Division as part of the building permit review and issuance process, as per the Morgan Hill Municipal code 18.45.110 – *Geologic Investigation*.

In addition, the following proposed General Plan policies and action in Chapter 9, Safety, Services and Infrastructure (SSI) Element, of the proposed General Plan would ensure potential impacts regarding landslides and other hazards would not occur with the implementation of the proposed Project.

Policy SSI-1.1	New Development and Hazards. New development should avoid hazardous and sensitive areas, and should occur only where it can be built without risking health and safety. New habitable structures should not be allowed in areas of highest hazard, such as floodways, active landslides, and active fault traces, and airport safety zones. In areas of less risk, development should be limited and designed to reduce risks to an acceptable level.
Policy SSI-1.2	Hazard Reporting. Known or potential geologic, fire, and flood hazards shall be disclosed as part of every real estate transaction, and recorded on documents to be reported for building permits, subdivisions, and land development reports. Mitigation of hazards should be noted in the same manner.
Action SSI-1.B	Current Information. Coordinate with local, regional, state, and federal sources to ensure the City maintains complete and current information on fire, flood, and geotechnical hazards.

⁴⁶ Association of Bay Area Governments (ABAG), 2015, *Interactive Tsunami Inundation Map*, <http://gis.abag.ca.gov/website/Hazards/?hlyr=tsunami>, accessed September 14, 2015.

⁴⁷ Association of Bay Area Governments (ABAG), 2015, *Rainfall-Induced Landslides: Debris Flow Source Areas*, <http://gis.abag.ca.gov/website/Hazards/?hlyr=debrisFlowSource>, accessed September 20, 2015.

HYDROLOGY AND WATER QUALITY

Policy SSI-2.7	Landslides. Prohibit development on known active landslides and limit development in areas where such development might initiate sliding or be affected by sliding on adjacent parcels.
Policy SSI-2.8	Runoff and Slope Stability. Prohibit development in areas where increased runoff from the addition of impervious surfaces and drainage would increase the probability of downslope landsliding, or where additional projects would add to the cumulative effect of increased runoff, unless a downslope drainage improvement plan has been approved.
Policy SSI-5.10	Development along Reservoirs. Limit development along the shores of reservoirs which can be expected to sustain damage from seismically-induced seiche waves.

With implementation of these policies and actions as well as compliance with the City's Municipal Code regarding hillside construction, the impacts due to seiches and mudflows would be *less than significant*.

Applicable Regulations:

- Emergency Services Act – California Government Code Section 8589.5(b)
- California Division of Safety of Dams – Dam Inspection Program
- City of Morgan Hill Municipal Code 18.45.110 – *Geologic Investigation*

Significance Before Mitigation: Less than significant.

Residential Development Control System

The RDCS regulates population growth through the provision of residential building allotments. The RDCS, and the proposed updates to the RDCS as part of the proposed Project, affect the pace of development in the City but do not determine the location, type, or intensity of development. Therefore, the proposed RDCS would not impact the potential for seiches or mudflows and the impact would be *less than significant*.

Significance Before Mitigation: Less than significant.

4.9.4 CUMULATIVE IMPACTS

HYDRO-10	Implementation of the proposed Project would not contribute to cumulative hydrology and water quality impacts in the area.

As discussed in Chapter 4, Environmental Analysis of this Draft EIR, this EIR takes into account growth projected by the proposed Project within the Morgan Hill City boundaries and SOI, in combination with impacts from projected growth in the rest of Santa Clara County and the surrounding region, as forecast by ABAG. The geographic context used for the cumulative assessment of water quality and hydrology impacts encompasses the two watersheds, that cover the City of Morgan Hill and SOI, the Coyote Creek Watershed and the Uvas-Llagas Watershed. Cumulative impacts can occur when impacts that are significant or less than significant from a proposed project combine with similar impacts from other past, present, or reasonably foreseeable projects in a similar geographic area.

HYDROLOGY AND WATER QUALITY

As discussed previously, development of the proposed Project would require conformance with state and local policies that would reduce hydrology and water quality impacts to *less-than-significant* levels. When applicable, any additional new development within the City would be subject, on a project-by-project basis, to independent CEQA review as well as policies in the proposed General Plan, design guidelines, zoning codes, and other applicable City requirements that reduce impacts related to hydrology and water quality. More specifically, potential changes related to stormwater quality, stormwater flows, drainage, impervious surfaces, and flooding would be minimized by implementation of stormwater control measures, retention, infiltration, and LID measures, and review by the City's Public Works Department to integrate measures to reduce potential flooding impacts.

All new development or redevelopment projects that create or replace 1,500 square feet of impervious surface must comply with Central Coast RWQCB's Post-Construction Requirements and implement LID measures. In addition, all projects that create or replace 15,000 square feet of impervious surface must retain stormwater on-site using stormwater control measures and projects that create or replace 22,500 square feet of impervious surface must match post-project peak flow rates to pre-project peak flows rates. These PCRs will ensure that new development and/or redevelopment projects do not contribute to on-site or off-site flooding and will minimize potential impacts to the existing storm drain system.

Any future development that involves the placement of housing or structures that could impede flood flow within the 100-year floodplain would be required to comply with federal and local regulations as specified in the Morgan Hill Municipal Code 18.42 – Flood Damage Prevention. This includes construction practices to minimize flood hazard risks, including anchoring, elevation of structures one foot above the base flood elevation, and floodproofing. Compliance with these federal regulatory requirements and other local ordinances similar to Morgan Hill's Municipal Code requirements would result in cumulative impacts for all projects within 100-year floodplains to be less than significant.

All cumulative projects would be subject to similar permit requirements and would be required to comply with City ordinances and proposed General Plan policies, as well as numerous water quality regulations that control construction related and operational discharge of pollutants in stormwater. The water quality regulations implemented by the San Francisco Bay and Central Coast RWQCB take a basin-wide approach and consider water quality impairment in a regional context. For these reasons, impacts of the proposed Project on hydrology and water quality are not cumulatively considerable and the cumulative impact would be *less than significant*.

Applicable Regulations and Conditions of Approval:

- California Water Code Sections 13000 et seq.: Porter-Cologne Water Quality Act
- Central Coast RWQCB: Phase II Small MS4 Permit (Order Number 2013-0001-DWQ) and NPDES Permit No. CAS000004
- SWRCB Construction General Permit (GCP) – 2009-0009-DWQ) as amended by 2010-0014-DWQ

HYDROLOGY AND WATER QUALITY

- Central Coast RWQCB Resolution R3-2013-0032 – Post-Construction Stormwater Management Requirements for Development Projects in the Central Coast Region
- Morgan Hill Municipal Code 13.30 – Urban Stormwater Quality Management and Discharge Control
- Morgan Hill Municipal Code 18.71 – Post Construction Stormwater Pollution Prevention
- City of Gilroy, City of Morgan Hill, and Santa Clara County *Stormwater Management Guidance Manual for Low Impact Development & Post-Construction Requirements*
- Morgan Hill Municipal Code 18.42 – Flood Damage Prevention

Significance Before Mitigation: Less than significant.

4.9.5 SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION MEASURES

The project would not result in any significant project-specific or cumulative impacts to hydrology and water quality. Therefore, no mitigation measures are required.

4.9.6 FULL BUILDOUT

The full buildout anticipated under the proposed Project would include significantly more non-residential development than the 2035 horizon-year development projection analyzed in Section 4.3.3, Impact Discussion, in terms of both the amount and the extent of development. Therefore, the potential for impacts related to hydrology and water quality would increase. However, as discussed in Chapter 3, Project Description, it is extremely unlikely that full buildout would ever occur under the proposed General Plan. Therefore, an analysis of full buildout is not required by CEQA.

4.10 LAND USE AND PLANNING

This chapter describes the regulatory framework and existing conditions in Morgan Hill related to land use, and the potential impacts of the proposed Project on land use and planning.

4.10.1 ENVIRONMENTAL SETTING

4.10.1.1 REGULATORY FRAMEWORK

This section summarizes existing state, regional, and local agencies, regulations, and plans that pertain to land use. No federal regulations apply to the proposed Project in this chapter.

State Regulations

California Housing Element Law¹

California Housing Element Law includes provisions to the requirements for housing elements of local government General Plans. Among these requirements, some of the necessary parts include an assessment of housing needs and an inventory of resources and constraints relevant to the meeting of these needs. Additionally, in order to assure that counties and cities recognize their responsibilities in contributing to the attainment of the state housing goals, this section of the Government Code calls for local jurisdictions to plan for, and allow the construction of, a share of region's projected housing needs.

Sphere of Influence

The Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 establishes a Local Agency Formation Commission (LAFCo) for each county in California, and authorizes these commissions to review, approve, or deny proposals for boundary changes and incorporations for cities, counties, and special districts.² The LAFCo establishes a "sphere of influence" (SOI) for cities within their jurisdiction that describes the City's probable future physical boundaries and service area. The Morgan Hill SOI is regulated by the Santa Clara County LAFCo.

Regional Regulations

Association of Bay Area Governments Projections 2013

The Association of Bay Area Governments (ABAG) is the official comprehensive planning agency for the San Francisco Bay region, which is composed of the nine counties of Alameda, Contra Costa, Marin, Napa, San

¹ Government Code Section 65580-65589.8.

² California Government Code, Section 56000-56001.

LAND USE AND PLANNING

Francisco, San Mateo, Santa Clara, Solano, and Sonoma, and contains 101 jurisdictions. The ABAG is responsible for taking the overall regional housing needs allocation provided by the state and preparing a formula for allocating that housing need by income level across its jurisdiction. The ABAG produces growth forecasts on four-year cycles so that other regional agencies, including the Metropolitan Transportation Commission (MTC) and the Bay Area Quality Management District (BAAQMD), can use the forecast to make project funding and regulatory decisions.

The ABAG projections are the basis for the regional Ozone Attainment Plan and Regional Transportation Plan (RTP). In this way, ABAG projections have practical consequences that shape growth and environmental quality within its jurisdiction. The General Plans, zoning regulations, and growth management programs of local jurisdictions inform the ABAG projections. The ABAG projections are also developed to reflect the impact of smart growth policies and incentives that could be used to shift development patterns from historical trends toward a better jobs-housing balance, increased preservation of open space, and greater development and redevelopment in urban core and transit-accessible areas throughout the ABAG region.

Regional Housing Needs Allocation

Housing Element law requires local jurisdictions to plan and allow for the construction of a share of the region's projected housing needs. This share is called the Regional Housing Needs Allocation (RHNA). State law mandates that each jurisdiction provide sufficient land to accommodate a variety of housing opportunities for all economic segments of the community to meet or exceed the RHNA. As the regional planning agency for the Bay Area, ABAG calculates the RHNA for individual jurisdictions within Santa Clara County, including Morgan Hill.

Plan Bay Area, Strategy for a Sustainable Region

MTC and ABAG's *Plan Bay Area* is the Bay Area's RTP/ Sustainable Community Strategy (SCS). The Final Plan Bay Area was adopted on July 18, 2013.³ The SCS sets a development pattern for the region, which, when integrated with the transportation network and other transportation measures and policies, would reduce greenhouse gas (GHG) emissions from transportation (excluding goods movement) beyond the per capita reduction targets identified by California Air Resources Board (CARB). Implementation of Plan Bay Area would achieve a 16 percent per capita reduction of GHG emissions by 2035 and a 10 percent per capita reduction by 2020 from 2005 conditions.

In 2008, MTC and ABAG initiated a regional effort (FOCUS) to link local planned development with regional land use and transportation planning objectives. Through this initiative, local governments identified Priority Development Areas (PDAs). The PDAs form the implementing framework for Plan Bay Area. The PDAs are areas along transportation corridors which are served by public transit that allow opportunities for development of transit-oriented, infill development within existing communities that are

³ It should be noted that the Bay Area Citizens filed a lawsuit on MTC's and ABAG's adoption of *Plan Bay Area*.

LAND USE AND PLANNING

expected to host the majority of future development. Overall, well over two-thirds of all regional growth by 2040 is allocated within PDAs. The PDAs throughout the Bay Area are expected to accommodate 80 percent (or over 525,570 units) of new housing and 66 percent (or 744,230) of new jobs.⁴ PDAs are identified by local agencies and approved by ABAG's Executive Board. A PDA designation provides opportunities for the City to receive assistance from ABAG and MTC, including technical assistance, planning grants, and capital funding. There is one PDA in Morgan Hill, which includes 180 acres focused around the Morgan Hill Caltrain Station and Monterey Road.

While *Plan Bay Area* distributes future growth across the Bay Area region in order to meet its GHG emissions reduction, housing, and other performance targets, it is not intended to override local land use control. In fact, the *Frequently Asked Questions* page of the *Plan Bay Area* website explains that "cities and counties, not MTC or ABAG, are ultimately responsible for the manner in which their local communities continue to be built out in the future. For this reason, cities and counties are not required to revise their 'land use policies and regulations, including [their] general plan, to be consistent with the regional transportation plan or an alternative planning strategy.' [Gov. Code, § 65080, subd. (b)(2)(J)]... Rather than increase regional land use control, the Plan facilitates implementation by expanding incentives and opportunities available to local jurisdictions to support growth in Priority Development Areas (PDAs). In addition to funding transportation and planning projects in PDAs, the Plan sets the stage for cities and counties to increase the efficiency of the development process, if they choose, for projects consistent with the Plan and other state legislation."¹

Santa Clara Valley Habitat Plan

In October 2012, the City of Morgan Hill adopted the Santa Clara Valley Habitat Plan (Habitat Plan), which is a regional partnership between six Local Partners (the County of Santa Clara, Santa Clara Valley Transportation Authority, Santa Clara Valley Water District, and the Cities of San Jose, Gilroy, and Morgan Hill) and two Wildlife Agencies (the CDFW and the USFWS), in order to protect special-status species. The Habitat Plan is both a habitat conservation plan and natural community conservation plan (HCP/NCCP) and provides a framework for promoting the protection and recovery of natural resources, including endangered species, and aims to streamline the permitting process for planned development, infrastructure, and maintenance activities within the jurisdictions of the County of Santa Clara (County), the Santa Clara Valley Water District (SCVWD), the Santa Clara Valley Transportation Authority (VTA) and the Cities of Gilroy, Morgan Hill, and San José.

The Habitat Plan's 519,506-acre study area includes Morgan Hill and its SOI. The Habitat Plan identifies several areas in and around Morgan Hill for species protection, including:

- Long-term management plan for 530 acres of western burrowing owl habitat in the Morgan Hill region.

⁴ Metropolitan Transportation Commission (MTC) and Association of Bay Area Governments (ABAG), 2013, *Final Plan Bay Area, Strategy for a Sustainable Region*.

LAND USE AND PLANNING

- Enhancement, restoration, and creation plan to protect the coyote ceanothus plant in three areas in Morgan Hill, including two areas near Anderson Reservoir east of Highway 101 and one area on the west side of Highway 101.
- Land acquisition to protect Santa Clara Valley dudleya, a native succulent, habitat north of Morgan Hill in Coyote Valley.
- Land acquisition of suitable habitat and occurrences of bay checkerspot butterfly near Morgan Hill.

South County Airport Comprehensive Land Use Plan (CLUP)

A small portion of Morgan Hill and its SOI extends into the Airport Influence Area (AIA) of the South County Airport, which is located in the unincorporated community of San Martin between Morgan Hill and Gilroy. The airport is operated by Santa Clara County and is used for general aviation, which includes all aviation activities other than commercial passenger flights, commuter/air taxi, and military uses. General aviation activity includes single-engine and small twin-engine aircraft holding six or fewer people. The CLUP identifies the South County Airport as the smallest and least active airport in the county.

The AIA includes all areas surrounding the airport that are affected by noise, height, and safety considerations. All development projects within the AIA must be reviewed by the Santa Clara County Airport Land Use Commission (ALUC) to ensure consistency with the CLUP. A small portion of the Morgan Hill City limits and SOI near Llagas Creek are located within the AIA. The Morgan Hill City limits and SOI are located outside of the airport's noise contours and safety zones.

The CLUP also establishes height restrictions for structures, and the area subject to these height restrictions is slightly greater than the AIA. Per Figure 6, FAR Part 77 Surfaces, of the CLUP, structures in the southern portion of the Morgan Hill City limits and SOI should not exceed the height limits of between 481 feet and 631 feet above mean sea level depending on the location of the structure.⁵

Santa Clara County General Plan

The Santa Clara County General Plan was comprehensively updated and adopted in 1994. Since 1994, the County updated the General Plan Land Use Map in June 2013, and as of August 2015, the County is currently working on updates to its Housing Element and Health Element.⁶ The Santa Clara County General Plan includes policies that regulate land uses in Morgan Hill's SOI, but outside of the City limit. The County General Plan land use map, updated in 2013, shows the County General Plan land use designations as illustrated in Figure 4.10-1. It should be noted that when County land within the SOI is annexed to the City, the land will be subject to the City's General Plan Land Use designation and regulations. County

⁵ Santa Clara County, South County Airport Comprehensive Land Use Plan, November 19, 2008.

⁶ County of Santa Clara website, General Plan, accessed on August 17, 2015, <https://www.sccgov.org/sites/dpd/PlansOrdinances/GP/Pages/GP.aspx>



LAND USE AND PLANNING

General Plan Land Use designations are indicative of the natural, rugged, and open terrain that characterizes land west, east, and south of the City limit. Those designations are:

- **Agriculture.** The Agriculture designation applies to lands to preserve for their intrinsic value as agricultural land and for productive agricultural land uses. Allowed uses include agriculture and ancillary uses, uses that support local agriculture, single-family residences, and other uses that are compatible with agriculture and that enhance the long-term viability of agriculture. Lands north of the Morgan Hill City limits are designated Agriculture Large Scale, with 40-acre minimum parcel sizes, and lands east and south are designated Agriculture Medium Scale, with 20-acre minimum parcel sizes. However, it should be noted that there are many existing parcels with these County land use designations that are smaller than the stated minimum parcel sizes.
- **Hillsides.** The Hillsides designation applies to mountainous lands and foothills unsuitable and/or unplanned for annexation and urban development. Allowed uses include agriculture and grazing, mineral extraction, parks and low-density recreational uses, natural lands, wildlife refuges, very low density residential development, and commercial, industrial, or institutional uses that require remote, rural settings and that support recreational use or appreciation of the natural environment.
- **Ranchlands.** The Ranchlands designation applies to lands predominantly used as ranches in rural unincorporated areas of the county, remote from urbanized areas, and generally less accessible than other mountain lands. The primary allowed use is ranching; other allowed uses include agriculture, low-intensity recreational uses, mineral extraction, natural lands, hunting, wildlife refuges, very low density residential development, and very low intensity commercial, industrial, or institutional uses that support ranching.
- **Existing Regional Parks.** The Existing Regional Parks designation applies to park lands administered by the County, cities, state, or federal government that serve a region-wide population.
- **Rural Residential Areas.** The Rural Residential Areas designation applies to lands outside of City Urban Service Areas where:
 - There is an established pattern of small, primarily developed parcels assembled in aggregations large enough to be considered more than simple clusters of rural development.
 - Residential density generally exceeds one dwelling unit per 10 acres.
 - The use of the land is primarily for residential purposes.
 - The land is not planned by Cities for future inclusion in Urban Service Areas.
 - The primary allowed uses are residential, agricultural, and open space uses, while commercial, industrial, and institutional uses may be allowed where they serve the needs of the resident population.

In addition, Santa Clara County jointly adopted Urban Growth Boundary (UGB) policies and actions with the City in 1996. These policies and actions are listed in Table 4.10-1. Many of these policies also address the

LAND USE AND PLANNING

TABLE 4.10-1 SANTA CLARA COUNTY GENERAL PLAN POLICIES RELEVANT TO LAND USE AND PLANNING

Strategy/Policy Number	Strategy/Policy Content
Land Use	
Policy R-LU 167	Establish and maintain a long term urban growth boundary for the City of Morgan Hill, in order to: - differentiate lands within the Morgan Hill SOI intended for future urbanization from those intended to remain rural and unincorporated over an approximately 25 year time period; - provide greater stability of future land use patterns than is currently provided by the existing “short term” urban service area (USA) boundaries; - indicate the preferred extent and direction of the City’s future urban expansion and capital improvements planning, consistent with the City’s general plan; - encourage compact and concentric urban growth and development; - promote fiscal responsibility, cost-effective service delivery, and the City’s ability to plan for and adequately maintain urban services over time; - provide for an adequate land supply necessary for sustainable economic growth; - compensate for the impacts of the City’s historical patterns of urban growth; - achieve greater compatibility of land use planning and decision-making for lands of mutual interest to the City and County; and, - provide additional certainty to rural landowners needed for purposes of planning investments and maintaining viable agricultural operations.
Policy R-LU 168	Ensure that future proposals to modify the UGB are evaluated according to the considerations which guided its initial establishment, particularly stability and dependability factors. Utilize established criteria, findings or other prerequisites, such as the need to ensure an adequate inventory of available land for accommodating projected growth (approximately 25 years), as the basis for evaluating any proposals to expand the UGB. Make no provision to reconsider the UGB location more frequently than on a 10 year basis unless triggered by the established criteria, findings, or prerequisites.
Policy R-LU 169	Ensure the consistency of all future proposals to modify the UGB location with applicable policies of the City’s and County’s General Plan, particularly concerning countywide urban growth management.
Policy R-LU 170	Consider modifications to the UGB location only in conjunction with a comprehensive City General Plan land use element update, which occurs on an approximately 10 year interval, unless triggered by the established criteria, findings, or prerequisites, to ensure coordination between relevant land use planning issues and growth management considerations.
Policy R-LU 171	Allow urban service area (USA) expansions only within the long term UGB and for lands with urban designations; the timing and extent of USA expansion shall remain consistent with established USA expansion policies and ordinances.
Policy R-LU 172	Consider reversion of residentially-designated lands outside the City limits and UGB to nonurban designations, through a comprehensive land use element update.
Policy R-LU 173	Acknowledge and formally recognize the location of the UGB as adopted by the City of Morgan Hill for use with the applicable Special Area land use policies of the County of Santa Clara pertaining to land use within the UGB and Sphere-of-Influence.
Policy R-LU 174	Ensure that County staff and decision-makers have adequate opportunity to participate in the evaluation of proposals to modify the UGB—the relative level of participation to be in keeping with the geographic scale or impact of proposed UGB changes (i.e., major revisions imply more significant role for joint City/County coordination; very minor or insignificant modifications would imply a potentially less significant role for joint City/County coordination).

LAND USE AND PLANNING

TABLE 4.10-1 SANTA CLARA COUNTY GENERAL PLAN POLICIES RELEVANT TO LAND USE AND PLANNING

Strategy/Policy Number	Strategy/Policy Content
Policy R-LU 175	Policies, criteria, and methodology for considering changes to the UGB should be developed by the City in consultation with the County. These policies and criteria should be reasonable and consistent with the goals, precedent, and spirit of the current South County Joint Area Plan. Future modifications to the UGB should be considered using the methodology developed in consultation with the County and should include opportunity for County review and comment concerning proposed modifications, in accordance with jointly adopted policies and implementation recommendations of the City and County.
Policy R-LU 176	Avoid land uses and development which would potentially conflict with future annexation and the optimal utilization of lands within the UGB. Allow only those interim uses which are consistent with intended future development.
Policy R-LU 177	Retain current large minimum parcel sizes, and promote agricultural and open space uses on unincorporated lands within the UGB.
Policy R-LU 178	Avoid premature road or infrastructure extensions that might conflict with optimal street configurations and development patterns within the UGB.
Policy R-LU 179	Limit the introduction of any intensive commercial, industrial, or institutional uses.
Policy R-LU 180	Prohibit the introduction of Roadside Services land use designations.
Policy R-LU 181	Maintain the County's commitment to agricultural, open space, and other allowable non-urban uses and densities, consistent with the intent of the Resource Conservation land use designations. Current minimum parcel sizes, development standards, and guidelines applicable to rural unincorporated lands should remain in effect.
Policy R-LU 182	Minimize potential land use conflicts between urban uses within the UGB and lands adjacent to the growth boundary.
Policy R-LU 82.1	Explore and implement as feasible various measures to enhance the economic viability of agriculturists, as called for in the County's General Plan (e.g.: Competitiveness Task Force).
Policy R-LU 183	Promote the use of expanded home occupations for rural landowners and agriculturists, within the parameters of the County's zoning ordinance.
Policy R-LU 184	Coordinate measures to enhance economic viability of non-urban land uses, particularly agriculture, being considered in conjunction with related planning efforts in which the County is a participant.
Policy R-LU 185	Prohibit the introduction of Roadside Services land use designations within the Sphere-of-Influence of the City of Morgan Hill.

Urban Service Area (USA), a sub-area within the UGB where utilities and public services can serve urban development.

Santa Clara Valley Water District Resources Protection Collaborative Guidelines and Standards for Land Use near Streams

On October 24, 2006, the SCVWD adopted the Water Resources Protection Ordinance (Ordinance 06-1).⁷ Beginning on February 28, 2007, this ordinance established the policy through which the SCVWD issues

⁷ Santa Clara Valley Water District, 2006. Water Resource Protection Ordinance 06-1, <http://www.valleywater.org/uploadedFiles/Programs/BusinessInformationPermits/Permits/Ordinance071213%281%29.pdf>, accessed August 27, 2014.

LAND USE AND PLANNING

permits for modifications, entry, use, or access to SCVWD facilities or easements. This Ordinance was adopted following the creation of the *Guidelines and Standards for Land Use Near Streams: A Manual of Tools, Standards, and Procedures to Protect Streams and Streamside Resource in Santa Clara County* (Guidelines and Standards) by the Santa Clara Valley Water Resources Protection Collaborative (Collaborative). The Collaborative includes the SCVWD and representatives from the County of Santa Clara, the 15 cities within the county, the Guadalupe-Coyote Resource Conservation District, the San Francisco Bay Regional Water Quality Control Board, and representatives of various community interests.⁸ The Collaborative members share the water and watershed resources protection goals of flood management, drinking water quality and adequate quantity, surface and groundwater quality and quantity, and habitat protection and enhancement throughout the county. In 2007, the City of Morgan Hill adopted the Guidelines and Standards for Land Use near Streams per the City's resolution No. 6112.

A property that is adjacent to a stream or located within 50 feet of the top of the bank is considered a Streamside Protection Area and is subject to the Guidelines and Standards.

Land use activities that are exempt from the Guidelines and Standards include:

- Less than 3 cubic yards of earthwork.
- Interior building construction and alterations.
- Erection of storage buildings not greater than 120 square feet.
- Replacement of sewer or water laterals.
- Re-roofing.
- Wood fences 6 feet in height or less.
- Exterior decks less than or equal to 30 inches above grade (decks or pathways should not overhang or extend beyond the creek bank).

All other land use activities are subject to guidelines and standards described in Chapter 3 of the Guidelines and Standards. Chapter 3 addresses issues including riparian corridor protection, bank stability/streambed conditions, encroachments on the top of a bank, erosion prevention and repair, grading, outfalls, pump stations and site drainage, channelization, utility encroachments, trail construction, septic systems, trash control and removal, protection of water quality, groundwater protection, and flood protection. In particular, *Guideline I.G., Land Uses Next to Riparian Corridors/Streams*, requires avoiding the construction of loading docks, trash enclosures, chemical storage areas, stationary noise producing mechanical equipment, new paved areas, active recreational areas, agricultural growing areas, and grazing activities within riparian corridors. *Guideline I.H., Light*, requires avoiding bright colors and glossy or glare-producing building finishes on structures facing the stream or riparian areas, keeping direct lighting away from riparian corridors, and maximizing distance of lighting from riparian corridors. Chapter 4 of the Guidelines and Standards provides vegetation guidelines to protect native riparian plants.

⁸ Santa Clara Valley Water Resources Protection Collaborative, 2007. *Guidelines and Standards for Land Use Near Streams: A Manual of Tools, Standards, and Procedures to Protect Streams and Streamside Resource in Santa Clara County*.

LAND USE AND PLANNING

Local Regulations

This section describes City regulations and policies that pertain to land use in Morgan Hill.

Housing Element

The Morgan Hill Housing Element addresses the statewide housing goal of “attaining decent housing and suitable living environments for every California family.” The City of Morgan Hill’s 2015 - 2023 Housing Element was adopted in February 2015 and is incorporated into the proposed General Plan by reference. The Housing Element was covered in an Initial Study/Negative Declaration (Planning File GPA-14-12).

As described under the Regional Housing Need Allocation section above, one of the requirements of Housing Element law is for each City and County to accommodate its “fair share” of projected housing needs across the full socio-economic range of existing and future potential residents over a five-year planning period. The City’s adopted Housing Element relies primarily on sites zoned for multi-family uses to accommodate its share of the RHNA for lower-income units, and small lot subdivisions to meet the needs of moderate income households.

Downtown Specific Plan

The Downtown Specific Plan, adopted in November 2009, covers approximately 115 acres and is generally bounded by Main Avenue to the north, Butterfield Boulevard to the east, Dunne Avenue to the south, and Del Monte Avenue to the west. The Downtown Specific Plan includes policies and design guidelines that promote public and private investments and improvements within the 20 block Downtown area. The Downtown Specific Plan modifies certain land use development and zoning regulations in order to increase the feasibility of development and renovation in the Downtown area, facilitating achievement of the community’s vision for the Downtown. The zoning districts in the Downtown area are summarized in Zoning Ordinance section. The regulations contained in the Downtown Specific Plan supersede those in the Zoning Ordinance.

Morgan Hill Zoning Ordinance

The Zoning Ordinance is the mechanism used to implement the goals, objectives, and policies of the General Plan and to regulate all land use within the City. The Zoning Ordinance applies zoning districts to properties within the City of Morgan Hill, as listed below. The Zoning Ordinance will be updated following adoption of the proposed General Plan.

The Morgan Hill Zoning Ordinance also includes overlay and combining districts that impose more specific development regulations than the underlying zoning districts where important site, environmental safety, compatibility, or design issues require particular attention in project planning. These overlay and combining districts do not change the underlying zoning.

LAND USE AND PLANNING

4.10.1.2 EXISTING CONDITIONS

The following sections describe the existing conditions in Morgan Hill related to land use.

Existing Land Uses

In this section, the term “existing land use” refers to the existing built environment, which may be different from the General Plan or Zoning designations that are applied by the City for planning purposes. CEQA requires a comparison of the proposed Project to existing physical conditions, not to existing policies or regulations. Morgan Hill is largely comprised of single-family residential neighborhoods. In addition, multi-family residential uses, such as condominiums and apartments, are dispersed primarily in the area west of Butterfield Boulevard between Cochrane Road and south of Watsonville Road, and east along Monterey Road. Retail, dining, and service uses are located along major transportation corridors throughout the City, including in Morgan Hill’s Downtown. There are also two main employment centers: the business parks north and south of Cochrane Road, and the light industrial area west of 101 between Dunne and Tennant Avenues.

Land uses surrounding Morgan Hill primarily consist of rural residential areas, agriculture, and open space. These uses, including nurseries, orchards, and vineyards, provide a buffer between urbanized parts of San José to the north and Gilroy to the south. Areas east and west of Morgan Hill primarily consist of undeveloped hillsides, open space areas, and reservoirs, including Anderson Lake, Anderson Lake County Park, and Coyote Lake to the east and Uvas Reservoir and Chesbro Reservoir to the west.

4.10.2 STANDARDS OF SIGNIFICANCE

Implementation of the proposed Project would result in a significant land use impact if it would:

1. Physically divide an established community.
2. Conflict with any applicable land use plan, policy or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.
3. Conflict with any applicable habitat conservation plan or natural community conservation plan.
4. Contribute to cumulative land use and planning impacts in the area.

LAND USE AND PLANNING

4.10.3 IMPACT DISCUSSION

This section analyzes potential Project-specific impacts to land use and planning.

LU-1	Implementation of the proposed Project would not physically divide an established community.

General Plan

The proposed General Plan would result in a significant impact if it would lead to new development or physical features that would divide existing neighborhoods. An example of a physical feature that would divide an existing community is a roadway or railroad track. The proposed General Plan does not propose any new major roadways or other physical features through existing neighborhoods that would create new barriers in the Project Area. The Hale Avenue/Santa Teresa Boulevard extension is carried forward from the existing General Plan into the proposed General Plan; however, this new roadway traverses undeveloped land between cul-de-sacs, parking lots, and the PG&E substation and therefore does not divide an established community.

The land uses in the proposed General Plan are largely consistent with existing development patterns. The most significant areas of change that would occur under proposed General Plan land use designations would be within areas that are currently underutilized or vacant, such as the area east of 101, the area southeast of Monterey Road and Watsonville Road, or the area south of Edmundson Avenue. Established residential neighborhoods are not part of the proposed land use changes and therefore would not be expected to change under the proposed General Plan. Future development under the proposed Project would retain the existing roadway patterns, and the proposed Project does not propose any new major roadways or other physical features through existing residential neighborhoods or other communities that would create new barriers in the Project Area. Therefore, while several of these residential neighborhoods are located in close proximity to the areas with proposed land use changes, these changes would not divide existing neighborhoods.

For instance, in the northern section of the Project Area, just north of Peebles Avenue, the General Plan proposes multi-family residential uses on lands now partially occupied by agricultural land uses and rural residential uses. Because this area does not contain large amounts of contiguous residential development, development of this area with proposed land uses would not result in the division of an existing neighborhood. Along the eastern border of the Project Area, just north of Diana Avenue, the General Plan proposes residential uses on lands occupied by agricultural and rural residential uses. These land uses would be consistent with existing residential land uses on the south side of Diana Avenue and north of Half Road, and would not divide established communities.

LAND USE AND PLANNING

Furthermore, future development under the proposed Project would be required to be consistent with the following General Plan polices that promote cohesive and compatible neighborhoods and prevent new development from dividing existing uses where different land uses abut one another.

Policy CNF-8.1	High Quality Design. Require all development to feature high quality design that enhances the visual character of Morgan Hill.
Policy CNF-8.3	Changes in Building Scale. Discourage abrupt changes in building scale. A gradual transition between low-rise to mid-rise buildings should be achieved by using the low-rise buildings at the edge of the project site. Consider the relationship of buildings to the street, to one another and to adjacent structures and land uses.
Policy CNF-8.7	Design Sensitivity. Ensure that new development is sensitive to the character of adjacent structures and the immediate neighborhood.
Policy CNF-8.12	Visual Impact of Parking. Require parking areas associated with development to be located and designed to minimize visual impact to the greatest extent feasible. This may include locating parking behind buildings street frontage, below grade, or screening through the use of natural landscaping.
Policy CNF-8.19	Incompatible Uses. Use setbacks, natural and man-made barriers such as streams, park land, and drainage ways, and other mitigation to separate incompatible uses whenever possible.
Policy CNF-9.1	Density Feathering from High to Low Densities. Encourage feathering from higher urban densities to lower rural densities to occur within the City limits. Feathering should begin as development nears the Urban Growth Boundary.
Policy CNF-11.1	Preservation of Single Family Neighborhoods. Encourage preservation and rehabilitation of single-family neighborhoods within the City.
Policy CNF-11.2	Well-designed Residential Neighborhoods. Design residential neighborhoods so they are distinct and buffered from conflicting non-residential uses.
Policy CNF-11.3	Appropriate Residential Transitions. Provide for an acceptable transition in lot size and density between adjacent residential areas.
Policy CNF-11.20	Infill Compatibility. Require residential infill development to complement existing development patterns and minimize impacts on neighboring properties.
Policy CNF-11.22	Minimized Mass and Scale. Minimize the perceived mass and scale of attached single-family homes and multi-family housing to appear consistent with Morgan Hill's small town residential character.
Policy CNF-12.1	Neighborhood Center Design. Allow neighborhood centers within future residential neighborhoods. Neighborhood centers are envisioned as nodes or focal points that offer neighborhood-serving services and amenities within a reasonable walking distance from adjoining residential areas. These centers should be designed to increase the accessibility of goods and services within existing residential neighborhoods, particularly for the benefit of senior citizens and those with limited mobility, and to offer opportunities for socialization.
Policy CNF-13.1	Mixed Use Flex Development. Encourage a mix of uses, either vertically or horizontally, to allow residents and employees to meet daily needs without the use of the private automobile.
Policy CNF-13.2	Density Feathering along Monterey Road. Encourage the feathering of land use densities and intensities from high to low along Monterey Road with higher intensity land uses located adjacent to Downtown.
Policy CNF-13.4	Block-level Master Plans. Require mixed use flex developments to prepare block-level master plan to ensure well-planned development.

LAND USE AND PLANNING

Policy CNF-21.1	East of 101 Area Land Use Planning. Require the preparation of a Master Plan, Area Plan, or Specific Plan when new residential development is proposed in the East of 101 Area Plan Overlay district.
Policy CNF-21.3	East of 101 Area Design. Require new residential development to be designed to minimize adverse impacts on adjacent residential and agricultural uses.

As described above, the proposed General Plan would not result in new development or features that would divide existing residential neighborhoods or communities. In addition, new development allowed by the proposed General Plan would be subject to the proposed policies that encourage cohesive neighborhoods. Therefore, the impact would be *less than significant*.

Applicable Regulations:

- Plan Bay Area
- Morgan Hill Zoning Ordinance

Significance Before Mitigation: Less than significant.

Residential Development Control System

The Residential Development Control System, known as the RDCS, regulates population growth by providing residential building allotments. The RDCS, and the proposed updates to the RDCS as part of the proposed Project, affect the pace of development in the City but do not determine the location, type, or intensity of development. Development allowed under the RDCS must comply with all applicable development requirements and proposed General Plan policies. The proposed RDCS supports and implements the General Plan policies listed above that encourage infill development by awarding points to projects that are adjacent to existing development, close to existing community services and facilities, and emphasize efficient use of public infrastructure and services. Points would also be awarded to projects based on quality design related to neighborhood form, site planning, building design, and landscape design, which would further serve to integrate new development into the existing community. Overall, the RDCS would have a *less-than-significant* impact on established communities.

Significance Before Mitigation: Less than significant.

LU-2	Implementation of the proposed Project would not conflict with any applicable plan, policy or regulation of an agency with jurisdiction over the project (including, but not limited to, the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.

LAND USE AND PLANNING

General Plan

Local Plans and Regulations

The proposed General Plan would be the primary planning document for the City of Morgan Hill. Once adopted, it would supersede the existing General Plan. Therefore, upon adoption and implementation of the proposed General Plan, other City documents would need to be updated to ensure consistency. The City's Zoning Ordinance would be updated, as necessary, to conform to the proposed General Plan. The proposed General Plan does not include any land use change in the Downtown Specific Plan area. Therefore, the impact would be *less than significant*.

Plan Bay Area

As described in Section 4.10.1.1, Regulatory Framework, local jurisdictions are not required to change land use designations to be consistent with Plan Bay Area. However, for disclosure purposes, this section evaluates the proposed General Plan's consistency with this important regional planning document. For a discussion of the proposed Project's consistency with the regional housing projections in Plan Bay Area, see Chapter 4.11, Population and Housing, of this Draft EIR. For a discussion of the proposed Project's consistency with Plan Bay Area as it relates to greenhouse gas emissions, see Chapter 4.6, Greenhouse Gas Emissions, of this Draft EIR.

There is one PDA in Morgan Hill, which includes 180 acres focused around the Morgan Hill Caltrain Station and Monterey Road. The proposed General Plan continues the same land use designations as established in the Downtown Specific Plan, which proposes various commercial, office, mixed-use and residential uses for the PDA. The mix, range, and intensity of uses are consistent with the Plan Bay Area.

The proposed General Plan includes many goals and policies that are in line with the goals of the Plan Bay Area. The following goals and policies call for reducing vehicle usage and encouraging a mix of land uses and densities to promote non-vehicular travel and decrease GHG emissions.

Goal TR-2	<i>A system designed for a healthy, active community based on complete streets, smart growth, and Sustainable Communities strategies; reflecting a balanced, safe, multi-modal transportation system for all users, especially in Downtown where pedestrian, bicycle, and transit facilities will be emphasized along with vehicular facilities.</i>
Policy TR-2.1	Multi-Modal System for All Users. A balanced multi-modal system offers viable choices for residents, employees, customers, visitors, and recreational users. Use smart growth and Sustainable Communities principles throughout the City to provide a balanced transportation system which assures access to all, and which integrates all appropriate modes of transportation into an effectively functioning system, including modes such as auto, ride sharing, public rail and bus transit, paratransit, bicycling, and walking.

LAND USE AND PLANNING

Policy TR-2.2	Integrated Land Use/Transportation Planning. Integrate planning for land use and transportation development by ensuring that the timing, amount, and location of urban development is consistent with the development of the transportation system capacity. Promote environmental objectives that supports smart growth and Sustainable Communities principles, such as safe and uncongested neighborhoods, a pedestrian-friendly vibrant downtown that emphasizes non-auto transportation modes, energy conservation, reduction of air and noise pollution, and the integrity of scenic and/or hillside areas.
Policy NRE-10.4	Reduced Automobile Use. To reduce air pollution the frequency and length of automobile trips and the amount of traffic congestion by controlling sprawl, promoting infill development, and encouraging mixed uses and higher density development near transit. Support the expansion and improvement of alternative modes of transportation. Encourage development project designs that protect and improve air quality and minimize direct and indirect air pollutant emissions by including components that reduce vehicle trips.
Policy NRE-15.2	Linking Land Use and Transportation. Encourage land use and transportation patterns that reduce dependence on automobiles.
Policy NRE-15.4	Sustainable Land Use. Promote land use patterns that reduce the number and length of motor vehicle trips.
Policy NRE-15.5	Jobs Housing Balance. To the extent feasible, encourage a balance and match between jobs and housing.
Policy NRE-15.6	Residential Near Transit. Encourage higher density residential and mixed-use development adjacent to commercial centers and transit corridors – the land along or within walking distance of a street served by transit.
Policy NRE-15.7	Mix of Uses in Employment Centers. Encourage employment areas to include a mix of support services to minimize the number of employee trips.
Policy NRE-15.8	Walkable City. Encourage retail and office areas to be located within walking and biking distance of existing and proposed residential developments.

Under these policies and actions, the City would support the development of housing options in proximity to transit, jobs, shopping, and services within the PDA. Through implementation of the proposed General Plan goals and policies, the impact related to conflicts with the Plan Bay Area would be *less than significant*.

Santa Clara County General Plan

The Santa Clara County General Plan was comprehensively updated and adopted in 1994. Since 1994, the County updated the General Plan Land Use Map in June 2013. The County General Plan is a long-range guide for land use in the unincorporated areas in the county, including land outside of Morgan Hill's City limits but within the SOI (the Project Area). Although the proposed General Plan applies land use designations to lands within the SOI, all land beyond the Morgan Hill City limit remains within the County's jurisdiction until annexation to the City of Morgan Hill.

The land use designations proposed in the proposed General Plan are largely consistent with the land uses in the County General Plan, with the exception of the following areas:

LAND USE AND PLANNING

- Two areas along Burnett Avenue, one immediately west of Hacienda Valley Mobile Estates and the other immediately south of Ann Sobrato High School, where the medium density attached residential designation is proposed. The County General Plan land use designation is Agriculture Large Scale.
- The East of 101 Overlay area, where residential attached medium, residential detached medium, and residential detached low designations are proposed. The County General Plan land use designation is Agriculture Medium Scale.
- The area immediately east of Highway 101 between Half Road and Diana Avenue, where the Commercial/Industrial designation is proposed. The County General Plan land use designation is Agriculture Medium Scale.
- The area west of Oakwood School where medium density attached residential, medium detached residential, and mixed use flex designations are proposed. The County General Plan land use designation is Agriculture Medium Scale.
- The area along the southerly extension of Butterfield Boulevard, where industrial and medium density attached residential designations are proposed. The County General Plan land use designation is Agriculture Medium Scale.
- The Southeast Quadrant area where Sports Recreation / Leisure, Public Facilities and residential designations are designated under the existing General Plan, and remain unchanged under the proposed General Plan, as described in Chapter 3, Project Description. The County General Plan land use designation is Agriculture Medium Scale.

Because land outside the City limits is currently subject to county land use regulations, and would only become under City land use jurisdiction upon annexation, only one set of land use policies apply at a given time, and there cannot be a conflict between the City and County General Plan policies. As a result, adoption and implementation of the proposed General Plan would not result in a conflict with the County General Plan.

Both the proposed General Plan and the Santa Clara County General Plan support focused growth within incorporated cities. Relevant policies from the proposed Morgan Hill General Plan include:

Goal CNF-4	<i>Orderly and limited expansion of City boundaries.</i>
Goal CNF-5	<i>Efficient development of County land within the UGB consistent with the City's long-term development strategy.</i>
Policy CNF-5.1	Land Use Conflicts. Support the County's policy to avoid land uses and development in the unincorporated areas which would potentially conflict with future annexation and the optimal utilization of lands within the UGB.
Policy CNF-7.1	County General Plan Policies. Promote the maintenance of current County General Plan policies encouraging low-density uses, including large lots and agriculture, for County projects adjacent to the UGB. Encourage the County to retain large minimum parcel sizes, and promote agricultural and open space uses on unincorporated lands.

LAND USE AND PLANNING

The County General Plan calls for annexation to the City prior to urban development of lands outside of City limits. One of the three basic strategies of the County General Plan is to “Promote Eventual Annexation.” The following policies support such strategy.

Policy U-LM 1	Urban unincorporated areas within City Urban Service Areas should eventually be annexed into the City.
Policy U-LM 3	To facilitate eventual annexation and improve overall quality of life, various land use planning and other related studies should be conducted in cooperation with the applicable surrounding City for those large urban unincorporated areas that are unlikely to be annexed in the short term future.
Policy U-LM(i) 1	Develop special area plans to bring urban pockets into general compliance with City plans, policies and development standards over time. (Implementors: Cities, County, LAFCO, local residents and property owners)

The intent of the City’s proposed General Plan policies to avoid land use conflicts and to maintain existing County land uses and parcel sizes, are consistent with the County’s General Plan policies. Therefore, with implementation of the proposed General Plan policies, the impact related to conflicts with the County General Plan would be *less than significant*.

South County Airport Land Use Compatibility Plan

A small portion of Morgan Hill and its SOI extends into the Airport Influence Area (AIA) of the South County Airport. All development projects within the AIA must be reviewed by the Santa Clara County Airport Land Use Commission (ALUC) to ensure consistency with the CLUP. A small portion of the Morgan Hill City limits and SOI near Llagas Creek are located within the AIA. The Morgan Hill City limits and SOI are located outside of the airport’s noise contours and safety zones.

The CLUP also establishes height restrictions for structures, and the area subject to these height restrictions is greater than the AIA. Structures in the southern portion of the Morgan Hill City limits and SOI should not exceed the height limits of between 481 feet and 631 feet above mean sea level depending on the location of the structure. The area subject to the height limits are currently zoned as Residential Estate, Rural County, or Open Space, and the proposed General Plan retains the same land use designations. It is unlikely structures from these designations would be higher than 481 feet above mean sea level, which would be equivalent to a 44-story building.

The Safety, Services, and Infrastructure Element of the proposed General Plan includes policies to ensure future development be consistent with the CLUP. Specifically:

Policy SSI-7.1	Airport Land Use Compatibility Plan. Work closely with appropriate agencies, including the Santa Clara County Airport Land Use Commission, to ensure compatibility of land uses with airport facilities and operations.
Policy SSI-7.2	Airspace Protection. Limit building heights for airspace protection in accordance with Federal Aviation Regulations Part 77.

LAND USE AND PLANNING

With the proposed General Plan policies that promote land use consistency around the airport and the ALUP review process, the impact would be *less than significant*.

Santa Clara Valley Water District Resources Protection Collaborative Guidelines and Standards for Land Use near Streams

As described above, the SCVWD *Guidelines and Standards for Land Use Near Streams* are intended to reduce environmental effects on streams and riparian habitats. The proposed General Plan includes the following relevant policies:

Policy NRE-5.1	Reclamation of Streams and Riparian Areas. Encourage reclamation of degraded streams and riparian areas.
Policy NRE-5.2	Other Agencies and Environmental Review. Coordinate with jurisdictional agencies, as required, as part of the environmental review process for development projects.
Policy NRE-5.3	Natural State of Streamside and Riparian Areas. Retain natural streamside and riparian areas in their natural state in order to preserve their value as percolation and recharge areas, natural habitat, scenic resources, and recreation corridors, and for to stabilize banks
Policy NRE-5.4	Development Impacts in Riparian Areas. Consider development impacts upon wildlife in riparian areas and mitigate those environmental impacts.
Policy NRE-5.6	Stream Channel Protection. Protect existing stream channels and riparian vegetation by requiring buffering or landscaped setbacks and storm runoff interception.

These policies are consistent with the SCVWD guidelines and therefore the proposed General Plan would not conflict with that applicable policy document.

Applicable Regulations:

- Plan Bay Area
- Santa Clara County General Plan
- South County Airport Land Use Compatibility Plan
- Santa Clara Valley Water District Resources Protection Collaborative Guidelines and Standards for Land Use near Streams

Significance Before Mitigation: Less than significant.

Residential Development Control System

As described above, the proposed updates to the RDCS as part of the proposed Project affect the pace of development in the City but do not determine the location, type, or intensity of development.

Development allowed under the RDCS must comply with all applicable development requirements and proposed General Plan policies. Therefore, the RDCS would be consistent with the goals of the Plan Bay Area and the County General Plan and would not result in any physical changes that could affect land use

LAND USE AND PLANNING

consistency around the airport. Therefore, the proposed updates to the RDCS would have a *less-than-significant* impact.

Significance Before Mitigation: Less than significant.

LU-3	Implementation of the proposed Project would not conflict with any applicable habitat conservation plan or natural community conservation plan.

General Plan

The City of Morgan Hill adopted the Santa Clara Valley Habitat Plan in October 2012, which provides a framework for promoting the protection and recovery of natural resources, including endangered species, and aims to streamline the permitting process for planned development, infrastructure, and maintenance activities. The Natural Resources and Environment Element of the proposed General Plan includes policies that support the implementation of the Habitat Plan and mitigate potential impacts related to conflicts with the Habitat Plan.

Policy NRE-6.1	Natural State of Habitat. Preserve all fish and wildlife habitats in their natural state whenever possible. Consider development impacts upon wildlife and utilize actions to mitigate those environmental impacts.
Policy NRE-6.2	Habitat Conservation Plan. Support the implementation of the Santa Clara Valley Habitat Conservation Plan to protect wildlife, rare and endangered plants and animals, and sensitive habitats from loss and destruction.
Policy NRE-6.7	Habitat Protection and Enhancement. Encourage the protection, restoration, and enhancement of remaining native grasslands, oak woodlands, marshlands, and riparian habitat.

These policies would mitigate potential impacts related to conflicts with the HCP to a *less-than-significant* level.

Applicable Regulations:

- Santa Clara Valley Habitat Plan

Significance Before Mitigation: Less than significant.

Residential Development Control System

As described above, the proposed updates to the RDCS as part of the proposed Project affect the pace of development in the City but do not determine the location, type, or intensity of development. Development allowed under the RDCS must comply with all applicable development requirements and proposed General Plan policies. Therefore, the RDCS would not result in any physical changes that could result in conflicts with the Habitat Plan, and the RDCS would have *no impact*.

LAND USE AND PLANNING

Significance Before Mitigation: No impact.

4.10.4 CUMULATIVE IMPACTS

LU-4	Implementation of the proposed Project would not contribute to cumulative land use and planning impacts in the area.

As discussed in Chapter 4, Environmental Evaluation, of this Draft EIR, the geographic context for the cumulative land use and planning effects occur from potential future development under the proposed Project combined with effects of development on lands adjacent to the City within San Jose to the north and the unincorporated areas of Santa Clara County to the west, east, north, and south.

The land use analyses find that the proposed General Plan would not divide an established community or conflict with established plans, policies and regulations. The proposed General Plan also would not conflict with any land use plan, policies, or regulations, in or outside the City of Morgan Hill, adopted for the purpose of avoiding or mitigating an environmental effect. Future development that would be allowed under the proposed General Plan would not create substantial land use impacts. Development is likely to continue to occur in surrounding cities and in the Santa Clara region as well. However, such development is taking place in already urbanized areas as infill development and would not require significant land use changes that would create land use conflicts, nor would they divide communities. Therefore, the proposed General Plan would not result in a cumulatively considerable contribution to cumulative impacts related to land use changes and its impact would be *less than significant*.

As described above, the proposed updates to the RDCS as part of the proposed Project affect the pace of development in the City but do not determine the location, type, or intensity of development. Development allowed under the RDCS must comply with all applicable development requirements and proposed General Plan policies. Therefore, the RDCS would not result in any physical changes that could contribute to any cumulative land use impact, and it would have *no impact*.

Applicable Regulations:

- Plan Bay Area
- Santa Clara County General Plan

Significance Before Mitigation: Less than significant.

4.10.5 SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION MEASURES

The proposed Project would not result in any significant project-specific or cumulative impacts to land use and planning and therefore no mitigation measures are required.

LAND USE AND PLANNING

4.10.6 FULL BUILDOUT

The full buildout anticipated under the proposed Project would include significantly more non-residential development than the 2035 horizon-year development projection analyzed in Section 4.10.3, Impact Discussion, in terms of both the amount and the extent of development. Therefore, the potential for impacts related to land use and planning would increase. However, as discussed in Chapter 3, Project Description, it is extremely unlikely that full buildout would ever occur under the proposed Project. Therefore, an analysis of full buildout is not required by CEQA.

4.11 NOISE

This chapter describes the regulatory framework and existing conditions related to noise sources and the overall noise environment in Morgan Hill, and evaluates the potential impacts that could occur by adopting and implementing the proposed Project on the noise environment, as well as the potential impacts of the noise environment on development under the proposed Project. The technical data and modeling used to for the analysis in this chapter are located in Appendix C, Technical Noise Data and Modeling.

4.11.1 ENVIRONMENTAL SETTING

4.11.1.1 OVERVIEW OF NOISE FUNDAMENTALS

Noise Descriptors

Noise is most often defined as unwanted sound. Although sound can be easily measured, the perception of noise and the physical response to sound complicate the analysis of its impact on people. People judge the relative magnitude of sound sensation in subjective terms such as “noisiness” or “loudness.”

The following are brief definitions of terminology used in this section:

- **Sound.** A disturbance created by a vibrating object, which when transmitted by pressure waves through a medium such as air, is capable of being detected by a receiving mechanism, such as the human ear or a microphone.
- **Noise.** Sound that is loud, unpleasant, unexpected, or otherwise undesirable.
- **Decibel (dB).** A unit-less measure of sound on a logarithmic scale.
- **A-Weighted Decibel (dBA).** An overall frequency-weighted sound level in decibels that approximates the frequency response of the human ear.
- **Equivalent Continuous Noise Level (L_{eq}).** The mean of the noise level, energy averaged over the measurement period.
- **Statistical Sound Level (L_n).** The sound level that is exceeded “n” percent of time during a given sample period. For example, the L_{50} level is the statistical indicator of the time-varying noise signal that is exceeded 50 percent of the time (during each sampling period), which is half of the sampling time, the changing noise levels are above this value and half of the time they are below it. This is called the “median sound level.” The L_{10} level, likewise, is the value that is exceeded 10 percent of the time (i.e., near the maximum) and this is often known as the “intrusive sound level.” The L_{90} is the sound level exceeded 90 percent of the time and is often considered the “effective background level” or “residual noise level.”

NOISE

- **Day-Night Sound Level (L_{dn} or DNL).** The energy-average of the A-weighted sound levels occurring during a 24-hour period, with 10 dB added to the sound levels occurring during the period from 10:00 p.m. to 7:00 a.m.
- **Community Noise Equivalent Level (CNEL).** The energy-average of the A-weighted sound levels occurring during a 24-hour period, with 5 dB added to the levels occurring during the period from 7:00 p.m. to 10:00 p.m. and 10 dB added to the sound levels occurring during the period from 10:00 p.m. to 7:00 a.m.

Note: For general community/environmental noise, CNEL and L_{dn} values rarely differ by more than 1 dB. As a matter of practice, L_{dn} and CNEL values are considered to be equivalent/interchangeable and are treated therefore in this assessment.

Characteristics of Sound

Sound is a pressure wave transmitted through the air. It is described in terms of loudness or amplitude (measured in decibels), frequency or pitch (measured in Hertz [Hz] or cycles per second), and duration (measured in seconds or minutes). The standard unit of measurement of the loudness of sound is the decibel (dB). Changes of 1 to 3 dB are detectable under quiet, controlled conditions and changes of less than 1 dBA are usually indiscernible. A 3 dB change in noise levels is considered the minimum change that is detectable with human hearing in outside environments. A change of 5 dB is readily discernable to most people in an exterior environment whereas a 10 dBA change is perceived as a doubling (or halving) of the sound.

The human ear is not equally sensitive to all frequencies. Sound waves below 16 Hz are not heard at all and are “felt” more as a vibration. Similarly, while people with extremely sensitive hearing can hear sounds as high as 20,000 Hz, most people cannot hear above 15,000 Hz. In all cases, hearing acuity falls off rapidly above about 10,000 Hz and below about 200 Hz. Since the human ear is not equally sensitive to sound at all frequencies, a special frequency dependent rating scale is usually used to relate noise to human sensitivity. The A-weighted decibel scale (dBA) performs this compensation by discriminating against frequencies in a manner approximating the sensitivity of the human ear.

Measurement of Sound

Sound intensity is measured through the A-weighted measure to correct for the relative frequency response of the human ear. That is, an A-weighted noise level deemphasizes low and very high frequencies of sound similar to the human ear’s de-emphasis of these frequencies.

Unlike linear units such as inches or pounds, decibels are measured on a logarithmic scale, representing points on a sharply rising curve. This logarithmic scale is used to better account for the large variations in pressure amplitude (the above range of human hearing, 0 to 140 dBA, represents a ratio in pressures of 100 trillion to one). All noise levels in this study are relative to the industry-standard pressure reference value of 20 micropascals. Because of the physical characteristics of noise transmission and perception, the relative

loudness of sound does not closely match the actual amounts of sound energy. Table 4.11-1 presents the subjective effect of changes in sound pressure levels.

TABLE 4.11-1	CHANGE IN APPARENT LOUDNESS
± 3 dB	Threshold of human perceptibility
± 5 dB	Clearly noticeable change in noise level
± 10 dB	Half or twice as loud
± 20 dB	Much quieter or louder

Source: Bies and Hansen, 2009.

In practical application, an increase of 10 dB is 10 times more intense than 1 dB, while 20 dB is 100 times more intense, and 30 dB is 1,000 times more intense. A sound as soft as human breathing is about 10 times greater than 0 dB. The decibel system of measuring sound gives a rough connection between the physical intensity of sound and its perceived loudness to the human ear. Ambient sounds generally range from 30 dBA (very quiet) to 100 dBA (very loud). To help relate noise level values to common experience, Table 4.11-2 shows typical noise levels from noise sources. Sound levels are generated from a source and their decibel level decreases as the distance from that source increases. Sound dissipates exponentially with distance from the noise source. This phenomenon is known as “spreading loss.” For a single point source, sound levels decrease by approximately 6 dB for each doubling of distance from the source. This drop-off rate is appropriate for noise generated by onsite operations from stationary equipment or activity at a project site. If noise is produced by a line source, such as highway traffic, the sound decreases by 3 dB for each doubling of distance in a hard site environment. Line source noise in a relatively flat environment with absorptive vegetation decreases by 4.5 dB for each doubling of distance.

Time variation in noise exposure is typically expressed in terms of a steady-state energy level equal to the energy content of the time varying period (called L_{eq}), or alternately, as a statistical description of the sound level that is exceeded over some fraction of a given observation period. For example, the L_{50} noise level represents the noise level that is exceeded 50 percent of the time. Half the time the noise level exceeds this level and half the time the noise level is less than this level. This level is also representative of the level that is exceeded 30 minutes in an hour. Similarly, the L_2 , L_8 , and L_{25} values represent the noise levels that are exceeded 2, 8, and 25 percent of the time or 1, 5, and 15 minutes per hour. These “L” values are typically used to demonstrate compliance for stationary noise sources with a city’s noise ordinance, as discussed below. Other values typically noted during a noise survey are the L_{min} and L_{max} . These values represent the minimum and maximum root-mean-square noise levels obtained over the measurement period.

Because community receptors are more sensitive to unwanted noise intrusion during the evening and at night, state law and the City of Morgan Hill require that, for planning purposes, an artificial dB increment be added to quiet time noise levels in a 24-hour noise descriptor called the Community Noise Equivalent Level (CNEL) or Day-Night Noise Level (L_{dn}). The CNEL descriptor requires that an artificial increment of 5 dBA be added to the actual noise level for the hours from 7:00 PM to 10:00 PM and 10 dBA for the hours from 10:00 PM to 7:00 AM. The L_{dn} descriptor uses the same methodology except that there is no artificial increment added to the hours between 7:00 PM and 10:00 PM. Both descriptors give roughly the same 24-hour level with the CNEL being only slightly more restrictive (i.e., higher).

NOISE

TABLE 4.11-2 TYPICAL NOISE LEVELS

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	110	Rock Band
Jet Flyover at 1,000 feet		
	100	
Gas Lawn Mower at three feet		
	90	
Diesel Truck at 50 feet, at 50 mph		Food Blender at 3 feet
	80	Garbage Disposal at 3 feet
Noisy Urban Area, Daytime		
	70	Vacuum Cleaner at 10 feet
Commercial Area		Normal speech at 3 feet
Heavy Traffic at 300 feet	60	
		Large Business Office
Quiet Urban Daytime	50	Dishwasher Next Room
Quiet Urban Nighttime	40	Theater, Large Conference Room (background)
Quiet Suburban Nighttime		
	30	Library
Quiet Rural Nighttime		Bedroom at Night, Concert Hall (background)
	20	
		Broadcast/Recording Studio
	10	
Lowest Threshold of Human Hearing	0	Lowest Threshold of Human Hearing

Source: Caltrans 2009.

Psychological and Physiological Effects of Noise

Noise is defined as unwanted sound, and is known to have several adverse effects on people, including hearing loss, speech and sleep interference, physiological responses, and annoyance. Physical damage to human hearing begins at prolonged exposure to noise levels higher than 85 dBA. Exposure to high noise levels affects our entire system, with prolonged noise exposure in excess of 75 dBA increasing body tensions, and thereby affecting blood pressure, functions of the heart and the nervous system. In comparison, extended periods of noise exposure above 90 dBA could result in permanent hearing damage.

Based on these known adverse effects of noise, the federal government, the State of California, and many local governments have established criteria to protect public health and safety and to prevent disruption of certain human activities.

Vibration Fundamentals

Vibration is a trembling, quivering, or oscillating motion of the earth. Like noise, vibration is transmitted in waves, but in this case through the earth or solid objects. Unlike noise, vibration is typically of a frequency that is felt rather than heard.

Vibration can be either natural as in the form of earthquakes, volcanic eruptions, sea waves, or landslides, or manmade as from explosions, the action of heavy machinery or heavy vehicles such as trains. Both natural and manmade vibration may be continuous such as from operating machinery, or transient, such as from an explosion. The way in which vibration is transmitted through the earth is called propagation. Propagation of earthborn vibrations is complicated and difficult to predict because of the endless variations in the soil through which waves travel. There are three main types of vibration propagation: surface, compression and shear waves. Surface waves, or Raleigh waves, travel along the ground's surface. These waves carry most of their energy along an expanding circular wave front, similar to ripples produced by throwing a rock into a pool of water. P waves, or compression waves, are body waves that carry their energy along an expanding spherical wave front. The particle motion in these waves is longitudinal (i.e., in a "push-pull" fashion). P waves are analogous to airborne sound waves. S waves, or shear waves, are also body waves that carry energy along an expanding spherical wave front. However, unlike P waves, the particle motion is transverse or "side-to-side and perpendicular to the direction of propagation".

As vibration waves propagate from a source, the energy is spread over an ever-increasing area such that the energy level striking a given point is reduced with the distance from the energy source. This geometric spreading loss is inversely proportional to the square of the distance. Wave energy is also reduced with distance as a result of material damping in the form of internal friction, soil layering, and void spaces. The amount of attenuation provided by material damping varies with soil type and condition as well as the frequency of the wave.

As with noise, vibration can be described by both its amplitude and frequency. Amplitude may be characterized in three ways: displacement, velocity, and acceleration. Particle displacement is a measure of the distance that a vibrated particle travels from its original position and for the purposes of soil displacement is typically measured in inches or millimeters. Particle velocity is the rate of speed at which soil particles move in inches per second or millimeters per second. Particle acceleration is the rate of change in velocity with respect to time and is measured in inches per second or millimeters per second. Typically, particle velocity (measured in inches or millimeters per second) and/or acceleration (measured in gravities) are used to describe vibration. Table 4.11-3 presents the human reaction to various levels of peak particle velocity.

NOISE

TABLE 4.11-3 HUMAN REACTION TO TYPICAL VIBRATION LEVELS

Vibration Level Peak Particle Velocity (in/sec)	Human Reaction	Effect on Buildings
0.006–0.019	Threshold of perception, possibility of intrusion	Vibrations unlikely to cause damage of any type
0.08	Vibrations readily perceptible	Recommended upper level of vibration to which ruins and ancient monuments should be subjected
0.10	Level at which continuous vibration begins to annoy people	Virtually no risk of “architectural” (i.e., not structural) damage to normal buildings
0.20	Vibrations annoying to people in buildings	Threshold at which there is a risk to “architectural” damage to normal dwelling—houses with plastered walls and ceilings
0.4–0.6	Vibrations considered unpleasant by people subjected to continuous vibrations and unacceptable to some people walking on bridges	Vibrations at a greater level than normally expected from traffic, but would cause “architectural” damage and possibly minor structural damage

Sources: California Department of Transportation (Caltrans). 2004, June. Transportation- and Construction-Induced Vibration Guidance Manual. California Department of Transportation (Caltrans), Division of Environmental Analysis. 2002, February. Transportation Related Earthborne Vibration (Caltrans Experiences). Technical Advisory, Vibration. TAV-02-01-R9601.

Vibrations also vary in frequency and this affects perception. Typical construction vibrations fall in the 10 to 30 Hz range and usually occur around 15 Hz. Traffic vibrations exhibit a similar range of frequencies; however, due to their suspension systems, buses often generate frequencies around 3 Hz at high vehicle speeds. It is less common, but possible, to measure traffic frequencies above 30 Hz.

Noise- and Vibration-Sensitive Receptors

Certain land uses are particularly sensitive to noise and vibration. These uses include residences, schools, libraries, churches, nursing homes, hospitals, and open space/recreation areas where quiet environments are necessary for enjoyment, public health, and safety. Commercial and industrial uses are generally not considered noise- and vibration-sensitive uses, unless noise and vibration would interfere with their normal operations and business activities.

4.11.1.2 REGULATORY FRAMEWORK

To limit population exposure to physically and/or psychologically damaging as well as intrusive noise levels, the federal government, the State of California, various county governments, and most municipalities in the state have established standards and ordinances to control noise. There are no federal noise or vibration standards applicable to activities or uses under the jurisdiction of the Morgan Hill General Plan; therefore, this analysis only addresses state and local standards.

State Regulations

California Code of Regulations

The State of California's noise insulation standards are codified in the California Code of Regulations (CCR), Title 24, Building Standards Administrative Code, Part 2, California Building Code (CBC). These noise standards are applied to new construction in California for the purpose of interior noise compatibility from exterior noise sources. The regulations specify that acoustical studies must be prepared when noise-sensitive structures, such as residential buildings, schools, or hospitals, are located near major transportation noise sources, and where such noise sources create an exterior noise level of 65 dBA CNEL or higher. Acoustical studies that accompany building plans must demonstrate that the structure has been designed to limit interior noise in habitable rooms to acceptable noise levels. For new residential buildings, schools, and hospitals, the acceptable interior noise limit for new construction is 45 dBA CNEL.

California Code of Regulations Title 21, Subchapter 6, (Airport Noise Standards) establishes 65 dBA CNEL as the acceptable level of aircraft noise for persons living in the vicinity of airports. Title 21 applies to airports that have been designated "noise problem airports," which includes the San Jose and San Francisco International Airports. Noise-sensitive land uses in locations where the aircraft exterior noise level exceeds 65 dBA CNEL are generally incompatible, unless (1) an aviation easement for aircraft noise has been acquired by the airport proprietor, or (2) the residence is a high-rise apartment or condominium that has an interior CNEL of 45 dBA or less in all habitable rooms despite aircraft noise and an air circulation or air conditioning system, as appropriate. Assembly Bill (AB) 2776 requires any person who intends to sell or lease residential properties within an airport influence area to disclose that fact to the person buying the property.

California Noise/Land Use Compatibility Matrix

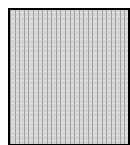
The California Office of Noise Control has prepared a land use compatibility chart for community noise to provide urban planners with a tool to gauge the compatibility of land uses relative to existing and future ambient noise levels. This land use compatibility chart, reproduced below as Table 4.11-4, identifies 'normally acceptable,' 'conditionally acceptable,' and 'clearly unacceptable' noise levels for various land uses. A conditionally acceptable designation implies new construction or development should be undertaken only after a detailed analysis of the noise reduction requirements for each land use is made and needed noise insulation features are incorporated in the design. By comparison, a normally acceptable designation indicates that standard construction can occur with no special noise reduction requirements.

Additionally, the City of Morgan Hill previously adopted the State of California Guidelines for Land Use Compatibility for Community Noise Environments. This remains the case for the updated General Plan.

NOISE

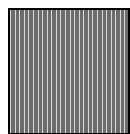
TABLE 4.11-4 LAND USE COMPATIBILITY FOR COMMUNITY NOISE ENVIRONMENTS

Land Uses	CNEL (dBA)					
	55	60	65	70	75	80
Residential – Low Density Single-Family, Duplex, Mobile Homes						
Residential – Multiple-Family						
Transient Lodging, Motels, Hotels						
Schools, Libraries, Churches, Hospitals, Nursing Homes						
Auditoriums, Concert Halls, Amphitheaters						
Sports Arena, Outdoor Spectator Sports						
Playgrounds, Neighborhood Parks						
Golf Courses, Riding Stables, Water Recreation, Cemeteries						
Office Buildings, Businesses, Commercial and Professional						
Industrial, Manufacturing, Utilities, Agricultural						



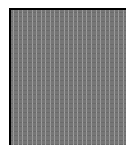
Normally Acceptable:

Specified land use is satisfactory based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.



Conditionally Acceptable:

New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and the needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.



Normally Unacceptable:

New construction or development should generally be discouraged. If new construction does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.



Clearly Unacceptable:

New construction or development generally should not be undertaken.

Source: Office of Noise Control, Guidelines for the Preparation and Content of Noise Elements of the General Plan, February 1976. Included in the Governor's Office of Planning and Research, California, General Plan Guidelines, Appendix C, October 2003.

Local Regulations

City of Morgan Hill Municipal Code

The Morgan Hill Municipal Code regulates noise primarily through the Noise Ordinance, which comprises Chapter 8.28 of the Code, under Title 8, Health and Safety. The Municipal Code contains additional specific and general provisions relating to noise. Most notably, the Municipal Code contains performance standards for industrial, office and retail, and residential, park, and institutional uses. Beyond the noise ordinance and performance standards, the Municipal Code contains additional miscellaneous references to noise. Where these references constitute specific regulations, they are reproduced in full below. Municipal Code provisions that do not address a specific regulation or standard, but which prohibit excessive noise or seek to limit noise impacts in general, are listed at the end of the Municipal Code section.

Noise Ordinance

Municipal Code Chapter 8.28, Noise, of Title 8, Health and Safety, includes the following provisions of that are most applicable to implementation of the proposed Project:

- **8.28.020 - Unlawful behavior defined.**

It is unlawful and a misdemeanor for any person to make or continue, or cause to be made or continued, any loud, disturbing, unnecessary or unusual noise or any noise which annoys, disturbs, injures or endangers the comfort, health, repose, peace or safety of other persons within the City.

- **8.28.030 - Police and fire sirens exempted from chapter provisions.**

Nothing in this chapter shall be construed to prevent the proper use of a siren or other alarm by a police, fire or authorized emergency vehicle as defined in the California Vehicle Code. Likewise, any stationary fire alarm operated by the fire department of the City is exempt from the provisions of this chapter.

- **8.28.040 - Enumeration of unlawful noises.**

Unlawful noises include:

A. **Animals and Birds.** The keeping of any animal or bird which, by causing frequent or long-continued noise, disturbs the comfort or repose of any persons in the vicinity;

B. **Auto Body Repairs.**

1. The repairing of any auto body, or part thereof, except within a completely enclosed building and the noises therefrom are reasonably confined to such building, and
2. The repairing of any auto body, or part thereof, between the hours of eight p.m. and seven a.m., which shall be deemed a violation of the provisions of this section;

NOISE

C. **Blowers, Fans, and Combustion Engines.** The operation of any noise-creating blower, power fan or internal combustion engine, the operation of which causes noise due to the explosion of operating gases or fluids, unless the noise from such blower or fan is muffled and such engine is equipped with a muffler device to deaden such noise;

D. **1. Construction activities as limited below.** "Construction activities" are defined as including but not limited to excavation, grading, paving, demolition, construction, alteration or repair of any building, site, street or highway, delivery or removal of construction material to a site, or movement of construction materials on a site. Construction activities are prohibited other than between the hours of seven a.m. and eight p.m., Monday through Friday and between the hours of nine a.m. to six p.m. on Saturday. Construction activities may not occur on Sundays or federal holidays. No third person, including but not limited to landowners, construction company owners, contractors, subcontractors, or employers, shall permit or allow any person working on construction activities which are under their ownership, control or direction to violate this provision. Construction activities may occur in the following cases without violation of this provision:

- a. In the event of urgent necessity in the interests of the public health and safety, and then only with a permit from the chief building official, which permit may be granted for a period of not to exceed three days or less while the emergency continues and which permit may be renewed for periods of three days or less while the emergency continues.
- b. If the Chief Building Official determines that the public health and safety will not be impaired by the construction activities between the hours of eight p.m. and seven a.m., and that loss or inconvenience would result to any party in interest, the chief building official may grant permission for such work to be done between the hours of eight p.m. and seven a.m. upon an application being made at the time the permit for the work is issued or during the progress of the work.
- c. The City Council finds that construction by the resident of a single residence does not have the same magnitude or frequency of noise impacts as a larger construction project. Therefore, the resident of a single residence may perform construction activities on that home during the hours in this subsection, as well as on Sundays and federal holidays from nine a.m. to six p.m., provided that such activities are limited to the improvement or maintenance undertaken by the resident on a personal basis.
- d. Public work projects are exempt from this section and the public works director shall determine the hours of construction for public works projects.
- e. Until November 30, 1998, construction activities shall be permitted between the vehicles, equipment or tools may be used during construction activities, except on the interior of a building or other structure which is enclosed by exterior siding (including windows and doors) and roofing, and which windows and doors are closed during construction activities. Construction activities must be situated at least one hundred fifty feet from the nearest occupied dwelling. No delivery or removal of construction material to a site, or movement

of construction materials on a site, is permitted. No activity, including but not limited to the playing of radios, tape players, compact disc players or other devices, which creates a loud or unusual noise which offends, disturbs or harasses the peace and quiet of the persons of ordinary sensibilities beyond the confines of the property from which the sound emanates is allowed.

2. If it is determined necessary in order to ensure compliance with this section, the chief building official may require fences, gates or other barriers prohibiting access to a construction site by construction crews during hours in which construction is prohibited by this subsection. The project manager of each project shall be responsible for ensuring the fences, gates or barriers are locked and/or in place during hours in which no construction is allowed. This subsection shall apply to construction sites other than public works projects or single dwelling units which are not a part of larger projects.

E. Defective or Loaded Vehicles. The use of any automobile, motorcycle or vehicle so out of repair, so loaded, or in such manner as to create loud and unnecessary grating, grinding, rattling or other noise;

F. Exhausts. The discharge into the open air of the exhaust of any steam engine, stationary internal combustion engine, motorboat or motor vehicle except through a muffler or other device which will effectively prevent loud or explosive noises therefrom;

G. Loading or Unloading Vehicles and Opening Boxes. The creation of loud and excessive noise in connection with loading or unloading any vehicle or the opening and destruction of bales, boxes, crates and containers;

H. Loudspeakers, Amplifiers and Similar Advertising Devices. The using or operating or permitting to be played, used or operated, of any radio receiving set, musical instrument, phonograph, loudspeaker, sound amplifier or other machine or device for the producing or reproducing of sound which is cast upon the public streets for the purpose of commercial advertising or attracting the attention of the public to any building or structure;

I. Noises Adjacent to Schools, Courts, Churches and Hospitals. The creation of any excessive noise on any street adjacent to any school, institution of learning, church or court while the same is in use or adjacent to any hospital, which noise unreasonably interferes with the workings of such institution or which disturbs or unduly annoys patients in the hospital; provided, conspicuous signs are displayed in such streets indicating that the street is adjacent to a school, hospital or court;

J. Pile Drivers, Hammers and Similar Equipment. The operation, between the hours of eight p.m. and seven a.m. of any pile driver, steam shovel, pneumatic hammer, derrick, steam or electric hoist or other appliance, the use of which is attended by loud or unusual noise;

K. Radios, Phonographs, Musical Instruments and Similar Devices.

1. The using or operating, or permitting to be played, used or operated, of any radio receiving set, musical instrument, phonograph or other machine or device for the producing or reproducing

NOISE

of sound in such manner as to disturb the peace, quiet and comfort of the neighborhood inhabitants or at any time with louder volume than is necessary for convenient hearing for the persons who are in the room, vehicle or chamber in which such machine or device is operated and who are voluntary listeners thereto, and

2. The operation of any such set, instrument, phonograph, machine or device between the hours of eleven p.m. and seven a.m. in such manner as to be plainly audible at a distance of fifty feet from the building, structure or vehicle in which such device is located which shall be prima facie evidence of a violation of the provisions of this section;

L. Shouting by Hawkers and Peddlers. The shouting and crying of peddlers, hawkers and vendors which disturb the peace and quiet of the neighborhood;

M. Steam Whistles. The blowing of any locomotive steam whistle or steam whistle attached to any stationary boiler except to give notice of the time to begin or stop work, or as a warning of fire or danger, or upon the request of proper City authorities;

N. Vehicle Horns and Signaling Devices.

1. The sounding of any horn or signaling device on any automobile, motorcycle, streetcar or other vehicle on any street or public place of the City except as a danger warning,
2. The creation, by means of any such signaling device of any unreasonably loud or harsh sound,
3. The sounding of any such device for an unnecessary and unreasonable period of time,
4. The use of any signaling device except one operated by hand or electricity,
5. The use of any horn, whistle or other device operated by engine exhaust, and
6. The use of any such signaling device when traffic is delayed for any reason.

■ **8.28.050 - Violation—Penalty.**

Any person violating any of the provisions of this chapter shall be deemed guilty of an infraction and shall be punished in accordance with Section 1.24.010(B) of this code. Each day such violation is committed or permitted to continue constitutes a separate offense and shall be punishable as such hereunder.

Zoning Ordinance

Title 18, Zoning, of the Municipal Code sets forth the City's Zoning Ordinance, which, among other purposes, is intended to assure the orderly and beneficial development of the City, attain a desirable balance of residential and employment opportunities, and promote efficient urban design and arrangement. Whereas the Noise Ordinance serves to limit the generation and reception of noise in Morgan Hill in general, the Zoning Ordinance serves to address noise as it relates to the permitting and development of different land uses. The Zoning Ordinance contains a variety of provisions related to noise; the most pertinent of these are reproduced in full, below. Other miscellaneous provisions, which present general requirements for avoiding

or minimizing excessive noise, or for conforming to other portions of the Municipal Code, are listed at the end of this section.

Chapter 18.24: CC-R Central Commercial / Residential District

- **18.24.110 - Commercial uses—Performance standards.**

In order to achieve residential compatibility with existing dwellings in the CC-R zoning district, the following standards shall apply to proposed commercial uses when they abut residential property:

A. Noise levels emanating from the commercial enterprise may not exceed sixty dBA at the property perimeter. Should a commercial use be active after ten p.m., noise levels shall not exceed forty-five dBA, as measured at the property boundary.

Chapter 18.48: Performance Standards

- **18.48.005 – Specific conditions and substances prohibited.**

No land or building shall be used or occupied in any manner so as to create any:
[other line items omitted for brevity]

B. Noise or vibration, smoke, dust, odor or other form of air pollution;
[other line items omitted for brevity]

- **18.48.075 - Noise.**

A. At the lot line of all uses specified in Section 18.48.010, the maximum sound generated by any use shall not exceed seventy to seventy-five dB(A) when adjacent uses are industrial or wholesale uses. When adjacent to offices, retail or sensitive industries, the sound level shall be limited to sixty-five to seventy dB(A). When uses are adjacent or contiguous to residential, park or institutional uses, the maximum sound level shall not exceed sixty dB(A).

B. Excluded from these standards are occasional sounds generated by the movement of railroad equipment, temporary construction activities, or warning devices.

- **18.48.135 - Vibration.**

No vibration shall be permitted which is discernible without instruments at the lot line of the establishment or use.

Miscellaneous provisions containing passing references to noise or vibration, such as requirements for compliance with other noise-related portions of the municipal code, and/or prohibitions on the generation of excessive noise or perceptible vibration:

- Title 5 Business Licenses Generally, Chapter 5.28: Amusement and Entertainment Premises, Section 5.28.120 Revocation of permit – Hearing.
- Title 6 Animals, Chapter 6.20: Animal Establishments, Section 6.20.010 General standards.
- Title 6 Animals, Chapter 6.24: Animal Restrictions, Section 6.24.020 Public nuisances.

NOISE

- Title 6 Animals, Chapter 6.36: Animals and Land Use, Section 6.36.175 Keeping of livestock for private uses in residential zoning districts and on open space properties with a private residence.
- Title 8 Health and Safety, Chapter 8.50: Right-to-Farm, Section 8.50.050 Resolution of disputes.
- Title 12 Streets, Sidewalks and Public Places, Chapter 12.32: Restrictions on Removal of Significant Trees, Section 12.32.010 Council determinations.
- Title 12 Streets, Sidewalks and Public Places, Chapter 12.32: Restrictions on Removal of Significant Trees, Section 12.32.080 Permit – Approval – Conditions.
- Title 17 Subdivisions, Chapter 17.20: Map Requirements – Five or More Parcels, Section 17.20.020 Submission procedures.
- Title 17 Subdivisions, Chapter 17.20: Map Requirements – Five or More Parcels, Section 17.20.040 Forms and Contents.
- Title 17 Subdivisions, Chapter 17.36: Condominium Conversion, Section 17.36.120 Physical standards – Specifications – Prerequisite to map approval.
- Title 18 Zoning, Chapter 18.38: MG General Industrial District, Section 18.38.010 Purpose of district.
- Title 18 Zoning, Chapter 18.48: Performance Standards, Section 18.48.055 Home occupations.
- Title 18 Zoning, Chapter 18.48: Performance Standards, Section 18.48.135 Vibration.
- Title 18 Zoning, Chapter 18.54: Conditional and Temporary Use Permits, Section 18.54.160 Permits required.
- Title 18 Zoning, Chapter 18.78: Residential Development Control System, Section 18.78.290 Lot layout and orientation.
- Title 18 Zoning, Chapter 18.78: Residential Development Control System, Section 18.78.320 Landscaping, screening and color.

4.11.1.3 EXISTING CONDITIONS

Like many urban areas, Morgan Hill's noise environment is dominated by transportation-related noise, primarily car/truck traffic. Noise from train movements and aircraft contributes only minimally to the noise environment in Morgan Hill. Highway 101 (US 101) are the largest contributors to noise in Morgan Hill, with other major roadways contributing as well. These include Monterey Road, Butterfield Boulevard, Cochrane Road, Main Avenue, Dunne Avenue, Edmundson Avenue, Tennant Avenue, and Watsonville Road. Noise along all of these roadways is generated by private cars, trucks, buses, and other types of vehicles. Activities associated with industrial, commercial, and residential uses also contribute substantially to the noise environment of Morgan Hill. For all of these uses, stationary equipment, such as HVAC systems, represents a significant source of noise. Activities such as deliveries and refuse collection also contribute to the noise generated by land uses in Morgan Hill.

Noise Measurements

Existing ambient noise levels were measured at 11 sites around Morgan Hill to document representative noise levels at a variety of locations. These locations are shown on Figure 4.11-1.

Short-term noise level measurements were taken at 8 locations for a period of 15 minutes during the daytime on Thursday, August 27, 2015 and Friday, August 28, 2015, all between the hours of 11:00 a.m. and 5:00 p.m.¹ Short-term noise measurements serve as a snapshot of noise levels at a particular time and location, offering a sense of how other, similar locations might experience noise during comparable times of day.

Long-term noise level measurements were taken at three locations for a period of at least 24 hours beginning on Thursday, August 27, 2015, and ending on Friday, August 28, 2015. Long-term noise level measurements serve to provide a broader picture of how noise levels vary over the course of a full day, helping to put the short-term measurements in a broader temporal context. Both long- and short-term measurements serve to indicate where excessive noise may be an existing or future issue for existing or new land uses.

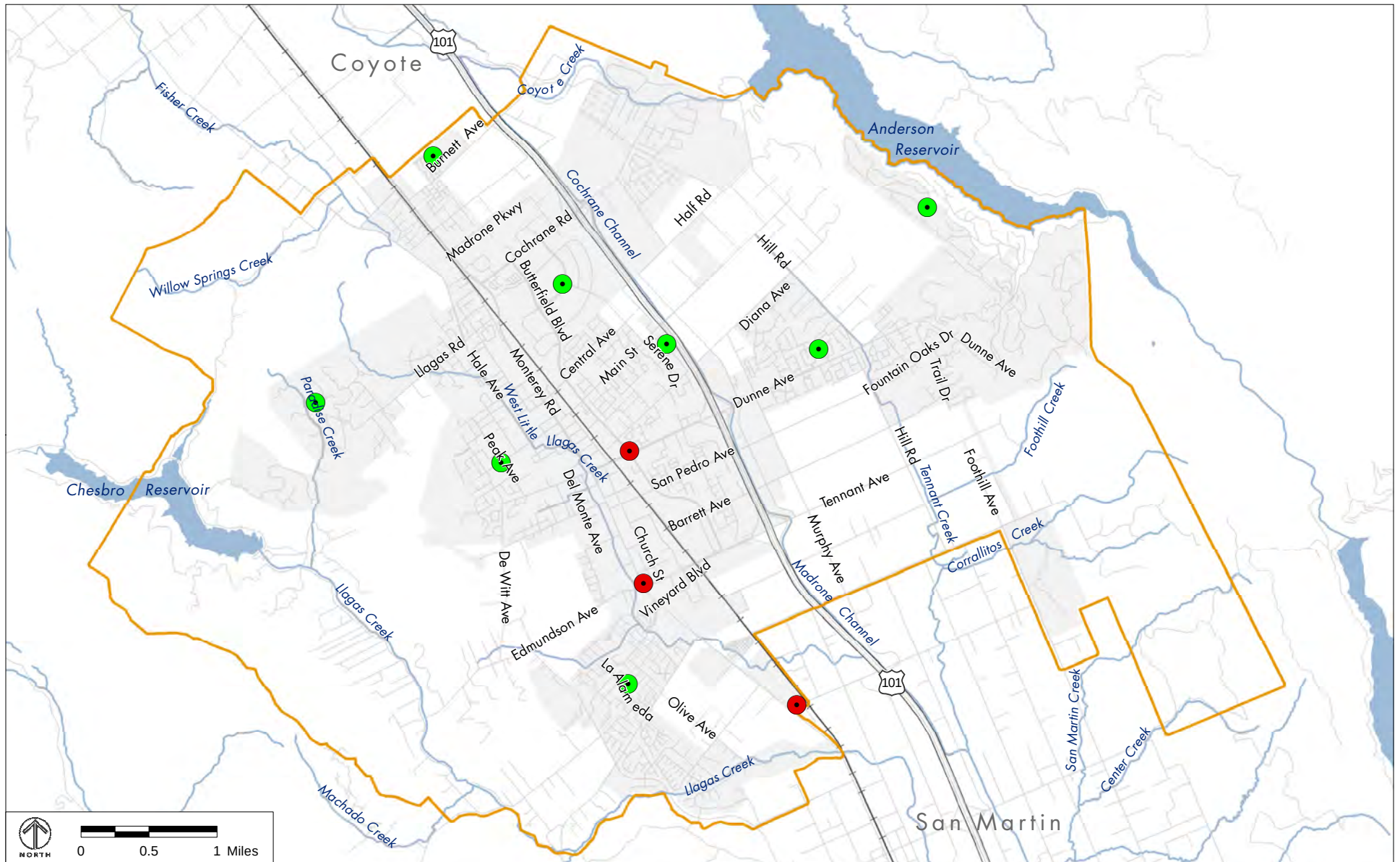
The noise levels during both the short- and long-term measurements were measured using Larson-Davis Model 831 sound level meters, which satisfy the American National Standards Institute for Type 1 general environmental noise measurement instrumentation. The sound level meters were programmed to record noise levels with the “slow” time constant and using the “A” weighting filter network. The sound level meters and microphones were mounted on a tripod 5 feet above the ground and equipped with a windscreen during all short-term measurements. For long-term measurements, the microphone and windscreen were attached to available permanent objects, as dictated by conditions in the field. The short- and long-term noise measurement locations are described in Appendix C.

Principal Noise Sources in Morgan Hill

On-Road Vehicles

Highway 101 roughly bisects the geographic area of Morgan Hill, running north to south. In addition to Highway 101, major north to south roadways include Monterey Road and Butterfield Boulevard. Major east to west roadways include Cochrane Road, Llagas Road, Main Avenue, Dunne Avenue, and Tennant Avenue. Together, Highway 101 and these streets comprise the major roads in the City of Morgan Hill. Figure 4.11-2 shows existing noise contours for Morgan Hill, including the roadways referenced above.

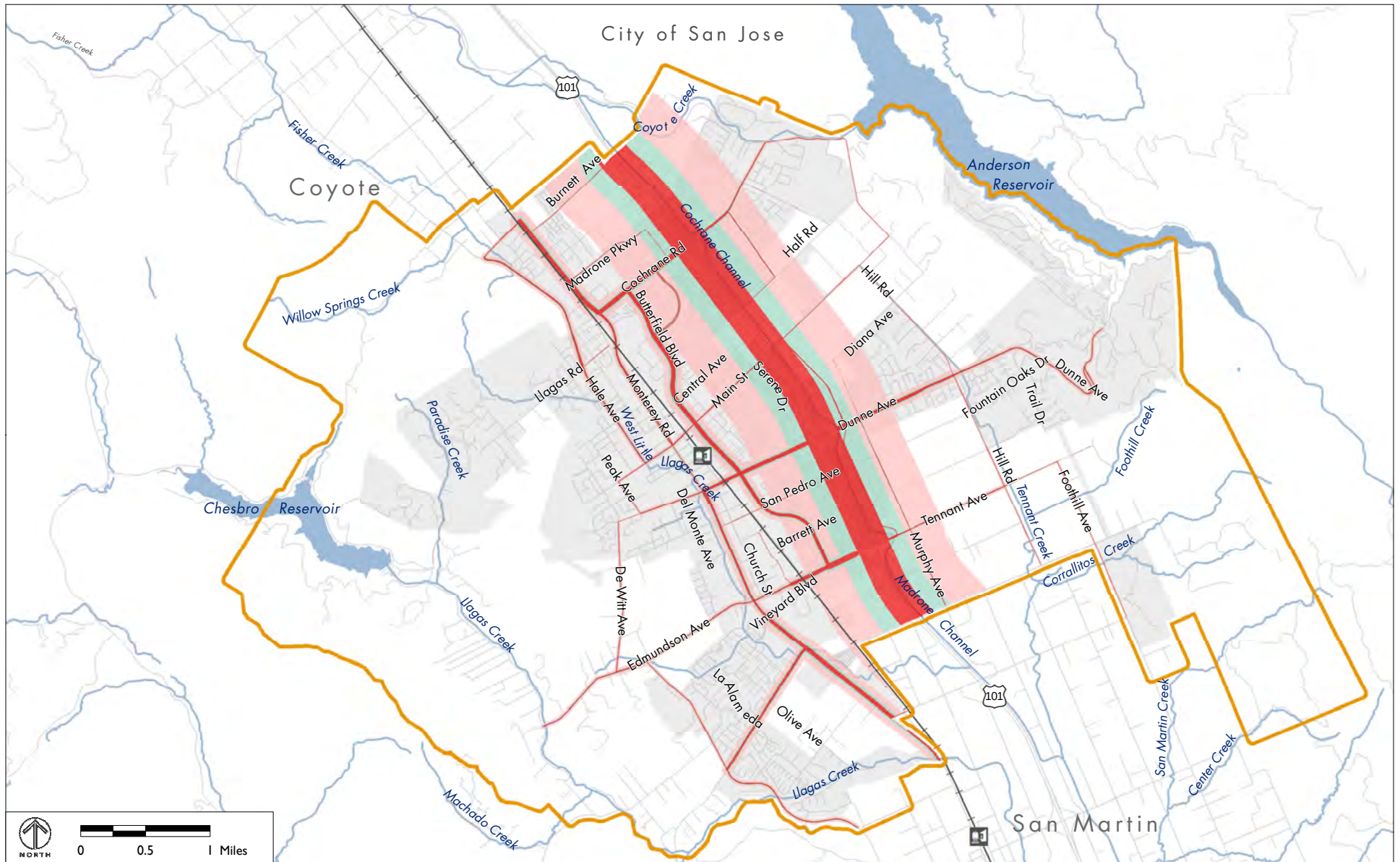
¹ Morgan Hill Unified School District was in session starting August 13, 2015.



Source: City of Morgan Hill and PlaceWorks, 2015.

Figure 4.11-1

Noise Monitoring Locations



Source: City of Morgan Hill and PlaceWorks, 2015.

Figure 4.11-2

Existing Noise Contours

NOISE

TABLE 4.11-5 NOISE MONITORING SUMMARY

Receptor Location	Start Time	Date	A-Weighted Sound Pressure Level, dBA re 20 µPa			
			L _{eq}	L _{min}	L _{max}	
ST-1	2:59 p.m.	Aug 28	51.6	30.3	70.7	
ST-2	2:48 p.m.	Aug 27	44.9	38.3	56.1	
ST-3	3:44 p.m.	Aug 27	66.4	54.2	80.6	
ST-4	4:25 p.m.	Aug 27	51.3	41.3	73.9	
ST-5	11:26 a.m.	Aug 28	45.4	27.9	61.9	
ST-6	12:12 p.m.	Aug 28	57.0	52.7	63.4	
ST-7	12:43 p.m.	Aug 28	66.1	48.2	79.1	
ST-8	2:00 p.m.	Aug 28	44.4	38.5	52.7	

Receptor Location	Start Time	End Time	Range of Hourly L _{eq}	Highest L _{max}	Lowest L _{min}	Overall L _{eq}	CNEL
LT-1	11:00 a.m. Aug 27	3:00 p.m. Aug 28	57.6 - 72.2	99.3 (3 p.m. Aug 27)	36.5 (12 a.m.)	69.0	72.6
LT-2*	12:00 p.m. Aug 27	4:00 p.m. Aug 28	50.6 – 71.6	97.4 (5 p.m. Aug 27)	37.5 (1 a.m.)	~67*	~69*
LT-3	2:00 p.m. Aug 27	4:00 p.m. Aug 28	53.1 – 71.6	99.4 (4 p.m. Aug 27)	37.4 (3 a.m.)	67.9	72.9

* Data approximated after 1:30 a.m.

Source: Noise monitoring conducted by PlaceWorks between 11:00 a.m. on 8/27/15 (Thursday) to 4:00 p.m. on 7/28/15 (Friday).

Train Noise

Morgan Hill has one railway, on which Amtrak and Caltrain passenger trains and Union Pacific freight trains operate. On a daily basis, there are approximately six Caltrain pass-bys, and six trains between Amtrak and Union Pacific combined.² Given the relatively few rail movements for these sources, this railway contributes only minimally to the noise environment of Morgan Hill; particularly in consideration of the Highway 101 traffic flow-related noise levels.

Heliports

There are no heliports located within the City of Morgan Hill. The nearest heliport is the St. Louise Regional Hospital Heliport in Gilroy, approximately 5 miles southeast of the City boundary. There are no other heliports within 10 miles of the City.³

² Federal Railroad Administration, <http://safetydata.fra.dot.gov/OfficeofSafety/PublicSite/Crossing/Xingqryloc.aspx>, accessed on September 23, 2015.

³ AirNav, <http://www.airnav.com/airports/search.html>, accessed on October 1, 2015.

Aircraft Noise

There are no public or private airports or airstrips in Morgan Hill. The nearest public airport is the South County Airport of Santa Clara County in San Martin, located approximately 1.5 miles southeast of the City limits and sphere of influence (SOI). There are no other airports, public or private, within 14 miles of the City. San Jose International Airport is located 20 miles to the northwest.⁴ Despite the proximity of the San Martin Airport, its Projected 2022 Aircraft Noise Contours do not extend into the Project Area. The 55 CNEL contour does not extend farther west than Llagas Avenue or farther than 1,000 feet north of Middle Avenue.⁵

Although Morgan Hill does receive some noise from aircraft using nearby airports, the Morgan Hill Project Area does not fall within the any of their land use planning areas/influence areas, runway protection zones, or identified noise contours.

Stationary Source Noise

Stationary sources of noise may occur from all types of land uses. Morgan Hill is mostly developed with residential, commercial, mixed-use, institutional, and some light industrial/research and development uses. Commercial uses can generate noise from HVAC systems, loading docks, trash compactors, and other sources. Industrial uses may generate noise from HVAC systems, loading docks, and machinery required for manufacturing or other industrial processes. Noise generated by commercial uses is generally short and intermittent. Industrial uses may generate noise on a more continual basis, or intermittently, depending on the processes and types of machinery involved. In addition to on-site mechanical equipment, which generates stationary noise, warehousing and industrial land uses generate substantial truck traffic that results in additional sources of noise on local roadways in the vicinity of industrial operations.

For Morgan Hill, the City's industrial areas are primarily located in two areas: north and south of Cochrane Road, and west of Highway 101 between Dunne and Tennant Avenues. These industrial areas are characterized by a mix of light industrial, office, and research and development uses; these areas are usually separated from sensitive uses, such as residences, by either major roads or some degree of buffering. These uses have the potential to generate noise impacts upon nearby sensitive receptors located at the edges of these areas. Such impacts would vary depending on the specific uses, with truck deliveries, HVAC, and other mechanical equipment being the primary sources of noise. The separation of residences by streets or other buffering serves to decrease the noise perceived by these receptors and, in the case of major roads, the noise from the roads was generally observed to exceed that from the industrial uses. Residential neighborhoods in Morgan Hill with a notable potential to receive substantial industrial noise include those to the north of East Central Avenue, and along Church Street.

⁴ AirNav, <http://www.airnav.com/airports/search.html>, accessed on October 1, 2015.

⁵ Comprehensive Land Use Plan, Santa Clara County – South County Airport, 2008.

NOISE

Construction Noise

Construction activity also contributes to the noise environment of Morgan Hill; however, such activities are typically temporary, occurring in any one location for only a limited period of time. Larger or multi-phase construction projects may contribute to the noise environment of a particular location for a more extended period of time. Public infrastructure that requires ongoing maintenance may also result in ongoing noise impacts, though usually not at a constant location. For example, different sections of road may be repaved at different times, meaning that noise impacts from associated construction activities would, at any given time, only occur along and near the section of roadway undergoing such maintenance.

Public Facility Noise

Outdoor activities that occur on school campuses and in parks throughout the Project Area generate noticeable levels of noise. Noise generated on both the weekdays (from physical education classes and sports programs) and weekends (from use of the fields and stadiums) can elevate community noise levels.

4.11.2 THRESHOLDS OF SIGNIFICANCE

According to Appendix G, Environmental Checklist, of the CEQA Guidelines, the proposed Project would result in a significant noise impact if it would:

1. Expose persons to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.
2. Expose persons to or generate excessive ground-borne vibration or ground-borne noise levels.
3. Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.
4. Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.
5. For projects within an area covered by an airport land use plan or within 2 miles of a public airport or public use airport when such an airport land use plan has not been adopted, or within the vicinity of a private airstrip, expose people residing or working in the project area to excessive aircraft noise levels.
6. For a project within the vicinity of a private airstrip, expose people residing or working in the project area to excessive noise levels.
7. Cumulative noise impact threshold

4.11.2.1 THRESHOLDS NOT DISCUSSED FURTHER

With regard to CEQA Guidelines Thresholds 5 and 6, as discussed in Section 4.10.1.3, Existing Conditions, above, no portion of Morgan Hill is within an airport land use plan for any of the airports located near the

City boundary. No portion of Morgan Hill is not within any airport's influence area or 55 dBA CNEL noise contour. All nearby airports are located more than 1.4 miles away from the City boundary.⁶ There are no private airstrips located within Morgan Hill. The nearest heliport is located almost 5 miles from the Morgan Hill City boundary, at the St. Louise Regional Hospital in Gilroy.⁷ Due to limited and sporadic heliport use for medical emergencies, and the significant distance to the nearest portions of Morgan Hill, there would be no impact related to excessive noise levels from private airstrips or heliports. Therefore, no further discussion of noise-related impacts from aviation facilities is warranted in this Draft EIR.

4.11.3 IMPACT DISCUSSION

This section analyzes the proposed Project's potential impacts and cumulative impacts to noise.

NOISE-1	Implementation of the proposed Project would not result in the exposure of persons to or generation of noise levels in excess of standards established in the local General Plan or noise ordinance, or applicable standards of other agencies.

General Plan

Standards for noise generation and exposure in the City of Morgan Hill are determined primarily through: the Land Use Noise Compatibility Guidelines (which are part of the proposed General Plan); Title 18 of the Morgan Hill Municipal Code;⁸ and the interior noise standards set by the Title 24 of the state Building Code. In addition to the guidelines for land use noise compatibility, the City of Morgan Hill has adopted noise reception limits for particular uses (Municipal Code Section 18.48.075).

Three individual criteria, based on these standards and regulations, are analyzed in greater detail below.

California Building Code Standards (Title 24)

Development of new residential or other noise-sensitive land uses would conflict with the CBC (Title 24) if new uses would experience an indoor L_{dn} exceeding 45 dBA.

The proposed General Plan would allow infill development along or near Highway 101 and/or major roadways, which are significant noise sources, as discussed below under Impact NOISE-3. Vacant and underutilized sites where development would be most likely to occur under the proposed General Plan vary in size and include a diversity of noise environments (from both adjacent land uses and roadways). For this

⁶ AirNav.com, 2015.

⁷ AirNav.com, 2015.

⁸ Sections within Title 18, Zoning, are the only sections within the Municipal Code that present quantitative noise standards. Chapter 8.28, Noise, only discusses standards qualitatively.

NOISE

reason, it is not feasible to discuss site-level noise impacts in these special areas in the absence of information about specific proposed development projects.

Multiple components of the proposed Project would serve to prevent new residential dwellings, hotels, motels, dormitories, and school classrooms from experiencing interior noise levels in excess of 45 dBA L_{dn} . Prevention of excessive interior noise levels would be achieved both through adherence to the Land Use Noise Compatibility Guidelines in the proposed General Plan, shown in Table 4.11-5, above, which identifies normally acceptable, conditionally acceptable, normally unacceptable, and clearly unacceptable noise levels for various land uses. In addition, as individual projects are proposed under the proposed Project, project applicants would be required, as necessary, to perform site-level acoustic analysis to demonstrate compliance with these standards. The performance of acoustical analysis in noisy areas would help determine what, if any, noise attenuating features are necessary to achieve the 45 dBA L_{dn} interior noise standard.

The following proposed General Plan policies would also provide guidelines for noise compatibility levels:

- Policy SSI-8.1 **Exterior Noise Level Standards.** Require new development projects to be designed and constructed to meet acceptable exterior noise level standards (see Table SSI-1), as follows:
- Apply a maximum exterior noise level of 60 dBA L_{dn} in residential areas where outdoor use is a major consideration (e.g., backyards in single-family housing developments and recreation areas in multi-family housing projects). Where the City determines that providing an L_{dn} of 60 dBA or lower cannot be achieved after the application of reasonable and feasible mitigation, an L_{dn} of 65 dBA may be permitted.
 - Indoor noise levels should not exceed an L_{dn} of 45 dBA in new residential housing units.
 - Noise levels in new residential development exposed to an exterior L_{dn} 60 dBA or greater should be limited to a maximum instantaneous noise level (e.g., trucks on busy streets, train warning whistles) in bedrooms of 50 dBA. Maximum instantaneous noise levels in all other habitable rooms should not exceed 55 dBA. The maximum outdoor noise level for new residences near the railroad shall be 70 dBA L_{dn} , recognizing that train noise is characterized by relatively few loud events.
- Policy SSI-8.4 **Office Noise Level Standards.** Interior noise levels in office buildings should be maintained at 45 dBA L_{eq} (hourly average) or less, rather than 45 dBA L_{dn} (daily average).

All the proposed General Plan policies regarding noise-sensitive development are consistent with the California Building Code. Additionally Chapter 8.28, Noise, and Section 18.48.075 of the Morgan Hill Municipal Code contain multiple provisions to limit the generation and reception of excessive noise. Such provisions include, but are not limited to, restrictions on construction activity, limitations on noise generation at property lines, and performance standards for the permitting of commercial and industrial uses.

Under the proposed Project, in areas where noise levels exceed those that are normally acceptable for a particular land use, development projects would continue to be required to demonstrate, through acoustical studies, as necessary, that interior noise environments would comply with the 45 dBA L_{dn} state standard.

Together, these policies and regulations would serve to ensure that land use and development decisions consider and seek to prevent potential noise impacts. Through implementation of these existing or new policies and requirements as part of the proposed Project, the City would ensure compliance with local and state standards for interior noise, and the impact would be *less than significant*.

Land Use Noise Compatibility Guidelines

Development of any land use in an area that is characterized by an exterior L_{dn} which indicates that the establishment of that land use in the area would be “clearly unacceptable,” pursuant to the Land Use Noise Compatibility Guidelines continued under the proposed Project.

Through adherence to the Land Use Noise Compatibility Guidelines, the City would prohibit the development of particular land uses in areas where the ambient noise level would indicate those land uses would be clearly unacceptable. Policy SSI-8.1, listed above, would ensure that City land use decisions adhere to the established compatibility guidelines. Through continued implementation of these requirements as part of the proposed Project, the City would ensure compliance with local and state standards for land use compatibility, and the impact would be *less than significant*.

Zoning Code Standards

Development of a new land use that would result in adjacent properties experiencing short- or long-term ambient noise levels that exceed those regarded as compatible, or which exceed levels permitted under noise-related sections of Title 18⁹ of the Morgan Hill Municipal Code.

Under the proposed Project, the following policies of the proposed General Plan and provisions of the Morgan Hill Municipal Code would ensure that new land uses do not contribute to excessive noise at existing sensitive receptors.

Policy SSI-8.2	Impact Evaluation. The impact of a proposed development project on existing land uses should be evaluated in terms of the potential for adverse community response based on significant increase in existing noise levels, regardless of compatibility guidelines.
Policy SSI-8.5	Traffic Noise Level Standards. Consider noise level increases resulting from traffic associated with new projects significant if: a) the noise level increase is 5 dBA Ldn or greater, with a future noise level of less than 60 dBA Ldn, or b) the noise level increase is 3 dBA Ldn or greater, with a future noise level of 60 dBA Ldn or greater.
Policy SSI-8.6	Stationary Noise Level Standards. Consider noise levels produced by stationary noise sources associated with new projects significant if they substantially exceed existing ambient noise levels.
Policy HC-1.10	Community Issues. Coordinate actions with the school districts and other community and social agencies to mobilize additional resources to deal with issues that impact the role of schools, such as drugs, job training, and teenage pregnancy, so that these are adequately dealt with during periods of rapid growth or change.

⁹ Sections within Title 18, Zoning, are the only sections within the Municipal Code that present quantitative noise standards. Chapter 8.28, Noise, only discusses standards qualitatively.

NOISE

The policies listed above, would be implemented and enforced during the development review process. Additionally, the maintenance and continued enforcement of the Morgan Hill Municipal Code, including the Noise Ordinance and Zoning Code, would work in tandem with and reinforce the current or amended policies within the General Plan, and any impact arising from violation of applicable local standards would therefore be *less than significant*.

Although individual development project allowed under the proposed General Plan may be affected in different ways or to different degrees by noise from major arterials and/or freeways, project-level analysis, at a minimum, would need to examine portions of individual housing sites nearest to major transportation corridors to measure current, 24-hour ambient noise levels and determine appropriate site design and/or construction techniques for noise attenuation. It is likely that some new development would require special noise-insulating features or construction techniques. Therefore, for individual sites, additional project-level acoustical analysis would be necessary to demonstrate consistency with applicable land use compatibility requirements and interior noise standards.

In conclusion, new development would avoid significant impacts by conforming with requirements for acoustic analysis under the proposed General Plan, including the Land Use Compatibility Guidelines for Community Noise Environments, as well as by achieving subsequent compliance with interior and exterior noise standards through application of any necessary special construction or noise insulation techniques. Through adherence to the requirements, policies, and strategies in the proposed General Plan and in the current Morgan Hill Municipal Code, the City of Morgan Hill would prevent the development of land uses in areas with inappropriately high ambient noise levels; would ensure that any development of noise-sensitive land uses include the study and adequate mitigation of noise impacts; and would prevent activities or new uses that generate excessive levels of noise at sensitive receptors. The City would ensure such compliance through the development review process, whereby individual developments would be required to demonstrate that they would neither develop an incompatible land use in an area of excessive noise (without adequate mitigation), nor develop a land use that would cause sensitive receptors to experience excessive noise. Altogether, this would ensure adherence to relevant noise exposure and generation standards, and would prevent noise-sensitive land uses from being exposed to noise exceeding the prescribed standards. Therefore, the impact under this criterion would be *less than significant*.

Residential Development Control System

The Residential Development Control System, known as the RDCS, regulates population growth through the provision of residential building allotments. The RDCS and the proposed updates to the RDCS as part of the proposed Project affect the pace of development in the City but do not determine the location, type, or intensity of development. Therefore, the proposed RDCS would not have an adverse effect on noise or vibration requirements and, as a result, the proposed RDCS would have a *less than significant* impact

Applicable Regulations:

- California Code of Regulations, Title 24, Building Standards
- California Code of Regulations, Title 21, Subchapter 6, Airport Noise Standards
- Morgan Hill Municipal Code:
 - Title 8: Health and Safety, Chapter 8.28: Noise
 - Title 18: Zoning Ordinance

Significance Before Mitigation: Less than significant.

NOISE-2	Implementation of the proposed Project would not expose persons to or generate excessive ground-borne vibration or ground-borne noise levels.

CEQA does not specify quantitative thresholds for what is considered “excessive” vibration or groundborne noise, nor does the City of Morgan Hill establish such thresholds. The City of Morgan Hill Municipal Code does specify that “No vibration shall be permitted which is discernible without instruments at the lot line of the establishment or use” (Section 18.48.135), but the Code does not set a specific numeric threshold. Since perception of vibrations varies between individuals, it is necessary to establish a quantitative threshold that reflects levels of vibration typically capable of causing perception, annoyance, or damage. Therefore, based on criteria from the Federal Transit Administration (FTA), which are regarded as standard practice, a significant impact would occur if:

- Implementation of the Project would result in ongoing exceedance of the criteria for annoyance presented in Table 4.11-6.
- Implementation of the Plan would result in vibration exceeding the criteria presented in Table 4.11-6 that could cause buildings architectural damage.

The following discusses potential vibration impacts generated by short-term construction and long-term operations that may occur under implementation of the proposed Project.

General Plan

Short-Term Construction-Related Vibration Impacts

The effect on buildings in the vicinity of a construction site varies depending on soil type, ground strata, and receptor-building construction. The results from vibration can range from no perceptible effects at the lowest vibration levels, to low rumbling sounds and perceptible vibrations at moderate levels, to slight structural damage at the highest levels. Vibration from construction activities rarely reaches the levels that can damage structures, but groundborne vibration and groundborne noise can reach perceptible and audible levels in buildings that are close to the construction site. Table 4.11-6 lists vibration levels for construction equipment.

NOISE

TABLE 4.11-6 GROUNDBORNE VIBRATION LEVELS FOR CONSTRUCTION EQUIPMENT

Equipment	Approximate Velocity Level at 25 Feet (VdB)	Approximate RMS ^a Velocity at 25 Feet (inch/sec)
Pile Driver (Impact) Upper Range	112	1.518
Pile Driver (Impact) Lower Range	104	0.644
Pile Driver (Sonic) Upper Range	105	0.734
Pile Driver (Sonic) Lower Range	93	0.170
Large Bulldozer	87	0.089
Caisson Drilling	87	0.089
Jackhammer	79	0.035
Small Bulldozer	58	0.003
Loaded Trucks	86	0.076
FTA Criteria – Human Annoyance (Daytime)	78 to 90 ^b	—
FTA Criteria – Structural Damage	—	0.2 to 0.5 ^c

a. RMS velocity calculated from vibration level (VdB) using the reference of 1 micro-inch/second.

b. Depending on affected land use. For residential 78 VdB, for offices 84 VdB, workshops 90 VdB.

c. Depending on affected building structure, for timber and masonry buildings 0.2 in/sec, for reinforced-concrete, steel, or timber 0.5 in/sec.

Source: Federal Transit Administration, Transit Noise, and Vibration Impact Assessment, 2006.

As shown in Table 4.11-6, vibration generated by construction equipment has the potential to be substantial. Significant vibration impacts may occur from construction activities associated with new development under the proposed Project. The proposed General Plan would allow an increase in development intensity in certain areas, including on vacant or underutilized sites adjacent to existing homes and businesses.

Construction would be localized and would occur intermittently for varying periods of time. Without specific development details, it is not possible to quantify potential construction vibration impacts. Grading and demolition activity typically generate the highest vibration levels during construction. Except for pile driving, maximum vibration levels measured at a distance of 25 feet from an individual piece of typical construction equipment do not exceed the thresholds for human annoyance for industrial uses, nor the thresholds for architectural damage, as defined in Table 4.11-3.

Methods to reduce vibration during construction would include the use of smaller equipment, use of well-maintained equipment, use of static rollers instead of vibratory rollers, and drilling of piles as opposed to pile driving. Methods to reduce human impacts of vibration from construction include limitations on construction hours and/or guidelines for the positioning of vibration-generating construction equipment.

Overall, vibration impacts related to construction would be short-term, temporary, and generally restricted to the areas in the immediate vicinity of active construction equipment. Construction would be localized and would occur intermittently for varying periods of time. Because specific, project-level information is not available at this time, it is not possible to quantify the construction vibration impacts at specific sensitive receptors.

The following policy, along with policies SSI-8.2 and SSI-8.6 listed above, would serve to reduce vibration impacts from construction:

Policy SSI-9.5 **Noise Studies for Private Development.** In order to prevent significant noise impacts on neighborhood residents which are related to roadway extensions or construction of new roadways, require completion of a detailed noise study during project-level design to quantify noise levels generated by projects such as the Murphy Avenue extension to Mission View Drive and the Walnut Grove Extension to Diana Avenue. The study limits should include noise sensitive land uses adjacent to the project alignment as well as those along existing segments that would be connected to new segments. A significant impact would be identified where traffic noise levels would exceed the “normally acceptable” noise level standard for residential land uses and/or where ambient noise levels would be substantially increased with the project. Project specific mitigation measures could include, but not be limited to, considering the location of the planned roadway alignment relative to existing receivers in the vicinity, evaluating the use of noise barriers to attenuate project-generated traffic noise, and/or evaluating the use of “quiet pavement” to minimize traffic noise levels at the source. Mitigation should be designed to reduce noise levels into compliance with “normally acceptable” levels for residential noise and land use compatibility.

These policies would thereby serve to ensure that construction activities do not result in sustained levels of vibration that could result in architectural damage or ongoing annoyance. Therefore, implementation of the proposed Project would not result in levels of construction-related groundborne noise or vibration that would exceed the thresholds for annoyance or architectural damage, and the impact would therefore be *less than significant*.

Long-Term Vibration Impacts

Development under the proposed Project could result in long-term, operations-related vibration impacts to sensitive receptors if sensitive land uses such as residential, educational facilities, hospitals, or places of worship were to be located in close proximity to industrial land uses that could have equipment with the potential to generate significant vibration levels. There are some locations within the Project Area where designations allowing residential or other sensitive land uses are adjacent to designations that would allow industrial operations under the proposed General Plan land use map.

Despite the potential for vibration impacts from the juxtaposition of sensitive land uses and land uses with the potential to generate vibration, appropriate setbacks, buffers, use restrictions, and/or other measures can largely eliminate these impacts. As discussed above, vibration impacts are highly dependent on a variety of localized factors, including geology, soil conditions, and building construction techniques. However, in most cases, vibration attenuates relatively rapidly with distance, making setbacks and buffering particularly effective approaches to avoid vibration impacts. Moreover, high levels of vibration are usually associated with heavy industrial uses. The industrial uses of the sort that currently exist and would continue to be permitted

NOISE

in Morgan Hill under the proposed Project are very rarely associated with vibration that is sufficiently intense or sustained so as to cause either human discomfort or architectural/structural damage.

Although there are no state or federal regulations to limit perception of vibration by sensitive receptors, the proposed Project would continue Municipal Code provisions that would employ the previously mentioned strategies to prevent vibration impacts. The proposed policies of the Safety Services Infrastructure Element offer generalized direction for the City to consider noise and vibration impacts during development decisions and to provide specific policies in respect to these considerations.

More specifically, Section 18.48.135 of the Municipal Code contains general restrictions regarding the generation of vibration that is perceptible without instruments at the lot line of the receiving property.¹⁰ By ensuring general land use compatibility and by requiring, where necessary, approaches to reduce the generation or transmission of vibration, these policies and ordinances would serve to ensure sufficient attenuation of vibration to preclude impacts at sensitive receptors.

Together, these policies and actions would ensure that construction of development projects allowed under the proposed Project would not result in perception of excessive noise and vibration by sensitive receptors in new developments. These policies and actions would also serve to ensure that new uses developed under the proposed Project would not result in the perception of excessive vibration by individuals living or working in areas of existing sensitive land uses. Through consideration of land use compatibility, project-level review, and requirements for mitigation of noise and vibration, the amended policies of the General Plan would prevent or reduce exposure to long-term, operations-related vibration. Therefore, implementation of the proposed Project would not result in levels of long-term operation-related groundborne noise or vibration that would exceed the thresholds for annoyance or architectural damage, and the impact would therefore be *less than significant*.

Residential Development Control System

The Residential Development Control System, known as the RDCS, regulates population growth through the provision of residential building allotments. The RDCS and the proposed updates to the RDCS as part of the proposed Project affect the pace of development in the City but do not determine the location, type, or intensity of development. Therefore, the proposed RDCS would not expose persons to or generate excessive ground-borne vibration or ground-borne noise levels and, as a result, the proposed RDCS would have a *less than significant* impact.

Applicable Regulations:

- California Code of Regulations, Title 24, Building Standards
- Morgan Hill Municipal Code:
 - Title 8: Health and Safety, Chapter 8.28: Noise
 - Title 18: Zoning Ordinance

¹⁰ As specified in Municipal Code Section 18.48.010.

Significance Before Mitigation: Less than significant.

NOISE-3	Implementation of the proposed Project would result in a substantial permanent increase in ambient noise levels in the Project vicinity above levels existing without the Project.

General Plan

Implementation of the proposed Project would have a significant impact if it results in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the Project. The City of Morgan Hill has not adopted a specific, quantitative threshold for what constitutes a significant permanent increase in ambient noise levels. The smallest increase in loudness perceptible by the human ear is 3 dBA and increases of 5 dBA or greater are easily noticed.¹¹ However, the implementation of the proposed Project and changes in the ambient noise environment will occur over a period of more than 20 years. Therefore, in the absence of quantitative ambient noise level increase thresholds adopted by the City, a substantial increase in ambient noise levels would be defined as either: a 5 dBA increase, if after the increase the ambient noise level remains in the range of what would be “normally acceptable” at the land use where the noise is being received; or a 3 dBA increase, if after the increase the ambient noise level exceeds the range of what would be “normally acceptable” at the land use where the noise is being received.

Long-Term Operational Noise

A portion of the substantial permanent increases to ambient noise levels that could result from implementation of the proposed Project would be attributable to ongoing operations on land uses developed under the plan. Residential, open space, and most passive recreational land uses (i.e., trails, rest areas, picnic areas) are generally not associated with substantial permanent increases in ambient noise. In the case of these land uses, very specific sources of noise, such as lawn equipment or social gatherings, would be the most likely source of excessive noise. Addressing impacts from these noise sources would be handled via the pertinent sections of Morgan Hill’s Municipal Code. Noise sources associated with residential, open space, and passive recreational land uses are generally not sufficiently frequent or sustained so as to result in permanent substantial increases to ambient noise levels. Instead, substantial permanent increases in ambient noise levels would be most likely to result from development of commercial, industrial, mixed-use, and certain institutional or active recreational land uses (i.e., ball fields, skate parks, dog parks).

The noise-related portions of the aforementioned General Plan Element contain multiple policies that would serve to prevent or mitigate substantial permanent increase to ambient noise levels from long-term operations. All of the proposed General Plan policies discussed under Impact Noise-1 and Impact Noise-2 would likewise serve to prevent substantial permanent increases to ambient noise levels. Key provisions of these previously discussed policies include, among others: limits on hours of operation, transitional land

¹¹ Bies, David and Hansen, Colin, 2009, *Engineering Noise Control: Theory and Practice, Fourth Edition*, New York: Spoon Press.

NOISE

uses and/or open space buffers, soundwalls, berms, and – in particular – project level review to ensure compliance with indoor/outdoor noise standards for sensitive uses. Together, these policies would serve to ensure that the development of new land uses under the proposed Project would not result in substantial permanent increases in the ambient noise level in the project vicinity, and the impact in this regard would be *less than significant*.

Transportation-Related Noise

As a result of implementation of the proposed Project and ongoing regional growth, it is anticipated that there would be substantial permanent increases to the ambient noise levels throughout Morgan Hill, and that these increases would primarily result from increases to transportation-related noise, especially that of automobile traffic. Because Morgan Hill has only one railway with limited service, does not host any airports or heliports, and is not located within the 55 dBA CNEL contour of any airports or heliports, increases in ambient noise levels from rail and air traffic are not anticipated. Nevertheless, increases to ambient noise from car traffic would result in substantial permanent increase in ambient noise levels.

Development of land uses under implementation of the proposed Project, as well as development in adjacent communities, would result in increases in traffic that would cause substantial permanent increases in ambient noise levels in the project vicinity. Table 4.11-7 shows major roadway segments in Morgan Hill with estimated increases in the ambient noise level at a distance of 50 feet from the roadway centerline. Segments in **bold** type are above the applicable impact thresholds.

Table 4.11-8 shows Highway 101 segments in Morgan Hill with estimated increases in the ambient noise level at a distance of 100 feet from the roadway centerline.

The ambient noise level increases shown in Tables 4.11-7 and 4.11-8 and the future 2035 Noise Contours in Figure 4.11-3 demonstrate that there would be multiple major road segments that would experience substantial permanent increases in ambient noise levels, including at sensitive land uses.

As discussed above, Safety Services Infrastructure Element (SSIE) of the proposed General Plan establishes definitions for what constitutes substantial permanent increase in ambient noise levels. Specifically, SSIE Policy SSI-8.5 states, “Noise level increases resulting from traffic associated with new projects shall be considered significant if: a) the noise level increase is 5 dBA L_{dn} or greater, with a future noise level of less than 60 dBA L_{dn} , or b) the noise level increase is 3 dBA L_{dn} or greater, with a future noise level of 60 dBA L_{dn} or greater.” Policies SSI-9.1 and TR-2.2 are intended to prevent traffic noise from reaching levels incompatible with surrounding land uses, while Policies SSI-9.2 and SSI-9.3 discuss appropriate use of sound walls for traffic noise mitigation. Altogether, these policies would serve to reduce noise from vehicles at the source and to otherwise shield sensitive uses from excessive noise.

Although these policies could, in certain cases, reduce or prevent significant increases in ambient noise at sensitive land uses under implementation of the proposed Project, the measures described in these policies would not be universally feasible, and some of the most effective noise-attenuation measures, including

NOISE**TABLE 4.11-7 INCREASES TO AMBIENT NOISE LEVELS ALONG MAJOR ROADWAY SEGMENTS – PROPOSED PROJECT**

Roadway	Segment	Ambient Noise Level at 50 feet from Roadway Centerline CNEL dBA		
		Existing Conditions	2035 Conditions	Increase (dBA)
Monterey Road	between Tilton Avenue and Burnett Avenue	73.3	75.1	1.8
	between Burnett Avenue and Madrone Parkway	72.4	74.1	1.7
	between Madrone Parkway and Cochrane Road	72.3	73.8	1.5
	between Cochrane Road and Llagas Road	66.5	68.7	2.2
	between Llagas Road and Wright Avenue	66.2	68.1	1.9
	between Wright Avenue and Main Avenue	63.7	67.0	3.3
	between Main Avenue and Dunne Avenue	62.8	63.4	0.6
	between Dunne Avenue and San Pedro Avenue	69.7	70.6	0.9
	between San Pedro Avenue and Barrett Avenue	69.6	70.4	0.8
	between Barrett Avenue and Tennant Avenue	69.6	70.4	0.8
	between Tennant Avenue and Vineyard Boulevard	68.6	69.5	0.9
	between Vineyard Boulevard and Watsonville Road	72.4	73.2	0.8
	between Watsonville Road and John Wilson Way	74.0	75.1	1.1
	between John Wilson Way and Middle Avenue	73.7	74.8	1.1
	between Middle Avenue and Atherton Way	73.1	74.2	1.1
Hale Avenue	between Tilton Avenue and Old Monterey Road	67.2	68.6	1.4
	between Old Monterey Road and Llagas Road	67.0	68.3	1.3
	between Llagas Road and Wright Avenue	66.0	68.2	2.2
	between Wright Avenue and Main Avenue	65.1	66.2	1.1
Peak Avenue	between Dunne Avenue and Main Avenue	60.1	59.5	-0.6
Butterfield Boulevard	between Cochrane Road and Sutter Boulevard	70.9	72.1	1.2
	between Sutter Boulevard and Main Avenue	72.4	72.7	0.3
	between Main Avenue and Dunne Avenue	72.3	73.2	0.9
	between Dunne Avenue and San Pedro Avenue	70.8	72.1	1.3
	between San Pedro Avenue and Barrett Avenue	70.0	71.6	1.6
	between Barrett Avenue and Tennant Avenue	70.1	71.5	1.4
Sutter Boulevard	between Cochrane Road and Butterfield Boulevard	62.6	64.0	1.4
Vineyard Boulevard	between Mast Street and Tennant Avenue	55.9	58.4	2.5

NOISE

TABLE 4.11-7 INCREASES TO AMBIENT NOISE LEVELS ALONG MAJOR ROADWAY SEGMENTS – PROPOSED PROJECT

Roadway	Segment	Ambient Noise Level at 50 feet from Roadway Centerline CNEL dBA		
		Existing Conditions	2035 Conditions	Increase (dBA)
Dewitt Avenue	between Dunne Avenue and Spring Avenue	60.4	50.3	-10.1
	between Spring Avenue and Edmundson Avenue	62.8	65.8	3.0
Sunnyside Avenue	between Edmundson Ave. and Watsonville Road	62.9	65.2	2.3
Santa Teresa Boulevard	between Watsonville Road and California Avenue	65.3	66.2	0.9
Mission View Drive	between Cochrane Road and Half Road	62.7	68.2	5.5
Peet Road	between Cochrane Road and Half Road	46.1	56.6	10.5
Cochrane Road	between Malaguerra Avenue and Coyote Road	62.0	62.3	0.3
	between Coyote Road and Half Road	57.6	58.1	0.5
	between Half Road and Main Avenue	57.5	58.2	0.7
Condit Road	between Half Road and Main Avenue	62.0	60.0	-2.0
	between Main Avenue and Diana Avenue	64.8	64.9	0.1
	between Diana Avenue and Dunne Avenue	65.7	65.4	-0.3
	between Dunne Avenue and San Pedro Avenue	61.9	63.1	1.2
	between San Pedro Avenue and Barrett Avenue	61.6	62.8	1.2
	between Barrett Avenue and Tennant Avenue	61.6	62.9	1.3
Murphy Avenue	between Diana Avenue and Dunne Avenue	52.2	65.7	13.5
	between Dunne Avenue and San Pedro Avenue	61.5	65.9	4.4
	between San Pedro Avenue and Barrett Avenue	61.3	65.8	4.5
	between Barrett Avenue and Tennant Avenue	61.1	65.6	4.5
	between Tennant Avenue and Fisher Avenue	59.2	66.7	7.5
	between Fisher Avenue and Maple Avenue	61.9	63.1	1.2
Hill Road	between Main Avenue and Diana Avenue	57.4	58.1	0.7
	between Diana Avenue and Dunne Avenue	56.7	57.3	0.6
	between Dunne Avenue and San Pedro Avenue	59.6	62.2	2.6
	between San Pedro Avenue and Barrett Avenue	59.3	62.4	3.1
	between Barrett Avenue and Tennant Avenue	60.4	63.0	2.6
	between Tennant Avenue and Fisher Avenue	59.6	59.9	0.3
	between Fisher Avenue and Maple Avenue	59.4	59.6	0.2

NOISE**TABLE 4.11-7 INCREASES TO AMBIENT NOISE LEVELS ALONG MAJOR ROADWAY SEGMENTS – PROPOSED PROJECT**

Roadway	Segment	Ambient Noise Level at 50 feet from Roadway Centerline CNEL dBA		
		Existing Conditions	2035 Conditions	Increase (dBA)
Foothill Avenue	between Tennant Avenue and Maple Avenue	59.0	59.7	0.7
	between Maple Avenue and Middle Avenue	58.5	59.5	1.0
Columbet Avenue	between Maple Avenue and Middle Avenue	51.9	53.3	1.4
Center Avenue	between Maple Avenue and Middle Avenue	59.8	60.9	1.1
Tilton Avenue	between Hale Avenue and Dougherty Avenue	62.2	56.5	-5.7
	between Dougherty Avenue and Monterey Road	63.7	59.5	-4.2
Burnett Avenue	between Monterey Road and Freeway Vista	60.0	61.4	1.4
Madrone Parkway	between Monterey Road and Lightpost Way	57.0	57.9	0.9
	between Lightpost Way and Cochrane Road	60.3	60.8	0.5
Cochrane Road	between Monterey Road and Butterfield Boulevard	72.1	72.6	0.5
	between Butterfield Blvd. and Sutter Boulevard	72.0	73.3	1.3
	between Sutter Boulevard and Madrone Parkway	74.0	75.4	1.4
	between Madrone Parkway and US 101	73.8	74.9	1.1
	between US 101 and Mission View Drive	69.3	70.0	0.7
	between Mission View Drive and Peet Road	65.9	67.3	1.4
	between Peet Road and Malaguerra Avenue	63.5	63.9	0.4
Llagas Road	between Oak Glen Avenue and Woodland Avenue	51.7	52.1	0.4
	between Hale Avenue and Old Monterey Road	58.5	52.6	-5.9
Half Road	between Condit Road and Mission View Drive	59.3	56.7	-2.6
	between Mission View Drive and Peet Road	45.7	47.2	1.5
Main Avenue	between Peak Avenue and Hale Avenue	61.8	59.0	-2.8
	between Hale Avenue and Monterey Road	65.0	62.5	-2.5
	between Monterey Road and Butterfield Boulevard	65.2	66.2	1.0
	between Butterfield Boulevard and Condit Road	64.5	65.9	1.4
	between Condit Road and Hill Road	60.8	64.2	3.4
	between Hill Road and Cochrane Road	56.4	57.3	0.9

NOISE

TABLE 4.11-7 INCREASES TO AMBIENT NOISE LEVELS ALONG MAJOR ROADWAY SEGMENTS – PROPOSED PROJECT

Roadway	Segment	Ambient Noise Level at 50 feet from Roadway Centerline CNEL dBA		
		Existing Conditions	2035 Conditions	Increase (dBA)
Dunne Avenue	between Dewitt Avenue and Peak Avenue	55.6	55.8	0.2
	between Peak Avenue and Del Monte Avenue	63.7	66.3	2.6
	between Del Monte Avenue and Monterey Road	64.4	66.6	2.2
	between Monterey Road and Depot Street	68.5	69.0	0.5
	between Depot Street and Butterfield Boulevard	68.9	69.2	0.3
	between Butterfield Blvd. and Walnut Grove Drive	71.4	71.8	0.4
	between Walnut Grove Drive and Condit Road	72.1	72.6	0.5
	between Condit Road and Murphy Avenue	70.9	71.8	0.9
	between Murphy Avenue and Hill Road	69.7	70.0	0.3
	between Hill Road and Saddleback Drive	66.9	67.0	0.1
	between Saddleback Drive and Gallop Drive	65.8	65.9	0.1
	between Gallop Drive and Flaming Oak Lane	65.1	65.3	0.2
	between Flaming Oak Lane and Jackson Oaks Drive	63.7	63.9	0.2
San Pedro Avenue	between Monterey Road and Church Street	57.7	59.0	1.3
	between Church Street and Butterfield Boulevard	58.4	59.4	1.0
	between Butterfield Boulevard and Nina Lane	55.8	56.6	0.8
Edmundson Avenue	between Oak Glen Avenue and Dewitt Avenue	64.7	65.6	0.9
	between Dewitt Avenue and Sunnyside Avenue	66.9	67.0	0.1
	between Sunnyside Avenue and Olympic Drive	64.5	66.5	2.0
	between Olympic Drive and Monterey Road	64.6	65.8	1.2
Tennant Avenue	between Monterey Road and Church Street	66.3	67.0	0.7
	between Church Street and Vineyard Boulevard	66.7	67.3	0.6
	between Vineyard Blvd. and Butterfield Boulevard	69.7	70.5	0.8
	between Butterfield Boulevard and US 101	74.0	75.8	1.8
	between US 101 and Condit Road	69.7	72.6	2.9
	between Condit Road and Murphy Avenue	66.6	71.1	4.5
	between Murphy Avenue and Hill Road	64.1	66.4	2.3

NOISE**TABLE 4.11-7 INCREASES TO AMBIENT NOISE LEVELS ALONG MAJOR ROADWAY SEGMENTS – PROPOSED PROJECT**

Roadway	Segment	Ambient Noise Level at 50 feet from Roadway Centerline CNEL dBA		
		Existing Conditions	2035 Conditions	Increase (dBA)
Tennant Ave. (cont'd)	between Hill Road and Foothill Avenue	59.4	60.8	1.4
	between Foothill Avenue and Carey Avenue	43.5	48.2	4.7
Watsonville Road	between Sunnyside Avenue and Olive Avenue	69.4	70.1	0.7
	between Olive Avenue and Monterey Road	70.4	71.5	1.1
Maple Avenue	between Murphy Avenue and Columbet Avenue	44.2	54.3	10.1
	between Columbet Avenue and Hill Road	51.8	56.3	4.5
	between Hill Road and Center Avenue	58.6	59.8	1.2
	between Center Avenue and Foothill Avenue	37.2	44.6	7.4
Middle Avenue	between Monterey Road and Murphy Avenue	60.2	60.8	0.6
	between Murphy Avenue and Sycamore Avenue	61.4	61.5	0.1
	between Sycamore Avenue and Columbet Avenue	58.1	57.9	-0.2
	between Columbet Avenue and Center Avenue	56.8	56.2	-0.6
	between Center Avenue and Foothill Avenue	52.7	52.2	-0.5

Bold numbers indicate increases in CNEL which would constitute substantial permanent increase in ambient noise level. Negative numbers indicate a decrease in ADT.

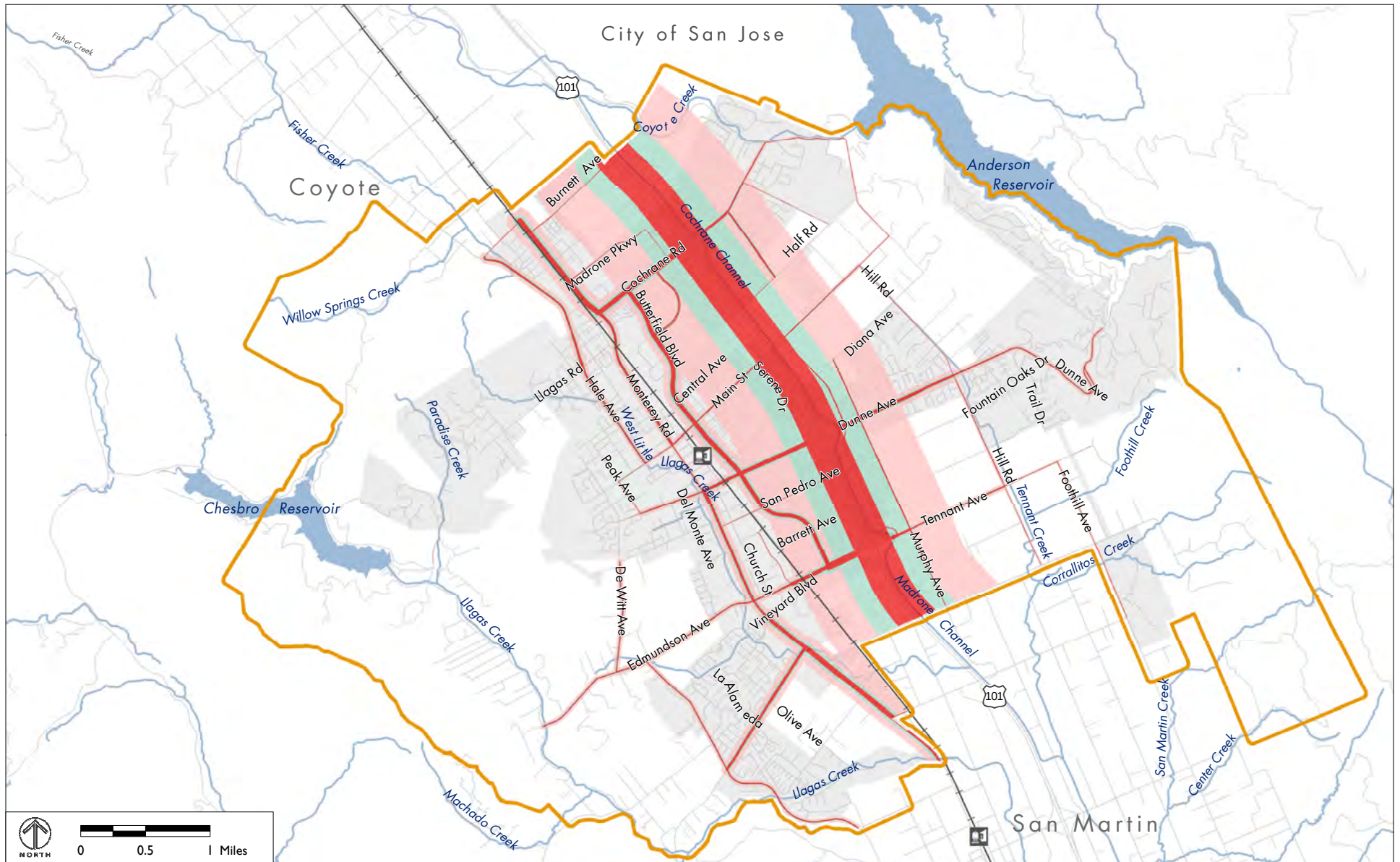
Source: Hexagon Transportation Consultants, Inc., 2015; PlaceWorks, 2015.

TABLE 4.11-8 INCREASES TO AMBIENT NOISE LEVELS ALONG HIGHWAY 101 SEGMENTS – PROPOSED PROJECT

Roadway	Segment	Ambient Noise Level at 100 feet from Roadway Centerline CNEL dBA		
		Existing Conditions	2035 Conditions	Increase (dBA)
US 101	between Burnett Avenue (Lane Drop) and Cochrane Road	82.2	83.1	0.9
	between Cochrane Road and East Dunne Avenue	82.1	83.0	0.9
	between East Dunne Avenue and Tennant Avenue	82.0	82.9	0.9
	between Tennant Avenue and San Martin Avenue	81.8	82.8	1.0

Note: **Bold** numbers indicate increases in CNEL which would constitute substantial permanent increase in ambient noise level. Negative numbers indicate a decrease in ADT.

Source: Hexagon Transportation Consultants, Inc., 2015; PlaceWorks, 2015.



Source: City of Morgan Hill and PlaceWorks, 2015.

Figure 4.11-3

Future 2035 Noise Contours

sound walls and berms, would be infeasible or inappropriate in a majority of locations where sensitive land uses already exist and/or would be discouraged by the proposed General Plan Policy CNF-8.14. Factors which would render these mitigations infeasible include but are not limited to cost, aesthetic considerations, and negative impacts to pedestrian and bicycle connectivity. Therefore, even after the application of relevant, feasible regulations and General Plan policies, the impact to ambient noise levels would remain *significant*.

Mitigation Measures

The following mitigation measures were considered but, as described below, were found to be infeasible.

Technological Advances for Noise-Generating Vehicles and Machinery

The implementation of improved technologies for the prevention or muffling of noise from transportation sources could theoretically prevent substantial increases to ambient noise levels; however, this approach would be infeasible as much of this implementation is beyond the jurisdiction of the City.

Beyond currently-accepted state and industry standards and best practices, developing and/or requiring novel technological improvements for noise-generating vehicles and machinery would not be affordable, scientifically plausible, or within the City's jurisdiction. Therefore, this potential mitigation measure is regarded as infeasible.

Universal Use of Noise-Attenuating Features

The universal use of noise attenuating features, such as rubberized asphalt, soundwalls, berms, and improved building sound-insulation, could prevent transmission of excessive noise to the outdoor and indoor areas of sensitive land uses and/or could prevent projected increases in ambient noise levels; however, this approach would be infeasible.

Rubberized asphalt reduces tire-pavement noise and, when new, achieves a reduction of approximately 4 dBA when compared to normal pavement surfaces.¹² However, the noise reduction properties degrade over time, and the noise reduction would not be sufficient to reduce noise impacts in many areas of Morgan Hill. In many cases, aesthetic concerns, costs, physical constraints, or other issues would prevent the universal implementation of adequate noise-attenuating features. Proposed General Plan Policy CNF-8.14 seeks to minimize soundwall construction. In addition to their expense, soundwalls often block views and are regarded as unsightly. Moreover, the construction of soundwalls can result in reduced pedestrian and vehicle connectivity, which would contravene other goals of the General Plan and have negative social, economic, and even environmental consequences. Although improved building construction and insulation beyond that which is required by the California Building Code and the current General Plan could further reduce indoor exposure to excessive noise, substantial outdoor increases to ambient noise levels would remain. Therefore, this potential mitigation measure is regarded as infeasible.

¹² Sacramento County, Department of Environmental Review and Assessment, 1999, *Report of the Status of Rubberized Asphalt Traffic Noise Reduction in Sacramento County*.

NOISE

For this noise impact, there is no feasible mitigation for preventing substantial increases in ambient noise levels, since all conceivable mitigations would be economically impractical, scientifically unachievable, outside the City's jurisdiction, and/or inconsistent with City planning goals and objectives. Impacts would remain significant and unavoidable because no feasible mitigation measures are available to mitigate noise impacts to a less than significant level, resulting in a *significant and unavoidable* impact.

Significance Before Mitigation: Significant and unavoidable.

Residential Development Control System

The Residential Development Control System, known as the RDCS, regulates population growth through the provision of residential building allotments. The RDCS and the proposed updates to the RDCS as part of the proposed Project affect the pace of development in the City but do not determine the location, type, or intensity of development. Therefore, the RDCS would not result in a substantial permanent increase in ambient noise levels in the Project Area above levels existing without the proposed RDCS and, as a result, the RDCS would have a *less than significant* impact

Applicable Regulations:

- California Code of Regulations, Title 24, Building Standards
- Morgan Hill Municipal Code:
 - Title 8: Health and Safety, Chapter 8.28: Noise
 - Title 18: Zoning Ordinance

NOISE-4	Implementation of the proposed Project would not result in a substantial temporary or periodic increase in ambient noise levels in the Project vicinity above levels existing without the Project.

General Plan

Implementation of the proposed General Plan would have a significant impact if it results in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the Project.

Noise from construction equipment and various construction-related activities is frequently a cause of temporary or periodic increases in ambient noise levels. Table 4.11-9, below, shows typical noise levels generated by commonly used construction equipment. Although the proposed policies of the General Plan and the provisions of the noise ordinance would serve to prevent or reduce noise generation from construction equipment, it is likely that in certain cases these and other available methods to reduce noise would be inadequate to prevent a significant impact.

NOISE**TABLE 4.11-9 CONSTRUCTION EQUIPMENT NOISE EMISSION LEVELS**

Construction Equipment	Typical Noise Level (dBA) at 50 Feet	Construction Equipment	Typical Noise Level (dBA) at 50 Feet
Air Compressor	81	Pile-Driver (Impact)	101
Backhoe	80	Pile-Driver (Sonic)	96
Ballast Equalizer	82	Pneumatic Tool	85
Ballast Tamper	83	Pump	76
Compactor	82	Rail Saw	90
Concrete Mixer	85	Rock Drill	98
Concrete Pump	71	Roller	74
Concrete Vibrator	76	Saw	76
Crane, Derrick	88	Scarifier	83
Crane, Mobile	83	Scraper	89
Dozer	85	Shovel	82
Generator	81	Spike Driver	77
Grader	85	Tie Cutter	84
Impact Wrench	85	Tie Handler	80
Jack Hammer	88	Tie Inserter	85
Loader	85	Truck	88
Paver	89		

Source: Federal Transit Administration, Transit Noise, and Vibration Impact Assessment, 2006.

By restricting hours of construction and directing the City to review project noise impacts as part of the planning and permitting processes, the amended policies of the General Plan would serve to reduce temporary or periodic increases to ambient noise.

Individual project review would further serve to reduce noise impacts arising from construction. Specifically, proposed Policies SSI-8.2, -8.6, and -9.5 listed above, within the Safety Services Infrastructure Element of the proposed General Plan would promote the use of best available technology by construction contractors to minimize excessive noise from construction equipment.

NOISE

Morgan Hill Municipal Code Section 8.20.040, Subsection D, serves to regulate noise from construction and related activities in Morgan Hill. The ordinance allows construction between the hours of 7:00 a.m. and 8:00 p.m., Monday through Friday, and between 9:00 a.m. and 6:00 p.m. on Saturday. Construction is prohibited on Sundays and federal holidays. Exceptions are made for projects “of urgent necessity in the interest of the public health and safety”, single residence construction, and public works projects. The Chief Building Official has the power to make further exceptions or to require barriers prohibiting access to the site.

Although it is possible that certain construction activities may in some cases, lead to substantial temporary or periodic increases to ambient noise levels, the policies and regulations included under the proposed Project and the Municipal Code would serve to reduce these impacts. With appropriate noise reduction and shielding measures, temporary or periodic increases to the ambient noise level could be substantially reduced. The impact would be *less than significant*.

Significance Before Mitigation: Less than significant.

Residential Development Control System

The Residential Development Control System, known as the RDCS, regulates population growth through the provision of residential building allotments. The RDCS and the proposed updates to the RDCS as part of the proposed Project affect the pace of development in the City but do not determine the location, type, or intensity of development. Therefore, the RDCS would not result in a substantial temporary or periodic increase in ambient noise levels in the Project Area above levels existing without the proposed RDCS and, as a result, the proposed RDCS would have a *less than significant* impact

Applicable Regulations:

- California Code of Regulations, Title 24, Building Standards
- Morgan Hill Municipal Code:
 - Chapter 8.20.040 D: Construction activities allowed during prescribed time periods.

4.11.4 CUMULATIVE IMPACTS

NOISE-5	Implementation of the proposed Project, in combination with past, present, and reasonably foreseeable projects, would result in significant cumulative impacts with respect to noise.

The analysis of the proposed Project, discussed above, addresses cumulative impacts with regard to noise, as well as groundborne noise and vibration. Although multiple simultaneous nearby noise sources may, in combination, result in higher overall noise levels, this effect is captured and accounted for by the ambient noise level metrics which form the basis of the Thresholds of Significance for noise analysis. Any measurement of sound or ambient noise, whether for the purpose of evaluating land use compatibility,

establishing compliance with exterior and interior noise standards, or determining point-source violations of a noise ordinance, necessarily will incorporate noise from all other nearby perceptible sources.

Additionally, although noise attenuation is influenced by a variety of topographical, meteorological, and other factors, noise levels decrease relatively rapidly with distance, and vibration impacts decrease even more rapidly. Therefore, site-level cumulative noise or vibration impacts across City boundaries occur only infrequently. The City of Morgan Hill shares a limited extent of its northern border with the City of San Jose, which makes cross-border cumulative noise and vibration impacts possible. Nevertheless, given the General Plan policies and Municipal Code requirements discussed above, and given the rural land uses surrounding the Project Area, it is unlikely that operations-related noise would, in combination with noise sources from adjacent cities, result in cumulative noise impacts. Additionally, because any noise measurements taken in conjunction with General Plan policies or Municipal Code requirements would necessarily account for noises received from outside the boundaries of the City of Morgan Hill, the ongoing implementation of these policies and regulations under the proposed project would serve to prevent site-based cumulative noise impacts.

Similarly, the noise contours and traffic-related noise levels developed for the proposed Project include and account for regional travel patterns as they affect traffic levels in Morgan Hill. Noise contours were based upon both existing and projected future traffic volumes that incorporate cumulative regional effects and trends. Existing noise contours were derived from traffic volumes based on counts of current traffic, and these traffic counts inherently include cumulative traffic, as generated by regional trips. With regard to future noise, projected noise contours were determined using projected 2035 traffic volumes; these data account for growth both within Morgan Hill under the proposed Project, as well as anticipated regional growth as contained within the VTA model on which the City's traffic model is based. The future noise modeling which served as the foundation for the overall Project analysis was therefore based on future, cumulative conditions.

Impacts NOISE-3 and NOISE-4 therefore encompass and address cumulative noise impacts from implementation of the proposed Project. As discussed under Impact NOISE-3, even after the application of pertinent policies and strategies of the proposed General Plan, as well as all mitigation measures considered but determined to be infeasible, these impacts would remain *significant and unavoidable*.

Significance With Mitigation: Significant and unavoidable.

4.11.5 SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION MEASURES

The following are significant project-specific or cumulative impacts regarding noise; both as a result of traffic flows in the Project Area.

NOISE

NOISE-3	Implementation of the proposed Project would result in a substantial permanent increase in ambient noise levels in the Project vicinity above levels existing without the Project.

For the reasons described above under discussion NOISE-3, mitigation measures related to minimizing or avoiding permanent increases to ambient noise levels were considered to be infeasible because they were determined to be either economically impractical, scientifically unachievable, outside the City's jurisdiction, and/or inconsistent with City planning goals and objectives. Therefore, impacts would remain *significant and unavoidable*.

Significance After Mitigation: Significant and Unavoidable.

NOISE-5	Implementation of the proposed Project, in combination with past, present, and reasonably foreseeable projects, would result in significant cumulative impacts with respect to noise.

As discussed above, implementation of the proposed Project could, in certain cases, reduce or prevent significant increases in ambient noise at sensitive land uses, the measures described in these policies would not be universally feasible, and some of the most effective noise-attenuation measures, including sound walls and berms, would be infeasible or inappropriate in a majority of locations where sensitive land uses already exist. Therefore, even after the application of relevant, feasible regulations and General Plan policies, the impact to ambient noise levels would remain *significant and unavoidable*.

Significance After Mitigation: Significant and Unavoidable.

4.11.6 FULL BUILDOUT

The full buildout anticipated under the proposed Project would include significantly more non-residential development than the 2035 horizon-year development projection analyzed in Section 4.3.3, Impact Discussion, in terms of both the amount and the extent of development. Therefore, the potential for impacts related to noise and vibration would increase. However, as discussed in Chapter 3, Project Description, it is extremely unlikely that full buildout would ever occur under the proposed Project. Therefore, an analysis of full buildout is not required by CEQA.

4.12 POPULATION AND HOUSING

This chapter describes the existing population and housing characteristics in the City of Morgan Hill and evaluates the potential environmental consequences from future development that could occur by adopting and implementing the proposed Project. A summary of the relevant regulatory setting and existing conditions is followed by a discussion of specific and cumulative impacts from future development permitted under the proposed Project.

4.12.1 ENVIRONMENTAL SETTING

4.12.1.1 REGULATORY FRAMEWORK

This section summarizes existing state and local laws and policies pertaining to population and housing in Morgan Hill. There are no federal regulations applicable population and housing in relation to the proposed Project.

State Regulations

California Housing Element Law

California Housing Element Law¹ includes provisions related to the requirements for housing elements of local government General Plans. Among these requirements, some of the necessary parts include an assessment of housing needs and an inventory of resources and constraints relevant to the meeting of these needs. Additionally, in order to assure that counties and cities recognize their responsibilities in contributing to the attainment of the state housing goals, this section of the Government Code calls for local jurisdictions to plan for, and allow the construction of, a share of the region's projected housing needs.

Regional Regulations

Association of Bay Area Governments Projections 2013

The Association of Bay Area Governments (ABAG) is the official comprehensive planning agency for the San Francisco Bay region, which is composed of the nine counties of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, and Sonoma, and contains 101 jurisdictions. ABAG along with the Metropolitan Transportation Commission (MTC) is responsible for taking the overall regional housing needs allocation provided by the state and preparing a formula for allocating that housing need by income level across its jurisdiction.² ABAG produces growth forecasts on four-year cycles so that other regional agencies, including MTC and the Bay Area Air Quality Management District (BAAQMD), can use the forecast to make project funding and regulatory decisions.

¹ Government Code Section 65580-65589.8.

² Association of Bay Area Governments, <http://www.abag.ca.gov/planning/housingneeds/> accessed on June 26, 2015.

POPULATION AND HOUSING

The ABAG projections are the basis for the regional Ozone Attainment Plan and Regional Transportation Plan (RTP), each of which are discussed in Chapters 4.3, Air Quality and 4.14, Transportation and Traffic, of this Draft EIR. The General Plans, zoning regulations, and growth management programs of local jurisdictions inform ABAG's projections. The projections are also developed to reflect the impact of "smart growth" policies and incentives that could be used to shift development patterns from historical trends toward a better jobs-housing balance, increased preservation of open space, and greater development and redevelopment in urban core and transit-accessible areas throughout their region.

Regional Housing Needs Allocation

Housing Element law requires local jurisdictions to plan for, and allow the construction of, a share of the region's projected housing needs. This share is called the Regional Housing Needs Allocation (RHNA). State law mandates that each jurisdiction provide sufficient land to accommodate a variety of housing opportunities for all economic segments of the community to meet or exceed the RHNA. As the regional planning agency, ABAG calculates the RHNA for individual jurisdictions within Santa Clara County, including Morgan Hill.

Plan Bay Area, Strategy for a Sustainable Region

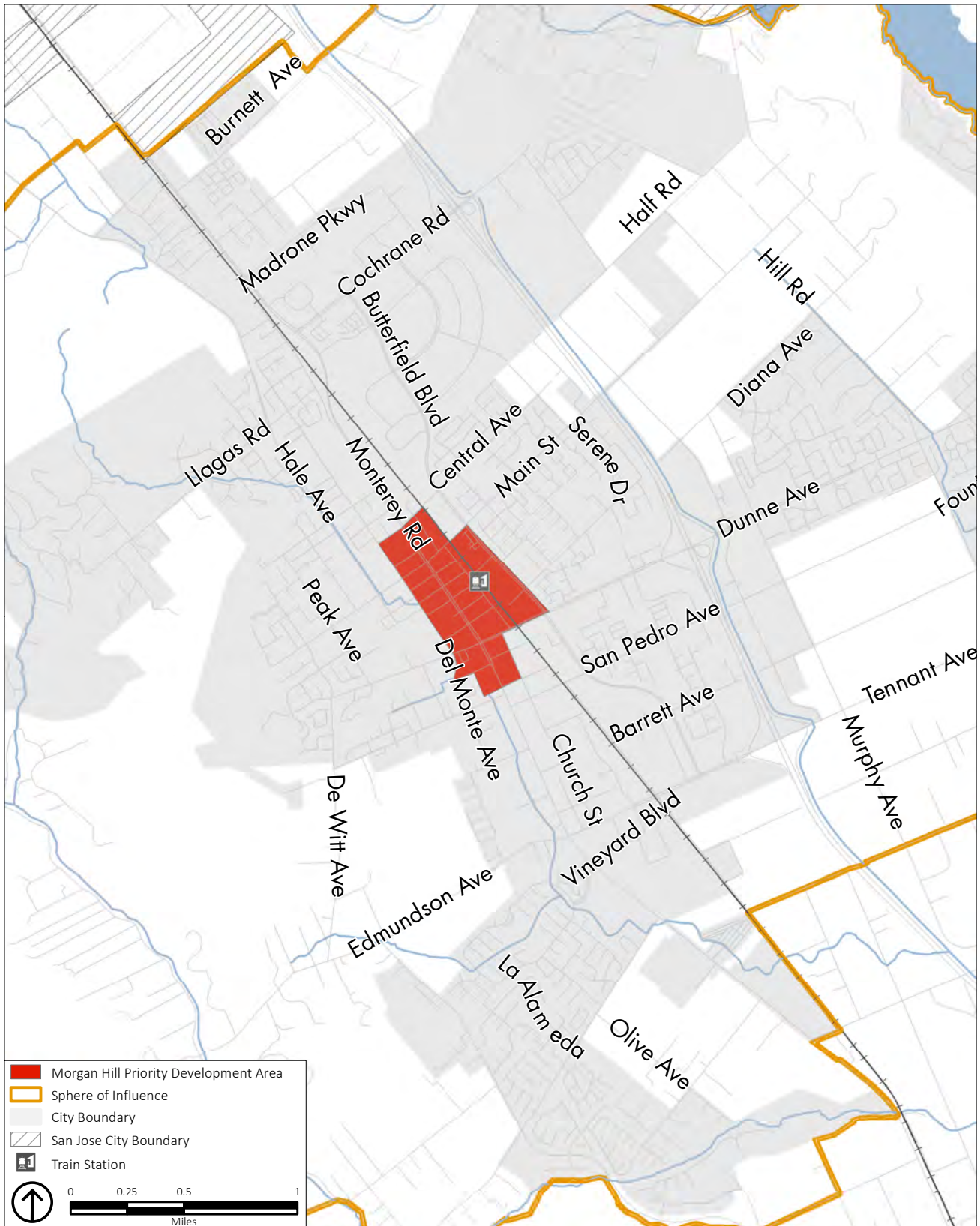
MTC and ABAG's Plan Bay Area is the Bay Area's Regional Transportation Plan (RTP)/ Sustainable Community Strategy (SCS). The Final Plan Bay Area was adopted on July 18, 2013.³ The SCS sets a development pattern for the region, which, when integrated with the transportation network and other transportation measures and policies, would reduce greenhouse gas (GHG) emissions from transportation (excluding goods movement) beyond the per capita reduction targets identified by California Air Resources Board (CARB). Implementation of the Plan Bay Area would achieve a 16 percent per capita reduction of GHG emissions by 2035 and a 10 percent per capita reduction by 2020 from 2005 conditions.⁴ In 2008, MTC and ABAG initiated a regional effort (FOCUS) to link local planned development with regional land use and transportation planning objectives. Through this initiative, local governments identified Priority Development Areas (PDAs). The PDAs form the implementing framework for Plan Bay Area. The PDAs are areas along transportation corridors, which are served by public transit that allow opportunities for development of transit-oriented, infill development within existing communities that are expected to host the majority of future development. Overall, well over two-thirds of all regional growth by 2040 is allocated within PDAs. The PDAs throughout the San Francisco Bay Area are expected to accommodate 80 percent (or over 525,570 units) of new housing and 66 percent (or 744,230) of new jobs.⁵ As shown on Figure 4.12-1, Morgan Hill's PDA is located in the Downtown.

³ It should be noted that the Bay Area Citizens filed a lawsuit on MTC's and ABAG's adoption of *Plan Bay Area*.

⁴ Metropolitan Transportation Commission (MTC) and Association of Bay Area Governments (ABAG), 2013, *Final Plan Bay Area, Strategy for a Sustainable Region*, page 96.

⁵ Metropolitan Transportation Commission (MTC) and Association of Bay Area Governments (ABAG), 2013, *Final Plan Bay Area, Strategy for a Sustainable Region*.

POPULATION AND HOUSING



Sources: City of Morgan Hill, 2013; USGS, 2010; NHD 2013; ESRI, 2010; Tiger Lines, 2010; ABAG, 2015; PlaceWorks, 2015.

Figure 4.12-1
Priority Development Area in Morgan Hill

POPULATION AND HOUSING

Local Regulations and Policies

Morgan Hill 2015-2023 Housing Element

The most recent Morgan Hill Housing Element was adopted on February 18, 2015, and HCD has certified that it meets state requirements. The 2015-2023 Housing Element includes a housing needs assessment that identifies current and projected housing needs, as well as policies to accommodate housing development that will be affordable to a range of household types and income ranges. The City's Policies related to population and housing in the City are listed in Table 4.12-1.

TABLE 4.12-1 HOUSING ELEMENT POLICIES RELEVANT TO POPULATION AND HOUSING

Policy Number	Policy Content
HE-1a	Ensure that an adequate amount of land is available for new residential development, zoned for a range of residential densities.
HE-1c	Encourage the allocation of the maximum possible number of housing units under RDCS allocations.
HE-1d	Encourage a variety of housing types and densities within the community.
HE-4a	Provide for a vibrant mix of residential and commercial development downtown.
HE-4e	Provide an adequate supply of land for multi-family housing located convenient to shopping, services, and transportation routes.
HE-4f	Maintain an adequate supply of land zoned for multi-family use to accommodate the City's ABAG assigned regional housing allocation for lower income households. This will be reviewed annually as part of the RDCS process.

4.12.1.2 EXISTING CONDITIONS

This section describes the existing population and housing conditions in the City of Morgan Hill, as well as Santa Clara County as a whole, to provide context for the analysis of the proposed Project in this EIR.

As of 2015, Morgan Hill had 41,779 residents and 13,868 housing units in the City limits.⁶ The most up to date jobs data available are from 2014 and show that there were estimated to be 17,947^{7,8} jobs within the City limit. The discussion below provides an overview of population, housing, and employment trends in Morgan Hill and the Bay Area region using the most recent data available, which is not always the 2014 EIR baseline year. Some numbers in the tables below include both the City and its SOI, depending on the source

⁶ State Department of Finance, E-5 Population and Housing Estimates for Cities, Counties, and the State, 2011 – 2015 with 2010 Census Benchmark, Table 2: E-5 City/County and Housing Estimates, 1/1/2015, <http://www.dof.ca.gov/research/demographic/reports/estimates/e-5/2011-20/view.php>, accessed June 30, 2015.

⁷ Bay Area Economics (BAE), 2014, *Morgan Hill 2035 – Growth Alternatives*, Table 5-5, page 64.

⁸ This figure provides an estimate for the number of jobs within the Morgan Hill City limits in 2014.

POPULATION AND HOUSING

of the numbers, while other numbers refer to the City limits only. Each table clearly notes the geographic area included.

Population

The population of Morgan Hill grew from 34,104 in 2000 to 41,779 in 2015. As shown in Table 4.12-2, the City's population grew by approximately 22 percent, or 1.4 percent per year; this rate of growth was faster than Santa Clara County. During the same period, the population increased by only 12 percent for Santa Clara County.

TABLE 4.12-2 POPULATION TRENDS, 2000-2015

	2000	2015	Annual % Change 2000-2015	Total % Change 2000-2015
Morgan Hill City limits	34,104	41,779	1.4%	22.5%
Santa Clara County	1,682,579	1,889,638	0.8%	12.3%

Source: U.S. Census 2000 and 2015 Department of Finance Report E-1.

Housing

Between 2000 and 2015, Morgan Hill experienced modest housing growth. As shown in Table 4.12-3, the City's number of housing units grew by approximately 23.2 percent, or 1.4 percent per year; this rate of growth was faster than Santa Clara County overall. During the same period, the number of housing units increased by only 12.5 percent for the County.

TABLE 4.12-3 HOUSING UNIT TRENDS, 2000-2015

	2000	2015	Annual % Change 2000-2015	Total % Change 2000-2015
Morgan Hill City Limits				
Housing Units	11,259	13,868	1.4%	23.2%
Santa Clara County				
Housing Units	579,329	652,007	0.8%	12.5%

Source: State Department of Finance, E-8 Historical Population and Housing Estimates for Cities, Counties, and the state, 2000-2010 and Report E-5 Population and Housing Estimates for Cities, Counties, and the state, January 1, 2011-2015, with 2010 Benchmark .

POPULATION AND HOUSING

As discussed above, the Housing Element focuses on the 2015-2023 planning period and meets the City's RHNA determined by ABAG. The current RHNA is for the 2014-2022 time-period and is broken into housing needs for various income levels. Table 4.12-4 shows the RHNA allocation for Morgan Hill.

TABLE 4.12-4 REGIONAL HOUSING NEED ALLOCATION (2014 – 2022) – MORGAN HILL

	Very Low 0 to 50%	Low 51 to 80%	Moderate 81 to 120%	Above Moderate 120% or more	Total
Morgan Hill City limits	273 housing units	154 housing units	185 housing units	316 housing units	928 housing units

Source: ABAG, July, 2013, Final Regional Housing Need Allocation (2014 – 2022).

Growth projections for Morgan Hill, Santa Clara County, and the Bay Area region as a whole are shown in Table 4.12-5.

TABLE 4.12-5 ABAG PROJECTIONS 2013 – HOUSEHOLD AND POPULATION GROWTH - 2015 TO 2035

	2015	2035	Percent Change 2015-2035	Total Change 2015-2035
Morgan Hill (City limits + SOI)				
Households	14,890	17,470	17.3%	2,580
Population	46,000	54,700	18.9%	8,700
Santa Clara County				
Households	639,160	782,120	22.4%	142,960
Population	1,877,700	2,303,500	22.7%	425,800

Source: Association of Bay Area Governments, 2013.

Employment

According to data from the California Employment Development Department (EDD), Morgan Hill had 22,200 residents in the labor force as of October 2015, 21,200 of whom were employed. At 4.3 percent, the unemployment rate in Morgan Hill was lower than the statewide unemployment rate (5.7 percent). Throughout Santa Clara County, the unemployment rate was somewhat lower, at 3.9 percent (see Table 4.12-6).

TABLE 4.12-6 EMPLOYED RESIDENTS, OCTOBER 2015

Geography	Number of Workers		
	Employed	In Labor Force	Unemployment Rate
Morgan Hill City limit	21,200	22,200	4.3%
Santa Clara County	999,500	1,040,100	3.9%

Note: Data are not seasonally adjusted.

Source: CA EDD, October 2015.

POPULATION AND HOUSING***Total Jobs***

As of mid-2014, there were roughly 17,947⁹ jobs in the Morgan Hill City limit. The number of jobs in Morgan Hill differs from the number of employed residents in Morgan Hill because employed residents may have jobs outside of Morgan Hill. The industries located in Morgan Hill are largely similar to those in Santa Clara County overall, indicating that the economic activity in Morgan Hill is closely tied to the Silicon Valley economy. According to American Community Survey (ACS) data collected between 2007 and 2011, manufacturing accounted for the largest share of employment both in the City and the county, comprising 21 percent of all employment in Morgan Hill and 20 percent in Santa Clara County.

Jobs-to-Housing Balance

A jobs-to-housing ratio demonstrates the balance between jobs and housing units within a community. It is found by dividing the number of jobs in the community by the number of households in the same area. A high number of jobs relative to a low number of housing units indicates that workers must commute into the community. A low number of jobs and high number of housing units means workers must commute out to jobs. In contrast, a healthy jobs/housing ratio, which is region-specific, as described further below, increases opportunities for residents to work locally, decreasing congestion and commute time, and improving workers' productivity and quality of life. Moreover, a strong and diversified local job base supports fiscal health, helping local governments endure fluctuations in different segments of the regional and national economies. In 2014, Morgan Hill's jobs/housing ratio was 1.41 jobs per household (17,947 jobs/12,767 households within the City limits).¹⁰

ABAG's Projections 2013 estimated that the Bay Area region as a whole would have approximately 1.3 jobs per household in 2015.¹¹ Therefore, Morgan Hill currently has a slightly higher proportion of jobs per household than does the region as a whole. This suggests that the current and projected ratio of jobs to households in Morgan Hill indicate a relatively healthy balance of land uses in the City, providing opportunities for employed residents to work locally. However, the extent to which residents will work locally depends in part on complex relationships between the housing types available in the City, the skills and education levels among the City's labor force, and the jobs that are located in the City. In no Bay Area community do all employed residents work in the City where they live, nor do all people employed in any given city live in that city. Nor does a jobs/housing balance ratio represent the type, pay, or quality of local jobs related to the education and skill set of the Morgan Hill residents who also work here.

⁹ Bay Area Economics (BAE), June 13, 2014 Morgan Hill 2035 – Growth Alternatives, Table 5-5, page 64.

¹⁰ Bay Area Economics (BAE), June 13, 2014 Morgan Hill 2035 – Growth Alternatives, Table 5-5, page 64.

¹¹ ABAG Projections 2013, Summary Table, Region. $3,547,310 \text{ jobs} / 2,720,410 \text{ households} = 1.30$ ¹² Floor Area Ratio (FAR) is a ratio of the gross building square footage permitted on a lot to the gross square footage of the lot.

POPULATION AND HOUSING

4.12.2 STANDARDS OF SIGNIFICANCE

Implementation of the proposed Project would result in a significant population and housing impact if it would:

1. Induce substantial unexpected population growth, or growth for which inadequate planning has occurred, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure).
2. Displace substantial numbers of existing housing units, necessitating the construction of replacement housing elsewhere.
3. Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.
4. Contribute to cumulative population and housing impacts in the area.

4.12.3 IMPACT DISCUSSION

This section provides an analysis of the potential population and housing impacts that could occur as a result of the implementation of the proposed Project. This discussion is organized by and responds to each of the potential impacts identified in the Thresholds of Significance above.

POP-1	Implementation of the proposed Project would not induce substantial unexpected population growth, or growth for which inadequate planning has occurred, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure).

The proposed Project would result in a significant impact related to population growth if it would lead to substantial growth for which inadequate planning has occurred, either directly or indirectly.

General Plan

This Draft EIR considers the “reasonably foreseeable” effects of adopting the proposed General Plan, which would result from development allowed between the adoption of the document and its horizon year of 2035.

Direct Growth

The proposed General Plan would serve as the constitution of development for Morgan Hill, providing the overall parameters of density and intensity for urban land use designations, but does not contain specific

POPULATION AND HOUSING

development proposals, so no direct growth would result from implementation of the proposed General Plan.

Indirect Growth

In the proposed General Plan, standards of building intensity for residential uses are stated as the allowable range of dwelling units per net acre. The number of units permitted would be further modified by the zoning district and/or any applicable overlay district. Standards of building intensity for non-residential uses are stated as maximum floor area ratios (FAR)¹² based on gross acreage.

Implementation of the proposed General Plan could result in up to 68,057 residents within the SOI at buildout in 2035. ABAG's Projections 2013 show that in 2035, the horizon year of the proposed General Plan, the population within the Morgan Hill SOI is anticipated to have a total of 54,700 residents. Therefore, full buildout of the proposed General Plan would exceed regional projections by 13,357 people. This is because ABAG Projections assume that residential growth will continue to be limited by the RDCS or a similar mechanism, while this EIR, to be conservative, assumes full development of residential capacity allowed by the proposed General Plan.¹³

Buildout of the proposed General Plan is projected to result in 2,360 new single-family residential units and 5,071 new multi-family residential units within the SOI. This means that implementation of the proposed Project would result in a net increase of 7,431 housing units and at buildout there would be a total of approximately 21,299 housing units. Additionally, as a result of the growth in commercial space, there would be a net increase of 9,326 jobs. Table 4.12-7 provides a summary of the proposed General Plan's buildout projections. As shown in the table, while the future jobs/housing ratio would decline somewhat from the existing 1.4 jobs per household, it would remain very close to the regional average of 1.3 jobs per household. This indicates that, based on the numerical balance between housing capacity and employment capacity under the proposed General Plan, Morgan Hill would neither need to export workers to find jobs in other communities, nor import a substantial number of workers, resulting in indirect growth inducement.

As discussed above, the projected level of growth associated with the proposed Project would exceed regional projections; however, the following policies from the proposed General Plan would serve to provide a planning framework for this growth.

Goal CNF-2 *An improved, orderly, and efficient pattern of urban development.*

Policy CNF-2.1 **Orderly Development.** Encourage the orderly development of the City, with concentric growth and infill of existing developed areas.

¹² Floor Area Ratio (FAR) is a ratio of the gross building square footage permitted on a lot to the gross square footage of the lot.

¹³ The Association of Bay Area Governments (ABAG), 2013, <http://abag.ca.gov/planning/housing/projections13.html>, accessed September 18, 2015.

POPULATION AND HOUSING

TABLE 4.12-7 PROJECTED BUILDOUT

Category	Projection ^b
Population (Total – City limit + SOI) ^a	68,057 Residents
Housing Units (Net Growth – City limit + SOI)	
Single-Family	2,360 Units
Multi-Family	5,071 Units
Non-Residential Square Footage (Net Growth – City limit + SOI)	755,548
Retail	628,698
Office	1,777,385
Industrial	417,557
Service	287,377
Public Facilities	
Jobs (Net Growth – City limit + SOI)	9,326
Type of New Jobs	
Retail	1,511
Office	1,888
Industrial	4,443
Service	1,254
Public Facilities	230
Jobs/Housing Balance (Citywide)	1.27

a. The Population total does not factor in an assumed vacancy rate.

b. These buildout numbers include SEQ and planned/entitled projects.

Source: PlaceWorks, 2015.

Policy CNF-2.2	A Balanced Community. Plan for the needs of all socioeconomic segments of the community, encouraging a balance and match in jobs and housing within the City.
Goal CNF-3	<i>A growth management system that maintains a population cap, a metered pace of development, and high level of community amenities, and that is clear, fair, flexible, and streamlined.</i>
Policy CNF-3.1	RDCS Purpose. Maintain a Residential Development Control System (RDCS) to manage the amount, rate, type, and location of residential development in Morgan Hill.
Policy CNF-3.2	Relationship to General Plan. Require the RDCS to implement the goals, and policies of the General Plan as they relate to residential development in Morgan Hill through 2035.
Policy CNF-3.4	Population Limit. Plan for a January 1, 2035 population of approximately of 64,600 residents.
Policy CNF-3.5	Rate of Growth. Maintain steady and predictable annual growth consistent with the population limit.
Policy CNF-3.6	Adequate Services and Infrastructure. Allow residential growth only if it is within the ability for the City to provide adequate public services and infrastructure for new development and the community at large.
Policy CNF-3.7	Jobs/Housing Balance. Plan for residential growth that supports a healthy balance between residents and jobs located within Morgan Hill.

POPULATION AND HOUSING

Policy CNF-4.2	Urban Growth Boundary. Maintain a long-term Urban Growth Boundary that: a) provides greater stability of future land use patterns than is currently provided by the existing "short term" urban service area (USA) boundaries; b) indicates the preferred extent and direction of the City's future urban expansion and capital improvements planning, consistent with the City General Plan; c) encourages compact and concentric urban growth and development; d) promotes fiscal responsibility, cost-effective service delivery, and the City's ability to plan for and adequately maintain urban services over time; e) provides for an adequate land supply necessary for sustainable economic growth; f) compensates for the impacts of the City's historical patterns of urban growth; g) achieves greater compatibility of land use planning and decision-making for lands of mutual interest to the City and County; and h) provides additional certainty to rural landowners needed for purposes of planning investments and maintaining viable agricultural operations.
Policy CNF-4.3	Prerequisites for Urban Development. Consider land within or adjacent to the City as available for urban development only when it is included within the Urban Service Area and Urban Growth Boundary, and can be developed in a manner that will be cost-effective to the City, and will be served by adequate public services and facilities.
Policy CNF-4.8	Land Supply. Include enough land within the Urban Service Area to provide for rate, amount, and type of development consistent with the General Plan; review and modify the Urban Service Area boundaries as needed.
Policy CNF-4.9	Orderly Growth: Urban growth should occur in an orderly and contiguous pattern, within the designated Urban Service Areas, encouraging infill of vacant urban land.
Policy CNF-4.10	Urban Service Area Expansions. Base expansion of urban service areas and annexations on the General Plan, consistent with the City's schedules for development and extension of services.
Policy CNF-4.1	Urban Service Area Expansions within UGB. Allow Urban Service Area expansions only within the long-term UGB and for lands with urban designations; the timing and extent of Urban Service Area expansion shall remain consistent with established Urban Service Area expansion policies and ordinances.

While Policy CNF-3.4 cites a 2035 population of 64,600, this figure factors in implementation of the voter approved RCDS. In order to provide a conservative analysis of the potential impacts of the proposed General Plan, since the RCDS will require voter approval, as discussed above, this EIR does not rely on the population cap for buildout projections. However, the list of policies above would provide a robust planning framework for the growth projected to occur under the proposed General Plan; this growth cannot be expected to occur with inadequate planning. Policy CNF-3.1 in particular calls for the City to maintain a Residential Development Control System (RDCS). Since ABAG projections assume that residential growth will continue to be limited by the RDCS or a similar mechanism, implementation of this policy would bring the projected level of growth closer to what is projected by ABAG. While the population cap cited in Policy CNF-3.4 would exceed ABAG projections, given the requirements for planning associated with this growth, its impact would be *less than significant*.

Applicable Regulations:

- Sustainable Communities Strategy
- Regional Housing Needs Allocation

POPULATION AND HOUSING

Significance Before Mitigation: Less than significant.

Residential Development Control System

Since 1977, the City of Morgan Hill has utilized the RDCS to ensure that new development can be served by existing infrastructure and public services. Some components of the RDCS were established through a voter approved ballot initiative. These components include an overall population cap, a formula for determining the number of building permit allotments available each year, a competition process to award those allotments, specific processing timelines, and reporting requirements. These components have been incorporated into the City's proposed General Plan and ordinances as directed by the ballot language. The City Council has also adopted additional ordinances and policies which provide further guidance on implementation of the RDCS, but which are modified more frequently as a general vote is not required.

The proposed RCDS component of the proposed Project would seek to streamline and improve the existing growth management system to be more efficient, effective, and sustainable while maintaining its most important benefits: a population cap; pace of development; high quality development; and contribution toward community amenities.¹⁴

Since the proposed RDCS would only serve to limit and meter the growth permitted under the proposed General Plan, it would not result in impacts greater than the impacts associated with development permitted under the proposed General Plan. These impacts are discussed above. If adopted the updated RDCS would serve to reduce negative impacts from population growth so that infrastructure and services can keep pace. Therefore, the RDCS would have a *less-than-significant* impact on population growth.

Significance Before Mitigation: Less than significant.

POP-2	Implementation of the proposed Project would not displace substantial numbers of existing housing units, necessitating the construction of replacement housing elsewhere.

General Plan

As described above, the proposed Project would result in a net increase of 7,431 housing units. If redevelopment occurs under the proposed General Plan, there is the potential that displacement of existing residential units could occur. However, all redevelopment of parcels would be voluntary in nature, and no housing units would be displaced without permission of the property owners. Furthermore, the proposed General Plan would serve as the constitution of development for Morgan Hill, providing the overall parameters of density and intensity for urban land use designations, but does not contain specific

¹⁴ City of Morgan Hill, 2015, City Council Staff Report, Morgan Hill 2035: RDCS Update, <http://www.morgan-hill.ca.gov/DocumentCenter/View/15900>, accessed August 14, 2015.

POPULATION AND HOUSING

development proposals so no direct impacts related to the displacement of housing would occur. Moreover, the following Policy from Morgan Hill's Housing Element, which was adopted on February 18, 2015, would minimize potential impacts related to the displacement of housing units:

Policy HE-1hh **Relocation Assistance.** Require relocation assistance when privately funded redevelopment displaces extremely low, very low, low, or moderate income residents.

Therefore, since the proposed General Plan would result in a net increase in housing units and would not have direct physical impacts related to the displacement of housing units a *less-than-significant* impact would result.

Applicable Regulations:

- City of Morgan Hill Housing Element

Significance Before Mitigation: Less than significant.

Residential Development Control System

It is possible that under the revised RDCS, allotments could be awarded to a project that would replace existing housing with new housing. However, these projects would be subject to Housing Element policies requiring preservation or replacement of housing units, and the total number of housing units in Morgan Hill is expected to increase under the proposed RDCS. Therefore a *less-than-significant* impact would result in this respect.

Significance Before Mitigation: Less than significant.

POP-3	Implementation of the proposed Project would not displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.

General Plan

As described above, the proposed Project would allow a net increase of housing units, jobs and residents in Morgan Hill. Implementation of the proposed General Plan is anticipated to result up to 68,057 residents at buildout in 2035. This figure represents a 63 percent increase from the 2015 population of 41,779. Table 4.12-7 shows the level of growth anticipated for non-residential land use types. The proposed General Plan would allow and encourage the redevelopment of some sites that currently developed with substantially fewer units or less square footage than would be allowed, and uses of a different type that allowed, for example, along the Monterey Road Corridor. However, new development would replace the existing development and the City would experience a net increase in all land use types. As a result, the proposed General Plan is not expected to displace substantial numbers of people who either live, work or do both

POPULATION AND HOUSING

within Morgan Hill. Therefore, the proposed General Plan would have a *less-than-significant* impact regarding the displacement of people.

Applicable Regulations:

- Morgan Hill Housing Element

Significance Before Mitigation: Less than significant.

Residential Development Control System

It is possible that under the revised RDCS, allotments could be awarded to a project that would replace existing housing with new housing which could result in the displacement of people. However, these projects would be subject to Housing Element policies requiring preservation or replacement of housing units, and the total number of housing units in Morgan Hill is expected to increase under the proposed RDCS. Therefore a *less-than-significant* impact would result in this respect.

Significance Before Mitigation: Less than significant.

4.12.4 CUMULATIVE IMPACTS

POP-4	Implementation of the proposed Project would not contribute to cumulative population and housing impacts in the area.

As discussed in Chapter 4, Environmental Evaluation, of this Draft EIR, this EIR takes into account growth associated with the proposed Project, within the Morgan Hill SOI, in combination with impacts from projected growth in the rest of Santa Clara County and the surrounding region,¹⁵ as forecasted by ABAG. Impacts from cumulative growth are considered in the context of their consistency with regional planning efforts. As described above in impact discussion POP-1, while growth associated with implementation of the proposed General Plan would exceed regional projections, implementation of Mitigation Measure POP-1 would result in a less-than-significant impact on a project-level. Since California planning law requires that local governments adopt a General Plan,¹⁶ it is reasonable to assume that surrounding jurisdictions would implement similar policies to guide growth. Therefore, the proposed General Plan would result in a *less-than-significant* cumulative impact with respect to population and housing.

Since the proposed RDCS would only serve to limit and meter the growth permitted under the proposed General Plan, it would not result in impacts greater than the impacts associated with development permitted under the proposed General Plan. These impacts are discussed above. Therefore a *less-than-significant* impact would result in this respect.

¹⁵ This area includes the nine counties within the jurisdiction of the Association of Bay Area Governments (Alameda County, Contra Costa County, Marin County, Napa County, San Francisco County, Santa Clara County, Solano County, and Sonoma County).

¹⁶ Government Code Section 65300-65303.4.

POPULATION AND HOUSING

Applicable Regulations:

- Morgan Hill Housing Element

Significance Before Mitigation: Less than significant.

4.12.5 SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION MEASURES

The proposed Project would not result in any significant project-specific or cumulative population and housing impacts and therefore no mitigation measures are required.

4.12.6 FULL BUILDOUT

The full buildout anticipated under the proposed Project would include significantly more non-residential development than the 2035 horizon-year development projection analyzed in Section 4.12.3, Impact Discussion, in terms of both the amount and the extent of development. Therefore, the potential for impacts related to population and housing would increase. However, as discussed in Chapter 3, Project Description, it is extremely unlikely that full buildout would ever occur under the proposed Project. Therefore, an analysis of full buildout is not required by CEQA.

POPULATION AND HOUSING

4.13 PUBLIC SERVICES AND RECREATION

This chapter describes existing public services and recreation facilities in the City of Morgan Hill and evaluates the potential environmental consequences on public services and recreation from future development that could occur by adopting and implementing the proposed Project. The public services and recreation facilities analyzed in this chapter include fire and police protection services, schools, libraries, and parks and recreation. For each service, a summary of the relevant regulatory setting and existing conditions is followed by a discussion of potential impacts from future development permitted under the proposed General Plan.

4.13.1 FIRE PROTECTION SERVICES

This section describes the current fire protection regulations, resources, and response times for fire protection services in Morgan Hill, as well as the proposed Project's potential impacts to fire protection services.

4.13.1.1 ENVIRONMENTAL SETTING

Regulatory Framework

This section summarizes key state and local regulations related to fire protection services. There are no federal regulations pertaining to fire protection that apply to the proposed Project.

State Regulations

California Building Code

The California Building Code (CBC), which is located in Part 2 of Title 24 of the California Code of Regulations, established the minimum state building standards. The CBC is based on the International Building Code, but has been amended to account for California conditions. The CBC is generally adopted on a jurisdiction-by-jurisdiction basis, subject to further modification based on local conditions. Commercial and residential buildings are plan-checked by City building officials for compliance with the CBC. Typical fire safety requirements of the CBC include installation of sprinklers in all high-rise buildings; establishment of fire resistance standards for fire doors, building materials, and particular types of construction; and clearance of debris and vegetation within a prescribed distance from occupied structures in wildfire hazard areas.

California Fire Code

The California Fire Code (CFC) incorporates, by adoption, the International Fire Code of the International Code Council, with California amendments. This is the official Fire Code for the state and all political

PUBLIC SERVICES AND RECREATION

subdivisions. It is located in Part 9 of Title 24 of the California Code of Regulations (CCR). The CFC is revised and published approximately every three years by the California Building Standards Commission.

California Public Resources Code

Fire Protection Fee, Section 4210

Adopted as California Public Resources Code Section 4210, Assembly Bill X1 29 (ABX1 29) establishes an annual Fire Prevention Fee to help pay for fire prevention services within State Responsibility Areas (SRA). Under ABX1 29, owners of habitable structures defined as a “building that contains one or more dwelling units or that can be occupied for residential use”¹ located within a State Responsibility Area, which is an area that includes state and privately-owned forest, watershed, and rangeland where the State of California has primary financial responsibility for the prevention and suppression of wildfires. As such, Santa Clara County works in cooperation with the California Department of Forestry and Fire Protection (CAL FIRE).

Hazardous Fire Areas, Section 4290

Section 4290, Hazardous Fire Areas, of the Public Resources Code (PRC) includes fire safety regulations that apply to development in Morgan Hill. This section establishes minimum standards for roads, signage, private water supply resources, and wildland fuel modification. Section 4290 works in conjunction with current and new building construction development standards in State Responsibility Areas (SRAs), defined by the State Board of Forestry and Fire Protection as an area in which the state has primary financial responsibility for preventing and suppressing fires. “Fire Hazard Severity Zones” (FHSZ) are classified with severity levels of Very High, High, Moderate, and Low. Morgan Hill’s FHSZs range from Moderate to High. These zones are primarily located in hillside areas. Of the 19,573 total acres in the City and SOI, approximately:

- 5,191 acres are located in a Very High Fire Hazard Severity Zone.
- 5,056 acres are located in a High Fire Hazard Severity Zone.
- 367 acres are located in a Moderate Fire Hazard Severity Zone.

The FHSZs in the Project Area are mapped in Figure 4.8-2.

Local Regulations

Morgan Hill Municipal Code

The Morgan Hill Municipal Code, organized by Title, Chapter, and Section, contains all ordinances for the City. The City’s Fire Code, which is in Chapter 15.44 (Fire Code) of the Municipal Code, regulates permit processes, emergency access, hazardous material handling, and fire protection systems, including automatic sprinkler systems, fire extinguishers, and fire alarms. Chapter 15.08 of the Municipal Code sets forth the

¹ California Fire Prevention Fee, http://www.firepreventionfee.org/sra_faqs.php, accessed August 25, 2015.

PUBLIC SERVICES AND RECREATION

standards for building and construction in the City. The City has adopted by reference the most recent CBC, subject to additions and amendments as outlined in Section 18.08.040 (Building Code).

Existing Conditions

The Morgan Hill Fire Department (MHFD) provides fire protection and emergency services for residential, commercial and wildland firefighting; for medical emergencies; automobile and technical rescue; and other hazardous conditions. The MHFD serves a population of approximately 41,000 in a 13-square-mile service area.² The MHFD operates two fire stations: the El Toro Fire Station, located at 18300 Old Monterey Road, and the Dunne Hill Fire Station, located at 2100 E. Dunne Avenue. Additionally, CAL FIRE operates a fire station within the Morgan Hill City limits at 15670 Monterey Street. The City shares personnel through an agreement with the South Santa Clara County Fire District (SSCCFD) at this station but the City does not own any of the equipment at this location. The fire station locations are shown on Figure 4.13-1.

MHFD utilizes the closest engine concept to respond to calls within the City's jurisdiction. In order to make this possible, Morgan Hill Fire works closely with surrounding fire agencies through Auto Aid Agreements. Morgan Hill Fire currently has reciprocal Auto-Aid agreements with the SSCCFD, Gilroy City Fire, and San Jose City Fire.³ The SSCCFD participates in automatic aid agreements with the MHFD and with the Gilroy, Pajaro Valley, Hollister, and San Jose Fire Departments.⁴ The City of Morgan Hill and the SSCCFD have entered into a "boundary drop" and resource sharing agreement which increased resource availability and response efficiency for both agencies.⁵ The SSCCFD service area includes 260 square miles in the unincorporated areas around Gilroy, San Martin, and Morgan Hill.⁶

Staffing and Equipment

MHFD currently has a staff of 24 employees.⁷ Daily staffing is three persons per engine company – including one Company Officer, one Engineer (FAE), and one Engineer Paramedic (FAE-P) – for a total of nine line personnel per day, as well as one Battalion Chief that shares coverage with SSCCFD. A Fire Marshal and an EMS/Training Captain are on duty during staff hours. El Toro Fire Station is equipped with one Type 1 Engine and one 105-foot ladder truck. The Dunne Hill Fire Station is equipped with one Type 1 engine and one Type 6 Engine. The SSCCFD Station on Monterey Street is equipped with one Type 1 Engine and one water tender.⁸ The SSCCFD contracts for personnel and administration with CAL FIRE.⁹

² Morgan Hill Fire Department, 2014 Annual Report, page 4.

³ Morgan Hill Fire Department, 2014 Annual Report, page 6.

⁴ South Santa Clara County Fire District, <http://www.sscfd.com/about/>, accessed on August 25, 2015.

⁵ Morgan Hill Fire Department, 2014 Annual Report, page 4.

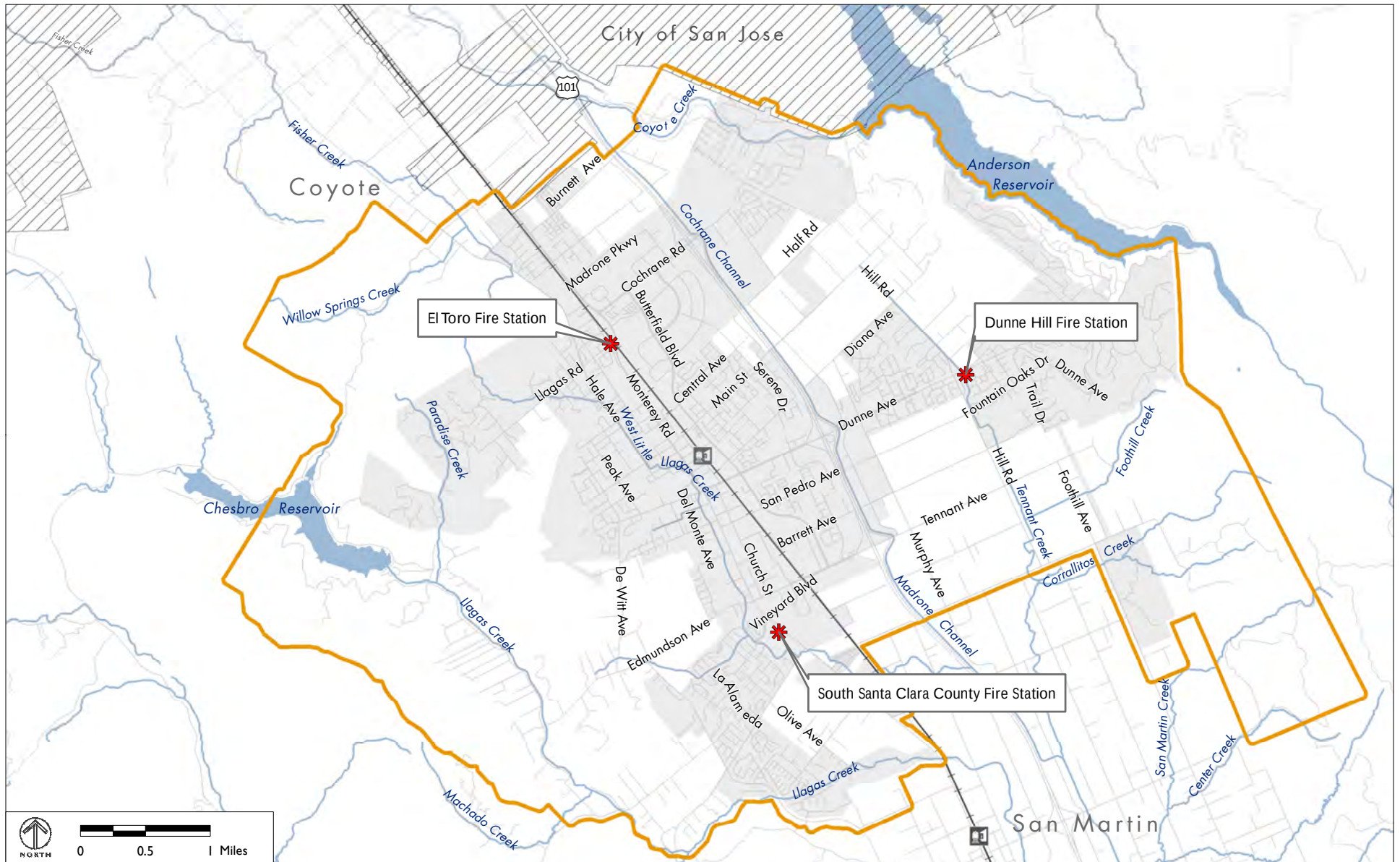
⁶ South Santa Clara County Fire District, 2013 Annual Report, page 5.

⁷ Morgan Hill Fire Department, 2014 Annual Report, page 4.

⁸ Witmer, Derek. Fire Chief, Morgan Hill Fire Department/South Santa Clara County Fire District. Personal communication with Alexis Mena, PlaceWorks. August 24, 2015.

⁹ South Santa Clara County Fire District, <http://www.sscfd.com/about/>, accessed on August 25, 2015.

PUBLIC SERVICES AND RECREATION



Sources: PlaceWorks and City of Morgan Hill, 2015.

Figure 4.13-1

Existing Fire Stations

PUBLIC SERVICES AND RECREATION

MHFD works closely with the local ambulance provider, Santa Clara County Emergency Medical Services Agency (EMSA), and adjoining fire departments to provide rapid Advance Life Support response.¹⁰ The City's Building Department provides one non-uniformed, part-time employee to check plans and inspect new construction for the MHFD. These functions are supplemented by fire prevention personnel during periods of heavy demand, on projects of significance, and when the part-time employees are off duty or in training. Fire Prevention activities include but are not limited to: routine/annual fire inspections and the business self-inspection program, fire pre-planning and mapping, brush abatement, and Development Review.¹¹

The MHFD is not currently experiencing any deficiencies in staff, facilities, or equipment, but existing stations are not sufficient to meet future demands as projected under the existing General Plan.¹² In Fiscal Year 2015-2016 the MHFD and Morgan Hill Police Department (MHPD) are developing a Public Safety Master Plan that is intended to ensure that the City has adequately planned for the construction and maintenance of public safety facilities. The cost of the Master Plan is anticipated to be \$100,000 and will be split among the MHFD, MHPD, and SSCCFD. The Master Plan will include three elements specific to Fire, Police, and Emergency Medical Services:

- The Fire Protection Element will address the need for timing and location of future fire stations, methods for providing preferred levels of service, and fire prevention programs.
- The Police Service Element will address current and future police staffing levels and performance standards.
- The Emergency Medical Element will address paramedic response and its relationship to fire protection responders.¹³

The MHFD is considering hiring an architectural firm in Fiscal Year 2015-2016 to design a new fire station based on the forthcoming Master Plan. Equipment and staffing for a new station would be determined based on the Master Plan and implemented in a phased approach.¹⁴

Average Response Times

In general, the response time meets the current standard of eight minutes 95 percent of the time; although it is expected that most responses will be approximately five minutes 90 percent of the time.¹⁵

¹⁰ Morgan Hill Fire Department, 2014 Annual Report, page 10.

¹¹ Morgan Hill Fire Department, 2014 Annual Report, page 20.

¹² Witmer, Derek. Fire Chief, Morgan Hill Fire Department/South Santa Clara County Fire District. Personal communication with Alexis Mena, PlaceWorks. August 24, 2015.

¹³ City of Morgan Hill, FY 15-16 Operating and CIP Budget, pages 217 to 218.

¹⁴ Witmer, Derek. Fire Chief, Morgan Hill Fire Department/South Santa Clara County Fire District. Personal communication with Alexis Mena, PlaceWorks. August 24, 2015.

¹⁵ Witmer, Derek. Fire Chief, Morgan Hill Fire Department/South Santa Clara County Fire District. Personal communication with Alexis Mena, PlaceWorks. August 24, 2015.

PUBLIC SERVICES AND RECREATION

Impact Fees

The City currently imposes a fire impact fee of \$115 per single-family dwelling unit, \$109 per multi-family dwelling unit, and \$1,510 per acre for commercial and industrial development.¹⁶

4.13.1.2 STANDARDS OF SIGNIFICANCE

Implementation of the proposed Project would have a significant impact related to fire protection and emergency services if it would:

1. In order to maintain acceptable service ratios, response times, or other performance objectives for fire services, result in the provision of or need for new or physically altered fire protection facilities, the construction or operation of which could cause significant environmental impacts.
2. Contribute to cumulative fire protection and emergency medical service impacts in the area.

4.13.1.3 IMPACT DISCUSSION

This section analyzes potential Project-specific and cumulative impacts to fire protection services.

PS-1	Implementation of the proposed Project would not result in the provision of or need for new or physically altered fire protection facilities, the construction or operation of which could cause significant environmental impacts.

General Plan

New development in the City and SOI would be served by the MHFD and SSCCFD from the three stations currently located in Morgan Hill. A significant impact would result if, in order for the MHFD and SSCCFD to adequately serve the Project Area, increased demand in the City limits and SOI would require the construction of new facilities or the expansion of existing facilities, the construction or operation of which would cause significant environmental impacts. The MHFD has indicated that existing stations would be inadequate to accommodate future needs, even without the proposed General Plan, and that the Department is planning to undergo a Master Plan process to guide the development of a new station.¹⁷

The proposed General Plan would allow new development within the City limits, increasing the service population served by the MHFD and SSCCFD above existing conditions and beyond the amount of future development currently projected under the existing General Plan. Development within the SOI would

¹⁶ City of Morgan Hill, 2015, Fee Schedule.

¹⁷ Witmer, Derek. Fire Chief, Morgan Hill Fire Department/South Santa Clara County Fire District. Personal communication with Alexis Mena, PlaceWorks. August 24, 2015.

PUBLIC SERVICES AND RECREATION

continue under the Santa Clara County General Plan, until or unless unincorporated lands are annexed to the City of Morgan Hill. While the proposed General Plan would allow future growth, thereby increasing demands for fire protection services, the following proposed goal and policies would serve to reduce the need for fire protection services and ensure that services are adequate to provide protection to Morgan Hill:

<i>Goal CNF-6</i>	<i>High-quality services and facilities that keep pace with community needs and standards.</i>
Policy CNF-6.1	Services to Serve Growth. Manage and schedule urban growth consistent with the ability to provide a full array of urban services and facilities, such as sewer capacity, water, transportation, schools, public safety and other urban services.
Policy CNF-6.2	Service Standards. Ensure that facility/service standards can be met for new development by the time of occupancy.
Policy CNF-6.3	New Public Facilities. Ensure that plans for public facilities (e.g., parks, City offices, fire stations) reflect the anticipated location, amount, and type of new development.
Policy CNF-6.4	Public Facilities Upgrades. Evaluate the need for improvements to existing public facilities based on such factors as the location and extent of new residential, commercial and industrial development, residential densities, and neighborhood development patterns.
Policy CNF-6.6	Urban Level of Public Services. Fully utilize existing strategies to achieve an urban level of public services throughout the City, including by a) requiring that the timing and location of future urban development be based upon the availability of public services and facilities; b) requiring new development to pay all the incremental public service costs which it generates; and c) requiring developers to dedicate land and/or pay to offset the costs relating to the provision and expansion of public services and facilities.
Policy CNF-6.7	Impacts on City Infrastructure. Require all development that may result in a substantial impact on City infrastructure and/or services to be analyzed to determine the extent of that fiscal burden.
<i>Goal SSI-3</i>	<i>Minimal threat to persons, property, and the environmental from fire hazards.</i>
Policy SSI-3.1	Development in Fire Hazard Areas. Minimize development in fire hazard areas and plan and construct permitted development so as to reduce exposure to fire hazards and to facilitate fire suppression efforts in the event of a wildfire.
Policy SSI-3.2	Wildfire Risks. Avoid actions which increase fire risk, such as increasing public access roads in fire hazard areas, because of the great environmental damage and economic loss associated with a large wildfire.
Policy SSI-3.3	Public Facilities Location. Locate, when feasible, new essential public facilities outside of high fire risk areas, including, but not limited to, hospitals and health care facilities, emergency shelters, emergency command centers, and emergency communications facilities, or identify construction methods or other methods to minimize damage if these facilities are located in a state responsibility area or very high fire hazard severity zone.
Policy SSI-3.4	Adequate Infrastructure. Design adequate infrastructure if a new development is located in a state responsibility area (SRA) or in a very high fire hazard severity zone (VHFHSZ) or high fire hazard severity zone (HFHSZ) as indicated on the City of Morgan Hill Wildland Urban Interface map (adopted March 18, 2009), including safe access for emergency response vehicles, visible street signs, and water supplies for structural fire suppression.
Policy SSI-3.5	Fire Risks. Work cooperatively with CAL FIRE and other public agencies with responsibility for fire protection to reduce fire risks in Morgan Hill.

PUBLIC SERVICES AND RECREATION

Policy SSI-3.6	Fire Hazard Severity Zones. Continue to support special High Fire Hazard Severity Zone requirements.
Goal SSI-11	<i>Efficient police, fire, and emergency medical response and services, and access to local medical facilities.</i>
Policy SSI-11.1	Staffing. Provide police and fire staffing and facilities as necessary to provide adequate public safety protection.
Policy SSI-11.2	Prevention through Design. Promote police and fire security considerations in all structures by ensuring that crime and fire prevention concepts are considered in development and design.
Policy SSI-11.3	Medical Services. Encourage provision of a full range of medical services in the city, including an acute care hospital.

New development is also subject to the City's fire prevention regulations and procedures. The City reviews plans and conducts construction inspections to ensure that new development complies with existing building and fire code requirements. In addition, new development is required to pay an impact fee for new single-family, multi-family, commercial, and industrial development.

Development allowed by the proposed General Plan would include new housing and non-residential development, with associated increases to resident and employee population. Much of the future development allowed under the proposed General Plan would occur on sites that are within or adjacent to already urbanized and/or developed areas and are scattered throughout the Project Area in areas already served by existing fire stations. However, the proposed General Plan would also allow development in areas that are currently predominantly undeveloped, such as the East of 101 Area Plan overlay area. The MHFD has indicated that a new fire station would be needed to meet future needs of the City, and has already allocated funds in the Fiscal Year 2015-2016 budget to begin the Master Plan process that will guide development of the new station, including an appropriate location. In addition, MHFD may need to consider changing or increasing staffing and/or equipment at existing stations in order to adequately serve new development allowed under the proposed General Plan.¹⁸

Plan review by the MHFD, development impact fees, consistency with the above policies, and compliance with the regulations described under Section 4.13.1.1 would ensure that the MHFD is involved as future development is allowed under the proposed General Plan. Further, future construction of a new fire station would be subject to separate project-level CEQA review in order to identify potential environmental impacts and mitigation measures as needed. As such, while buildout allowed by the proposed General Plan would require new fire protection facilities, a new station is already being planned to accommodate current and future needs of the City, and the proposed policies listed above would ensure that adequate fire protection services are provided without causing significant environmental impacts. Therefore, a *less-than-significant* impact would occur.

¹⁸ Witmer, Derek. Fire Chief, Morgan Hill Fire Department/South Santa Clara County Fire District. Personal communication with Ricky Caperton, PlaceWorks. April 15, 2014.

PUBLIC SERVICES AND RECREATION

Applicable Regulations:

- Morgan Hill Municipal Chapter 15.44.

Significance Before Mitigation: Less than significant.

Residential Development Control System

The Residential Development Control System, known as the RDCS, regulates population growth through the provision of residential building allotments. The RDCS, and the proposed updates to the RDCS as part of the proposed Project, affect the pace of development in the City but do not determine the location, type, or intensity of development. By metering the pace of development, the RDCS would support and reinforce the policies listed above to ensure that adequate fire protection services are in place to serve new residential development before it occurs. In addition, the proposed RDCS Competition Standards would award points to residential projects that are within the required response time of fire stations. The RDCS itself would not increase demands for fire protection services, would encourage residential units to be located close to existing community services and facilities, and would not have the potential to create the need for the physical expansion of fire protection facilities. As such, the RDCS would have *no impact*.

Significance Before Mitigation: No impact.

4.13.1.4 CUMULATIVE IMPACTS

PS-2	Implementation of the proposed Project, in combination with past, present, and reasonably foreseeable projects, would not result in significant cumulative impacts with respect to fire protection service.

As discussed in Chapter 4, Environmental Evaluation, this EIR takes into account growth from development under the proposed Project within the City combined with the estimated growth in the service areas of each service provider. As described in the discussion of Impact PS-1, the RDCS update would not contribute to increased fire protection service demands and would therefore have no impact to fire protection services. As such, the RDCS update would not have the potential to contribute to cumulative fire protection service impacts and this discussion focuses on the potential cumulative impacts of the proposed General Plan.

The MHFD and SSCCFD work together to provide fire protection services to the City and SOI through a “boundary drop” and resource sharing agreement. Cumulative impacts are considered in the context of the growth from development under the proposed General Plan within the City and the service area of the MHFD, combined with anticipated growth in the service area of the SSCCFD, including San Martin and the unincorporated areas around Gilroy and Morgan Hill. The City of Gilroy is currently preparing a General Plan Update that will consider additional growth within the SSCCFD. While extensive development in the unincorporated county is not anticipated, existing land use regulation and parcelization would allow some additional single-family development to occur on individual sites. A significant cumulative environmental

PUBLIC SERVICES AND RECREATION

impact would result if this cumulative growth would exceed the ability of the MHFD and SSCCFD to adequately serve the area, thereby requiring construction of new facilities or modification of existing facilities.

Implementation of the proposed General Plan and other anticipated cumulative growth would occur incrementally throughout the 20-year horizon of the General Plan. Within the City, development projects allowed by the Plan would be subjected to plan review by the MHFD, MHFD development impact fees, consistency with the proposed policies listed under Impact PS-1, and compliance with the regulations described under Section 4.13.1.1. Adherence to these City procedures, policies, regulations, and fee requirements would ensure that the MHFD is involved as future development is allowed in Morgan Hill under the proposed General Plan. In addition, as described under Impact PS-1, the City has funded a Public Safety Master Plan to ensure that the City is adequately planning for the construction and maintenance of public safety facilities. With adequate planning in place in both the City and the SSCCFD service area, the cumulative impact would be *less than significant*.

Applicable Regulations:

- Morgan Hill Municipal Chapter 15.44.

Significance Before Mitigation: Less than significant.

4.13.2 POLICE PROTECTION SERVICES

This section describes the current police protection regulations, resources and response times in Morgan Hill, as well as the proposed Project's potential impacts to police protection services.

4.13.2.1 ENVIRONMENTAL SETTING

Regulatory Framework

This section summarizes local policies related to police services in Morgan Hill. There are no federal, state, or local regulations pertaining to law enforcement that apply to the Project Area.

Existing Conditions

Morgan Hill Police Department

Police service is provided to the site by the City of Morgan Hill Police Department (MHPD). The headquarters of the Morgan Hill Police Department is located at 16200 Vineyard Boulevard and is shown on Figure 4.13-1.

PUBLIC SERVICES AND RECREATION

Staffing and Equipment

The department currently employs 39 sworn officer positions and 20.5 non-sworn support positions.¹⁹ Although the MHPD does not have an adopted ratio of officers to population, with 39 sworn officers service a population of approximately 45,170 residents, MHPD provides 1 officer for every 1,158 residents. Staff members are assigned to one of three divisions: Field Operations; Special Operations; and Support Services:

- **Field Operations:** The Field Operations Division is under the leadership of the Field Operations Captain. The Field Operations Division consists of 24 sworn patrol officers. There are two traffic officers, including one K-9 officer, and the Reserve Unit, which are paid part-time employees. The non-sworn component of the Division consists of three Multi-Service Officers, and the Police Explorer Program for youths. Patrol officers in this division work with community members to identify and resolve problems of crime and disorder either through formal Community Oriented Policing projects, or by directed patrol and targeted proactive enforcement. Within the Field Operations Division, certain trained officers participate as Field Training Officers, bicycle officers, motorcycle officers, a K-9 handler, as well as assuming other duties.
- **Special Operations:** The Special Operations Division is under the leadership of the Special Operations Captain. The Special Operations Division consists of nine sworn officers and one part-time graffiti abatement officer. The Special Operations Division Sergeant supervises one crimes against persons detective, one domestic violence detective, one street crimes detective, one school resource/juvenile crimes officer, one property crimes detective, and three task force officers, in addition to the part-time graffiti abatement officer.²⁰
- **Support Services:** The Support Services Division provides vital service to both police officers and the public. The division consists of the Records Unit, Communications Center, Information Technology, and Property/Evidence Services. The Division includes Public Safety Dispatchers, a Property/Evidence Technician, and Police Service Cadets.

The MHPD reports that existing staff and equipment levels are not sufficient to meet current or future demands for service. However, as described in Section 4.13.1.1, in Fiscal Year 2015-2016 the MHFD and MHPD are developing a Public Safety Master Plan that will include an element specific to Police Service. The Police Service Element of the Public Safety Master Plan will address current and future staffing levels and performance standards.²¹

¹⁹ Swing, David. Police Chief, Morgan Hill Police Department. Personal communication with Alexis Mena, PlaceWorks. August 20, 2015.

²⁰ Morgan Hill Police Department, <http://www.morgan-hill.ca.gov/186/Special-Operations>, accessed on August 26, 2015.

²¹ City of Morgan Hill, FY 15-16 Operating and CIP Budget, pages 217 to 218.

PUBLIC SERVICES AND RECREATION

Calls for Service

The Police Department's goal is to respond to Priority One calls within 5 minutes and Priority Two calls within 8 minutes.²² In 2014, the MHPD received 11,539 emergency (i.e., 911) calls and 25,788 non-emergency calls.²³ The MHPD made approximately 36 arrests per officer in 2014.²⁴

Impact Fees

The City currently imposes a police impact fee of \$747 per single-family dwelling unit, \$722 per multi-family dwelling unit, \$1,624 per acre for commercial development, and \$2,274 per acre for industrial development.²⁵

Santa Clara County Sheriff's Office

The Santa Clara County Sheriff's Office also provides police protection services to unincorporated areas of Santa Clara County and the communities of Cupertino, Los Altos Hills, and Saratoga.²⁶ The Sheriff's Office has 1,725 employees, of which 1,299 are sworn officers. Apart from the Sheriff, the Sheriff's Office has an Undersheriff, two Assistant Sheriffs, 14 captains, 24 lieutenants, 117 sergeants, and 1,142 deputies.²⁷

The Morgan Hill SOI is served by the South County Sub-Station in San Martin at 80 West Highland Avenue.²⁸ The South County Sub-Station patrols the unincorporated communities of San Martin, Rucker, and Uvas Canyon, as well as the Morgan Hill and Gilroy SOIs.²⁹ The South County Sub-Station detectives provide investigative services for the southern county area. Detectives pursue cases generated from reports by patrol deputies, except for those dealing with homicide or narcotics.³⁰

The Sheriff's Office reports that existing staff and equipment levels are sufficient to meet current demands for service.³¹

²² City of Morgan Hill, Citywide Agricultural Preservation Program and Southeast Quadrant Land Use Plan Draft EIR, page 3.12-4.

²³ Swing, David. Police Chief, Morgan Hill Police Department. Personal communication with Alexis Mena, PlaceWorks. August 20, 2015.

²⁴ Morgan Hill Police Department, 2014 Annual Report, page 4.

²⁵ City of Morgan Hill, 2015, Fee Schedule.

²⁶ Santa Clara County Sheriff, <https://www.sccgov.org/sites/sheriff/Pages/sheriff.aspx>, accessed on September 8, 2015.

²⁷ Santa Clara County Sheriff's Office, <https://www.sccgov.org/sites/sheriff/Pages/overview.aspx>, accessed on September 8, 2015.

²⁸ Sergeant Jensen, James. Public Information Officer, Santa Clara County Sheriff's Office. Personal communication with Alexis Mena, PlaceWorks. September 2, 2015.

²⁹ Santa Clara County Sheriff's Office, Enforcement Operations, <https://www.sccgov.org/sites/sheriff/Pages/eo.aspx>, accessed on September 8, 2015.

³⁰ Santa Clara County Sheriff's Office, Investigative Services Division, <https://www.sccgov.org/sites/sheriff/Pages/investigations.aspx>, accessed on September 8, 2015.

³¹ Sergeant Jensen, James. Public Information Officer, Santa Clara County Sheriff's Office. Personal communication with Alexis Mena, PlaceWorks. September 2, 2015.

PUBLIC SERVICES AND RECREATION

4.13.2.2 STANDARDS OF SIGNIFICANCE

Implementation of the proposed Project would have a significant impact related to police protection services if it would:

1. In order to maintain acceptable service ratios, response times, or other performance objectives for police services, result in the provision of or need for new or physically altered police facilities, the construction or operation of which could cause significant environmental impacts.
2. Contribute to cumulative police protection service impacts in the area.

4.13.2.3 IMPACT DISCUSSION

This section analyzes the proposed Project's potential impacts to police protection services.

PS-3	Implementation of the proposed Project would not result in the provision of or need for new or physically altered police protection facilities, the construction or operation of which could cause significant environmental impacts.

General Plan

New development in the City and SOI would be served by the MHPD and Santa Clara County Sheriff's Office from the police station in Morgan Hill and Sheriff's station in San Martin. A significant impact would result if increased demand in the City limits and SOI would require the construction of new facilities or the expansion of existing facilities in order for the MHPD and Sheriff's Office to adequately serve the Project Area, the construction or operation of which would cause significant environmental impacts. The MHPD has indicated that existing station facilities would need to be expanded or renovated to meet long-term future needs. The expansion would not be in the form of constructing a new building, but rather in the form of expanding the MHPD space to take over space currently occupied by a tenant.³² The Sheriff's Office has indicated that currently there are no plans to expand or relocate, and that no existing facility deficiencies exist that would be exacerbated by the proposed General Plan. The Sheriff's Office would likely upgrade equipment accordingly over time to incorporate new technologies as they emerge. Any upgrades would be incremental over time based on regular funding sources as growth occurs incrementally over time.³³

The proposed General Plan would allow new development within the City limits, increasing the service population served by the MHPD. Development within the SOI would continue under the Santa Clara

³² Swing, David. Police Chief, Morgan Hill Police Department. Personal communication with Alexis Mena, PlaceWorks. October 14, 2015.

³³ Sergeant Jensen, James. Public Information Officer, Santa Clara County Sheriff's Office. Personal communication with Alexis Mena, PlaceWorks. September 2, 2015.

PUBLIC SERVICES AND RECREATION

County General Plan, until or unless unincorporated lands are annexed to the City of Morgan Hill. While the proposed General Plan would allow future growth, thereby increasing demands for police protection services, the following proposed goal and policies, in addition to Goal CNF-6 and its supporting policies listed under Impact PS-1, would serve to reduce police service demands and ensure that services are adequate to provide protection to Morgan Hill:

Goal SSI-11	<i>Efficient police, fire, and emergency medical response and services, and access to local medical facilities.</i>
Policy SSI-11.1	Staffing. Provide police and fire staffing and facilities as necessary to provide adequate public safety protection.
Policy SSI-11.2	Prevention through Design. Promote police and fire security considerations in all structures by ensuring that crime and fire prevention concepts are considered in development and design.

Development allowed by the proposed General Plan would include new housing and non-residential development, with associated increases to resident and employee population. Most future development would occur within or adjacent to already urbanized and/or developed areas of the Project Area in areas already served by existing MHPD and Sheriff stations. However, the proposed General Plan would also allow development in areas that are currently predominantly undeveloped, such as the East of 101 Area Plan overlay area, which may not be served by existing stations.

The MHPD has indicated that the existing police station building is adequately sized to meet long-term future needs. Future expansion can be accommodated by utilizing space within the police station building that is currently occupied by a private company. However, new vehicles and safety equipment would be required.³⁴ Therefore, it is expected that potential environmental impacts would be minimal and would be limited to temporary, construction-related activities. Development impact fees from new development within the City, and consistency with the above policies, would help to ensure that the MHPD is involved as future development is allowed under the proposed General Plan. Therefore, a *less-than-significant* impact would occur.

Applicable Regulations:

- None.

Significance Before Mitigation: Less than significant.

Residential Development Control System

The RDCS regulates population growth through the provision of residential building allotments. The RDCS, and the proposed updates to the RDCS as part of the proposed Project, affect the pace of development in the City but do not determine the location, type, or intensity of development. By metering the pace of

³⁴ Swing, David. Police Chief, Morgan Hill Police Department. Personal communication with Alexis Mena, PlaceWorks. October 14, 2015.

PUBLIC SERVICES AND RECREATION

development, the RDCS would support and reinforce the policies listed above to ensure that adequate police protection services are in place to serve new residential development before it occurs. The RDCS itself would not increase demands for police protection services and would not have the potential to create the need for the physical expansion of police protection facilities. As such, the RDCS would have *no impact*.

Significance Before Mitigation: No impact.

4.13.2.4 CUMULATIVE IMPACTS

PS-4	Implementation of the proposed Project, in combination with past, present, and reasonably foreseeable projects, would not result in significant cumulative impacts with respect to police protection services.

As discussed in Chapter 4, Environmental Evaluation, this EIR takes into account growth from development under the proposed Project within the City combined with the estimated growth in the service areas of each service provider. As described in the discussion of Impact PS-3, the RDCS update would not contribute to increased police protection service demands and would therefore have no impact to police protection services. As such, the RDCS update would not have the potential to contribute to cumulative police protection service impacts and this discussion focuses on the potential cumulative impacts of the proposed Project.

New development in the City and SOI would be served by the MHPD and Santa Clara County Sheriff's Office from the existing stations currently located in Morgan Hill and San Martin, respectively. Cumulative impacts are considered in the context of the growth from development under the proposed Project within the City and the service area of the MHPD, combined with the estimated growth in the service area of the Sheriff's Office, including San Martin and the unincorporated areas around Gilroy and Morgan Hill. A significant cumulative environmental impact would result if this cumulative growth would exceed the ability of the MHPD and Sheriff's Office to adequately serve the area, thereby requiring construction of new facilities or modification of existing facilities.

Anticipated growth under the proposed Project would occur incrementally throughout the 20-year buildout horizon. Development impact fees and consistency with the proposed policies listed under Impact PS-3 would ensure that the MHPD is involved as future development is allowed under the proposed Project. In addition, as described under Impact PS-3, the City has funded a Public Safety Master Plan to ensure that the City is adequately planning for the construction and maintenance of public safety facilities. The Sheriff's Office has indicated that it will upgrade technologies incrementally over time along with incremental growth in its service area, but that no major facility expansions are expected at this time to serve existing and future growth in its service area. Therefore, the proposed Project would have a *less-than-significant* cumulative effect with respect to police protection services.

PUBLIC SERVICES AND RECREATION

Applicable Regulations:

- None.

Significance Before Mitigation: Less than significant.

4.13.3 SCHOOLS

This section describes the existing regulations and conditions regarding public schools in Morgan Hill, as well as the proposed Project's potential impacts to schools.

4.13.3.1 ENVIRONMENTAL SETTING

Regulatory Framework

This section summarizes key state regulations related to schools. There are no federal or local regulations pertaining to schools that apply to the proposed Project.

California Government Code, Section 65995(b), and Education Code Section 17620

Senate Bill (SB) 50 (funded by Proposition 1A, approved in 1998) limits the power of cities and counties to require mitigation of school facilities impacts as a condition of approving new development and provides instead for a standardized developer fee. SB 50 generally provides for a 50/50 state and local school facilities funding match. SB 50 also provides for three levels of statutory impact fees. The application level depends on whether state funding is available, whether the school district is eligible for state funding and whether the school district meets certain additional criteria involving bonding capacity, year round school and the percentage of moveable classrooms in use.

California Government Code Sections 65995-65998 sets forth provisions to implement SB 50. Section 65995 contains limitations on Education Code Section 17620, the statute that authorizes school districts to assess development fees within school district boundaries. Government Code Section 65995(b)(3) requires the maximum square footage assessment for development to be increased every two years, according to inflation adjustments. On January 22, 2014 the State Allocation Board (SAB) approved increasing the allowable amount of statutory school facilities fees (Level I School Fees) from \$3.20 to \$3.36 per square foot of assessable space for residential development of 500 square feet or more, and from \$0.51 to \$0.54 per square foot of chargeable covered and enclosed space for commercial/industrial development.

According to Section 65995(3)(h), the payment of statutory fees is “deemed to be full and complete mitigation of the impacts of any legislative or adjudicative act, or both, involving, but not limited to, the planning, use, or development of real property, or any change in governmental organization or reorganization...on the provision of adequate school facilities.” The school district is responsible for implementing the specific methods for mitigating school impacts under the Government Code.

PUBLIC SERVICES AND RECREATION***Mitigation Fee Act (California Government Code 66000-66008)***

Enacted as AB 1600, the Mitigation Fee Act requires a local agency establishing, increasing, or imposing an impact fee as a condition of development to identify the purpose of the fee and the use to which the fee is to be put.³⁵ The agency must also demonstrate a reasonable relationship between the fee and the purpose for which it is charged, and between the fee and the type of development plan on which it is to be levied. The Act came into force on January 1, 1989.

Existing Conditions***Enrollment***

The City of Morgan Hill is served by the Morgan Hill Unified School District (MHUSD). The MHUSD has ten elementary schools, two middle schools, and three high schools serving more than 8,000 students within Morgan Hill and its vicinity. Table 4.13-1 shows each school type and its current capacity and enrollment, as well as its remaining capacity. As shown in Table 4.13-1, four of the schools in the MHUSD – Barrett Elementary School, Jackson Academy of Math and Music, Paradise Valley Elementary Schools, and Ann Sobrato High School – are currently operating over capacity. However, as a whole across all of its schools, the MHUSD currently has capacity for 117 elementary school students, 607 middle school students, and 621 high school students.

Table 4.13-2 shows enrollment forecasts provided by MHUSD for MHUSD schools.

Student Generation Rates

The MHUSD's student generation rates for single-family residential units are listed in Table 4.13-3. MHUSD has used two sets of rates in recent studies; both sets are shown in Table 4.13-3.

MHUSD uses the same generation rates for both single- and multi-family housing units based on the characteristics of existing Morgan Hill households. As the population of seniors and young adults increases in Morgan Hill, there is the potential for new multi-family units to attract these two demographics. Since seniors and young adults typically do not have children in residence, it is possible that future multi-family units may produce fewer school children than single-family units.

³⁵ California Government Code, Sections 66000-66008, http://leginfo.legislature.ca.gov/faces/codes_displayText.xhtml?lawCode=GOV&division=1.&title=7.&part=&chapter=5.&article=, accessed on August 26, 2015.

PUBLIC SERVICES AND RECREATION

TABLE 4.13-1 CURRENT ENROLLMENT AND CAPACITY FOR MORGAN HILL UNIFIED SCHOOL DISTRICT

	District Facility Capacity	2014-2015 Enrollment	2014-2015 Remaining Capacity
Elementary Schools	4,776	4,659	117
Barrett Elementary School	549	574	(25)
El Toro Elementary School	539	478	61
Jackson Academy of Math and Music	559	596	(37)
Los Paseos Elementary School	592	589	3
Nordstrom Elementary School	674	638	36
Paradise Valley Elementary School	592	662	(70)
San Martin/Gwinn Elementary School	616	517	99
Walsh Elementary School	655	605	50
Middle Schools	1,711	1,104	607
Britton Middle School	986	625	361
Martin Murphy Middle School	725	479	246
High Schools	3,267	2,646	621
Ann Sobrato High School	1,450	1,452	(2)
Central High School (Continuation)	425	142	283
Live Oak High School	1,392	1,052	340
Total	9,754	8,409	1,345

Source: SchoolWorks, 2015; Morgan Hill Unified School District Demographic Study 2015; City of Morgan Hill, 2015.

School Impact Fees

The MHUSD collects a fee of \$3.36 per square foot for residential construction and \$0.54 per square foot for commercial and industrial construction.³⁶

³⁶ Espinosa, Anessa. Director of Facilities/Maintenance, Morgan Hill Unified School District. Personal communication with Alexis Mena, PlaceWorks. August 26, 2015.

PUBLIC SERVICES AND RECREATION**TABLE 4.13-2 ENROLLMENT AND CAPACITY FORECASTS FOR MORGAN HILL UNIFIED SCHOOL DISTRICT, THROUGH 2020-2021**

	2014-2015 Enrollment	Enrollment Forecast						Capacity	2020-2021 Remaining Capacity
		2015- 2016	2016- 2017	2017- 2018	2018- 2019	2019- 2020	2020- 2021		
Elementary Schools	4,659	4,724	4,756	4,748	4,735	4,667	4,604	4,776	172
Barrett Elementary School	574	595	604	592	582	580	564	549	(15)
El Toro Elementary School	478	465	486	510	535	535	536	539	3
Jackson Academy of Math and Music	596	619	621	630	621	610	608	559	(49)
Los Paseos Elementary School	589	604	586	581	573	552	542	592	50
Nordstrom Elementary School	638	623	636	655	667	668	688	674	(14)
Paradise Valley Elementary School	662	678	694	691	691	676	666	592	(74)
San Martin/Gwinn Elementary School	517	521	519	503	502	491	472	616	144
Walsh Elementary School	605	619	610	586	564	555	528	655	127
Middle Schools	1,104	1,121	1,116	1,159	1,219	1,243	1,260	1,711	451
Britton Middle School	625	633	638	670	706	722	744	986	242
Martin Murphy Middle School	479	488	478	489	513	521	516	725	209
High Schools	2,646	2,654	2,680	2,739	2,736	2,776	2,804	3,267	463
Ann Sobrato High School	1,452	1,489	1,514	1,532	1,576	1,606	1,620	1,450	(170)
Central High School (Continuation)	142	140	138	143	140	144	142	425	283
Live Oak High School	1,052	1,025	1,028	1,064	1,020	1,026	1,042	1,392	350
Total	8,409	8,499	8,552	8,646	8,690	8,686	8,668	9,754	1,086

Source: SchoolWorks, 2015; Morgan Hill Unified School District Demographic Study 2015; City of Morgan Hill, 2015.

PUBLIC SERVICES AND RECREATION

TABLE 4.13-3 STUDENT GENERATION RATES

	2014 Developer Fee Justification Study Student Generation Rate Per Unit ^a	Demographics Study 2015 Student Generation Rate Per Unit ^b
Elementary School (K-6)	0.40	0.246
Middle School (7-8)	0.10	0.067
High School (9-12)	0.20	0.152

Note: MHUSD uses the same generation rates for both single- and multi-family housing units.

a. Source: Morgan Hill Unified School District, 2014 Development Fee Justification Study.

b. Source: SchoolWorks, 2015, Morgan Hill Unified School District Demographic Study 2015.

4.13.3.2 STANDARDS OF SIGNIFICANCE

Implementation of the proposed Project would have a significant impact related to schools if it would:

1. In order to maintain acceptable service ratios or other performance objectives for schools, result in the provision of or need for new or physically altered school facilities, the construction or operation of which could cause significant environmental impacts.
2. Contribute to cumulative school facility impacts in the area.

4.13.3.3 IMPACT DISCUSSION

PS-5	Implementation of the proposed Project would not result in the provision of or need for new or physically altered school facilities, the construction or operation of which could cause significant environmental impacts.

General Plan

A significant impact would result if, in order for the MHUSD to adequately serve the Project Area, increased school enrollment in the City limits and SOI would require the construction of new facilities or the expansion of existing schools, the construction or operation of which would cause significant environmental impacts. Development allowed by the proposed General Plan is expected to result in 2,360 new single-family residential units and 5,071 new multi-family residential units, for a total of 7,431 units. Using the higher of the two sets of student generation rates in Table 4.13-3, development allowed by the proposed Plan would result in an expected growth in student enrollment for the MHUSD of approximately 2,972 new students in grades K-6, 743 students in grades 7-8, and 1,486 students in grades 9-12, totaling approximately 5,202 students overall.³⁷ Using the lower of the two sets of student generation rates in Table

³⁷ 7,431 new units x 0.40 K-6 students per unit = 2,972 new K-6 students; 7,431 new units x 0.10 7-8 students per unit = 743 new 7-8 students; 7,431 new units x 0.20 9-12 students per unit = 1,486 new 9-12 students. 2,972 + 743 + 1,486 = 5,202 new students.

PUBLIC SERVICES AND RECREATION

4.13-3, development allowed by the proposed Plan would result in an expected growth in student enrollment for the MHUSD of approximately 1,828 new students in grades K-6, 498 students in grades 7-8, and 1,130 students in grades 9-12, totaling approximately 3,455 students overall.³⁸

Tables 4.13-4 and 4.13-5 below show a breakdown of elementary, middle, and high school students that would be generated by the proposed General Plan based on the generation rates in Table 4.13-3. As shown in Table 4.13-4, using the higher of the two sets of generation rates, with 2035 buildout of the proposed General Plan, and without assuming any increases in existing capacity, MHUSD elementary schools would be 2,855 students over capacity, middle schools would be 136 students under capacity, high schools would be 865 students over capacity, and the district as a whole would be 3,857 students over capacity. As shown in Table 4.13-5, using the lower of the two sets of generation rates, with 2035 buildout of the proposed General Plan, and without assuming any increases in existing capacity, MHUSD elementary schools would be 1,711 students over capacity, middle schools would be 109 students under capacity, high schools would be 509 students over capacity, and the district as a whole would be 2,110 students over capacity. To accommodate new students, MHUSD would need to expand existing facilities. The school district does not currently have plans to expand existing facilities and does not own any vacant land on which it could build. Given the large influx of students generated by the proposed General Plan, a significant burden would be placed on MHUSD to purchase land and build new schools at a time when there are no State resources or grants to support educational facilities.³⁹

TABLE 4.13-4 PROJECTED MHUSD ENROLLMENT MHUSD RESULTING FROM PROPOSED GENERAL PLAN 2035 HORIZON DEVELOPMENT (BASED ON HIGHER RATES FROM 2015 DEMOGRAPHIC STUDY)

School Type	2014-2015 Enrollment	2035 New Student Enrollment	2035 Total Enrollment	2015 Capacity	2035 Remaining Capacity
Elementary School	4,659	2,972	7,631	4,776	(2,855)
Middle School	1,104	743	1,847	1,711	(136)
High School	2,646	1,486	4,132	3,267	(865)
Total	8,409	5,202	13,611	9,754	(3,857)

Note: Sum of numbers may not match totals due to rounding.

Source: Morgan Hill Unified School District, 2015; PlaceWorks, 2015.

School impact fees of \$3.36 per square foot for residential construction and \$0.54 per square foot for commercial and industrial construction collected for individual projects allowed by the proposed General

³⁸ 7,431 new units x 0.246 K-6 students per unit = 1,828 new K-6 students; 7,431 new units x 0.067 7-8 students per unit = 498 new 7-8 students; 7,431 new units x 0.152 9-12 students per unit = 1,130 new 9-12 students. 1,828 + 498 + 1,130 = 3,455 new students.

³⁹ Perez, Kristen, Assistant Superintendent, Business Services, Morgan Hill Unified School District. Personal communication with John Baty, City of Morgan Hill. December 15, 2015.

PUBLIC SERVICES AND RECREATION

TABLE 4.13-5 PROJECTED MHUSD ENROLLMENT MHUSD RESULTING FROM PROPOSED GENERAL PLAN 2035 HORIZON DEVELOPMENT

School Type	2014-2015 Enrollment	2035 New Student Enrollment	2035 Total Enrollment	2015 Capacity	2035 Remaining Capacity
Elementary School	4,659	1,828	6,487	4,776	(1,711)
Middle School	1,104	498	1,602	1,711	109
High School	2,646	1,130	3,776	3,267	(509)
Total	8,409	3,455	11,864	9,754	(2,110)

Note: Sum of numbers may not match totals due to rounding.

Source: Morgan Hill Unified School District, 2015; PlaceWorks, 2015.

Plan would mitigate the impact to the MHUSD facilities. Under Section 65995 of the California Government Code, the payment of impact fees is deemed to fully mitigate the impacts of new development on school facilities, regardless of whether the fees are adequate to fully fund the expansion or construction of needed facilities. The MHUSD has stated that Developer Fees pay for less than 50 percent of the costs to house new students and that the burden for funding new facilities would come directly from MHUSD's operating budget.⁴⁰

The City of Morgan Hill does not plan for or provide school services and facilities. However, the proposed General Plan contains the following goal, policies, and action, in addition to Goal CNF-6 and its supporting policies listed under Impact PS-1, that are supportive of high quality school services through coordinated planning between the City and MHUSD:

<i>Goal HC-1</i>	<i>Coordinated urban and school development.</i>
Policy HC-1.1	Neighborhood Schools. Coordinate community development and school development to promote neighborhood schools, which educate neighborhood children and serve as a community resource facility.
Policy HC-1.2	Coordinate School Development. Work with the Morgan Hill Unified School District to coordinate planning for school facilities in conjunction with new development, and to identify appropriate locations for future school facilities.
Policy HC-1.3	Quality Education. Cooperate with the City of San Jose, Santa Clara County, and the Morgan Hill Unified School District to ensure a high-quality education experience by providing adequate and safe school facilities, preventing overcrowding, and providing school locations convenient to the population served.
Policy HC-1.4	Strategic Plan. Encourage the Morgan Hill Unified School District, Gavilan College, and private schools to develop a strategic plan for and construct schools to coincide with the planned future growth of the City.

⁴⁰ Perez, Kristen, Assistant Superintendent, Business Services, Morgan Hill Unified School District. Personal communication with John Baty, City of Morgan Hill. December 15, 2015.

PUBLIC SERVICES AND RECREATION

Policy HC-1.5	Site Selection. Work with the Morgan Hill Unified School District in selecting sites for new schools to optimize educational and community development goals.
Policy HC-1.6	Efficient Siting. Site new residential development in areas served by existing schools to allow school facilities to be used most efficiently and to minimize busing needs.
Policy HC-1.7	Neighborhood Activities. Encourage the Morgan Hill Unified School District to design, site, and upgrade elementary schools with flexible facilities that serve as the focal point of each neighborhood's diverse and changing social, cultural, vocational, recreational, and educational activities.
Policy HC-1.8	Park Coordination. Work with the Morgan Hill Unified School District to locate parks and schools together to optimize their use as community facilities and reduce fiscal strain on both agencies.
Policy HC-1.12	School Availability. Use the RDCS to meter residential growth consistent with school capacity.
Action HC-1.2	Funding. Support the development of additional and innovative financing techniques for school improvements and construction.

The proposed policies would help to reduce potential impacts to the MHUSD. In addition, school fees would be considered sufficient to mitigate impacts to schools, as per SB 50. The specific environmental impact of constructing new schools and related facilities to support the proposed General Plan cannot be determined at this first-tier level of analysis, as planning for the facilities has not occurred. Any environmental impacts resulting from the construction of new schools would be analyzed by MHUSD prior to construction. Therefore, there would be a *less-than-significant* impact related to the provision of school facilities under buildout of the proposed General Plan.

Applicable Regulations:

- Government Code Section 65995
- California Government Code 66000-66008

Significance Before Mitigation: Less than significant.

Residential Development Control System

The Residential Development Control System, known as the RDCS, regulates population growth through the provision of residential building allotments. The RDCS, and the proposed updates to the RDCS as part of the proposed Project, affect the pace of development in the City but does not determine the location, type, or intensity of development. Therefore, the RDCS itself would not generate new students and would not have the potential to create the need for the physical expansion of school facilities. By metering growth, the RDCS would increase the predictability of residential growth and the corresponding student growth, enabling MHUSD to plan for school facilities construction or expansion and mitigate any environmental impacts. In addition, the proposed RDCS would award points to proposed residential projects that:

- Pay school fees greater than the minimum required by the Morgan Hill Unified Schools District (MHUSD) and state law.
- Are located near to a Morgan Hill Unified Schools District (MHUSD) school.

PUBLIC SERVICES AND RECREATION

- Are located near to a Morgan Hill Unified Schools District (MHUSD) school with capacity to serve new students.
- Contribute funds to the Morgan Hill Unified School District to provide student transportation improvements.

As such, the RDCS would have a positive rather than a negative impact on school facilities.

Significance Before Mitigation: No impact.

4.13.3.4 CUMULATIVE IMPACTS

PS-6	Implementation of the proposed Project, in combination with past, present, and reasonably foreseeable projects, would not result in significant cumulative impacts with respect to schools.

As discussed in Chapter 4, Environmental Evaluation, this EIR takes into account growth from development under the proposed Project within the City combined with the estimated growth in the service areas of each service provider. As described in the discussion of Impact PS-5, the RDCS update would not contribute to student generation and would therefore have no impact to school services. As such, the RDCS update would not have the potential to contribute to cumulative school impacts and this discussion focuses on the potential cumulative impacts of the proposed Project.

The MHUSD serves the Project Area and would primarily be affected by development within the City of Morgan Hill. Therefore, new development affecting the MHUSD would primarily be that allowed by the proposed Project. Any development that would affect the MHUSD apart from development within the City, such as development within the SOI, would also be subject to the school mitigation fees discussed under Impact PS-5. Under Section 65995 of the California Government Code, the payment of impact fees is deemed to fully mitigate the impacts of new development on school facilities. Therefore, cumulative impacts related to school facilities would be *less than significant*.

Applicable Regulations:

- Government Code Section 65995
- California Government Code 66000-66008

Significance Before Mitigation: Less than significant.

4.13.4 LIBRARIES

This section describes the existing regulations and conditions regarding library services in Morgan Hill, as well as the proposed Project's potential impacts to libraries.

4.13.4.1 ENVIRONMENTAL SETTING

Regulatory Framework

This section summarizes key state and local regulations related to libraries. There are no federal regulations pertaining to libraries that apply to the proposed Project.

State Regulations

The Mello-Roos Communities Facilities Act of 1982

The Mello-Roos Community Facilities Act, Government Code Section 53311 et seq., provides an alternative method of financing certain public capital facilities and services through special taxes. This state law empowers local agencies to establish Community Facilities Districts (CFDs) to levy special taxes for facilities such as libraries. Such districts exist within the City of Morgan Hill.

Local Regulations

Santa Clara County Library Strategic Plan, 2008

The Santa Clara County Library Strategic Plan seeks to create clarity and focus on how the Santa Clara County Library should invest its resources on the wants, preferences, and needs of current users and also expand the user base. Research studies by individual community libraries informed the wants, preferences, and needs referenced above. In order to accomplish this, the Strategic Plan identifies a vision for the future as well as goals and policies intended to achieve that desired outcome. The goals and objectives are intended to improve the libraries' existing services and do not apply to future development in Morgan Hill.

Existing Conditions

The Morgan Hill Library is a member of the Santa Clara County Library District. The Santa Clara County Library District (SCCLD) governs and administers seven community libraries, one branch library, two bookmobiles, the Home Service Library, and the 24-7 online library for all library users. The SCCLD serves all unincorporated communities of Santa Clara County, as well as nine Santa Clara County cities, including Campbell, Cupertino, Gilroy, Los Altos, Los Altos Hills, Milpitas, Monte Sereno, Morgan Hill, and Saratoga. As one of the SCCLD's member cities, Morgan Hill has a community library located on 680 West Main Avenue.⁴¹

The Morgan Hill Library is an approximately 28,000 square foot building that lends books, media, and digital content to all age groups, and provides educational and entertainment programs and events for children, teens, adults, and families. It also offers free internet-enabled public computers, offers access to

⁴¹ Santa Clara County Library District, <http://www.sccl.org/Locations/Morgan-Hill>, accessed on September 1, 2015.

PUBLIC SERVICES AND RECREATION

database and reference and research service, and provides self-service copy machines for residents. Equipped with a children's space, the library is well known for having story times for families, especially for families with babies, toddlers, and preschool children.

The SCCLD does not use a particular service standard for new development and the SCCLD does not collect impact fees from new development. Generally, as new development occurs, a City will hire a library architect to consider service population, activity and programing needs, and space needs. The California State Library publishes comparative data for similarly-sized public libraries. Based on the available data, the existing Morgan Hill Library facility is within the range of normal building square footage, collections, seating, and program space and has more than the average number of public computers.⁴²

The City of Morgan Hill has set aside money from developer fees to expand the Morgan Hill Library. The current fund balance is approximately \$900,000.⁴³ The SCCLD has laid out a phased expansion and tenant improvement plan that could ultimately increase the size of the Morgan Hill Library by 10,600 square feet. The City has allocated \$320,000 in Fiscal Year 2015/2016 for further development of the plan.⁴⁴ The Friends of the Morgan Hill Library have hired an architect and performed a series of interviews with staff and the Friends of the Library to identify desired areas of improvement to provide better service.⁴⁵

4.13.4.2 STANDARDS OF SIGNIFICANCE

Implementation of the proposed Project would result in significant impacts if it would:

1. Result in the provision of or need for new or physically altered library facilities, the construction or operation of which could cause significant environmental impacts.
2. Contribute to cumulative library facilities impacts in the area

4.13.4.3 IMPACT DISCUSSION

This section analyzes the proposed Project's potential impacts and cumulative impacts to library services.

PS-7	Implementation of the proposed Project would not result in the provision of or need for new or physically altered library facilities, the construction or operation of which could cause significant environmental impacts.

⁴² Frost, Carol. Deputy County Librarian, Santa Clara County Library District. Personal communication with Alexis Mena, PlaceWorks, August 25, 2015.

⁴³ Frost, Carol. Deputy County Librarian, Santa Clara County Library District. Personal communication with Alexis Mena, PlaceWorks, August 25, 2015.

⁴⁴ City of Morgan Hill, FY 2015-16 Budget, <http://www.morgan-hill.ca.gov/DocumentCenter/View/16618>, page C34, accessed on September 1, 2015

⁴⁵ Frost, Carol. Deputy County Librarian, Santa Clara County Library District. Personal communication with Alexis Mena, PlaceWorks, August 25, 2015.

PUBLIC SERVICES AND RECREATION

General Plan

A significant impact would result if, in order for the SCCLD to adequately serve the Project Area, increased demand in the City limits and SOI would require the construction of new facilities or the expansion of existing library facilities, the construction or operation of which would cause significant environmental impacts. It is projected that by 2035, the horizon year of the proposed General Plan, 7,431 new dwelling units would be developed and the population would increase by 22,888 new residents. New residents would utilize library services, which could impact library facilities.

The SCCLD does not use a particular service standard for new development that could be used to assess potential impacts from new development. Therefore, this analysis uses comparative data from the California State Library to determine whether the projected population increase would result in the Morgan Hill Library's current or planned facilities would no longer provide facilities consistent with average facilities. According to the California State Library data, the average library size for a City of Morgan Hill's current size is 23,371 square feet. The Morgan Hill Library is 28,000 square feet and therefore exceeds this average. The projected 2035 population of 68,057, an average library size would be 41,525 square feet. With the planned 10,600-square-foot expansion of the Morgan Hill Library, the library will be 38,600 square feet, which is slightly below this average. The SCCLD notes that, for every community, the size of the libraries, and the size allocated for various functions, varies widely based on individual community need. For instance, the Morgan Hill Library is well funded for collections, and has a large collection. Based on projected growth that would be allowed by the proposed General Plan, the SCCLD has indicated that further study would be needed to determine the current and future needs and whether additional facility expansion would be needed to maintain adequate services.⁴⁶

The proposed General Plan includes the following goal and policies, in addition to Goal CNF-6 and its supporting policies listed under Impact PS-1, and support adequate library facilities:

Goal HC-5	<i>Libraries that serve as community centers for education and culture while preparing residents for success in school, career, and life.</i>
Policy HC-5.1	County Partnership. Partner with the Santa Clara County Public Library to maximize public use of libraries for community, cultural, and educational events and classes, particularly to support youth, seniors, job training, adult education, technology, literacy, and English as a second language.
Action HC-5.A	Joint Use. Evaluate the opportunity to partner with Morgan Hill schools to open school libraries to the community when not in use by students.

Because it is not known precisely where new housing allowed by the proposed General Plan would be constructed, it cannot be determined exactly how libraries would be utilized by future residents. It is expected that students attending local schools would have access to MHUSD libraries. The availability of

⁴⁶ Frost, Carol. Deputy County Librarian, Santa Clara County Library District. Personal communication with Alexis Mena, PlaceWorks, August 25, 2015.

PUBLIC SERVICES AND RECREATION

school library facilities would decrease the potential impact on SCCLD library facilities. In addition, proposed Action HC-5.A seeks to increase the use of school libraries to provide additional library services to the community as a whole.

The Santa Clara County Library Strategic Plan (2008) accounts for the entire SCCLD service area and provides a basis for analyzing the most efficient allocation of funds both for the district as a whole as well as among the different libraries in the SCCLD service area. As indicated above, as new development occurs, it is likely that expanded library facilities would be needed to support the increased development and associated population growth that would be allowed by the proposed General Plan. It is not known at what time or location such facilities would be required or what the exact nature of these facilities would be, so it cannot be determined what project-specific environmental impacts would occur from their construction and operation. However, such impacts would be project-specific, and would require permitting and review in accordance with CEQA, which would ensure that any environmental impacts are disclosed and mitigated to the extent possible. This EIR is a programmatic document and does not evaluate the environmental impacts of any project-specific development. The SCCLD notes that one way to reduce the need to expand or renovate library facilities would be to provide funds to expand the SCCLD's Bookmobile, thereby reducing the need for additional services in a brick and mortar facility. In addition, the City of Morgan Hill has set aside approximately \$900,000⁴⁷ to expand the Morgan Hill Library, of which \$320,000 is currently allocated in the Fiscal Year 2015-2016 budget.

New growth under the proposed General Plan would occur incrementally over the next 20 years. The potential need for future facility expansions beyond those already planned would be assessed as development occurs. As specific library expansion or improvement projects are identified, additional project-specific, environmental analysis pursuant to CEQA would be completed. Therefore, implementation of the proposed General Plan would ensure that there would be a *less-than-significant* impact relating to the provision of new or physically altered library facilities.

Applicable Regulations:

- Santa Clara County Library Strategic Plan

Significance Before Mitigation: Less than significant.

Residential Development Control System

The Residential Development Control System, known as the RDCS, regulates population growth through the provision of residential building allotments. The RDCS, and the proposed updates to the RDCS as part of the proposed Project, affect the pace of development in the City but do not determine the location, type, or intensity of development. Therefore, the RDCS would not increase demands for library services and

⁴⁷ Frost, Carol. Deputy County Librarian, Santa Clara County Library District. Personal communication with Alexis Mena, PlaceWorks, August 25, 2015.

PUBLIC SERVICES AND RECREATION

would not have the potential to create the need for the physical expansion of library facilities. As such, the RDCS would have *no impact*.

Significance Before Mitigation: No impact.

4.13.4.4 CUMULATIVE IMPACTS

PS-8	Implementation of the proposed Project would not contribute to cumulative library impacts in the area.

As discussed in Chapter 4, Environmental Evaluation, this EIR takes into account growth from development under the proposed Project within the City combined with the estimated growth in the service areas of each service provider. As described in the discussion of Impact PS-7, the RDCS update would not contribute to increased library service demands and would therefore have no impact to library services. As such, the RDCS update would not have the potential to contribute to cumulative library service impacts and this discussion focuses on the potential cumulative impacts of the proposed Project.

New development in the City and SOI would be served by the SCCLD from the eight existing libraries located throughout the county, as well as two bookmobiles, the Home Service Library, and the 24-7 online library. Cumulative impacts are considered in the context of the growth from development under the proposed Project within the City and SOI, combined with the estimated growth in rest of the county. The SCCLD serves all unincorporated communities of Santa Clara County, as well as nine Santa Clara County cities, including Campbell, Cupertino, Gilroy, Los Altos, Los Altos Hills, Milpitas, Monte Sereno, Morgan Hill, and Saratoga. A significant cumulative environmental impact would result if this cumulative growth would exceed the ability of the SCCLD to adequately serve the area, thereby requiring construction of new facilities or modification of existing facilities.

The Santa Clara County Library Strategic Plan (2008) accounts for the entire SCCLD service area and provides a basis for analyzing the most efficient allocation of funds both for the district as a whole as well as among the different libraries in the SCCLD service area. This would not only allow for adequate funding to satisfy demand at the Morgan Hill library, but also, it would ensure that surrounding libraries are adequate to fulfill demand, which in turn would reduce the demand at the Morgan Hill library by reducing deficiencies at surrounding facilities. As a result, the proposed Project would result in a *less-than-significant* cumulative impact associated with libraries.

Applicable Regulations:

- Santa Clara County Library Strategic Plan

Significance Before Mitigation: Less than significant.

PUBLIC SERVICES AND RECREATION

4.13.5 PARKS AND RECREATION

This section summarizes key state and local regulations related to park and recreation services, concerning the proposed Project. There are no federal regulations pertaining to park and recreation services that apply to the proposed Project.

4.13.5.1 ENVIRONMENTAL SETTING

Regulatory Framework

State Regulations

The Quimby Act

The 1975 Quimby Act (California Government Code Section 66477), authorizes cities and counties to adopt ordinances requiring that developers set aside land, donate conservation easements or pay fees for park improvements. Revenues generated through the Quimby Act cannot be used for operation and maintenance of park facilities.⁴⁸ A 1982 amendment (AB 1600) requires agencies to clearly show a reasonable relationship between the public need for the recreation facility or parkland and the type of development project upon which the fee is imposed. Cities with a high ratio of park space to inhabitants can set a standard of up to 5 acres per thousand persons for new development. Cities with a lower ratio can only require the provision of up to 3 acres of park space per thousand people. The calculation of a City's park space to population ratio is based on a comparison of the population count of the last federal census to the amount of City-owned parkland.

Local Regulations

Santa Clara County Open Space Authority

The Santa Clara County Open Space Authority is a special district that serves Santa Clara County, with the exception of areas served by the Midpeninsula Regional Open Space District (MROSD) and City of Gilroy. The Cities of Milpitas, Santa Clara, Campbell, San Jose, and Morgan Hill participate in the Open Space Authority. The purpose of the Open Space Authority is to preserve key portions of the natural environment in the county as a balanced to continuing urban growth. The Open Space Authority preserves natural land by buying land, acquiring easements, and contributing funds to conservation efforts.⁴⁹

⁴⁸ Westrup, Laura, 2002, *Quimby Act 101: An Abbreviated Overview*, Sacramento: California Department of Parks and Recreation, <http://www.parks.ca.gov/pages/795/files/quimby101.pdf>, accessed on September 9, 2015.

⁴⁹ Santa Clara County Open Space Authority, <http://www.openspaceauthority.org/about/index.html>, accessed on November 12, 2015.

PUBLIC SERVICES AND RECREATION

Santa Clara County Parks and Recreation Department

The Santa Clara County Parks operates on a voter-approved measure in which a fixed portion of the property taxes collected are set aside from the General Fund to acquire and develop a regional park system. The Countywide Trails Master Plan maps several trail facilities in Morgan Hill, including Juan Bautista de Anza National Historic Trail, Coyote Creek/Llagas Creek Trail, and Morgan Hill Cross-Valley Trail, as well as connector trail routes.

Parks and Recreation Master Plan

The City is currently in the process of updating the Parks and Recreation Master Plan. The Final Master Plan is expected to be adopted in 2016. A forthcoming draft existing system analysis summary will provide additional information on existing conditions.

City of Morgan Hill Municipal Code

The following provisions of the Municipal Code apply to parks and recreational services in Morgan Hill:

- Chapter 12.20, City Parks and Recreation Buildings, sets regulations and standards for parks and recreation buildings in the City for all people to enjoy and protects the rights to surrounding areas as well. Chapter 12.20 regulates any activities that may occur at parks and recreation buildings at the time of events and/or use, which includes, but is not limited to, conduct in parks, sanitation requirements, vehicle requirements, use of skate park requirements, and violation penalties.
- Title 17, Subdivisions, sets regulations for subdivisions, including park dedication and/or in-lieu fees. Chapter 17.28 (Dedications and Reservations) includes different dedication requirements for the City in Article I (Park Land Dedication). The Park Land Dedication regulations are applied to all development except commercial or industrial subdivisions, condominium projects, or stock cooperatives which consist of the subdivision of airspace in an existing apartment building, which is more than five years old when no new dwelling units are added. The amount of dedicated land is determined by multiplying the average number of persons per unit and the park acreage standard of 3 acres of parkland for every 1,000 residents as allowed by the Quimby Act. The in-lieu fee would be determined based upon the fair market value of the land which would otherwise be required to be dedicated.

PUBLIC SERVICES AND RECREATION

Existing Conditions

Existing Parks and Recreational Facilities

City Parks and Recreational Facilities

Existing parks and recreational facilities are listed in Tables 4.13-6 and 4.13-7. As shown in Table 4.13-6, the City of Morgan Hill currently has approximately 147 acres of developed public parklands,⁵⁰ which consist of open space, community parks, neighborhood parks, school parks, mini parks, and community recreational centers. Additionally, there are approximately 323 acres of undeveloped public lands, most of which are within open space areas.

The City owns and operates special use facilities for recreational purposes. These facilities include the Morgan Hill Aquatics Center, Community and Cultural Center, the Centennial Recreation Center, the 40-acre Outdoor Sports Center, and skateboard/bicycle motocross park. The Community Center provides various rooms for events, meetings, classes, a children's pavilion, and an outdoor amphitheater. Many sports leagues and teams use MHUSD facilities after school hours and on weekends. These facilities include 12 baseball/softball fields, two football fields, two tracks, and four swimming pools. Morgan Hill residents also utilize county and state parks. These parks include the Coyote Creek park chain to the north, Anderson Lake County Park to the east, Harvey Bear County Park to the South, and Henry Coe State Park to the east.⁵¹

The City has future plans for new or expanded facilities that would increase the City's parks and recreation inventory by 42.5 acres. Planned parks and recreational facilities include:⁵²

- Ball fields: 26 acres purchased in 2015; timing of development not yet determined.
- Parking and facilities expansion adjacent to the Outdoor Sports Center and Aquatics Center: 10 acres.
- Downtown parks and trails: 3.5 acres.
- Neighborhood Park adjacent to new school site: 3 acres
- Extension of West Little Llagas Creek Trail: On Santa Clara Valley Water District property and will not be counted toward the City's parkland inventory.
- Butterfield Boulevard Linear Park Extension: Will not significantly increase City's parkland inventory acreage.
- El Toro Trail: On City-owned property and would not be added to the City's parkland inventory.
- Citywide open space acquisitions: Acreage not yet determined.
- Inclusive playground: Part of the Community Park and will not increase the City's parkland inventory.

⁵⁰ City of Morgan Hill, 2010, Development Impact Fee Study, page 31.

⁵¹ City of Morgan Hill, 2011, Monterey-South of Watsonville Project, pages 102-103.

⁵² Ghione, Chris. Community Services Director, City of Morgan Hill. Personal communication with Alexis Mena. September 10, 2015.

PUBLIC SERVICES AND RECREATION**TABLE 4.13-6 EXISTING PARKLAND INVENTORY**

Name	Location	Developed Acreage	Undeveloped Acreage	Total Acres
Park Facilities		58.21	3.33	61.54
<i>Community Parks</i>		<i>32.38</i>	<i>0</i>	<i>32.38</i>
Community Park	Edmundson Avenue	24.38	0	24.38
Galvin Park	Crest Avenue	8.00	0	8.00
<i>Neighborhood Parks</i>		<i>18.13</i>	<i>3.07</i>	<i>21.20</i>
Diana Park	Diana Avenue	3.08	0	3.08
Jackson Park	Trail Drive	1.30	1.00	2.30
Corp Yard Site	Edes Street	0	2.07	2.07
Oak Creek Park	Prancer Court	3.50	0	3.50
Nordstrom Park	Dunne Avenue	4.57	0	4.57
Paradise Park	La Crosse Drive	5.68	0	5.68
<i>Mini Parks</i>		<i>7.70</i>	<i>0.26</i>	<i>7.96</i>
Belle Estates Park	Calle Caballeria	0.46	0	0.46
Conte Gardens Park	Conte Way	0.50	0	0.50
Courthouse Demonstration Garden	Butterfield Boulevard	0.30	0	0.30
Diana Estates Park	Diana Avenue	0.50	0	0.50
Fox Hollow Park	Fox Hollow Circle	0.20	0	0.20
Hamilton Square Park	Via Corfino	0.57	0	0.57
Howard Wiechert Park	Via Del Castille	0.90	0	0.90
La Grande Estates Park	Via Castana Ct.	0.49	0	0.49
Library Playground	Dewitt Avenue	0.10	0	0.10
Mill Creek Park	La Arboleda Way	0.93	0	0.93
Murphy Springs Park	Murphy Springs Court	0.49	0	0.49
Rose Haven Park	San Ramon Drive	0.65	0	0.65
Sanchez Park	Sanchez Drive	0.51	0.26	0.41
Stone Creek Park	Rosemary Circle	0.95	0	0.95
21 Mile Park	Edmundson Avenue/ Monterey Road	0.15	0	0.15
Recreational Facilities		62.21	0	62.21
Aquatics Center	Condit Road	8.54	0	8.54

PUBLIC SERVICES AND RECREATION

TABLE 4.13-6 EXISTING PARKLAND INVENTORY

Name	Location	Developed Acreage	Undeveloped Acreage	Total Acres
Centennial Recreation Center	West Edmundson Avenue	8.70	0	8.70
Community and Cultural Center	Monterey Street	6.97	0	6.97
Outdoor Sports Center	Condit Road	38.00	0	38.00
Trails		20.77	0	20.77
Butterfield Linear Park	Butterfield Boulevard	2.09	0	2.09
Edmundson Creek Trail	La Jolla Drive/La Crosse Drive	11.40	0	11.40
West Llagas Creek Trail	La Crosse Drive/ Watsonville Road	7.28	0	7.28
Open Space		0	320.00	320.00
Edmundson Reservoir	Dewitt Avenue	0	36.00	36.00
El Toro	West Dunne Avenue	0	86.00	86.00
Jackson Oaks	Jackson Oaks Drive	0	170.00	170.00
San Pedro Ponds	San Pedro Avenue	0	28.00	28.00
Schools		6.58	0	6.58
Nordstrom School	East Dunne Avenue	3.96	0	3.96
Paradise School	La Crosse Drive	2.62	0	2.62
Homeowners Association Parks	Various	45.98	26.59	72.57
Total		193.00	349.92	549.92

Source: City of Morgan Hill, 2010, Development Impact Fee Study.

County Parks and Recreational Facilities

Residents in the Morgan Hill SOI are served by the Santa Clara County parks and recreation system. County park facilities that serve Morgan Hill include Anderson Lake, County Park, Coyote Creek Parkway, Chesbro Reservoir County Park, Uvas Reservoir, and Uvas Canyon County Park.⁵³

Service Standards

The City's General Plan has a parks and recreation goal to provide useful, accessible and high quality park, recreation and trail facilities programs. Morgan Hill's current recommended standard for parkland is five acres per 1,000 population.⁵⁴ Per the City's Parks, Facilities, and Recreation Programming Master Plan,

⁵³ Santa Clara County, <https://www.sccgov.org/sites/parks/parkfinder/Pages/parkfinder.aspx>, accessed on September 10, 2015.

⁵⁴ City of Morgan Hill, 2000, Parks, Facilities & Recreation Programming Master Plan.

PUBLIC SERVICES AND RECREATION**TABLE 4.13-7 EXISTING RECREATIONAL FACILITIES INVENTORY**

Name	Location	Building Square Footage
Aquatics Center	Condit Road	8,825
Centennial Recreation Center	West Edmundson Avenue	52,135
Community and Cultural Center	Monterey Street	31,610
Community Playhouse	Monterey Street	7,100
Friendly Inn Non-Profit Center	Crest Avenue	6,300
Gavilan College	Monterey Street	11,057
		Turf Fields Square Footage
Outdoor Sports Center	Condit Road	348,000

Source: City of Morgan Hill, 2010, Development Impact Fee Study. Ghione, Chris. Community Services Director, City of Morgan Hill. Personal communication with Alexis Mena. September 10, 2015.

when calculating parkland per thousand residents the City includes City parks, special use facilities, trails, and schools with a joint-use agreement for City use, as well as 10 percent of recreational open space and fifty percent of parks within home owners associations (HOAs).⁵⁵ HOA parks provide an advantage in that the City is not responsible for their maintenance. However, some HOA parks are available only for HOA use and are not available to the greater community.⁵⁶ HOAs provide approximately 46 acres of parkland.⁵⁷ Based on these calculation criteria, there is a total of approximately 208 acres of parkland,⁵⁸ which equates to 5 acres per thousand residents based on a 2015 population of 41,779.⁵⁹ Therefore, the City is currently meeting its standard of 5 acres per thousand residents.

Impact Fees

New residential development would be required to pay park impact fees to generate revenue to fund the park facilities needed to serve new development.⁶⁰ The City collects a fee of \$5,241 per single-family dwelling unit involving a subdivision, \$3,811 per single-family dwelling unit not involving a subdivision,

⁵⁵ City of Morgan Hill, 2000, Parks, Facilities & Recreation Programming Master Plan, page 33.

⁵⁶ City of Morgan Hill, 2000, Parks, Facilities & Recreation Programming Master Plan, page 48.

⁵⁷ City of Morgan Hill, 2010, Development Impact Fee Study, page 32.

⁵⁸ 60.79 acres of park facilities + 62.21 acres of special use facilities + 20.77 acres of trails + 6.58 acres of school facilities + 32 acres (10 percent of 320 acres) of recreational open space + 25.65 acres (50 percent of 45.98 acres + 10 percent of 26.59 acres) = 208.0 acres

⁵⁹ State of California, Department of Finance, 2015. *E-5 Population and Housing Estimates for Cities, Counties, and the State, 2011-2015, with 2010 Benchmark*.

⁶⁰ City of Morgan Hill, 2010, Development Impact Fee Study, page 30.

PUBLIC SERVICES AND RECREATION

\$5,050 per multi-family dwelling unit involving a subdivision, and \$3,675 per multi-family dwelling unit not involving a subdivision.⁶¹

4.13.5.2 STANDARDS OF SIGNIFICANCE

Implementation of the proposed Project would have a significant impact related to parks and recreation if it would:

1. In order to maintain acceptable service ratios or other performance objectives, result in substantial adverse physical impacts associated with the provision of or need for new or physically altered parks or recreation facilities, the construction or operation of which could cause significant environmental impacts, in order to maintain acceptable service ratios.
2. Increase the use of existing neighborhood and regional parks or other recreational facilities, such that substantial physical deterioration of the facility would occur or be accelerated.
3. Include recreation facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.
4. Contribute to cumulative parks and recreation impacts in the area.

4.13.5.3 IMPACT DISCUSSION

This section analyzes the proposed Project's potential impacts to parks and recreation services.

PS-9	Implementation of the proposed Project would not result in substantial adverse physical impacts associated with the provision of new or physically altered parks or recreational facilities in order to maintain the City's adopted parkland service ratio.

General Plan

A significant impact would result if, in order for the City to adequately serve the Project Area, increased demand in the City limits and SOI would require the construction of new facilities or the expansion of existing parks or recreational facilities, the construction or operation of which would cause significant environmental impacts. The existing General Plan establishes a park standard of 5 acres of parkland for every 1,000 Morgan Hill residents. The proposed General Plan proposes to eliminate this standard to be replaced by a new standard currently being developed through the update of the Parks, Recreation, Trails, and Bikeways Master Plan. The City anticipates the Parks, Recreation, Trails, and Bikeways Master Plan Update will be finalized by Fall 2016. Since the new park standard will not be finalized until after the publication of

⁶¹ City of Morgan Hill, 2015, Fee Schedule.

PUBLIC SERVICES AND RECREATION

this Draft EIR, this analysis relies upon the existing General Plan park standard of 5 acres of parkland for every 1,000 Morgan Hill residents.

As indicated in Section 13.5.1, Existing Conditions, the City includes certain recreational facilities in this calculation and the City is currently meeting this service standard. It is projected that by 2035, the horizon year of the proposed General Plan, 7,431 new dwelling units would be developed and the population would increase by 22,888 new residents. New residents would utilize parks and recreational facilities, which could decrease the City's parkland ratio and necessitate the construction of new facilities.

Based on existing park and recreational facilities of 208 acres and a 2035 population of 68,057, the parkland ratio in 2035 would be approximately 3.1 acres per 1,000 residents in the Project Area. To meet the City's existing service standard, an additional 132 acres of parkland would be needed by 2035.

As described in Section 13.5.1, Existing Conditions, the City has current plans to expand the City's parkland inventory by 39.5 acres. With these additional park acres, the City would provide 3.6 acres per 1,000 residents and would not meet the parkland standard. Therefore, additional park acreage would be needed to meet park demand from new residents from development allowed by the proposed General Plan.

The proposed General Plan includes the following goal and policies, in addition to Goal CNF-6 and its supporting policies listed under Impact PS-1 that would help ensure that parkland goals are met:

Goal HC-3	<i>Usable, complete, well-maintained, safe, and high-quality activities and amenities, including active and passive parks and recreational facilities, community gardens, and trails that are accessible to all ages, functional abilities, and socio-economic groups.</i>
Policy HC-3.1	Universal Recreation. Provide recreational facilities and programs that meet the needs of all Morgan Hill residents, including seniors, youth, low-income residents, and citizens with disabilities.
Policy HC-3.2	Parkland Standard. Strive to provide 5 acres of parkland per thousand residents by acquiring and developing parks and recreation facilities, and developing joint use agreements with other agencies and organizations that provide community recreation facilities. Calculate parkland based on classification in the <i>Parks, Facilities, and Recreation Programming Master Plan</i> .
Policy HC-3.3	Park Land Fees. Continue to require park land dedication or in-lieu fees from all new development to meet the recreation and open space needs of the residents of Morgan Hill.
Policy HC-3.4	New Facilities. Continue to develop the recreational facilities identified in the Morgan Hill Vision Process. These include the permanent skate park and trails. Other facilities to be developed include a BMX park, new neighborhood parks in areas currently underserved by parks, and off-leash dog area.
Policy HC-3.8	Private Open Space. Encourage new development to permit public access to private open space and parks where feasible and appropriate.
Policy HC-3.9	Open Space Requirements. Require multi-family residential developments to include common open space suitable for group gatherings. Common open space shall be funded and maintained by Homeowners Associations or property owners.

PUBLIC SERVICES AND RECREATION

Policy HC-3.10	Walking Distance. Site parks and recreational facilities to maximize access for all residents. Where feasible, distribute neighborhood parks throughout the community so that all residents live within a ½-mile walk of a neighborhood or community park. See the <i>Parks, Facilities and Recreation Programming Master Plan</i> for definitions of neighborhood and community parks.
Policy HC-3.11	Conservation Coordination. Coordinate location and development of parks with the Open Space and Conservation Element of the General Plan to maximize opportunities for resource protection, greenbelt creation, environmental education, and passive recreational use of open space.
Policy HC-3.12	Bikeways. Coordinate trails, parks, and recreation facilities with a Citywide bikeways system to include bicycle paths, lanes, and routes.
Policy HC-3.13	Sports Fields. Locate sports fields and courts for efficiency and convenience. Group some fields and courts together at centers or complexes for league and tournament use, and others at neighborhood parks for neighborhood use.
Policy HC-3.14	Streamside Trails. Work in partnership with the Santa Clara Valley Water District to establish easements and develop trails and linear parks along creeks and drainage channels, connecting parks, regional trails, schools, library, and other community facilities and ensuring that natural resources are protected and restored.
Policy HC-3.15	County Parkland. Work in partnership with the Santa Clara County Parks and Recreation Department to enhance appropriate community use of County parkland adjacent to or within the City.
Policy HC-3.16	Greenbelt Areas. Where possible, coordinate the location of future parks with greenbelt areas to maximize public open space and recreational benefits.
Policy HC-3.17	Regional Needs. Plan and design parks and recreational facilities primarily to meet local needs. Consider regional need when meeting that need will provide long-term operations and maintenance benefits (such as facilities where regional tournaments may help offset long-term operations costs) or meet other General Plan goals (such as economic development). Locate and design regional facilities to minimize impact on residential neighborhoods.
Policy HC-3.22	School Coordination. Work in partnership with MHUSD and other schools where appropriate to identify potential locations for future parks adjacent to future schools in areas currently underserved by parks. Where feasible, the lead agency (MHUSD or the City) shall acquire the full amount of land needed for the school or park, with the other agency agreeing to pay its fair share.
Policy HC-3.23	Educational Joint Use. Develop joint use agreements between the City and Morgan Hill Unified School District for all new school or neighborhood parks and school facilities, identifying maintenance responsibilities and maximizing shared use of resources where mutually beneficial to enhance educational and community recreational use.
Policy HC-3.24	Parkland Acquisition. Actively pursue acquisition of appropriate parkland for recommended parks, trails and facilities, and to meet existing and future recreation needs.
Policy HC-3.25	Partnerships. Utilize joint use agreements, memorandums of understanding, and other agreements to partner with public, nonprofit, and private agencies and organizations, including the Morgan Hill Unified School District and other schools, Santa Clara Valley Water District, and the Santa Clara County Parks and Recreation Department, to acquire, develop, and maintain parks and recreation facilities. When appropriate, prioritize partnerships where revenues beyond operations and maintenance costs must be reinvested in the facility or elsewhere within the community to enhance recreation opportunity.
Policy HC-3.28	Funding. Actively pursue additional funding sources and mechanisms to support acquiring, developing, and operating parks, trails, facilities and recreation programs.

PUBLIC SERVICES AND RECREATION

Policy HC-3.29

Development Requirements. Continue to require park acquisition and development fees and/or land dedication to support the acquisition and development of parks, trails and other recreation facilities.

The proposed Project does not directly propose the construction of any parks or recreational facilities. However, as indicated above, to meet increased demand and meet the City's existing service standard of 5 acres of parkland per 1,000 residents the City would need to construct or expand parks and recreational facilities. New residential development would be required to pay park impact fees to generate revenue to fund the park facilities needed to serve new development. Further, future development would be required to comply with applicable General Plan policies that, once adopted, would ensure adequate park and recreational facilities are available for the residents of Morgan Hill. It is not known at what time or location future facilities funded by impact fees from future development would be constructed or what the exact nature of these facilities would be, so it cannot be determined what project-specific environmental impacts would occur from their construction and operation. Impacts from future facility improvements would be project-specific, and would require permitting and review in accordance with CEQA, which would ensure that any environmental impacts are disclosed and mitigated to the extent possible. This EIR is a programmatic document and does not evaluate the environmental impacts of any project-specific development. Therefore, the impact is *less than significant*.

Applicable Regulations:

- None.

Significance Before Mitigation: Less than significant.

Residential Development Control System

The RDCS regulates population growth through the provision of residential building allotments. The RDCS, and the proposed updates to the RDCS as part of the proposed Project, affect the pace of development in the City but do not determine the location, type, or intensity of development. Therefore, the RDCS itself would not increase demands for parks and recreational facilities and would not have the potential to create the need for new or physically expanded facilities. By metering residential development, the RDCS would allow adequate time for planning new or physically altered parks and recreation facilities and would have a positive rather than a negative impact. Overall, the RDCS would have *no impact*.

Significance Before Mitigation: No impact.

PS-10	Implementation of the proposed Project would not increase the use of existing neighborhood and regional parks or other recreational facilities, such that substantial physical deterioration of the facility would occur, or be accelerated.

PUBLIC SERVICES AND RECREATION

General Plan

A significant impact would result if new development allowed by the proposed Project would increase demand for existing parks and recreational facilities such that facility use would exceed the City's ability to maintain acceptable facility conditions. As discussed above in the discussion of Impact PS-9, the City currently meets its adopted standard of providing 5 acres of parkland per 1,000 residents, but would not meet this standard in 2035 based on projected population growth and existing and planned park and recreational facilities. Therefore, as indicated above under Impact PS-9, new residents from development allowed by the proposed General Plan would increase the demand for recreational facilities, and recreational facility standards would require the construction of new or expanded recreation facilities. However, as described under Impact PS-9, the proposed General Plan contains policies that would help ensure that parkland goals are met, thus ensuring that individual park and recreation facilities are not overburdened by use. In addition, the proposed General Plan includes the following additional policies, in addition to Goal CNF-6 and its supporting policies listed under Impact PS-1, that protect the public's investment in park and recreation facilities:

Policy HC-3.5	Mini-Parks. Avoid developing mini-parks, which have high maintenance costs and limited recreational value, unless they serve a specific function, such as a downtown plaza.
Policy HC-3.6	Flood Control Basins. Develop two- to three-acre parks only when they both serve as flood control basins and provide recreational opportunities. Landscape flood control basins less than two acres as a neighborhood amenity, but do not consider them parks.
Policy HC-3.7	Maintenance. Maintain parks and recreational facilities consistent with established standards.
Policy HC-3.18	Minimizing Impacts. Minimize impact on adjacent neighborhoods by utilizing evaluation criteria from the <i>Parks, Facilities and Recreation Programming Master Plan</i> to select sites for major parks and special use facilities.
Policy HC-3.21	Multiuse Facilities. Incorporate multi-functional and multi-generational design into facilities, provided that such uses do not create long-term operational conflicts.
Policy HC-3.26	Long-Term Operations. Consider long-term operations and maintenance implications when designing new or renovating existing parks and recreation facilities. Identify cost implications and funding sources for long-term operations and maintenance for each new facility prior to proceeding with project development.
Policy HC-3.27	Business Plans. Develop business plans for new sports parks and special use facilities that address management structure, potential partnerships, long-term operations and maintenance costs and potential for cost recovery through user fees and other means.

As indicated above, efforts to maintain the City's service standard would help to prevent the overuse and subsequent deterioration of existing parks and recreational facilities. Further, future development would be required to comply with applicable General Plan policies that, once adopted, would promote adequate park and recreational facility maintenance. If future park and recreational facility use results in the physical deterioration of facilities, it is not known what the exact nature of these physical deteriorations would be, so it cannot be determined what environmental impacts may occur. Future facility improvements that may be

PUBLIC SERVICES AND RECREATION

needed would require permitting and review in accordance with CEQA, which would ensure that any environmental impacts are disclosed and mitigated to the extent possible. This EIR is a programmatic document and does not evaluate the environmental impacts of any project-specific development. Therefore, the impact is *less than significant*.

Applicable Regulations:

- None.

Significance Before Mitigation: Less than significant.

Residential Development Control System

The RDCS regulates population growth through the provision of residential building allotments. The RDCS, and the proposed updates to the RDCS as part of the proposed Project, affect the pace of development in the City but do not determine the location, type, or intensity of development. Therefore, the RDCS itself would not create demands for parks and recreational facilities that could result in the physical deterioration of such facilities. By metering residential development, the RDCS would allow adequate time for planning new or physically altered parks and recreation facilities to avoid their physical deterioration and would have a positive rather than a negative impact. In addition, the proposed RDCS Competition Standards would award points for projects that contribute park fees and/or open space dedication beyond the minimum requirement and/or for creating public neighborhood parks. As such, the proposed RDCS would help create additional park land. Overall, the RDCS would have *no impact*.

Significance Before Mitigation: No impact.

PS-11	Implementation of the proposed Project would not include or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

General Plan

A significant impact would result if the proposed Project would result in the construction or expansion of recreational facilities. As indicated in Section 13.5.1, Existing Conditions, the City includes certain recreational facilities in its calculation of service standards and the City is currently meeting its service standard. Per the City's Parks, Facilities, and Recreation Programming Master Plan, when calculating parkland per thousand residents the City includes City parks, special use facilities, trails, and schools with a joint-use agreement for City use, as well as 10 percent of recreational open space and fifty percent of parks within HOAs. As discussed above in the discussion of Impact PS-9, the City currently meets its adopted standard but would not meet this standard in 2035 based on projected population growth and existing and planned park and recreational facilities. Therefore, additional parks or recreational facilities would be needed to meet park demand from new residents from development allowed by the proposed General Plan, and it is

PUBLIC SERVICES AND RECREATION

unknown whether the City would construction new parks, recreational facilities, or both to meet this demand. As described under Impacts PS-9 and PS-10, the proposed General Plan contains policies that would help ensure that park and recreational facility goals are met, and that facilities are maintained. If recreational facilities are expanded or constructed in the future to meet future demand, it is not known at what time or location future facilities would be constructed or what the exact nature of these facilities would be, so it cannot be determined what project-specific environmental impacts would occur from their construction and operation. Future facility improvements that may be needed would require permitting and review in accordance with CEQA, which would ensure that any environmental impacts are disclosed and mitigated to the extent possible. This EIR is a programmatic document and does not evaluate the environmental impacts of any project-specific development. Therefore, the impact is *less than significant*.

Applicable Regulations:

- None.

Significance Before Mitigation: Less than significant.

Residential Development Control System

The RDCS regulates population growth through the provision of residential building allotments. The RDCS, and the proposed updates to the RDCS as part of the proposed Project, affect the pace of development in the City but do not determine the location, type, or intensity of development. Therefore, the RDCS itself would not have the potential to create the need for new or physically expanded recreational facilities. By metering residential development, the RDCS would allow adequate time for planning new or physically expanded recreation facilities and would have a positive rather than a negative impact. Overall, the RDCS would have *no impact*.

Significance Before Mitigation: Less than significant.

4.13.5.4 CUMULATIVE IMPACTS

PS-12	Implementation of the proposed Project would not contribute to cumulative parks and recreation impacts in the area.

As discussed in Chapter 4, Environmental Evaluation, this EIR takes into account growth from development under the proposed Project within the City combined with the estimated growth in the service areas of each service provider. As described in the discussion of Impact PS-9, the RDCS update would not contribute to increased park and recreational facility demands and would therefore have no parks and recreation impacts. As such, the RDCS update would not have the potential to contribute to cumulative parks and recreation impacts and this discussion focuses on the potential cumulative impacts of the proposed Project.

PUBLIC SERVICES AND RECREATION

Parks and recreation serves in the Project Area are provided by the City and County. Future growth in the county would result in increased demand for park and recreational facilities throughout the county. As a result, the County would potentially need to expand and construct additional parks and other recreational facilities to meet the increased demand. State law allows, but does not require, jurisdictions to require additional development to fund park improvements; however, proper implementation of the policies listed under Impacts PS-9 and PS-10 would help ensure the provision of adequate parklands along with new development. The final location and size of additional facilities would be determined as part of future development activity. As specific parkland expansion or improvement projects are identified, additional project-specific, environmental analysis would be completed. As a result, the cumulative impact associated with parks and recreational facilities would be *less than significant*.

Applicable Regulations:

- None.

Significance Before Mitigation: Less than significant.

4.13.6 SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION MEASURES

The proposed Project would not result in any significant impacts to public services. Therefore, no mitigation measures are required.

4.13.7 FULL BUILDOUT

The full buildout anticipated under the proposed Project would include significantly more non-residential development than the 2035 horizon-year development projection analyzed above, in terms of both the amount and the extent of development. Therefore, the potential for impacts related to public services and recreation would increase. However, as discussed in Chapter 3, Project Description, it is extremely unlikely that full buildout would ever occur under the proposed Project. Therefore, an analysis of full buildout is not required by CEQA.

PUBLIC SERVICES AND RECREATION

4.14 TRAFFIC AND TRANSPORTATION

This chapter describes the regulatory framework and existing conditions in Morgan Hill related to transportation and traffic, and the potential impacts of the proposed Project on transportation and traffic.

4.14.1 ENVIRONMENTAL SETTING

4.14.1.1 REGULATORY FRAMEWORK

This section describes federal, state, regional, and local statutes, regulations, and policies that would apply to the proposed Project. This information provides a context for the discussion of existing and future traffic conditions, as well as the environmental laws and policies that are relevant to the California Environmental Quality Act (CEQA) review process for transportation and circulation.

Federal Regulation

Federal Highway Administration

The Federal Highway Administration (FHWA) is the agency of the United States (US) Department of Transportation (DOT) responsible for the federally funded roadway system, including the interstate highway network and portions of the primary state highway network, such as US 101.

State Regulation

California Transportation Commission

The California Transportation Commission (CTC), consisting of nine members appointed by the Governor, administers the public decision-making process that sets priorities and funds projects envisioned in long-range transportation plans. The CTC's programming includes the State Transportation Improvement Program (STIP), a multi-year capital improvement program of transportation projects on and off the state highway system, funded with revenues from the state Highway Account and other funding sources. The California Department of Transportation (Caltrans) manages the operation of state highways.

California Department of Transportation

Caltrans is the primary state agency responsible for transportation issues. One of its duties is the construction and maintenance of the state highway system. Caltrans approves the planning, design, and construction of improvements for all state-controlled facilities including US 101, and the associated interchanges for these facilities located in Morgan Hill. Caltrans has established standards for roadway traffic flow and developed procedures to determine if state-controlled facilities require improvements. For projects that may physically affect facilities under its administration, Caltrans requires encroachment

TRAFFIC AND TRANSPORTATION

permits before any construction work may be undertaken. For projects that would not physically affect facilities, but may influence traffic flow and levels of services at such facilities, Caltrans may recommend measures to mitigate the traffic impacts of such projects.

The following Caltrans procedures and directives are relevant to the proposed General Plan Update, particularly state roadway facilities:

- *Level of Service Target.* Caltrans maintains a minimum level of service (LOS) at the transition between LOS C and LOS D for all of its facilities.¹ Where an existing facility is operating at less than the LOS C/D threshold, the existing measure of effectiveness should be maintained.²
- *Caltrans Project Development Procedures Manual.* This manual outlines pertinent statutory requirements, planning policies, and implementing procedures regarding transportation facilities. It is continually and incrementally updated to reflect changes in policy and procedures. For example, the most recent revision incorporates the Complete Streets policy from Deputy Directive 64-R1, which is detailed below.
- *Caltrans Deputy Directive 64.* This directive requires Caltrans to consider the needs of non-motorized travelers, including pedestrians, bicyclists, and persons with disabilities, in all programming, planning, maintenance, construction, operations, and project development activities and products. This includes incorporation of the best available standards in all of Caltrans' practices.
- *Caltrans Deputy Directive 64-R1.* This directive requires Caltrans to provide for the needs of travelers of all ages and abilities in all planning, programming, design, construction, operations, and maintenance activities and products on the state highway system. Caltrans supports bicycle, pedestrian, and transit travel with a focus on "complete streets" that begins early in system planning and continues through project construction and maintenance and operations.
- *Caltrans Director's Policy 22.* This policy establishes support for balancing transportation needs with community goals. Caltrans seeks to involve and integrate community goals in the planning, design, construction, and maintenance and operations processes, including accommodating the needs of bicyclists and pedestrians.

Caltrans Aeronautics division of Caltrans administers noise regulations and land use planning laws to lessen the impacts caused by aviation. Caltrans Aeronautics issues permits for and inspects hospital heliports and public-use airports, makes recommendations regarding schools sites near airports, authorizes helicopter landing sites near schools, and provides grants and loans at airports.

¹ Refer to Table 4.13-1 above for definitions of each level of service (LOS).

² California Department of Transportation. 2010. *Guide for the Preparation of Traffic Impact Studies*.

TRAFFIC AND TRANSPORTATION***Senate Bill 743 (Steinberg, 2013)***

Senate Bill 743 (SB 743) requires the California Governor’s Office of Planning and Research (OPR) to amend the CEQA Guidelines to provide an alternative to LOS as the metric for evaluating transportation impacts under CEQA. Particularly within areas served by transit, the alternative criteria must promote the reduction of greenhouse gas (GHG) emissions, development of multimodal transportation networks, and diversity of land uses. Measurements of transportation impacts may include VMT, VMT per capita, automobile trip generation rates, or automobile trips generated. Once alternative criteria are incorporated into the CEQA Guidelines, auto delay will no longer be considered a significant impact under CEQA. SB 743 also amended state congestion management law to allow cities and counties to opt out of LOS standards in certain infill areas.

California Complete Streets Act of 2008 (AB 1358)

Originally passed in 2008, California’s Complete Streets Act came into force in 2011 and requires local jurisdictions to plan for land use transportation policies that reflect a “complete streets” approach to mobility. Complete streets comprises a suite of policies and street design guidelines which provide for the needs of all road users, including pedestrians, bicyclists, transit operators and riders, children, the elderly, and the disabled. From 2011 onward, any local jurisdiction—county or city—that undertakes a substantive update of the circulation element of its general plan must consider complete streets and incorporate corresponding policies and programs.

Assembly Concurrent Resolution 211

Assembly Concurrent Resolution 211, enacted in 2002, acknowledges the importance of bicycling and walking to the State of California. The Resolution encourages all cities, including Morgan Hill, to “implement the policies of... the United States Department of Transportation’s design guidance document on integrating bicycling and walking when building their transportation infrastructure.”

Regional Agencies, Plans, and Policies***Metropolitan Transportation Commission***

The Metropolitan Transportation Commission (MTC) is the transportation planning, coordinating, and financing agency for the nine-county San Francisco Bay Area, including Santa Clara County. It also functions as the federally mandated metropolitan planning organization (MPO) for the region. It is responsible for regularly updating the Regional Transportation Plan (RTP), a comprehensive blueprint for the development of mass transit, highway, airport, seaport, railroad, bicycle, and pedestrian facilities.

With the passage of Assembly Bill (AB) 32, the Global Warming Solutions Act of 2006, the State of California committed itself to reducing statewide GHG emissions to 1990 levels by 2020. Subsequent to adoption of AB 32, the state adopted Senate Bill 375 (SB 375) as the means for achieving regional

TRAFFIC AND TRANSPORTATION

transportation-related GHG targets. Among the requirements of SB 375 is the adoption of targets to be met by 2020 and 2035 for each MPO in the state, as well as the creation of a Sustainable Communities Strategy (SCS) that provides a plan for meeting regional targets. The SCS and the RTP must be consistent with one another, including action items and financing decisions. MPOs must use transportation and air emissions modeling techniques consistent with guidelines prepared by the CTC.

The current RTP, *Plan Bay Area: Strategy for a Sustainable Region*, was adopted on July 18, 2013 and includes both the region's Sustainable Communities Strategy and the 2040 Regional Transportation Plan. *Plan Bay Area* was prepared by MTC in partnership with the Association of Bay Area Governments (ABAG) and cities and counties throughout the region. *Plan Bay Area* is an integrated long-range transportation and land-use/housing plan intended to support a growing economy, provide more housing and transportation choices, and reduce transportation-related pollution in the Bay Area. It also specifies a detailed set of investments and strategies to maintain, manage, and improve the region's transportation system, specifying how anticipated federal, state, and local transportation funds will be spent.

The MTC has established its policy on Complete Streets in the Bay Area. The policy states that projects funded all, or in part, with regional funds (e.g., federal, state Transportation Improvement Program, bridge tolls) must consider the accommodation of bicycle and pedestrian facilities, as described in Caltrans Deputy Directive 64. These recommendations do not replace locally adopted policies regarding transportation planning, design, and construction. Instead, these recommendations facilitate the accommodation of pedestrians, including wheelchair users, and bicyclists into all projects where bicycle and pedestrian travel is consistent with current adopted regional and local plans.

Santa Clara Valley Transportation Authority

Congestion Management Plan

The MTC requires the local transportation authority, such as the Santa Clara Valley Transportation Authority (VTA), to establish transportation plans that can feed into the larger RTP. In Santa Clara County, the VTA is the Congestion Management Agency (CMA) tasked with preparing the Congestion Management Plan that describes the strategies to address congestion problems and monitoring compliance. The VTA works cooperatively with the MTC, transit agencies, local governments, the Caltrans and the BAAQMD. The CMP contains LOS standards for highways and arterials, multimodal performance standards, a capital improvement program, a program for analyzing land use decisions, and a travel demand management (TDM) program.

The minimum LOS standard for VTA-monitored CMP intersections is LOS E, except for facilities grandfathered in at LOS F, which states that intersections operating at LOS F at the baseline year for implementation of an LOS standard can be grandfathered in. The standards for Santa Clara County were established in October of 1991; thus, any intersection operating at LOS F prior to the established 1991 LOS

TRAFFIC AND TRANSPORTATION

standards are not held to the minimum standard of LOS E.³ Member Agencies, which include the cities and County of Santa Clara, must ensure that CMP roadways operate at or better than the minimum LOS standard. The VTA monitors the performance of CMP facilities at a minimum of every two years. If the minimum LOS standards are not met, Member Agencies plan for improvements to address the congestion.⁴ Morgan Hill uses a minimum LOS standard of LOS D with the exception of the following:

- LOS F for Downtown intersections and segments including at Main Avenue/Monterey Road, along Monterey Road between Main Avenue and Fifth Street, and along Depot Street at First Street through Fifth Street;
- LOS E for the following intersections and freeway zones:
 - Main Avenue and Del Monte Avenue
 - Main Avenue and Depot Street
 - Dunne Avenue and Del Monte Avenue
 - Dunne Avenue and Monterey Avenue
 - Dunne Avenue and Church Street
 - Dunne Avenue and Depot Street
 - Cochrane Road and Monterey Road
 - Tennant Avenue and Monterey Road
 - Tennant Avenue and Butterfield Boulevard
 - Cochrane Road Freeway Zone: from Madrone Parkway/Cochrane Plaza to Cochrane Road/DePaul Drive
 - Dunne Avenue Freeway Zone: from Walnut Grove Drive/East Dunne Avenue to Condit Road/East Dunne Avenue
 - Tennant Avenue Freeway Zone: from Butterfield Boulevard/Tennant Avenue to Condit Road/Tennant Avenue

To manage the transportation system and monitor performance in relation to established LOS standards, the VTA has designated a CMP roadway system for Santa Clara County. If adopted standards are not being maintained on a specific roadway in the designated system, actions must be taken to address problems on that facility or plans must be developed to improve the overall LOS of the system and improve air quality. The CMP roadway system is a subset of the broader Metropolitan Transportation System (MTS).

Valley Transportation Plan 2040

The Valley Transportation Plan (VTP) 2040 is a long-range plan that identifies programs, projects, and policies that the VTA Board of Directors will pursue over the lifetime of the plan. It connects projects and

³ Santa Clara County VTA, Congestion Management Plan, 2013, page 29.

⁴ Santa Clara County VTA, Congestion Management Plan, 2013, pages 29-30.

TRAFFIC AND TRANSPORTATION

programs with anticipated funds and provides a framework for the development and maintenance of the transportation network.

The VTP 2040 identifies the following roadway improvements in Morgan Hill:

- VTP ID H3, Convert HOV lanes to express lanes on US 101 from Whipple Avenue in San Mateo County to Cochrane Road in Morgan Hill.
- VTP ID R8, Extend Butterfield Boulevard and North Road to include a four-lane arterial, bike lanes, sidewalks, lighting, and signal modifications.
- VTP ID R9, Extend Butterfield Boulevard between Tennant Avenue and Watsonville Road.
- VTP ID R10, Improve Santa Teresa Boulevard between Main Avenue and DeWitt Avenue to include bike lanes in both directions, utility relocations, and add traffic signals at three intersections.
- VTP ID S19, Improve traffic signal timing Citywide.
- VTP ID S20, Install a wireless vehicle detection system at all signalized intersections.

The VTP 2040 identifies three bicycle projects in Morgan Hill:

- VTP ID B86, Main Avenue Bike Lanes: Butterfield Boulevard to Condit Road. This project consists of the construction of bike lanes on Main Avenue.
- VTP ID B87, Sobrato High School Bike Access Improvements: Bike Path Southeast from Burnett Avenue to Coyote Creek Trail. This project consists of the construction of a bridge over Coyote Creek and shoulder widening and striping to provide bike access from Sobrato High School east to the existing Coyote Creek Trail System.
- VTP ID B88, West Little Llagas Creek Trail: Main Avenue to Spring Avenue. This project consists of the construction of a Class I bicycle/pedestrian trail adjacent to West Little Llagas Creek.

2008 South County Circulation Study

The 2008 South County Circulation Study, prepared by VTA, is a long-term regional planning study that evaluates existing and projected future conditions related to land use changes and travel patterns in the southern part of Santa Clara County, including the City of Morgan Hill. The key purpose of the study was to identify transportation improvements that improve travel in the South County area. The study suggests that measures such as reviewing land use strategies, transit and multi-modal opportunities, High Occupancy Toll (HOT) lanes for new and existing roads, and optimizing infrastructure should be pursued. Regional impact fees are also considered as a source of revenue for improvements to regional transportation facilities. The City of Morgan Hill will continue to participate in regional solutions; however, the need for additional capacity on freeways and regional-serving facilities is the primary responsibility of regional and state agencies (VTA and Caltrans).

TRAFFIC AND TRANSPORTATION

Santa Clara Countywide Bicycle Plan

In 2008, VTA completed the Santa Clara Countywide Bicycle Plan (SCCBP), which provided a foundation for maintaining and enhancing the countywide bicycle network. The vision of the SCCBP is:

To establish, protect, and enhance bicycling as a viable transportation mode and to assure that bicycling is a practical and safe mode of travel, by itself and in combination with other modes.

The Santa Clara Countywide Bicycle Plan identifies four potential cross county bicycle corridors that would directly serve Morgan Hill. The potential cross county bicycle corridors include:

- US 101 Corridor – this bicycle corridor would extend from Sunnyvale to the San Benito County line, via Monterey Road in the City of Morgan Hill.
- Valley Fair to Santa Teresa Corridor – this bicycle corridor would extend from San Jose to the San Benito County line, via various roadways in the west side of the City, including Hale Avenue, Main Avenue, Dunne Avenue, and Santa Teresa Boulevard.
- San Martin East-West Route – this bicycle corridor would extend along San Martin and Dunne Avenues to De Witt Avenue and Oak Glen Avenue in the west side of the City.
- Eastern South Valley Corridor – this bicycle corridor would extend from Morgan Hill to Gilroy, via Hill Road in the City of Morgan Hill.

Additionally, the 2008 Countywide Bicycle Plan also identifies two potential new Across Barrier Connections (ABC) over US 101 in the City of Morgan Hill: one between Cochrane Road and Main Avenue, and the second between Dunne and Tennant Avenues.

Santa Clara County Bicycle Technical Guidelines

The VTA Bicycle Technical Guidelines (BTG) establish standards and guidance for planning, designing, operating, retrofitting, and maintaining roadways and bikeways throughout Santa Clara County, including parts of Morgan Hill. The BTGs are intended to improve the quality of bicycle facilities and to ensure countywide consistency in the design and construction of the countywide bicycle network, including roadways. The BTGs apply to projects that are a part of the countywide bicycle network. The BTGs are divided into the following four parts:

- **Part 1** provides an introduction and general guidance, including purpose and policy guidance, as well as bicycle characteristics, such as bicyclist skill levels and facilities that best accommodate them.
- **Part 2** includes the technical guidelines for roadways, including roadway design elements, construction zones and maintenance, intersections and interchanges, and signalized intersections.
- **Part 3** establishes technical guidelines for on-road bikeways, including bikeways on major rural roads, and local roads.

TRAFFIC AND TRANSPORTATION

- **Part 4** includes technical guidelines for bike-only facilities, including bike paths, and bike bridges, as well as bike parking.

Santa Clara Countywide Trails Master Plan

The Santa Clara County General Plan, adopted in November 1995, includes a Countywide Trails Master Plan. The Countywide Trails Master Plan identifies approximately 535 miles of off-street trail routes within the county that serve as recreational facilities and transportation routes for bicyclists and pedestrians. The Countywide Trails Master Plan includes several trails that traverse the City of Morgan Hill.

- Benito-Clara Trail (Regional Route) – this trail links recreational resources in northern San Benito County with those in southern Santa Clara County, specifically those in Morgan Hill and Gilroy. Within Morgan Hill the proposed trail would connect to planned bicycle facilities along Santa Teresa-Hale.
- Morgan Hill Cross-Valley Trail (Sub-Regional Route) – this trail is an east-west route that connects the western foothills to Anderson Lake County park. The route utilizes bike facilities along Dunne Avenue within Morgan Hill.
- Main Avenue Trail (Connector Route) – this trail connects Santa Teresa Boulevard through Morgan Hill to regional trails along the foothills east of Morgan Hill. The route utilizes bike facilities along Main Avenue within Morgan Hill.
- Paradise Valley Trail (Connector Route) – this trail connects the Morgan Hill Cross-Valley Trail route with other sub-regional routes along the western foothills.
- San Martin/South Valley Trails (Connector Route) – this trail connects Main Avenue in Morgan Hill to regional routes south of Morgan Hill. The route utilizes bicycle facilities along Foothill Avenue within Morgan Hill.

Local Plans and Policies

Morgan Hill Municipal Code

Title 10 of the Morgan Hill Municipal Code establishes the City's traffic regulations. In addition, it designates the following streets as commercial vehicle truck routes:

- Monterey Highway from the southerly City limit to Tennant Avenue and from the northerly City limit to Cochrane Road.
- Cochrane Road from Highway 101 to Monterey Highway.
- Tennant Avenue from Highway 101 to Monterey Highway.

TRAFFIC AND TRANSPORTATION

Chapter 18.50 of the Zoning Code establishes off-street parking and loading requirements, including requirements for the number of spaces based on the use and/or location and parking and loading space standards.

Design Standards and Standard Details for Construction

Title 17 of the City of Morgan Hill Municipal Code establishes the City's design standards for local streets. Chapter 17.34 identifies local street standards including standards for roadway right-of-way width, curbs, gutters, driveways, sidewalks, complete paving to curb.

2008 Bikeways Master Plan

The City of Morgan Hill Bikeways Master Plan identifies various bicycle projects that would provide for a more complete bicycle network within the City. The Bikeways Master Plan includes potential shared-use paths, bike lanes, bike routes, and bike/pedestrian bridges. These proposed bicycle facilities would extend existing facilities and/or provide a connection between existing and new bicycle facilities within the City. Although more than one hundred new bicycle facility segments are identified in the plan, the document also provides a list of priority projects, which include the following bicycle projects:

- Live Oak High School Access – this project consists of providing bike lanes along Main Avenue, between Butterfield Boulevard and between the Live Oak High School and Elm Road; Mission View, between Cochrane Road and Half Road; and along Elm Road and Half Road.
- Sobrato High School Access – this project consists of providing bike lanes along Burnett Avenue, east of Sobrato High School to the Coyote Creek Trail, and along Tilton Avenue, between Hale Avenue and Monterey Road. This project is also identified in the VTP 2040 (ID B87).
- West Little Llagas Creek Trail – this project consists of providing a shared-use path along the West Little Llagas Creek, extending from West Main Avenue to the Silveira Park Trail. This project is also identified in the VTP 2040 (ID B88).
- Santa Teresa Corridor – this project primarily consists of providing bike lanes (with a short segment designated as a bike route with shoulder striping) along the Hale Avenue/Sunnyside Avenue/Santa Teresa Boulevard corridor. This project is also identified as one of the four potential cross county bike corridors in the Santa Clara Countywide Bicycle Plan (Valley Fair to Santa Teresa corridor).
- Monterey Highway Corridor – this project would close the existing gap in the bike lanes on Monterey Road, between Main Avenue and Dunne Avenue, with a bike route, and would extend the existing bicycle lanes on Monterey Road beyond their current terminus points north of Burnett Avenue to the north and Middle Avenue to the south.
- Madrone Channel Trail – this project consists of providing a shared-use path along the Madrone Channel, extending from north of Burnett Avenue to Middle Avenue, traversing the entire east side of the City.

TRAFFIC AND TRANSPORTATION

- East/West Connection to Coyote Creek – this project consists of providing bike lanes and bike routes along various streets between Burnett Avenue and Cochrane Road connecting to Coyote Creek. The streets include Madrone Parkway, Peebles Avenue, Butterfield Boulevard, and Vista De Lomas Avenue.

4.14.1.2 EXISTING CONDITIONS

This section describes the existing circulation network in Morgan Hill, including vehicular circulation, public transit service, bicycle circulation, pedestrian circulation, and parking. It also identifies the study network and methodology used to calculate existing operating conditions for the above-mentioned modes of transportation, and it includes data summarizing existing operating conditions.

Roadway Network

Morgan Hill is served by an extensive roadway network of freeways, arterials, and local roads. These roadways provide access to the surrounding municipalities and to local destinations, such as employment areas, shopping centers, schools, recreational opportunities, and residential communities. Morgan Hill's roadway network is shown in Figure 4.14-1.

Regional and local roadways in the City include US 101, Monterey Road, Butterfield Boulevard, Cochrane Road, Dunne Avenue, and Tennant Avenue. Each of these facilities is described below.

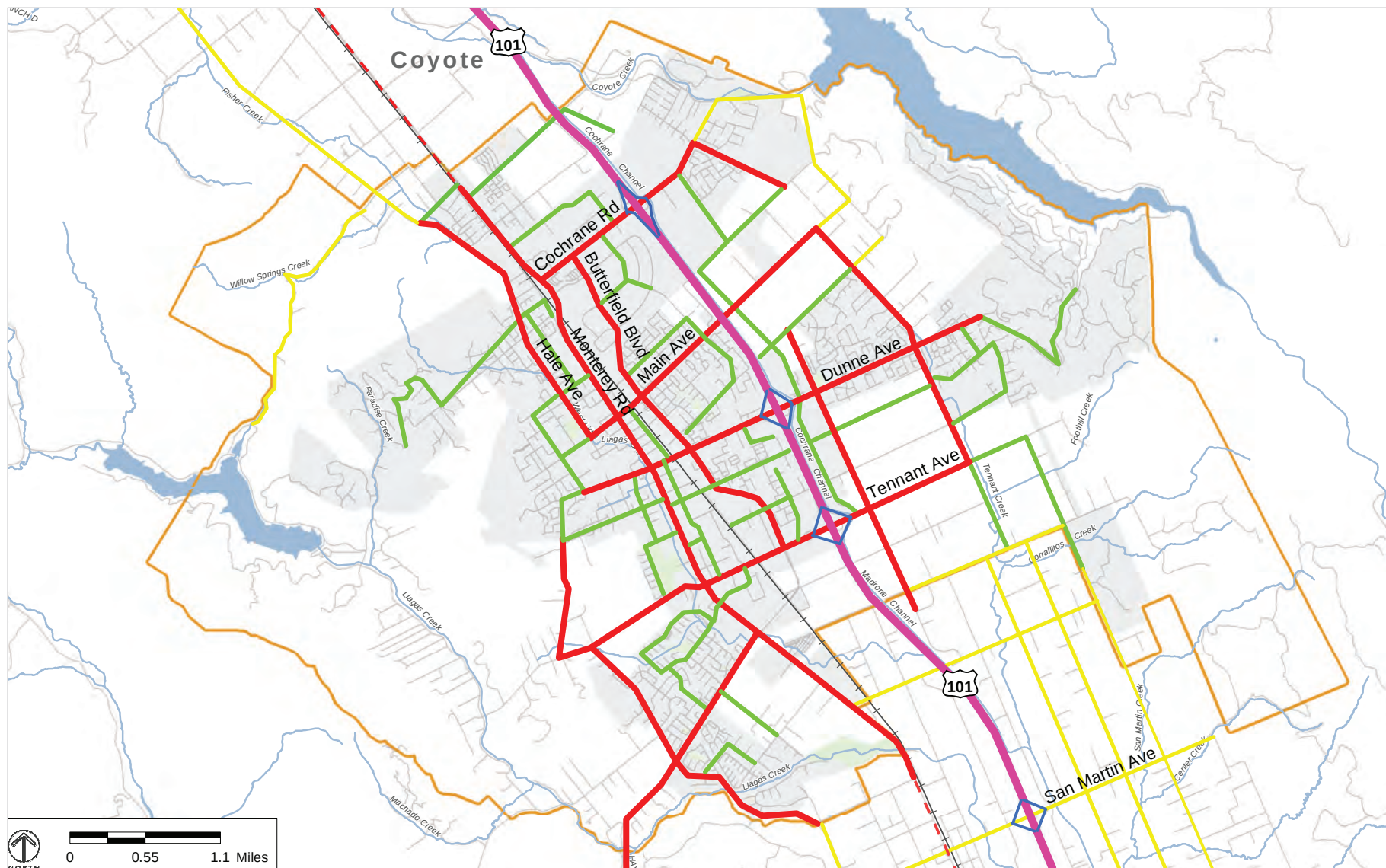
North-South Roadways

US 101 is a major north-south freeway that extends from southern California to northern California. The freeway serves as the primary roadway connection between the City of Morgan Hill and Santa Clara County to the north and San Benito County to the south. Approximately 4.25 miles of US 101 fall within the City of Morgan Hill. US 101 is an eight-lane freeway (three mixed-flow lanes and one high-occupancy vehicle (HOV) lane in each direction) north of Cochrane Road. South of Cochrane Road, it is a six-lane freeway with no HOV lanes. Interchanges with Tennant Avenue, Dunne Avenue, and Cochrane Road provide access to the most of the City of Morgan Hill.

Monterey Road is a four-lane divided major arterial that runs directly through Downtown Morgan Hill. Monterey Road extends from Market Street in Downtown San Jose, through Downtown Morgan Hill, and to US 101, south of the City of Gilroy. The speed limit on Monterey Road varies from 45 mph north of the Downtown to 25 mph between Main Avenue and East Dunne Avenue within the Downtown.

Butterfield Boulevard is a four-lane divided arterial with a separated Class I bikeway and pedestrian path that runs southward from Cochrane Road, past Tennant Avenue, to its new intersection with Watsonville Road/Monterey Road. Butterfield Boulevard has a posted speed limit of 35 mph. Along with Monterey Road, Butterfield Boulevard serves as a primary north-south route within the City.

TRAFFIC AND TRANSPORTATION



Source: City of Morgan Hill.

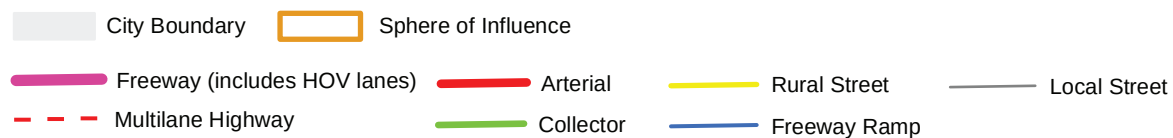


Figure 4.14-1
Roadway Classifications

TRAFFIC AND TRANSPORTATION

Hale Avenue/Santa Teresa Boulevard is a two-lane roadway that extends southward from San Jose into northern Morgan Hill. South of Scheller Avenue, the roadway changes designation to Hale Avenue. Hale Avenue terminates south of Main Avenue. Santa Teresa resumes at Watsonville Road and continues south to the City of Gilroy.

Hill Road is a two-lane roadway that runs southward from its intersection with Main Avenue to south of Tennant Avenue, in the east part of the City.

Murphy Avenue is a two-lane roadway that runs parallel to and east of US 101 and extends southward from its intersection with Diana Avenue to Middle Avenue.

East-West Roadways

Cochrane Road is an east-west divided arterial that runs from Monterey Road to Malaguerra Avenue, east of US 101. Cochrane Road is a four-lane road between Monterey Road and Sutter Boulevard. Between Sutter Boulevard and US 101, Cochrane Road widens to three-lanes eastbound and two lanes westbound, then narrows back to four lanes east of US 101, and to two lanes east of Mission View Drive. Cochrane Road has a posted speed limit of 45 mph. A full access interchange with US 101 is provided along Cochrane Road.

Main Avenue is a two-lane roadway that runs eastward from its intersection with De Witt Avenue to Coyote Road at the base of the eastern foothills. The roadway has an overcrossing of US 101, however no access to US 101 is provided.

Dunne Avenue is a four-lane arterial that runs eastward from its intersection with Peak Avenue to the eastern foothills. The roadway has posted speed limits of 35 and 45 mph. A full access interchange with US 101 is provided along Dunne Avenue.

Edmundson Avenue is a two-lane roadway that runs eastward from its intersection with Oak Glen Avenue to Monterey Road, at which point it transitions to Tennant Avenue.

Tennant Avenue is an east-west roadway that runs from Foothill Avenue, east of US 101, to Monterey Road. Tennant Avenue is a two-lane road between Foothill Avenue and US 101. West of US 101, Tennant Avenue widens to a four-lane divided roadway to Monterey Road with a posted speed limit of 40 mph. West of Monterey Road, the roadway narrows to two lanes and changes designation to Edmundson Avenue. A full access interchange with US 101 is provided along Tennant Avenue.

Watsonville Road is a two-lane roadway that extends west from its intersection with Monterey Road to SR 152 at the base of the western foothills.

TRAFFIC AND TRANSPORTATION

Level of Service Methodology

This section provides information on the existing operating conditions for selected intersections and freeway mainline segments in Morgan Hill in terms of level of service. Level of service (LOS) describes the operating conditions experienced by persons on a transportation system. For motorized vehicles, level of service is a qualitative measure of the effects of a number of factors, including speed and travel time, traffic interruptions, freedom to maneuver, driving comfort, and convenience. Levels of service are designated LOS A through F, from best to worst, which cover the entire range of traffic operations that might occur. LOS A through E generally represent traffic volumes at less than roadway capacity, while LOS F represents conditions where traffic demands exceed capacity and the flow of traffic breaks down, resulting in stop-and-go conditions and long queues of vehicles.

Travel Demand Forecasting Model

The City of Morgan Hill travel demand forecasting (TDF) model was developed specifically for the City as part of the 2010 Circulation Element update to help the City project traffic impacts attributable to the projected land use growth that is part of the General Plan. A detailed description of the City's model structure is presented in the *Morgan Hill Travel Demand Forecasting Model & Future Improvements Study*, Fehr & Peers, June 2009. As part of this analysis, the model was updated and validated to reflect a baseline year of 2015 and a future year of 2035.

The model is implemented using the TransCAD transportation planning software. The City of Morgan Hill model includes the three elements traditionally associated with models of this kind. These elements include:

- Trip Generation
- Trip Distribution
- Traffic Assignment

The fundamental structure of the model includes a representation of the City's street system (highway network) that defines street segments (links) identified by end points (nodes). Each roadway link is further represented by key characteristics (link attributes) that describe the length, travel speeds, and vehicular capacity of the roadway segment. Small geographic areas (traffic analysis zones also called TAZ's) are used to quantify the existing and planned land use activity throughout the City's planning area.

The data in the model includes information about the number of households (single family, multi-family and senior housing) and employment based variables (retail, office, manufacturing, medical, industrial, etc.) expressed in square feet of gross building area. In addition, the land use database includes student enrollment estimates for kindergarten through 8th grade and high schools, as well as the number of motel rooms. The model uses trip generation rates similar to those found in the Institute of Transportation Engineers (ITE) Trip Generation manual.

Additionally, the traffic projections produced by the Morgan Hill model take into account the possible reduction in trips and trip lengths as a result of the interaction between the different and complementing

TRAFFIC AND TRANSPORTATION

land uses within the City. These include pass-by trips to commercial uses as well as diverted trips as the result of new complementing land uses.

In addition to providing projected peak hour and daily traffic volumes, model outputs include ratios of projected traffic volume to available roadway capacity (V/C ratios) on each roadway segment and information on vehicle-miles of travel by facility type (freeway, arterial streets, etc.). These informational reports can be used to identify potential impacts associated with the General Plan growth.

Signalized Intersections

The City of Morgan Hill uses the TRAFFIX level of service methodology, which is based on the 2000 *Highway Capacity Manual* (HCM), for signalized intersections. TRAFFIX evaluates signalized intersection operations based on average delay time for all vehicles at the intersection. Since TRAFFIX is also the CMP-designated intersections level of service methodology, the City of Morgan Hill methodology employs the CMP default values for the analysis parameters, which include adjusted saturation flow rates to reflect conditions in Santa Clara County. All intersections within the City of Morgan Hill are required to meet the City's LOS standards, which are detailed in standard of significance #1 below. Most intersections must operate at LOS D, with the exception of specific intersections Downtown and near 101.

The correlation between average delay and level of service for signalized intersections is shown in Table 4.14-1.

Unsignalized Intersections

The City of Morgan Hill also uses the TRAFFIX level of service methodology for unsignalized intersections. This method is applicable for both two-way and all-way stop-controlled intersections. For the analysis of stop-controlled intersections, the 2000 HCM methodology evaluates intersection operations on the basis of average control delay time for all vehicles on the stop-controlled approaches. For the purpose of reporting level of service for one- and two-way stop-controlled intersections, the delay and corresponding level of service for the stop-controlled minor street approach with the highest delay is reported. For all-way stop-controlled intersections, the reported average delay and corresponding level of service is the average for all approaches at the intersection. The City uses a minimum acceptable level of service standard of LOS D for unsignalized intersections, in accordance with its adopted threshold of significance in its Guidelines for Preparation of Transportation Impact Reports. The correlation between average delay and level of service for unsignalized intersections is shown in Table 4.14-2.

Signal Warrants

The level of service analysis at unsignalized intersections is supplemented with an assessment of the need for signalization of the intersection. The need for signalization of unsignalized intersections is assessed based on the Peak Hour Volume Warrant (Warrant 3) described in the *California Manual on Uniform Traffic Control Devices for Streets and Highways* (CA MUTCD), Part 4, Highway Traffic Signals, 2014. This method makes no

TRAFFIC AND TRANSPORTATION**TABLE 4.14-1 SIGNALIZED INTERSECTION LEVEL OF SERVICE DEFINITIONS BASED ON CONTROL DELAY**

LOS	Description	Average Control Delay Per Vehicle (Sec.)
A	Operations with very low delay occurring with favorable progression and/or short cycle lengths.	Up to 10.0
B	Operations with low delay occurring with good progression and/or short cycle lengths.	10.1 to 20.0
C	Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.	20.1 to 35.0
D	Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, or high V/C ratios. Many vehicles stop and individual cycle failures are noticeable.	35.1 to 55.0
E	Operations with high delay values indicating poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences. This is considered to be the limit of acceptable delay.	55.1 to 80.0
F	Operation with delays unacceptable to most drivers occurring due to oversaturation, poor progression, or very long cycle lengths.	Greater than 80.0

Source: Transportation Research Board, Highway Capacity Manual 2000, (Washington, D.C., 2000).

TABLE 4.14-2 UNSIGNALIZED INTERSECTION LEVEL OF SERVICE DEFINITIONS BASED ON CONTROL DELAY

LOS	Description	Average Control Delay Per Vehicle (Sec.)
A	Operations with low delays occurring with favorable progression.	Up to 10.0
B	Operations with low delays occurring with good progression.	10.1 to 15.0
C	Operations with average delays resulting from fair progression.	15.1 to 25.0
D	Operations with longer delays due to a combination of unfavorable progression of high V/C ratios.	25.1 to 35.0
E	Operations with high delay values indicating poor progression and high V/C ratios. This is considered to be the limited of acceptable delay.	35.1 to 50.0
F	Operation with delays unacceptable to most drivers occurring due to oversaturation and poor progression.	Greater than 50.0

Source: Transportation Research Board, Highway Capacity Manual 2000, (Washington, D.C., 2000).

evaluation of intersection level of service, but simply provides an indication whether vehicular peak hour traffic volumes are, or would be, sufficient to justify installation of a traffic signal. The decision to install a traffic signal should not be based purely on the warrants alone. Instead, the installation of a signal should be considered and further analysis performed when one or more of the warrants are met. Additionally, engineering judgment is exercised on a case-by-case basis to evaluate the effect a traffic signal will have on certain types of accidents and traffic conditions at the subject intersection as well as at adjacent intersections. Intersections that meet the peak hour warrant are subject to further analysis before determining that a traffic signal is necessary. Other options such as traffic control devices, signage, or geometric changes may be preferable based on existing field conditions.

TRAFFIC AND TRANSPORTATION

Roadway Segments

Traffic operations for local roadways were evaluated by comparing the average daily volumes (ADT) to the threshold capacities for various roadway types identified in the *Highway Capacity Manual, Transportation Research Board 2000 (HCM 2000)*. The HCM 2000 thresholds are based on the local roadway functional classification and these values provide a planning-level analysis of the relative traffic load and approximate capacity on a particular roadway. It is important to note that daily volume thresholds are used for planning purposes and traffic during the peak commute periods may result in worse operations than illustrated by the daily LOS. The City of Morgan Hill does not have a formally adopted roadway segment operating standard. Thus, for the purposes of this analysis, LOS D was used as a guideline for the evaluation of daily segment volumes. The relationship between roadway classifications and maximum ADT to achieve specific LOS levels is summarized on Table 4.14-3.

Freeway Segment Analysis

The Santa Clara Valley Transportation Authority (VTA) Congestion Management Program (CMP) defines an acceptable level of service for freeway segments within Santa Clara County as LOS E or better. Caltrans defines an acceptable level of service for freeway segments as the “transition between LOS C and D” or better per its Guide for the Preparation of Traffic Impact Studies, 2002. As with roadway segments, level of service for freeways is based on the daily volume of traffic on the roadway, rather than the amount of congestion occurring during the AM or PM peak hour.

Existing Traffic Operations

This section describes existing traffic operations in Morgan Hill.

Existing Intersection Level of Service

Existing peak-hour traffic volumes were obtained from recently completed traffic studies and supplemented with manual turning-movement counts at intersections where counts were either unavailable or outdated (more than two-year-old intersection turning-movement counts conducted for this analysis are presented in Appendix D).

The results of the level of service analysis under existing conditions are summarized in Table 4.14-4. The results show that, measured against the City of Morgan Hill level of service standards, all the study intersections currently operate at an acceptable level of service under existing conditions during both the AM and PM peak hours. The level of service calculation sheets are included in Appendix D.

TRAFFIC AND TRANSPORTATION

TABLE 4.14-3 MAXIMUM ADT THRESHOLDS BY ROADWAY CLASSIFICATION

Roadway Type	Maximum Daily Volume (Both Directions Except Freeways)				
	LOS A	LOS B	LOS C	LOS D	LOS E
2-Lane Freeway ^a	11,100	20,100	28,800	35,700	40,100
2-Lane Freeway with Auxiliary Lane ^a	14,100	25,500	36,400	44,900	50,300
3-Lane Freeway ^a	17,000	30,800	44,000	54,100	60,600
3-Lane Freeway with Auxiliary Lane ^a	20,100	36,400	51,800	63,500	71,000
4-Lane Freeway ^a	23,200	42,000	59,500	72,800	81,400
4-Lane Freeway with Auxiliary Lane ^a	26,300	47,600	67,300	82,200	91,800
5-Lane Freeway ^a	32,800	53,700	75,500	91,700	102,300
2-Lane Highway	1,200	2,900	7,900	16,000	20,500
4-Lane Multilane Highway	21,400	35,200	50,600	65,600	73,000
6-Lane Multilane Highway	32,100	52,800	76,200	98,000	109,000
2-Lane Undivided Arterial ^c	N/A	N/A	9,100	16,700	17,700
2-Lane Divided Arterial ^c	N/A	N/A	9,700	17,600	18,700
3-Lane Arterial (two in one direction) ^c	N/A	N/A	13,100	20,600	21,700
4-Lane Undivided Arterial ^c	N/A	N/A	17,500	27,400	28,900
4-Lane Divided Arterial ^c	N/A	N/A	19,200	35,400	37,400
5-Lane Divided Arterial (three in one direction) ^c	N/A	N/A	22,600	44,300	46,700
6-Lane Divided Arterial ^c	N/A	N/A	27,100	53,200	56,000
8-Lane Divided Arterial ^c	N/A	N/A	37,200	71,100	74,700
1-Lane Ramp	5,000	7,500	10,500	13,000	15,000
2-Lane Rural Road	3,100	6,200	9,400	13,200	15,600
2-Lane Collector ^d	2,600	5,200	7,800	11,000	12,900
2-Lane Local Street ^d	1,900	3,900	5,800	8,200	9,600

a. LOS capacity thresholds based on one direction.

b. The LOS capacity thresholds are based on HCM 2000 methodology and are generally appropriate for suburban and rural areas. All volumes are approximate and assume ideal roadway characteristics.

c. LOS A and B are not achievable for arterial roadways using the HCM 2000 methods.

d. For local and collector roadway segments, the capacity limitation is related to neighborhood quality of life rather than the physical carrying capacity of the road. This assumes a standard suburban neighborhood, 40-foot roadway width, and 25 mile per hour speed limit with normal speed violation rates.

Source: *City of Morgan Hill General Plan Circulation Element Network and Policy Revisions Transportation Impact Analysis*, prepared by Fehr & Peers Transportation Consultants, July 2009.

TRAFFIC AND TRANSPORTATION

TABLE 4.14-4 EXISTING INTERSECTION LEVELS OF SERVICE

Study Number	Intersection	Hour	Date	Control	Met?	Delay ^a	LOS
1	Monterey Road and Madrone Parkway	AM	03/26/15	Signal	--	9.6	A
		PM	03/26/15		--	8.5	A
2	Monterey Road and Cochrane Road	AM	03/26/15	Signal	--	23.2	C
		PM	03/26/15		--	24.9	C
3	Butterfield Boulevard and Cochrane Road	AM	03/26/15	Signal	--	12.7	B
		PM	03/26/15		--	17.3	B
4	Madrone Parkway/Cochrane Plaza and Cochrane Road	AM	03/26/15	Signal	--	17.4	B
		PM	03/26/15		--	29.4	C
5	US 101 SB Ramps and Cochrane Road	AM	03/26/15	Signal	--	12.6	B
		PM	03/26/15		--	14.8	B
6	US 101 NB Ramps and Cochrane Road	AM	03/26/15	Signal	--	10.0	B
		PM	03/26/15		--	11.2	B
7	De Paul Drive/Saint Louise Drive and Cochrane Road	AM	03/26/15	Signal	--	15.8	B
		PM	03/26/15		--	14.6	B
8	Mission View Drive and Cochrane Road	AM	03/26/15	All-Way Stop	Yes	21.1	C
		PM	03/26/15		No	11.6	B
9	Monterey Road and Wright Avenue	AM	03/26/15	Signal	--	17.0	B
		PM	03/26/15		--	18.8	B
10	Monterey Road and Central Avenue	AM	03/26/15	Two-Way Stop	No	14.7	B
		PM	03/26/15		No	17.0	C
11	Hale Avenue and Main Avenue	AM	03/26/15	All-Way Stop	No	12.6	B
		PM	03/26/15		Yes	18.3	C
12	Del Monte Avenue and Main Avenue	AM	03/26/15	Two-Way Stop	No	13.6	B
		PM	03/26/15		No	20.2	C
13	Monterey Road and Main Avenue	AM	03/26/15	Signal	--	23.7	C
		PM	03/26/15		--	41.9	D
14	Depot Street and Main Avenue	AM	03/26/15	One-Way Stop	No	13.2	B
		PM	03/26/15		No	16.3	C
15	Butterfield Boulevard and Main Avenue	AM	03/26/15	Signal	--	23.5	C
		PM	03/26/15		--	30.2	C
16	Monterey Road and First Street	AM	03/26/15	Two-Way Stop	No	11.3	B
		PM	03/26/15		No	14.6	B
17	Monterey Road and Second Street	AM	03/26/15	Signal	--	11.1	B
		PM	03/26/15		--	12.6	B

TRAFFIC AND TRANSPORTATION**TABLE 4.14-4 EXISTING INTERSECTION LEVELS OF SERVICE**

Study Number	Intersection	Hour	Date	Control	Met?	Delay ^a	LOS
18	Monterey Road and Third Street	AM	03/26/15	Two-Way Stop	No	11.6	B
		PM	03/26/15		No	16.9	C
19	Monterey Road and Fourth Street	AM	04/02/15	Two-Way Stop	No	17.3	C
		PM	04/02/15		No	17.4	C
20	Monterey Road and Fifth Street	AM	04/02/15	Two-Way Stop	No	18.3	C
		PM	04/02/15		No	32.6	D
21	Peak Avenue and Dunne Avenue	AM	04/02/15	All-Way Stop	No	9.9	A
		PM	04/02/15		No	13.7	B
22	Hale Avenue and Dunne Avenue	AM	--	Future	--	--	--
		PM	--		--	--	--
23	Del Monte Avenue and Dunne Avenue	AM	04/02/15	Two-Way Stop	No	12.8	B
		PM	04/02/15		No	15.9	C
24	Monterey Road and Dunne Avenue	AM	10/24/13	Signal	--	24.3	C
		PM	10/24/13		--	32.9	C
25	Church Street and Dunne Avenue	AM	10/22/13	Signal	--	17.4	B
		PM	10/22/13		--	18.9	B
26	Depot Street and Dunne Avenue	AM	04/02/15	One-Way Stop	No	9.8	A
		PM	04/02/15		No	11.9	B
27	Butterfield Boulevard and Dunne Avenue	AM	10/24/13	Signal	--	33.0	C
		PM	10/24/13		--	31.8	C
28	Walnut Grove Drive and Dunne Avenue	AM	05/14/14	Signal	--	18.3	B
		PM	05/14/14		--	29.3	C
29	Laurel Road and Dunne Avenue	AM	05/20/14	Two-Way Stop	No	12.2	B
		PM	05/20/14		Yes	15.1	C
30	US 101 SB Ramps and Dunne Avenue	AM	04/02/15	Signal	--	20.9	C
		PM	04/02/15		--	15.0	B
31	US 101 NB Ramps and Dunne Avenue	AM	04/02/15	Signal	--	12.5	B
		PM	04/02/15		--	13.8	B
32	Condit Road and Dunne Avenue	AM	05/14/14	Signal	--	39.2	D
		PM	05/14/14		--	28.2	C
33	Murphy Avenue and Dunne Avenue	AM	05/14/14	Signal	--	12.8	B
		PM	05/14/14		--	11.6	B
34	Monterey Road and Tennant Avenue	AM	10/22/13	Signal	--	23.7	C
		PM	10/22/13		--	37.8	D

TRAFFIC AND TRANSPORTATION

TABLE 4.14-4 EXISTING INTERSECTION LEVELS OF SERVICE

Study Number	Intersection	Hour	Date	Control	Met?	Delay ^a	LOS
35	Butterfield Boulevard and Tennant Avenue	AM	05/14/14	Signal	--	23.5	C
		PM	05/14/14		--	37.6	D
36	Juan Hernandez Drive and Tennant Avenue	AM	04/02/15	Signal	--	7.4	A
		PM	04/02/15		--	6.8	A
37	US 101 SB Ramps and Tennant Avenue	AM	05/14/14	Signal	--	15.2	B
		PM	05/14/14		--	19.3	B
38	US 101 NB Ramps and Tennant Avenue	AM	05/14/14	Signal	--	12.8	B
		PM	05/14/14		--	10.8	B
39	Condit Road and Tennant Avenue	AM	05/14/14	One-Way Stop	No	11.9	B
		PM	05/14/14		Yes	11.4	B
40	Murphy Avenue and Tennant Avenue	AM	05/14/14	All-Way Stop	No	10.5	B
		PM	05/14/14		No	10.2	B
41	Monterey Road and Vineyard Boulevard	AM	04/02/15	Signal	--	25.9	C
		PM	04/02/15		--	29.5	C
42	Monterey Road and Watsonville Road/Butterfield Boulevard\	AM	04/02/15	Signal	--	25.6	C
		PM	04/02/15		--	28.5	C

a. The reported delay and corresponding level of service for signalized and all-way stop-controlled intersections represents the average delay for all approaches at the intersection. The reported delay and corresponding level of service for side-street stop-controlled intersections are based on the stop-controlled approach with the highest delay.

Source: Hexagon Transportation Consultants, 2015.

Existing Roadway Segment Analysis

The results of the roadway segment analysis under existing conditions are summarized in Table 4.14-5. The ADT level of service analysis indicates that all the roadway segments evaluated currently have ADT volumes that fall below the HCM 2000 maximum ADT thresholds for operations of LOS E or worse.

Existing Freeway Segment Analysis

Table 4.14-6 summarizes the level of service results for the freeway segments on US 101 in Morgan Hill. Based on this analysis, all eight freeway segments are shown to currently operate at an unacceptable LOS F when measured against the Caltrans LOS C/D and Morgan Hill standards.

Bus Service

This section describes existing transit service in Morgan Hill.

TRAFFIC AND TRANSPORTATION

VTA Bus Service

VTA provides local bus service with regional connections to destinations north and south of Morgan Hill. In addition, the Monterey-Salinas Transit (MST) Bus Service provides bus service between the Morgan Hill Caltrain Station and the Monterey Transit Plaza in Monterey. The Morgan Hill Transit Center, located at the northeast corner of the intersection of Hale Avenue and Main Avenue, serves as a hub for one local bus route and one community bus route that serve Morgan Hill and provides park-and-ride facilities. The Morgan Hill Caltrain Station located along Depot Street between 2nd and 4th Street is served by two express bus routes and one MST bus route and provides park-and-ride facilities. Figure 4.14-2 shows the bus routes that serve Morgan Hill and the Caltrain right-of-way and station location.

The City of Morgan Hill is served by one local bus route and one community bus route. In addition, two express buses serve the City with limited stops. VTA bus routes serving Morgan Hill are as follows:

- **Community Bus Route 16** serves the northern portion of the City. Route 16 runs from Burnett Avenue to the Morgan Hill Civic Center with approximately 60-minute headways on weekdays only from 6:30 to 9:00 a.m. and 2:00 to 6:00 p.m.
- **Local Route 68** is a regional bus route connecting the Gilroy Transit center to the San Jose Diridon Transit Center. Route 68 passes through Morgan Hill along Monterey Road within the City limit and has 15- to 60-minute headways on weekdays and weekends, running between 4:00 a.m. and 1:30 a.m.
- **Express Route 121** is an express bus route that provides weekday peak commute period service between the Gilroy Transit Center and the Lockheed Martin Transit Center. Within Morgan Hill, the route serves the Morgan Hill Caltrain Station. It operates northbound with 30-minute headways during the AM peak hours and southbound with 30- to 55-minute headways during the PM peak hours.
- **Express Route 168** is an express bus route that provides direct weekday peak-commute period service between the Gilroy Transit Center and the San Jose Diridon Transit Center. It operates northbound with 30-minute headways during the AM peak hours and southbound with 30-minute headways during the PM peak hours.

Monterey-Salinas Transit Bus Service

MST Route 55 connects Morgan Hill to the Monterey Transit Plaza. Route 55 operates on weekdays only and runs as follows: two stops during the morning commute period, one stop in later morning, and two stops during the evening commute period.

Commuter Rail Service

Caltrain, operated by the Peninsula Joint Powers Authority, provides commuter rail service along the Peninsula between San Francisco and Gilroy. The Morgan Hill Caltrain Station is located along the west side of Butterfield Boulevard, between Dunne Avenue and Main Avenue, along the east side of the Downtown. At

TRAFFIC AND TRANSPORTATION

TABLE 4.14-5 EXISTING ROADWAY SEGMENT ANALYSIS

#	Roadway Segment	Roadway Type	Speed Limit (mph)	Directions	ADT ^a	LOS ^b
1	Hale Ave between Willow Springs Rd and Caprista Ct	2-Lane Rural Road	45	N/S	7,925	C
2	Hale Ave between Tarragon Ave and Campoli Dr	2-Lane Undivided Arterial	45	N/S	7,811	C
3	Hale Ave between Stoney Creek Wy and Hillwood Ln	2-Lane Undivided Arterial	40	N/S	8,331	C
4	Dewitt Ave between Oak Park Dr and Origlia Ln	2-Lane Undivided Arterial	45	N/S	2,987	C
5	Sunnyside Ave between Casino Real and Appian Wy	2-Lane Undivided Arterial	40	N/S	4,099	C
6	Santa Teresa Blvd between Highland Ave and Fitzgerald Ave	2-Lane Rural Road	45	N/S	5,247	B
7	Monterey Rd between Kirby Ave and Tilton Ave	4-Lane Multilane Highway	50	N/S	20,124	A
8	Monterey Rd between Peebles Ave and Madrone Pkwy	4-Lane Divided Arterial	45	N/S	22,326	D
9	Monterey Rd between Cochrane Rd and Old Monterey Rd	3-Lane Arterial (two in NB direction)	35	N/S	11,692	C
10	Monterey Rd between Wright Ave and El Toro St	4-Lane Divided Arterial	30	N/S	8,090	C
11	Monterey Rd between 3rd St and 4th St	4-Lane Divided Arterial	35	N/S	11,843	C
12	Monterey Rd between San Pedro Ave and Cosmo Ln	4-Lane Divided Arterial	35	N/S	21,837	D
13	Monterey Rd between Vineyard Blvd and Watsonville Rd	4-Lane Divided Arteria	45	N/S	22,322	D
14	Monterey Rd between Starswept Ln and East Middle Ave	4-Lane Divided Arteria	50	N/S	23,228	D
15	Monterey Rd between Church Ave and Carlis Ct	4-Lane Multilane Highway	50	N/S	20,206	D
16	Old Monterey Rd between Llagas Rd and Monterey Rd	2-Lane Collector	35	E/W	2,924	B
17	Butterfield Blvd between Digital Dr and East Central Ave	4-Lane Divided Arterial	45	N/S	22,207	D
18	Butterfield Blvd between East Main St and Diane Ave	4-Lane Divided Arterial	45	N/S	21,686	D
19	Butterfield Boulevard between San Pedro Ave and Barrett Ave	4-Lane Divided Arterial	45	N/S	12,858	C
20	Watsonville Rd between Monterey Rd and Calle Sueno	2-Lane Undivided Arterial	45	E/W	16,566	D
21	Watsonville Rd between Santa Teresa Blvd and Branston Ct	2-Lane Undivided Arterial	45	E/W	10,249	D

TRAFFIC AND TRANSPORTATION**TABLE 4.14-5 EXISTING ROADWAY SEGMENT ANALYSIS**

#	Roadway Segment	Roadway Type	Speed Limit (mph)	Directions	ADT ^a	LOS ^b
22	Mission View Dr between Avenida de los Padres and Half Rd	2-Lane Collector	40	N/S	3,752	B
23	Condit Road between Main Ave and Diana Ave	2-Lane Collector	45	N/S	4,650	B
24	Condit Road between San Pedro Ave and Barrett Ave	2-Lane Collector	40	N/S	2,915	B
25	Sycamore Ave between East Middle Ave and San Martin Ave	2-Lane Local Street	40	N/S	495	A
26	Tilton Ave between Dougherty Ave and Monterey Road	2-Lane Collector	35	E/W	6,775	C
27	Madrone Parkway between Monterey Road and Lightpost Way	2-Lane Collector	35	E/W	1,435	A
28	Cochrane Rd between Adams Ct and Woodview Ave	4-Lane Divided Arterial	45	E/W	20,436	D
29	Cochrane Rd between Madrone Pkwy and US 101	5-Lane Divided Arterial	45	E/W	30,686	D
30	Cochrane Rd between US 101 and St. Louise Dr	4-Lane Divided Arterial	40	E/W	14,812	C
31	Sutter Blvd between Serene Dr and Cochrane Rd	2-Lane Collector	35	N/S	4,349	B
32	West Main St between Hale Ave and Del Monte St	2-Lane Undivided Arterial	30	E/W	11,035	D
33	Main Ave between Condit Road and Hill Road	2-Lane Undivided Arterial	40	E/W	4,781	C
34	West Dunne Ave between Peak Ave and Viewcrest Ln	2-Lane Undivided Arterial	35	E/W	6,458	C
35	East Dunne Ave between Depot St and Butterfield Blvd	4-Lane Divided Arterial	35	E/W	18,752	C
36	East Dunne Ave between Laurel Rd and US 101	4-Lane Divided Arterial	40	E/W	27,828	D
37	East Dunne Ave between US 101 and Condit Rd	5-Lane Divided Arterial	40	E/W	28,250	D
38	East Dunne Ave between Bayo Claros and Claret Dr	4-Lane Divided Arterial	40	E/W	16,289	C
39	East Dunne Ave between Thomas Grade and Old Oak Ln	2-Lane Collector	40	E/W	6,800	C
40	Edmundson Ave between Sunnyside Ave and Sunset Ave	2-Lane Undivided Arterial	45	E/W	4,387	C
41	Tennant Ave between Vineyard Blvd and Railroad Ave	4-Lane Divided Arterial	40	E/W	16,286	C
42	Tennant Ave between Tennant Ct and US 101	4-Lane Divided Arterial	45	E/W	32,630	D

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TABLE 4.14-5 EXISTING ROADWAY SEGMENT ANALYSIS

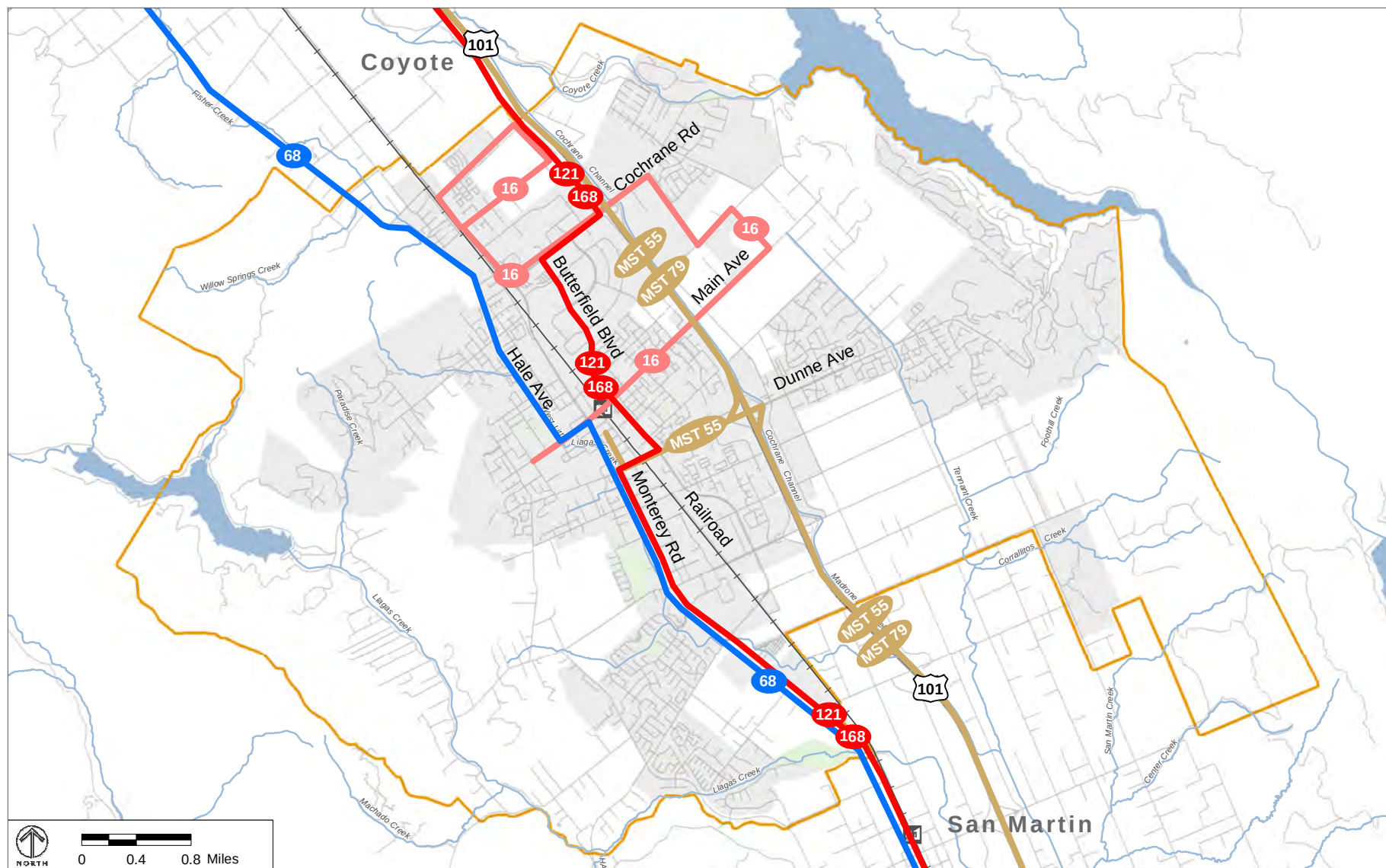
#	Roadway Segment	Roadway Type	Speed Limit (mph)	Directions	ADT ^a	LOS ^b
43	Tennant Ave between US 101 and Condit Rd	4-Lane Divided Arterial	45	E/W	12,069	C
44	East Middle Ave between Murphy Ave (west side) and US 101	2-Lane Rural Road	45	E/W	2,146	A
45	Middle Ave between Sycamore Ave and Columbet Ave	2-Lane Rural Road	35	E/W	8,000	C

a. ADT = Average two-way daily traffic.

b. LOS = Level of service based on daily volume planning thresholds. Peak hour traffic operations may be worse than shown for daily conditions.

Source: Hexagon Transportation Consultants, August 2015.

TRAFFIC AND TRANSPORTATION



Source: City of Morgan Hill.

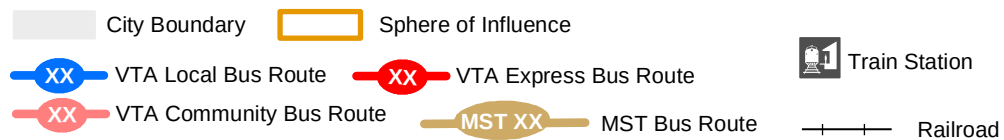


Figure 4.14-2
Existing Transit Services

TRAFFIC AND TRANSPORTATION

TABLE 4.14-6 EXISTING FREEWAY SEGMENT LEVELS OF SERVICE

Travel Direction	Segment		Roadway Type ^a	ADT ^b	LOS ^c
	From	To			
NB US 101	San Martin Avenue	Tennant Avenue	3-Lane Freeway	63,511	F
	Tennant Avenue	Dunne Avenue	3-Lane Freeway	66,961	F
	Dunne Avenue	Cochrane Road	3-Lane Freeway	69,535	F
	Cochrane Road	Coyote Creek Road	4-Lane Freeway	71,181	F
SB US 101	Coyote Creek Road	Cochrane Road	4-Lane Freeway	70,977	F
	Cochrane Road	Dunne Avenue	3-Lane Freeway	69,783	F
	Dunne Avenue	Tennant Avenue	3-Lane Freeway	68,611	F
	Tennant Avenue	San Martin Avenue	3-Lane Freeway	65,354	F

a. 4-Lane Freeway includes three (3) mixed-flow lanes and one (1) high occupancy vehicle lane in each direction.

b. ADT = Average two-way daily traffic.

c. LOS = Level of service.

Source: Hexagon Transportation Consultants, 2015.

the Morgan Hill Station, Caltrain provides three northbound trains during the morning and three southbound trains during the evening peak commute periods with approximately 30- to 40-minute headways. There currently is an average of 113 daily boardings at the Morgan Hill Station based on Caltrans 2012 passenger counts. Connections to Express Routes 121 and 168 are provided at the nearby Morgan Hill Transit Center.

Caltrain is considering and has identified potential service cuts due to a budget crisis in 2012. The Caltrain service cuts include the suspension of service to the least-used stations along their service line, including the stations south of Diridon Station, which includes the Morgan Hill Station. The Morgan Hill Station accounts for only 0.27 percent of the total passenger boarding and ranks 25th of the 29 stations served by Caltrain. However, no final service reductions have been adopted by Caltrain as of yet.

High Speed Rail

The future High Speed Rail (HSR) project will provide high speed rail service between San Francisco and Los Angeles via the Central Valley. HSR will run through Morgan Hill. However, there is no planned stop within the City. The City of Morgan Hill has been working with other communities, transportation groups, and the California High-Speed Rail Authority (CaHSRA) to identify the best location for its route through Morgan Hill. Two alignments for this project are being investigated: the first alignment would run parallel to and east of the existing Caltrain train tracks; the second alignment would run parallel to and east of US 101.

Bicycle Circulation

Bicycle facilities can be divided into three classifications:

- **Class I Bikeway (Bike Path).** A Class I bikeway is completely separated from the road and is exclusively for bicyclists and pedestrians (including skaters, users of manual and motorized wheelchairs, and joggers).
- **Class II Bikeway (Bike Lane).** A Class II bikeway is usually a striped lane that is intended for exclusive use by bicyclists, but is not physically separated from the roadway or from traffic.
- **Class III Bikeway (Bike Route).** A Class III bikeway means that cyclists use the same road and the same lane as motorists, but signs or permanent pavement markings indicate that the lane is shared.

Given the topography of Morgan Hill, bicycling is a viable alternative to driving for both recreational and non-recreational trips. Bicycle facilities are provided throughout the City of Morgan Hill on most arterials and major collectors, as illustrated in Figure 4.14-3.

Pedestrian Circulation

Morgan Hill has a well-established pedestrian network that includes sidewalks, crosswalks, pedestrian signals, and off-street paths. Sidewalks with raised curbs and gutters are typically provided along arterials and collectors, as well as in newer residential developments. Most major intersections in the City have marked crosswalks and countdown pedestrian crossing signals that can be activated by pedestrians.

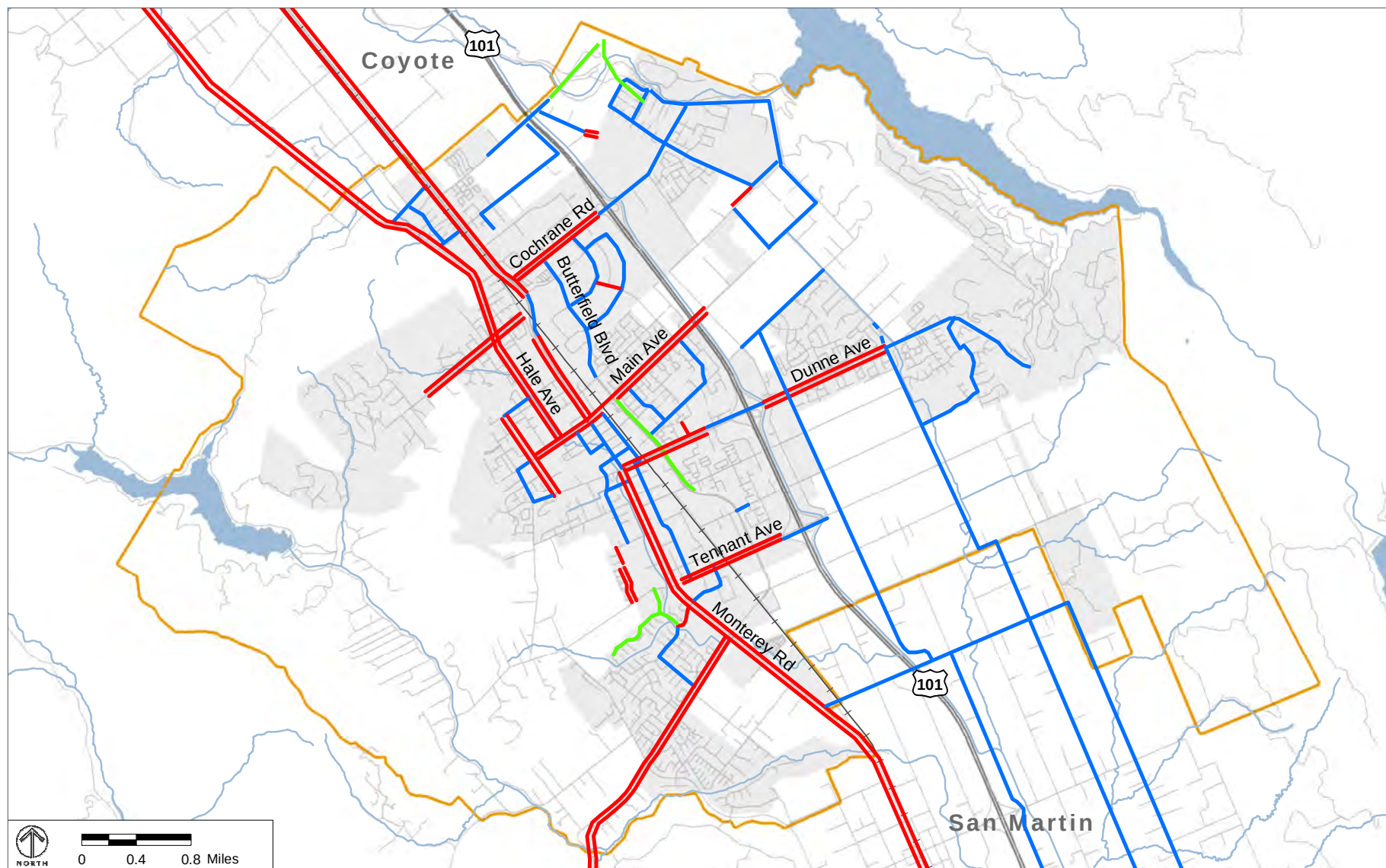
Though the City does not identify minimum sidewalk widths, minimum side-walk widths of 5 feet are required to meet Americans with Disabilities Act (ADA) requirements. Depending on the land use type, wider sidewalks may be provided. Narrower sidewalks are allowed for residential areas as compared to commercial districts. Nonetheless, a 5-foot minimum of clear, uninterrupted area is required on all sidewalks.

South County Airport

A small portion of Morgan Hill and its Sphere of Influence (SOI) extends into the Airport Influence Area (AIA) of the South County Airport, which is located in the unincorporated community of San Martin between Morgan Hill and Gilroy. The airport is operated by Santa Clara County, and is used for general aviation, which includes all aviation activities other than commercial passenger flights, commuter/air taxi, and military uses. General aviation activity typically includes single-engine and small twin-engine aircraft holding six or fewer people. The South County Airport is the smallest and least active airport in the county.

The AIA includes all areas surrounding the airport that are affected by noise, height, and safety considerations. All development projects within the AIA must be reviewed by the Santa Clara County

TRAFFIC AND TRANSPORTATION



Source: City of Morgan Hill.

- City Boundary
- Sphere of Influence
- Class 1, Shared-Use Path
- Class 3, Bike Route
- Class 2, Bike Lane, Both Sides
- Class 2, Bike Lane, One Side

Figure 4.14-3
Existing Bicycle Facilities

TRAFFIC AND TRANSPORTATION

Airport Land Use Commission (ALUC) to ensure consistency with the South County Airport Comprehensive Land Use Plan (CLUP). The CLUP establishes height restrictions for structures within the portion of the Morgan Hill City limits and SOI that extends into the AIA. The Morgan Hill City limits and SOI are located outside of the airport's noise contours and safety zones.

4.14.2 STANDARDS OF SIGNIFICANCE

The proposed Project would result in a significant traffic and transportation impact if it would:

1. Conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation, including mass transit and non-motorized travel and relevant components of the circulation system, including, but not limited to, intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit.
 - **Definition of Significant Signalized Intersection Impacts.** Significance criteria for impacts on intersections for this analysis are based on the City of Morgan Hill Level of Service standards, which are established in the Transportation Element of the General Plan. All intersections within the City of Morgan Hill are required to meet the City's LOS standard of LOS D, with the exception of the following:
 - LOS F for Downtown intersections and segments including at Main/Monterey, along Monterey Road between Main and Fifth Street, and along Depot Street at First through Fifth Street;
 - LOS E for the following intersections and freeway zones:
 - Main Avenue and Del Monte Avenue
 - Main Avenue and Depot Street
 - Dunne Avenue and Del Monte Avenue
 - Dunne Avenue and Monterey Avenue
 - Dunne Avenue and Church Street;
 - Dunne Avenue and Depot Street
 - Cochrane Road and Monterey Road
 - Tennant Avenue and Monterey Road
 - Tennant Avenue and Butterfield Boulevard
 - Cochrane Road Freeway Zone: from Madrone Parkway/Cochrane Plaza to Cochrane Road/DePaul Drive
 - Dunne Avenue Freeway Zone: from Walnut Grove Drive/East Dunne Avenue to Condit Road/East Dunne Avenue
 - Tennant Avenue Freeway Zone: from Butterfield Boulevard/Tennant Avenue to Condit Road/Tennant Avenue

According to the City of Morgan Hill level of service guidelines, as outlined in the 2008 *City of Morgan Hill Planning Commission Policy: Guidelines for Preparation of Transportation Impact Reports*, a

TRAFFIC AND TRANSPORTATION

project is said to create a significant adverse impact on traffic conditions at a signalized intersection if for either the AM or PM peak hour:

- The level of service at the intersection degrades from an acceptable level (LOS D or LOS E as identified above) under existing conditions to an unacceptable level (LOS E or F) under project conditions, or
- The level of service at the intersection is an unacceptable level (LOS E or F as identified above) under existing conditions and the addition of project trips causes the average critical delay to increase by four (4) or more seconds and the volume-to-capacity ratio (V/C) to increase by 0.01.

An exception to this rule applies when the addition of project traffic reduces the amount of average delay for critical movements (i.e., the change in average delay for critical movements is negative). In this case, the threshold of significance is an increase in the critical V/C value by 0.01 or more.

- **Definition of Significant Unsignalized Intersection Impacts.** Unsignalized intersections within the City of Morgan Hill have a minimum operating level of LOS D. According to the City of Morgan Hill level of service guidelines, a project is said to have a significant adverse impact on traffic conditions at an unsignalized intersection if for either peak hour the addition of project traffic causes the worst approach delay to degrade to LOS E or F and the traffic volumes at the intersection are sufficiently high to satisfy the peak hour volume warrant.
2. Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways.
- **Definition of Significant Roadway Segment Impacts.** The City of Morgan Hill does not have a formally adopted roadway segment operating standard. Thus, for the purposes of this analysis and to be consistent with planning efforts in Morgan Hill and other jurisdictions, LOS D was used as a guideline for the evaluation of the roadway segments. Any of the study roadway segments projected to operate below LOS D conditions will be considered deficient.
 - **CMP Definition of Significant Freeway Segment Impacts.** A project is said to create a significant adverse impact on traffic conditions on a CMP freeway segment if the addition of traffic due to the proposed land uses of the General Plan causes:
 - The level of service on a freeway segment degrades from an acceptable LOS E or better under existing conditions to an unacceptable LOS F under 2035 General Plan conditions.
 - The level of service on the freeway segment is an unacceptable LOS F under existing conditions, and the number of project trips on that segment constitutes at least one percent of capacity on that segment.

A significant impact by CMP standards is said to be satisfactorily mitigated when measures are implemented that would restore freeway conditions to LOS E or better.

TRAFFIC AND TRANSPORTATION

3. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).
4. Result in inadequate emergency access.
5. Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.
6. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks.
7. Contribute to cumulative transportation and traffic impacts in the area.

4.14.3 ANALYSIS APPROACH

Like most other jurisdictions in Santa Clara County and the state, the City of Morgan Hill has historically utilized Level of Service (LOS) as the primary analysis metric when evaluating the impacts of land use decisions on the transportation system. However, Senate Bill 743 encourages the use of alternative metrics other than vehicle delay, as measured with LOS, when evaluating the impacts of land use decisions. The use of vehicle miles traveled (VMT) is becoming the primary metric for the evaluation of impacts on transportation systems due to land use decisions.

However, the City of Morgan Hill currently uses LOS to evaluate the effects of new development and land use changes. In addition, the 2010 Circulation Element uses LOS as its primary metric for the projected operation of the City's roadway system. Therefore, in addition to the evaluation of VMT, this traffic analysis also includes level of service analysis at the same intersections and roadway segments that were evaluated in the 2010 Circulation Element.

4.14.3.1 STUDY INTERSECTIONS

The study includes an analysis of AM and PM peak-hour traffic conditions for 26 signalized intersections, 15 unsignalized intersections, and three future intersections. Additionally, the study also includes the analysis of average daily traffic volumes (ADT) on 45 roadway segments and 10 directional freeway segments. The study intersections, roadway segments, and freeway segments are identified below. Figure 4.14-4 and Figure 4.14-5 indicate the study intersections and roadway segments, respectively, included in the analysis.

The Study Intersections included:

1. Monterey Road and Madrone Parkway
2. Monterey Road and Cochrane Road
3. Butterfield Boulevard and Cochrane Road
4. Madrone Parkway/Cochrane Plaza and Cochrane Road
5. US 101 SB Ramps and Cochrane Road

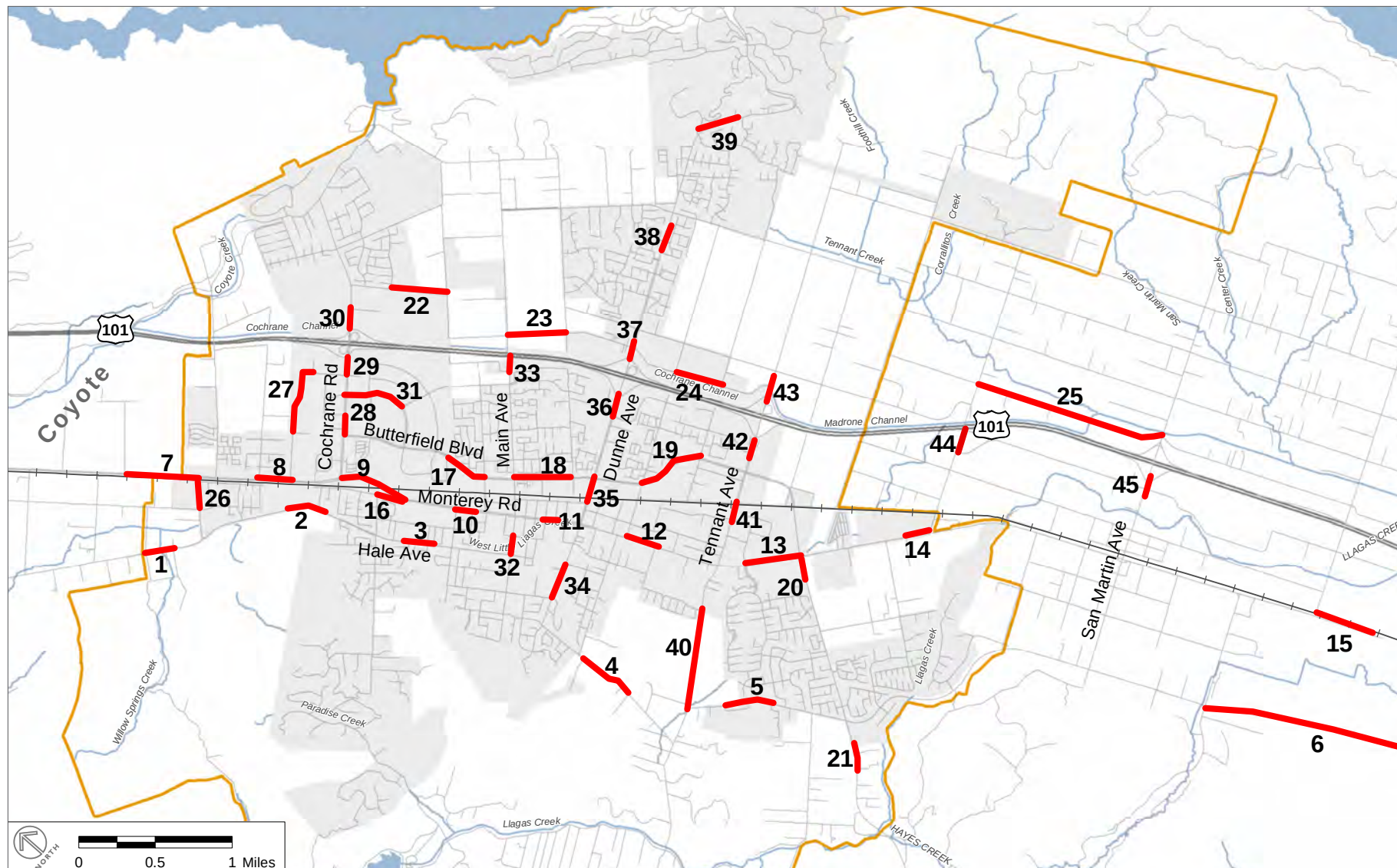
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Source: City of Morgan Hill and Hexagon Transportation Consultants, 2015.

Figure 4.14-4
Study Area and Study Intersections

TRAFFIC AND TRANSPORTATION



Source: City of Morgan Hill and Hexagon Transportation Consultants, 2015.

- City Boundary
- Sphere of Influence
- XX Study Roadway Segment

Figure 4.14-5
Study Roadway Segment

TRAFFIC AND TRANSPORTATION

8. US 101 NB Ramps and Cochrane Road
9. De Paul Drive/Saint Louise Drive and Cochrane Road
10. Mission View Drive and Cochrane Road
11. Monterey Road and Wright Avenue
12. Monterey Road and Central Avenue
13. Hale Avenue and Main Avenue
14. Del Monte Avenue and Main Avenue
15. Monterey Road and Main Avenue
16. Depot Street and Main Avenue
17. Butterfield Boulevard and Main Avenue
18. Monterey Road and First Street
19. Monterey Road and Second Street
20. Monterey Road and Third Street
21. Monterey Road and Fourth Street
22. Monterey Road and Fifth Street
23. Peak Avenue and Dunne Avenue
24. Hale Avenue and Dunne Avenue (future intersection)
25. Del Monte Avenue and Dunne Avenue
26. Monterey Road and Dunne Avenue
27. Church Street and Dunne Avenue
28. Depot Street and Dunne Avenue
29. Butterfield Boulevard and Dunne Avenue
30. Walnut Grove Drive and Dunne Avenue
31. Laurel Road and Dunne Avenue
32. US 101 SB Ramps and Dunne Avenue
33. US 101 NB Ramps and Dunne Avenue
34. Condit Road and Dunne Avenue
35. Murphy Avenue and Dunne Avenue
36. Monterey Road and Tennant Avenue
37. Butterfield Boulevard and Tennant Avenue
38. Juan Hernandez Drive and Tennant Avenue

TRAFFIC AND TRANSPORTATION

The Study Roadway Segments include:

1. Hale Avenue, between Willow Springs Road and Caprista Court
2. Hale Avenue, between Tarragon Avenue and Campoli Drive
3. Hale Avenue, between Stoney Creek Way and Hillwood Lane
4. Dewitt Avenue, between Oak Park Drive and Origlia Lane
5. Sunnyside Avenue, between Casino Real and Appian Way
6. Santa Teresa Boulevard, between Highland Avenue and Fitzgerald Avenue
7. Monterey Road, between Kirby Avenue and Tilton Avenue
8. Monterey Road, between Peebles Avenue and Madrone Parkway
9. Monterey Road, between Cochrane Road and Old Monterey Road
10. Monterey Road, between Wright Avenue and El Toro Street
11. Monterey Road, between 3rd Street and 4th Street
12. Monterey Road, between San Pedro Avenue and Cosmo Lane
13. Monterey Road, between Vineyard Boulevard and Watsonville Road
14. Monterey Road, between Starswept Lane and East Middle Avenue
15. Monterey Road, between Church Avenue and Carlis Court
16. Old Monterey Road, between Llagas Road and Monterey Road
17. Butterfield Boulevard, between Digital Drive and East Central Avenue
18. Butterfield Boulevard, between East Main Street and Diane Avenue
19. Butterfield Boulevard, between San Pedro Avenue and Barrett Avenue
20. Watsonville Road, between Monterey Road and Calle Sueno
21. Watsonville Road, between Santa Teresa Boulevard and Bransten Court
22. Mission View Drive, between Avenida de los Padres and Half Road
23. Condit Road, between East Main Avenue and Diana Avenue
24. Condit Road, between San Pedro Avenue and Barrett Avenue
25. Sycamore Avenue, between East Middle Avenue and San Martin Avenue
26. Tilton Avenue, between Dougherty Avenue and Monterey Road
27. Madrone Parkway, between Butterfield Boulevard and Lightpost Way
28. Cochrane Road, between Adams Court and Woodview Avenue
29. Cochrane Road, between Madrone Parkway and US 101
30. Cochrane Road, between US 101 and St. Louise Drive
31. Sutter Boulevard, between Serene Drive and Cochrane Road
32. West Main Street, between Hale Avenue and Del Monte Street
33. East Main Avenue, between Laurel Road and US 101

TRAFFIC AND TRANSPORTATION

34. West Dunne Avenue, between Peak Avenue and Viewcrest Lane
35. East Dunne Avenue, between Depot Street and Butterfield Boulevard
36. East Dunne Avenue, between Laurel Road and US 101
37. East Dunne Avenue, between US 101 and Condit Road
38. East Dunne Avenue, between Bayo Claros and Claret Drive
39. East Dunne Avenue, between Thomas Grade and Old Oak Lane
40. Edmundson Avenue, between Sunnyside Avenue and Sunset Avenue
41. Tennant Avenue, between Vineyard Boulevard and Railroad Avenue
42. Tennant Avenue, between Tennant Court and US 101
43. Tennant Avenue, between US 101 and Condit Road
44. East Middle Avenue, between Murphy Avenue (west side) and US 101
45. San Martin Avenue, between Murphy Avenue and US 101

The Study Freeway Segments include:

1. US 101 Southbound, between Burnett Avenue and Cochrane Road
2. US 101 Southbound, between Cochrane Road and Dunne Avenue
3. US 101 Southbound, between Dunne Avenue and Tennant Avenue
4. US 101 Southbound, between Tennant Avenue and San Martin Avenue
5. US 101 Southbound, between San Martin Avenue and Masten Avenue
6. US 101 Northbound, between Masten Avenue and San Martin Avenue
7. US 101 Northbound, between San Martin Avenue and Tennant Avenue
8. US 101 Northbound, between Tennant Avenue and Dunne Avenue
9. US 101 Northbound, between Dunne Avenue and Cochrane Road
10. US 101 Northbound, between Cochrane Road and Burnett Avenue

4.14.3.2 SCENARIOS MODELED

Traffic conditions were evaluated for the following scenarios:

- *Scenario 1: Existing Conditions.* Existing conditions represent existing peak-hour traffic volumes on the existing roadway network. Existing traffic volumes were obtained from new traffic counts and recently completed traffic studies in the City of Morgan Hill. Existing Year 2015 conditions represent baseline conditions.
- *Scenario 2: Year 2035 General Plan Conditions.* Year 2035 General Plan conditions represent future traffic volumes on the future transportation network. Year 2035 General Plan conditions includes land use growth projections within the City of Morgan Hill through the year 2035 and the roadway network identified in the City's *2010 Circulation Element*. Year 2035 General Plan conditions are evaluated relative

TRAFFIC AND TRANSPORTATION

to existing 2015 (baseline) conditions in order to determine potential impacts associated with the proposed Morgan Hill 2035 project.

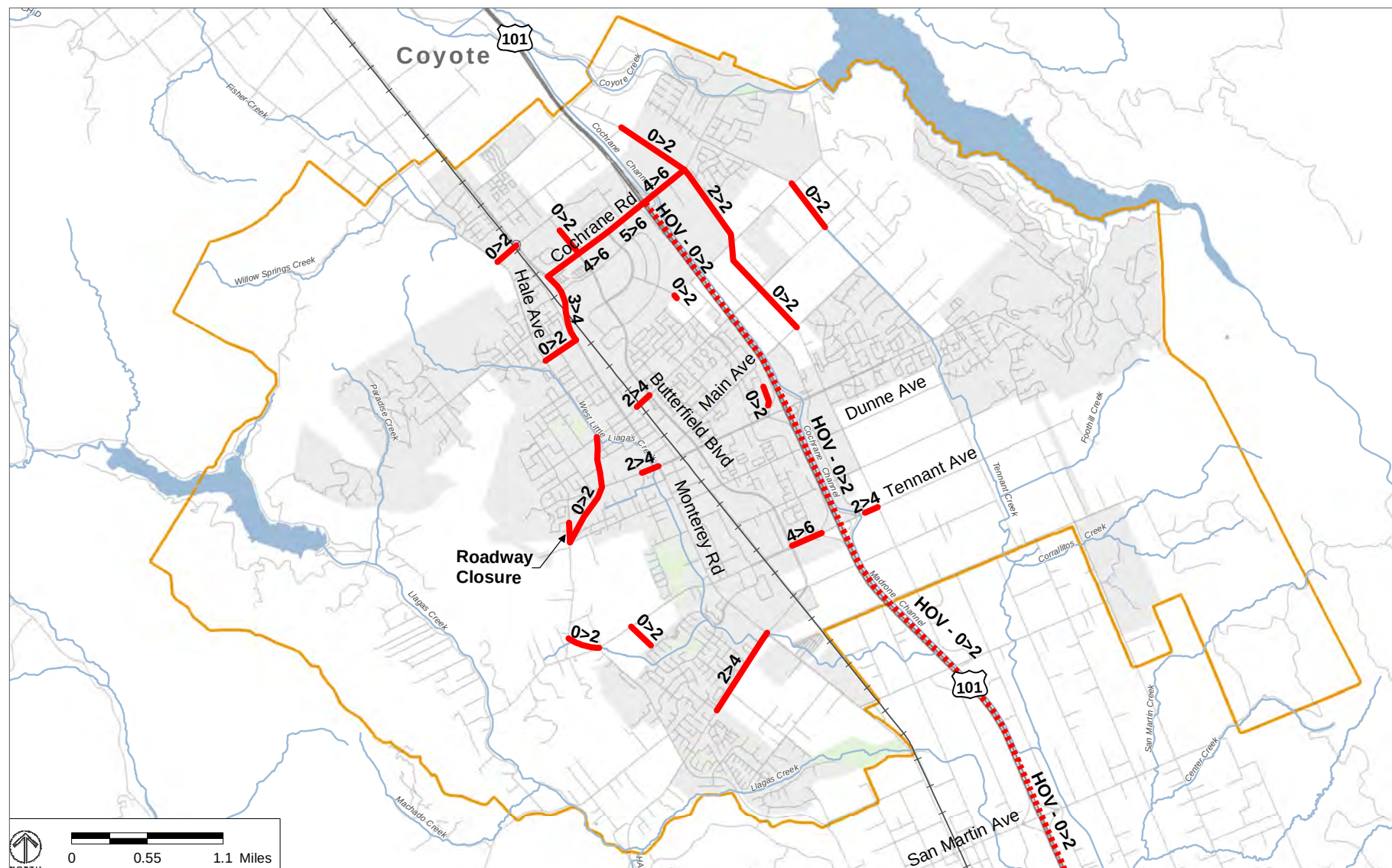
4.14.3.3 FUTURE ROADWAY NETWORK

Along with the land use growth projections utilized in the development of the 2035 traffic forecasts, the transportation improvements associated with buildout of the proposed General Plan, as identified in the City's 2010 Circulation Element, were assumed completed. The improvements include several new roadways that will provide for enhanced connectivity and circulation throughout the City. The roadway improvements presented in Table 4.14-7 and Figure 4.14-6 within the City are planned and assumed completed under the 2035 buildout conditions.

There were several roadway improvements/adjustments that were recommended as part of the 2010 Circulation Element that were not assumed completed under 2035 General Plan conditions. Each of the roadway improvements/adjustments not included are described below along with reasons for their exclusion.

- **Depot Street and Main Avenue.** The 2010 Circulation Element recommended the installation of a traffic signal at the Depot Street and Main Avenue intersection. However, spacing between adjacent signalized intersections along Main Avenue at Butterfield Boulevard and Monterey Road could result in operational issues along Main Avenue should a signal be installed.
- **Monterey Road and Dunne Avenue.** The 2010 Circulation Element recommended the addition of a second northbound left-turn lane at the Monterey Road to Dunne Avenue intersection. However, Dunne Avenue was improved east of Monterey Road in early 2012 to include bike lanes and on-street parking. The as-built roadway along Dunne Avenue is not sufficient width to provide receiving lanes for dual-left turn lanes. The receiving lanes would require right-of-way acquisition and removal of on-street parking.
- **Widening of Monterey Road to Six Lanes (Cochrane Road to Tilton Avenue).** The 2010 Circulation Element assumed the widening of Monterey Road from its existing four lanes to six lanes between Cochrane Road and Tilton Avenue. The widening of Monterey Road was identified to primarily serve projected traffic volumes associated with the development of Coyote Valley in San Jose. However, this analysis does not assume widening of Monterey Road under 2035 buildout conditions given that development of Coyote Valley is not anticipated within that timeframe since there are currently no development plans in place for this area.
- **Monterey Road Narrowing/Road Diet (Main Avenue to Dunne Avenue).** The 2010 Circulation Element included an action to study a two-lane configuration of Monterey Road through the Downtown. The roadway was temporarily narrowed to two lanes as part of the 2014-2015 Complete Streets Trial. However, in August 2015 the City Council decided to return Monterey Road to its original four-lane configuration through Downtown. This analysis assumes that Monterey Road remains at four lanes.

TRAFFIC AND TRANSPORTATION



Source: City of Morgan Hill and Hexagon Transportation Consultants, 2015.

- City Boundary
- Sphere of Influence
- Planned 2035 Improvement
- Caltrans Planned 2035 Improvement
- Existing Lanes > 2035 Lanes

Figure 4.14-6
Planned 2035 Roadway Improvements

TRAFFIC AND TRANSPORTATION**TABLE 4.14-7 2035 ROADWAY IMPROVEMENTS**

No	2035 Roadway Improvements
1	Extension of Butterfield Blvd as a 2-lane collector between Madrone Pkwy and Cochrane Rd
2	Extension of Hale Ave/Santa Teresa Blvd as a 2-lane multi-modal arterial between Main Ave and Spring Ave
3	Closure of DeWitt Ave between Price Drive and Spring Ave
4	Extension of Walnut Grove as a 2-lane collector between Dunne Ave and Diana Ave
5	Tennant Ave widening as a 4-lane arterial between Condit Rd and Murphy Ave
6	Monterey Rd widened to a 4-lane arterial between Cochrane Rd and Old Monterey Rd / Llagas Creek Dr
7	Extension of Llagas Creek Dr as a 2-lane collector between Hale Ave and Monterey Rd
8	Realignment of Old Monterey Rd to intersect with Llagas Creek Dr extension
9	Dunne Ave widened to a 4-lane arterial between Monterey Rd and Del Monte Ave
10	Modifications to intersection control and access at San Pedro Ave and Monterey Rd
11	Extension of Madrone Parkway as a 2-lane arterial between Hale Ave and Monterey Rd
12	Realignment of DeWitt Ave as a 2-lane arterial with Sunnyside Ave
13	Extension of Mission View Dr as a 2-lane collector between Cochrane Rd and Vista del Lomas Ave
14	Mission View Dr upgraded to a 2-lane multi-modal arterial between Cochrane Rd and Half Rd
15	Extension of Murphy Ave/Mission View Dr as a 2-lane multi-modal arterial between Half Rd and Diana Ave
16	Cochrane Rd widened to a 6-lane arterial between Monterey Rd and Mission View Dr
17	Main Ave widened to a 4-lane arterial between Depot St and Butterfield Blvd
18	Watsonville Rd widened to a 4-lane arterial between La Alameda and Monterey Rd
19	Extension of Serene Dr as a 2-lane collector between Jarvis Dr and Central Ave
20	Dunne Avenue intersection at Depot Street closed with Dunne Avenue grade separation from Union Pacific railroad tracks
21	Extension of McKeely Lane as a 2-lane collector between West Edmundson Ave and La Crosse Dr
22	Tennant Ave widened to a 6-lane arterial between US 101 and Butterfield Blvd
23	Extension of Hill Rd/Peet Rd as a 2-lane collector between Half Rd and Main Ave

Source: *City of Morgan Hill General Plan Circulation Element Network and Policy Revisions Transportation Impact Analysis*, prepared by Fehr & Peers Transportation Consultants, July 2009.

In addition, the 2035 General Plan transportation network also includes the planned widening of US 101 to include an HOV lane in both the southbound and northbound directions between Cochrane Road and Monterey Road in Gilroy, as identified in the VTP 2040 adopted by the VTA in October 2013. The VTP 2040 also identifies the conversion of the HOV lanes all along US 101 within Santa Clara County to express lanes.

TRAFFIC AND TRANSPORTATION

4.14.3.4 VEHICLE MILES TRAVELED

A comparison of Vehicle Miles Traveled (VMT) for the existing conditions versus the 2035 buildout conditions was made to determine the effects of the proposed General Plan on existing travel patterns within the City. This comparison is shown in Table 4.14-8.

Vehicle miles traveled refers to daily Morgan Hill trips multiplied by the trip distances. Morgan Hill trips were defined as all trips that begin and/or end in Morgan Hill defined as follows:

- Internal-External: trips that begin in Morgan Hill and end at a location outside the City;
- External-Internal: trips that begin outside the City and end in Morgan Hill;
- Internal-Internal: trips that begin and end entirely within Morgan Hill.

All data provided in Table 4.14-8, including trip length, number of vehicles, VMT, and the directional orientation of the trips, were calculated using the City's TDF model and represent only those trips within the City of Morgan Hill. Trips with both trip ends in Morgan Hill (Internal-Internal) were counted as two trips, while trips with only one trip end in Morgan Hill (Internal-External and External-Internal) were counted as one trip. This is standard practice because for trips with an origin or destination outside Morgan Hill half of the "responsibility" for the trip lies outside Morgan Hill for purposes of air quality and greenhouse gas analyses.

Under existing conditions, approximately 37 percent of all vehicle trips are Internal-Internal trips, that is, they both begin and end in Morgan Hill. Since Internal-Internal trips are shorter than most trips coming from or going to locations outside the City, the VMT for Internal-Internal trips is only about 10 percent of the total vehicle miles traveled. Conversely, Internal-External and External-Internal trips represent approximately 63 percent of the vehicle trips per day, but 90 percent of the total VMT, because most of these trips are longer than trips entirely within Morgan Hill.

VMT per service population is a metric that utilizes total VMT, as shown in Table 4.14-8, divided by the total residents and jobs. VMT per service population is projected to decrease under the 2035 buildout horizon when compared with existing conditions.

In general, new development adds new residents, new workers, and therefore new trips, and whenever new trips are added to the transportation system, VMT will increase proportionally to the number of trips being added. However, not all land use changes have equal effects on VMT. Adding new housing closer to jobs or new jobs closer to housing tends to minimize increases in VMT. Although there are new people driving (higher number of trips) they are not driving as far (shorter trip distances). In an area dominated by housing, adding jobs without displacing housing, while increasing trips, can actually reduce VMT by reducing commute distances.

TRAFFIC AND TRANSPORTATION**TABLE 4.14-8 EXISTING AND YEAR 2035 GENERAL PLAN VMT COMPARISON**

	2015 Existing			2035 General Plan		
	II ^a	IE/EI ^b	Total	II ^a	IE/EI ^b	Total
Daily Trips	89,305	152,488	241,793	135,483	209,129	344,612
Daily VMT ^c	187,136	1,659,297	1,846,433	277,440	2,268,012	2,545,452
VMT/Trip	2.1	10.88	7.64	2.05	10.85	7.39
Morgan Hill Population		45,171			68,057	
Morgan Hill Jobs		17,947			27,273	
VMT/Service Pop		29.3			26.7	

a. Internal-Internal.

b. Internal-External/External.

c. Daily VMT (II): VMT generated by trips starting and ending in Morgan Hill.

d. Daily VMT (IE/EI): VMT generated by trips starting or ending in Morgan Hill.

Source: Hexagon Transportation Consultants, 2015.

4.14.4 IMPACT DISCUSSION

This section analyzes potential Project-specific impacts to transportation and traffic.

TRAF-1	Implementation of the proposed Project would conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit.

General Plan

The proposed General Plan includes a stated goal of providing a coordinated, continuous network of streets and roads (Goal TR-3). To this end, it establishes intersection level of service policies (Policy TR-3.4) and requires development project applicants or the City to provide roadway improvements based on the service standards (Policy TR-3.5).

Intersection operations during the AM and PM peak hours were assessed for the 2035 horizon with proposed General Plan conditions. For comparison purposes, both the levels of service for Existing Conditions and the 2035 General Plan conditions are presented in Table 4.14-9. However, impact findings and mitigation measures are based only on the levels of service under the 2035 General Plan conditions.

TRAFFIC AND TRANSPORTATION

Of the 42 study intersections, two would exceed level of service standards during one or both peak hours under the proposed General Plan; therefore, a *significant* impact would occur.

Significance Before Mitigation Significant.

Residential Development Control System

The Growth Management Ordinance, known as the RDCS, regulates population growth through the provision of residential building allotments. The RDCS, and the proposed updates to the RDCS as part of the proposed Project, affects the pace of development in the City but does not determine the location, type, or intensity of development. Therefore, the RDCS would not conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system. As such, the RDCS would have *no impact*.

Significance Before Mitigation: No impact.

TRAF-2	Implementation of the proposed Project would conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways.

General Plan

Selected freeway and roadway segments on the CMP system were assessed to determine compliance with CMP standards. The results for roadway segments are presented in Table 4.14-10. The analysis results for the CMP freeway mainline segments are presented in Table 4.14-11.

Roadway Segments

Traffic volumes projected for the 2035 buildout horizon are based on the study roadway segments analyzed by the Morgan Hill traffic model. These volumes represent traffic projections assuming the buildout of all land use growth projections associated with the 2035 buildout horizon and all planned roadway improvements described previously. The roadway segment capacity analysis under Year 2035 General Plan conditions is summarized in Table 4.14-10.

The evaluation of daily roadway segment volumes indicates that all 45 roadway segments will meet the City of Morgan LOS standard of LOS D or better. Therefore, the proposed General Plan would have a *less-than-significant impact* on roadways in the CMP system.

TRAFFIC AND TRANSPORTATION

TABLE 4.14-9 EXISTING AND 2035 GENERAL PLAN INTERSECTION LEVEL OF SERVICE

Study No	Intersection	Peak Hour	Count Date	Existing Conditions				2035 General Plan Conditions					
				Control	Warrant Met?	Delay ^a	LOS	Control	Warrant Met?	Delay ^a	LOS	Incr. in Crit. Delay	Incr. in Crit. V/C
1	Monterey Road and Madrone Parkway ^b	AM	03/26/15	Signal	--	9.6	A	Signal	--	19.4	B	--	--
		PM	03/26/15		--	8.5	A		--	14.0	B	--	--
1a	Monterey Road and Madrone Parkway (E)	AM	--	Future	--	--	--	Signal	--	14.7	B	--	--
		PM	--		--	--	--		--	13.7	B	--	--
2	Monterey Road and Cochrane Road	AM	03/26/15	Signal	--	23.2	C	Signal	--	22.1	C	-2.9	0.200
		PM	03/26/15		--	24.9	C		--	30.5	C	9.4	0.228
3	Butterfield Boulevard and Cochrane Road	AM	03/26/15	Signal	--	12.7	B	Signal	--	19.0	B	4.8	0.033
		PM	03/26/15		--	17.3	B		--	34.2	C	28.4	0.215
4	Madrone Parkway/Cochrane Plaza and Cochrane Road	AM	03/26/15	Signal	--	17.4	B	Signal	--	19.0	B	0.2	0.089
		PM	03/26/15		--	29.4	C		--	28.2	C	-1.6	0.121
5	US 101 SB Ramps and Cochrane Road	AM	03/26/15	Signal	--	12.6	B	Signal	--	14.4	B	0.7	0.030
		PM	03/26/15		--	14.8	B		--	21.1	C	9.6	0.171
6	US 101 NB Ramps and Cochrane Road	AM	03/26/15	Signal	--	10.0	B	Signal	--	13.6	B	7.5	0.308
		PM	03/26/15		--	11.2	B		--	13.1	B	1.8	0.156
7	De Paul Drive/Saint Louise Drive and Cochrane Road	AM	03/26/15	Signal	--	15.8	B	Signal	--	18.6	B	2.2	0.120
		PM	03/26/15		--	14.6	B		--	19.8	B	2.6	0.235
8	Mission View Drive and Cochrane Road	AM	03/26/15	All-Way Stop	Yes	21.1	C	Signal	--	20.2	C	--	--
		PM	03/26/15		No	11.6	B		--	19.0	B	--	--
9	Monterey Road and Wright Avenue	AM	03/26/15	Signal	--	17.0	B	Signal	--	18.0	B	-3.4	0.199
		PM	03/26/15		--	18.8	B		--	19.1	B	1.4	0.116
10	Monterey Road and Central Avenue	AM	03/26/15	Two-Way Stop	No	14.7	B	Two-Way Stop	Yes	131.4	F	--	--
		PM	03/26/15		No	17.0	C		No	34.4	D	--	--

TRAFFIC AND TRANSPORTATION

TABLE 4.14-9 EXISTING AND 2035 GENERAL PLAN INTERSECTION LEVEL OF SERVICE

Study No	Intersection	Peak Hour	Count Date	Existing Conditions				2035 General Plan Conditions					
				Control	Warrant Met?	Delay ^a	LOS	Control	Warrant Met?	Delay ^a	LOS	Incr. in Crit. Delay	Incr. in Crit. V/C
11	Hale Avenue and Main Avenue	AM	03/26/15	All-Way Stop	No	12.6	B	Signal	--	34.2	C	--	--
		PM	03/26/15		Yes	18.3	C		--	32.8	C	--	--
12	Del Monte Avenue and Main Avenue	AM	03/26/15	Two-Way Stop	No	13.6	B	Two-Way Stop	No	15.0	B	--	--
		PM	03/26/15		No	20.2	C		No	19.8	C	--	--
13	Monterey Road and Main Avenue	AM	03/26/15	Signal	--	23.7	C	Signal	--	97.2	F	102.6	0.618
		PM	03/26/15		--	41.9	D		--	49.6	D	13.6	0.144
14	Depot Street and Main Avenue	AM	03/26/15	One-Way Stop	No	13.2	B	One-Way Stop	No	19.6	C	--	--
		PM	03/26/15		No	16.3	C		Yes	22.1	C	--	--
15	Butterfield Boulevard and Main Avenue	AM	03/26/15	Signal	--	23.5	C	Signal	--	26.6	C	4.9	0.102
		PM	03/26/15		--	30.2	C		--	37.4	D	11.7	0.190
16	Monterey Road and First Street	AM	03/26/15	Two-Way Stop	No	11.3	B	Two-Way Stop	No	11.9	B	--	--
		PM	03/26/15		No	14.6	B		No	11.4	B	--	--
17	Monterey Road and Second Street	AM	03/26/15	Signal	--	11.1	B	Signal	--	10.5	B	-1.1	-0.007
		PM	03/26/15		--	12.6	B		--	14.0	B	0.0	-0.199
18	Monterey Road and Third Street	AM	03/26/15	Two-Way Stop	No	11.6	B	Two-Way Stop	No	11.2	B	--	--
		PM	03/26/15		No	16.9	C		No	12.1	B	--	--
19	Monterey Road and Fourth Street	AM	04/02/15	Two-Way Stop	No	17.3	C	Two-Way Stop	No	15.1	C	--	--
		PM	04/02/15		No	17.4	C		No	25.1	D	--	--
20	Monterey Road and Fifth Street	AM	04/02/15	Two-Way Stop	No	18.3	C	Two-Way Stop	No	48.2	E	--	--
		PM	04/02/15		No	32.6	D		No	68.2	F	--	--
21	Peak Avenue and Dunne Avenue	AM	04/02/15	All-Way Stop	No	9.9	A	All-Way Stop	No	11.8	B	--	--
		PM	04/02/15		No	13.7	B		No	14.4	B	--	--

TRAFFIC AND TRANSPORTATION

TABLE 4.14-9 EXISTING AND 2035 GENERAL PLAN INTERSECTION LEVEL OF SERVICE

Study No	Intersection	Peak Hour	Count Date	Existing Conditions				2035 General Plan Conditions					
				Control	Warrant Met?	Delay ^a	LOS	Control	Warrant Met?	Delay ^a	LOS	Incr. in Crit. Delay	Incr. in Crit. V/C
22	Hale Avenue and Dunne Avenue	AM	--	Future	--	--	--	Signal	--	18.3	B	--	--
		PM	--		--	--	--		--	19.2	B	--	--
23	Del Monte Avenue and Dunne Avenue	AM	04/02/15	Two-Way Stop	No	12.8	B	Two-Way Stop	No	31.9	D	--	--
		PM	04/02/15		No	15.9	C		No	27.6	D	--	--
24	Monterey Road and Dunne Avenue	AM	10/24/13	Signal	--	24.3	C	Signal	--	25.7	C	-0.9	-0.125
		PM	10/24/13		--	32.9	C		--	38.3	D	6.8	0.151
25	Church Street and Dunne Avenue	AM	10/22/13	Signal	--	17.4	B	Signal	--	18.0	B	0.7	0.033
		PM	10/22/13		--	18.9	B		--	19.2	B	0.2	0.022
26	Depot Street and Dunne Avenue	AM	04/02/15	One-Way Stop	No	9.8	A	Closed	--	--	--	--	--
		PM	04/02/15		No	11.9	B		--	--	--	--	--
27	Butterfield Boulevard and Dunne Avenue	AM	10/24/13	Signal	--	33.0	C	Signal	--	35.9	D	5.3	0.082
		PM	10/24/13		--	31.8	C		--	33.8	C	3.3	0.088
28	Walnut Grove Drive and Dunne Avenue	AM	05/14/14	Signal	--	18.3	B	Signal	--	20.2	C	0.8	0.038
		PM	05/14/14		--	29.3	C		--	29.4	C	-0.4	-0.012
29	Laurel Road and Dunne Avenue	AM	05/20/14	Two-Way Stop	No	12.2	B	Two-Way Stop	No	13.1	B	--	--
		PM	05/20/14		Yes	15.1	C		Yes	16.5	C	--	--
30	US 101 SB Ramps and Dunne Avenue	AM	04/02/15	Signal	--	20.9	C	Signal	--	21.0	C	2.0	0.111
		PM	04/02/15		--	15.0	B		--	18.2	B	6.6	0.174
31	US 101 NB Ramps and Dunne Avenue	AM	04/02/15	Signal	--	12.5	B	Signal	--	12.9	B	0.5	0.043
		PM	04/02/15		--	13.8	B		--	14.7	B	1.4	0.154
32	Condit Road and Dunne Avenue	AM	05/14/14	Signal	--	39.2	D	Signal	--	41.5	D	3.3	0.077
		PM	05/14/14		--	28.2	C		--	29.1	C	1.6	0.091

TRAFFIC AND TRANSPORTATION

TABLE 4.14-9 EXISTING AND 2035 GENERAL PLAN INTERSECTION LEVEL OF SERVICE

Study No	Intersection	Peak Hour	Count Date	Existing Conditions				2035 General Plan Conditions					
				Control	Warrant Met?	Delay ^a	LOS	Control	Warrant Met?	Delay ^a	LOS	Incr. in Crit. Delay	Incr. in Crit. V/C
33	Murphy Avenue and Dunne Avenue	AM	05/14/14	Signal	--	12.8	B	Signal	--	18.0	B	6.4	0.197
		PM	05/14/14		--	11.6	B		--	17.8	B	9.5	0.266
34	Monterey Road and Tennant Avenue	AM	10/22/13	Signal	--	23.7	C	Signal	--	24.5	C	0.8	0.108
		PM	10/22/13		--	37.8	D		--	37.5	D	0.3	0.078
35	Butterfield Boulevard and Tennant Avenue	AM	05/14/14	Signal	--	23.5	C	Signal	--	38.4	D	20.5	0.357
		PM	05/14/14		--	37.6	D		--	42.6	D	8.6	0.190
36	Juan Hernandez Drive and Tennant Avenue	AM	04/02/15	Signal	--	7.4	A	Signal	--	20.4	C	8.7	0.151
		PM	04/02/15		--	6.8	A		--	20.3	C	15.4	0.208
37	US 101 SB Ramps and Tennant Avenue	AM	05/14/14	Signal	--	15.2	B	Signal	--	32.3	C	25.1	0.358
		PM	05/14/14		--	19.3	B		--	50.3	D	45.7	0.415
38	US 101 NB Ramps and Tennant Avenue	AM	05/14/14	Signal	--	12.8	B	Signal	--	12.9	B	1.3	0.114
		PM	05/14/14		--	10.8	B		--	11.3	B	0.7	0.205
39	Condit Road and Tennant Avenue	AM	05/14/14	One-Way Stop	No	11.9	B	One-Way Stop	Yes	16.3	C	--	--
		PM	05/14/14		Yes	11.4	B		Yes	27.2	D	--	--
40	Murphy Avenue and Tennant Avenue	AM	05/14/14	All-Way Stop	No	10.5	B	All-Way Stop	Yes	116.7	F	--	--
		PM	05/14/14		No	10.2	B		Yes	272.9	F	--	--
41	Monterey Road and Vineyard Boulevard	AM	04/02/15	Signal	--	25.9	C	Signal	--	24.1	C	-2.6	0.099
		PM	04/02/15		--	29.5	C		--	27.5	C	-1.5	0.069
42	Monterey Road and Watsonville Road/Butterfield Boulevard	AM	04/02/15	Signal	--	25.6	C	Signal	--	32.0	C	10.4	0.147
		PM	04/02/15		--	28.5	C		--	29.5	C	1.6	0.063

Note: Shading indicates that an intersection with a potentially significant impact.

a. The reported delay and corresponding level of service for signalized and all-way stop-controlled intersections represents the average delay for all approaches at the intersection. The reported delay and corresponding level of service for side-street stop-controlled intersections are based on the stop-controlled approach with the highest delay.

b. Presented LOS under 2035 General Plan is representative of new Monterey Road and Madrone Parkway (N) intersection.

Source: Hexagon Transportation Consultants, 2015.

TRAFFIC AND TRANSPORTATION**TABLE 4.14-10 2035 ROADWAY SEGMENT LEVEL OF SERVICE**

#	Roadway Segment	Existing 2015 Conditions		2035 General Plan Conditions		% Inc. ADT
		ADT ^a	LOS ^b	ADT ^a	LOS ^b	
1	Hale Ave between Willow Springs Rd and Caprista Ct	7,925	C	10,791	D	36%
2	Hale Ave between Tarragon Ave and Campoli Dr	7,811	C	10,434	D	34%
3	Hale Ave between Stoney Creek Wy and Hillwood Ln	8,331	C	13,703	D	64%
4	Dewitt Ave between Oak Park Dr and Origlia Ln	2,987	C	5,892	C	97%
5	Sunnyside Ave between Casino Real and Appian Wy	4,099	C	6,933	C	69%
6	Santa Teresa Blvd between Highland Ave and Fitzgerald Ave	5,247	B	6,477	C	23%
7	Monterey Rd between Kirby Ave and Tilton Ave	20,124	A	30,872	B	53%
8	Monterey Rd between Peebles Ave and Madrone Pkwy	22,326	D	33,269	D	49%
9	Monterey Rd between Cochrane Rd and Old Monterey Rd	11,692	C	19,584	D	67%
10	Monterey Rd between Wright Ave and El Toro St	8,090	C	17,164	C	112%
11	Monterey Rd between 3rd St and 4th St	11,843	C	13,503	C	14%
12	Monterey Rd between San Pedro Ave and Cosmo Ln	21,837	D	26,140	D	20%
13	Monterey Rd between Vineyard Blvd and Watsonville Rd	22,322	D	26,985	D	21%
14	Monterey Rd between Starswept Ln and East Middle Ave	23,228	D	29,446	D	27%
15	Monterey Rd between Church Ave and Carlis Ct	20,206	D	26,034	D	29%
16	Old Monterey Rd between Llagas Rd and Monterey Rd	2,924	B	1,418	C	-51%
17	Butterfield Blvd between Digital Dr and East Central Ave	22,207	D	23,741	D	7%
18	Butterfield Blvd between East Main St and Diane Ave	21,686	D	26,947	D	24%
19	Butterfield Boulevard between San Pedro Ave and Barrett Ave	12,858	C	18,799	C	46%
20	Watsonville Rd between Monterey Rd and Calle Sueno	16,566	D	21,041	D	27%
21	Watsonville Rd between Santa Teresa Blvd and Branston Ct	10,249	D	13,912	D	36%
22	Mission View Dr between Avenida de los Padres and Half Rd	3,752	B	13,275	D	254%
23	Condit Road between Main Ave and Diana Ave	4,650	B	4,742	B	2%
24	Condit Road between San Pedro Ave and Barrett Ave	2,915	B	3,827	B	31%
25	Sycamore Ave between East Middle Ave and San Martin Ave	495	A	464	A	-6%
26	Tilton Ave between Dougherty Ave and Monterey Road	6,775	C	2,572	A	-62%
27	Madrone Parkway between Monterey Road and Lightpost Way	1,435	A	1,782	A	24%
28	Cochrane Rd between Adams Ct and Woodview Ave	20,436	D	27,597	D	35%

TRAFFIC AND TRANSPORTATION

TABLE 4.14-10 2035 ROADWAY SEGMENT LEVEL OF SERVICE

#	Roadway Segment	Existing 2015 Conditions		2035 General Plan Conditions		% Inc. ADT
		ADT ^a	LOS ^b	ADT ^a	LOS ^b	
29	Cochrane Rd between Madrone Pkwy and US 101	30,686	D	39,787	D	30%
30	Cochrane Rd between US 101 and St. Louise Dr	14,812	C	17,474	C	18%
31	Sutter Blvd between Serene Dr and Cochrane Rd	4,349	B	5,951	C	37%
32	West Main St between Hale Ave and Del Monte St	11,035	D	6,693	C	-39%
33	Main Ave between Condit Road and Hill Road	4,781	C	10,100	D	111%
34	West Dunne Ave between Peak Ave and Viewcrest Ln	6,458	C	11,924	D	85%
35	East Dunne Ave between Depot St and Butterfield Blvd	18,752	C	19,838	D	6%
36	East Dunne Ave between Laurel Rd and US 101	27,828	D	31,441	D	13%
37	East Dunne Ave between US 101 and Condit Rd	28,250	D	33,797	D	20%
38	East Dunne Ave between Bayo Claros and Claret Dr	16,289	C	17,487	C	7%
39	East Dunne Ave between Thomas Grade and Old Oak Ln	6,800	C	6,988	C	3%
40	Edmundson Ave between Sunnyside Ave and Sunset Ave	4,387	C	6,947	C	58%
41	Tennant Ave between Vineyard Blvd and Railroad Ave	16,286	C	19,197	C	18%
42	Tennant Ave between Tennant Ct and US 101	32,630	D	48,457	D	49%
43	Tennant Ave between US 101 and Condit Rd	12,069	C	23,477	D	95%
44	East Middle Ave between Murphy Ave (west side) and US 101	2,146	A	2,170	A	1%
45	Middle Ave between Sycamore Ave and Columbet Ave	8,000	C	6,164	B	-23%

a. ADT = Average two-way daily traffic.

b. LOS = Level of service based on daily volume planning thresholds. Peak hour traffic operations may be worse than shown for daily conditions.

Source: Hexagon Transportation Consultants, 2015.

Freeway Segments

As shown in Table 4.14-11, seven of the eight study freeway segments are projected to operate at an unacceptable LOS F at the 2035 buildout horizon. Each of the freeway segments identified to operate at LOS F would be impacted, according to both VTA CMP and Caltrans level of service standards for freeways. Therefore, the proposed General Plan would have a *significant impact* on freeways in the CMP system.

Sub-standard levels of service of US 101 mainline operations under the 2035 buildout horizon is caused by future growth within and outside Santa Clara County, as well as the addition of traffic from development of City of Morgan Hill General Plan land uses. Already planned increases in land use and

TRAFFIC AND TRANSPORTATION**TABLE 4.14-11 2035 FREEWAY SEGMENT LEVEL OF SERVICE**

Travel Direction	Segment		Existing Conditions			2035 General Plan Conditions		
	From	To	Roadway Type ^a	ADT ^b	LOS ^c	Roadway Type ^a	ADT ^b	LOS ^c
NB US 101	San Martin Avenue	Tennant Avenue	3-Lane Freeway	63,511	F	4-Lane Freeway	79,890	E
	Tennant Avenue	Dunne Avenue	3-Lane Freeway	66,961	F	4-Lane Freeway	83,573	F
	Dunne Avenue	Cochrane Road	3-Lane Freeway	69,535	F	4-Lane Freeway	84,270	F
	Cochrane Road	Coyote Creek Road	4-Lane Freeway	71,181	F	4-Lane Freeway	86,950	F
SB US 101	Coyote Creek Road	Cochrane Road	4-Lane Freeway	70,977	F	4-Lane Freeway	86,517	F
	Cochrane Road	Dunne Avenue	3-Lane Freeway	69,783	F	4-Lane Freeway	84,366	F
	Dunne Avenue	Tennant Avenue	3-Lane Freeway	68,611	F	4-Lane Freeway	84,726	F
	Tennant Avenue	San Martin Avenue	3-Lane Freeway	65,354	F	4-Lane Freeway	82,382	F

a. 4-Lane Freeway includes three (3) mixed-flow lanes and one (1) high occupancy vehicle lane in each direction.

b. ADT = Average two-way daily traffic.

c. LOS = Level of service.

Source: Hexagon Transportation Consultants, 2015.

changes to regional travel patterns will contribute to unacceptable operations of the US 101 freeway, which is assumed to include a fourth lane through Morgan Hill in 2035.

Applicable Regulations:

- VTA Congestion Management Plan

Significance Before Mitigation: Significant.

Residential Development Control System

The Growth Management Ordinance, known as the RDCS, regulates population growth through the provision of residential building allotments. The RDCS, and the proposed updates to the RDCS as part of the proposed Project, affects the pace of development in the City but does not determine the location, type, or intensity of development. Therefore, the RDCS would not conflict with an applicable congestion management program. As such, the RDCS would have *no impact*.

Significance Before Mitigation: No impact.

TRAF-3	Implementation of the proposed Project would not substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).

TRAFFIC AND TRANSPORTATION

General Plan

The proposed General Plan would allow an increase in both residential and non-residential development. Construction and modifications of new and existing roadways would be necessary to support the allowed growth. As with current practice, the improvements would be designed and reviewed in accordance to City of Morgan Hill Department of Public Works Design Standards and Standard Details for Construction. Incompatible uses would be discouraged by the proposed General Plan.

The proposed General Plan contains policies and implementing actions that would reduce potential hazards due to roadway design or incompatible uses. Policy TR-1.3 requires the City to ensure safe and appropriate operation of the transportation system. Policy TR-3.2 requires the City to avoid incomplete public improvements that create public safety hazards. Policy TR-3.8 calls for the City to monitor traffic conditions and accident data to identify safety improvements and decrease congestion. Policy TR-3.21 requires the City to review speed limits to support safe neighborhoods. Policy TR-3.16 requires development along arterial streets to obtain access through a local street or major entrance and not through curb cuts.

Future developments and roadway improvements would be designed in accordance to City standards and will be subject to the proposed General Plan policies. Compliance with the City standards and policies would ensure that the future project would not significantly increase hazards due to design features or incompatible uses. Therefore, the proposed General Plan would result in a *less-than-significant* impact.

Applicable Regulations:

- Morgan Hill Design Standards and Standard Details for Construction

Significance Before Mitigation: Less than significant.

Residential Development Control System

The Growth Management Ordinance, known as the RDCS, regulates population growth through the provision of residential building allotments. The RDCS, and the proposed updates to the RDCS as part of the proposed Project, affects the pace of development in the City but does not determine the location, type, or intensity of development. Therefore, the RDCS would not substantially increase hazards due to a design feature or incompatible uses. As such, the RDCS would have *no impact*.

Significance Before Mitigation: No impact.

TRAF-4	Implementation of the proposed Project would not result in inadequate emergency access.

TRAFFIC AND TRANSPORTATION

General Plan

The proposed General Plan contains policies and an action that ensure efficient circulation and adequate access are provided in the City, which would help facilitate emergency response. These policies address level of service standards, roadway improvements, and integrated roadway network as noted in TRAF-1 above. Furthermore, the following policies and action of the proposed General Plan would require the City to maintain and improve emergency access and response times:

Policy SSI-12.4	Maintenance of Emergency Access Routes. Require that emergency access routes be kept free of traffic impediments.
Policy SSI-12.5	Emergency Response Plan. Maintain comprehensive Emergency Response Plans.
Policy SSI-12.6	Accessibility. Continue restricting development in areas of poor accessibility. Discourage development in areas where access is provided by a single road that could be damaged by faulting or landslides, or where access could be cut off by wildfires, trapping residents or workers.
Action SSI-12.A	Emergency Access. Where appropriate, allow development in areas where a second improved access road has been provided for emergency escape.

Implementation of the proposed General Plan policies and action would ensure that adequate emergency access is provided in Morgan Hill. In addition, the proposed General Plan would not designate any new land for development within wildland fire hazard zones and would not contribute to the need for increased emergency access in these areas. Also, as shown in TRAF-1 and TRAF-2, all roadway intersections and roadway segments would operate or could be mitigated to operate at acceptable LOS standards at 2035 buildout conditions. Lastly, any new streets or developments that would result from implementation of the proposed General Plan would be subject to City engineering standards and the General Plan policies described above.

Therefore, implementation of the proposed General Plan policies and actions and the City's Design Standards and Standard Details for Construction would ensure that adequate emergency access is provided in Morgan Hill. Therefore, impacts associated with the implementation of the proposed General Plan would be *less than significant*.

Applicable Regulations:

- Morgan Hill Design Standards and Standard Details for Construction

Significance Before Mitigation: Less than significant.

Residential Development Control System

The Growth Management Ordinance, known as the RDCS, regulates population growth through the provision of residential building allotments. The RDCS, and the proposed updates to the RDCS as part of the proposed Project, affects the pace of development in the City but does not determine the location, type,

TRAFFIC AND TRANSPORTATION

or intensity of development. Therefore, the RDCS would not result in inadequate emergency access. As such, the RDCS would have *no impact*.

Significance Before Mitigation: No impact.

TRAF-5	Implementation of the proposed Project would not conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

The Santa Clara Countywide Bicycle Plan provides guidelines about bicycle facilities in Santa Clara County and the Valley Transportation Plan 2040 identifies future bicycle improvement projects in Morgan Hill. The City of Morgan Hill Bikeways Master Plan Update identifies bicycle infrastructure improvements throughout the City.

With the exception of the planned High Speed Rail project, no other transit projects or extensions of existing transit service are currently planned in Morgan Hill.

General Plan

The proposed General Plan includes policies that provide for an integrated network of bicycle facilities, as well as for the needs of transit users. The General Plan calls for a multi-modal system that integrates all modes of transportation (Policy TR-2.1). Specifically, the proposed General Plan calls for coordinated regional bicycle planning including supporting the implementation of the Santa Clara Countywide Trails Master Plan, Santa Clara Countywide Trails Master Plan, and Santa Clara County Bicycle Technical Guidelines (Policies TR-8.4, TR-8.5, and TR-8.11). In addition, the proposed General Plan supports the implementation and maintenance of the City's Bikeways Master Plan (Policy TR-8.14).

The proposed General Plan also supports an expanded pedestrian network that connects pedestrians to Downtown, shopping areas, and employment centers (Policy TR-9.1). To ensure a well-planned pedestrian network, the proposed General Plan calls for the City to coordinate pedestrian planning with the City's Bikeways Master Plan, Santa Clara Countywide Trails Master Plan, and Santa Clara Countywide Bicycle Plan (Policy TR-9.4).

The proposed General Plan calls for the City to design streets to accommodate bus service (Policies TR-6.1 and TR-6.4) and to require new development to install bus shelters as appropriate (Policy TR-6.12).

Implementation of the proposed General Plan would therefore support and would not conflict with plans, programs and policies regarding bicycle, pedestrian, or transit facilities, or decrease the performance and safety of such facilities. Therefore, the project impact is *less than significant*.

TRAFFIC AND TRANSPORTATION

Applicable Regulations:

- Santa Clara Countywide Bicycle Plan
- Valley Transportation Plan 2040
- City of Morgan Hill Bikeways Master Plan Update
- Santa Clara Countywide Trails Master Plan

Significance Before Mitigation: Less than significant.

Residential Development Control System

The Growth Management Ordinance, known as the RDCS, regulates population growth through the provision of residential building allotments. The RDCS, and the proposed updates to the RDCS as part of the proposed Project, affects the pace of development in the City but does not determine the location, type, or intensity of development. In addition, the proposed RDCS Competition Standards would award points to projects that provide pedestrian and bicyclist improvements beyond the minimum requirement, construct bus stop and other transit improvements beyond the minimum requirement, and construct off-site transportation improvements beyond the minimum requirement. Therefore, the RDCS would not conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities. As such, the RDCS would have *no impact*.

Significance Before Mitigation: No impact.

TRAF-6	Implementation of the proposed Project would not result in a change in air traffic patterns, including either an increase in traffic levels or a change in location, which would result in substantial safety risks.

General Plan

The South County Airport, located near the junction of US 101 and East San Martin Avenue and is outside the Project Area. However, a small portion of Morgan Hill and its Sphere of Influence (SOI) extends into the Airport Influence Area (AIA) of the South County Airport. The proposed General Plan land use designations within the South County AIA would be a mix of land uses including Residential Estate, Single Family Low, Single Family Medium, Open Space, and Rural County. All of these land use designations would be well under the maximum height established in the South County Airport Comprehensive Land Use Plan of 531-631 feet for the affected areas. Moreover, the proposed General Plan includes policies to maintain safe living and working conditions within the vicinity of the South County Airport. Specifically, Policy SSI-7.1 calls for the City to work with the appropriate agencies to ensure land use compatibility with airport operations. Policy SSI-7.2 calls for the City to limit building heights for airspace protection in accordance with Federal Aviation Regulations Part 77. These policies would prevent inappropriate development that could affect air traffic patterns due to its nature or height. Therefore, the proposed General Plan would have a *less-than-significant* impact on air traffic patterns.

TRAFFIC AND TRANSPORTATION

Applicable Regulations:

- South County Airport Comprehensive Land Use Plan

Significance Before Mitigation: Less than significant.

Residential Development Control System

The Growth Management Ordinance, known as the RDCS, regulates population growth through the provision of residential building allotments. The RDCS, and the proposed updates to the RDCS as part of the proposed Project, affects the pace of development in the City but does not determine the location, type, or intensity of development. Therefore, the RDCS would not result in a change in air traffic patterns, including either an increase in traffic levels or a change in location, which would result in substantial safety risks. As such, the RDCS would have *no impact*.

Significance Before Mitigation: No impact.

4.14.5 CUMULATIVE IMPACTS

The traffic levels predicted in 2035 and evaluated in Section 4.14.4, Project Impacts, are based on cumulative traffic conditions that take into account cumulative development in the region, including development within other parts of Santa Clara County and the Bay Area. Therefore, the analysis in Section 4.14.4 addresses cumulative impacts.

4.14.6 SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION MEASURES

TRAF-1	Implementation of the proposed General Plan would result in the intersection of Monterey Road and Central Avenue (Intersection #10) to degrade to LOS F during the AM peak hour, and the intersection of Tennant Avenue and Murphy Avenue (Intersection #40) to degrade to LOS F during both the AM and PM peak hours.

Impact TRAF-1A: The intersection of Monterey Road and Central Avenue (Intersection #10) would degrade to LOS F during the AM peak hour.

Mitigation Measure TRAF-1A: The City of Morgan Hill shall install a signal at the intersection of Monterey Road and Central Avenue or install a different, equally effective measure to reduce delays at the intersection. With this improvement, the project impact is *less than significant*.

Significance After Mitigation: Less than significant.

TRAFFIC AND TRANSPORTATION

Impact TRAF-1B: The intersection of Tennant Avenue and Murphy Avenue (Intersection #40) would degrade to LOS F during both the AM and PM peak hours.

Mitigation Measure TRAF-1B: The City of Morgan Hill shall install a signal at the intersection of Tennant Avenue and Murphy Avenue or install a different, equally effective measure to reduce delays at the intersection. With this improvement, the project impact is *less than significant*.

Significance After Mitigation: Less than significant.

TRAF-2	Implementation of the proposed General Plan would conflict with an applicable congestion management program as all freeway segments through Morgan Hill, both northbound and southbound, would continue to operate at LOS F.

Impact TRAF-2: The freeway segments along US 101 through the City are currently operating at LOS F and each of the segments would continue to operate at LOS F and the addition of traffic that would result from implementation of the proposed General Plan would constitute more than 1 percent of freeway capacity under 2035 buildout conditions.

Mitigation Measure TRAF-2: Full mitigation of significant impacts on freeway segments would require freeway widening to construct five lanes through Morgan Hill, thereby increasing freeway capacity.

Ultimately, the VTA and Caltrans are the responsible agencies for planning for and implementing improvements within the US 101 corridor. A fair share contribution from the City of Morgan Hill towards freeway improvement costs is an acceptable mitigation measure. However, the City of Morgan Hill does not have a funding strategy in place to contribute towards regional improvements. City representatives should work collaboratively with San Jose, Gilroy, Santa Clara County, counties to the south (Monterey, San Benito, and Merced Counties), the Valley Transportation Authority, and Caltrans to prepare and develop a funding strategy for South County roadway improvements. Payment of traffic impact fees or a fair share contribution is expected to fulfill the City's obligations for mitigating regional traffic impacts; however, unless other funding sources such as a new regional impact fee, additional sales tax measures, contributions from other developers, or state funds are made available, feasible roadway improvements will not be implemented, and the identified freeway impacts will remain significant and unavoidable.

Significance After Mitigation: Significant and unavoidable.

4.14.7 FULL BUILDOUT

The full buildout anticipated under the proposed Project would include significantly more non-residential development than the 2035 horizon-year development projection analyzed in Section 4.14.4, Impact

TRAFFIC AND TRANSPORTATION

Discussion, in terms of both the amount and the extent of development. Therefore, the potential for impacts related to traffic and transportation would increase. However, as discussed in Chapter 3, Project Description, it is extremely unlikely that full buildout would ever occur under the proposed Project. Therefore, an analysis of full buildout is not required by CEQA.

UTILITIES AND SERVICE SYSTEMS

4.15 UTILITIES AND SERVICE SYSTEMS

This chapter discusses the existing utilities and service systems in Morgan Hill and its surrounding area, evaluating the potential environmental impacts to water supply, wastewater collection and treatment, solid waste disposal, and energy conservation associated with the proposed Project.

4.15.1 WATER

This section outlines the regulatory setting, describes existing conditions, and discusses potential impacts from the proposed Project with regard to water supply services.

The City is preparing a Water Infrastructure Master Plan that will assess existing water supply and demand and determine what types of improvements are necessary to meet projected future demand. However, the Water Infrastructure Master Plan will not be complete before publication of this Draft EIR. As a result, the impact analyses for water supply services presented in this EIR are subject to change (e.g., via an Addendum to the EIR) after the Water Infrastructure Master Plan is prepared.

4.15.1.1 ENVIRONMENTAL SETTING

Regulatory Framework

Federal Regulations

Federal Safe Drinking Water Act

The Safe Drinking Water Act authorizes the United States Environmental Protection Agency (US EPA) to set national standards for drinking water, called the National Primary Drinking Water Regulations, to protect against both naturally occurring and man-made contaminants. These standards set enforceable maximum contaminant levels in drinking water and require all water providers in the United States to treat water to remove contaminants, except for private wells serving fewer than 25 people. In California, the Division of Drinking Water (DDW) within the State Water Resources Control Board (SWRCB) regulates public drinking water systems. If a water system does not meet standards, it is the water supplier's responsibility to notify its customers.

State Regulations

California Porter-Cologne Water Quality Control Act

Under the Porter-Cologne Water Quality Control Act (Porter-Cologne), which was passed in California in 1969, the SWRCB has the ultimate authority over state water rights and water quality policy. Porter-Cologne also establishes nine Regional Water Quality Control Boards (RWQCBs) to oversee water quality on a day-to-day basis at the local and regional level. RWQCBs engage in a number of water quality functions

UTILITIES AND SERVICE SYSTEMS

in their respective regions. RWQCBs regulate all pollutant or nuisance discharges that may affect either surface water or groundwater.¹ Morgan Hill is overseen by the Central Coast RWQCB.

California Urban Water Management Planning Act

Through the Urban Water Management Planning Act of 1983, the California Water Code requires all urban water suppliers within California to prepare and adopt an Urban Water Management Plan (UWMP) and update it every five years. This requirement applies to all suppliers providing water to more than 3,000 customers or supplying more than 3,000 acre-feet of water per year (AFY).² This Act is intended to support conservation and efficient use of urban water supplies. The Act requires that total project water use be compared to water supply sources over the next 20 years in five-year increments, that planning occur for single and multiple dry water years, and that plans include a water recycling analysis that incorporates a description of the wastewater collection and treatment system within the agency's service area along with current and potential recycled water uses.³

Senate Bills 610 and 221

Senate Bill (SB) 610 and SB 221 amended state law to ensure better coordination between local water supply and land use decisions and confirm that there is an adequate water supply for new development. Both statutes require that detailed information regarding water availability be provided to City and County decision-makers prior to approval of large development projects. SB 610 requires the preparation of a Water Supply Assessment (WSA) for certain types of projects, as defined by Water Code Section 10912, which are subject to the California Environmental Quality Act (CEQA). Projects required to prepare a WSA are defined as follows:

- Residential development of more than 500 dwelling units.
- Shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor area.
- Hotel or motel, or both, having more than 500 rooms.
- Industrial, manufacturing or processing plant, or industrial park planned to employ more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area.
- Mixed-use project that includes one or more of the projects specified above.
- Project that would demand an amount of water equivalent to, or greater than, the amount of water required for 500 dwelling units.

¹ California Wetlands Information System, Summary of the Porter-Cologne Water Quality Control Act, http://ceres.ca.gov/wetlands/permitting/Porter_summary.html, accessed on February 5, 2015.

² One acre-foot is the amount of water required to cover 1 acre of ground (43,560 square feet) to a depth of 1 foot.

³ Department of Water Resources, About Urban Water Management, <http://www.water.ca.gov/urbanwatermanagement/>, accessed February 5, 2015.

UTILITIES AND SERVICE SYSTEMS

SB 221 establishes consultation and analysis requirements related to water supply planning for residential subdivisions including more than 500 dwelling units. Written verification by the water supplier that sufficient water is available for the project is required before construction begins. The document used to determine compliance with both SB 610 and SB 221 is the UWMP.

California Groundwater Management Act of 1992

The Groundwater Management Act (Assembly Bill (AB) 3030) was signed into law in 1992 and provides guidance for applicable local agencies to develop voluntary Groundwater Management Plans (GMPs) in state-designated groundwater basins. GMPs can allow agencies to raise revenue to pay for measures influencing the management of the basin, including extraction, recharge, conveyance, facilities' maintenance, and water quality.⁴ The Groundwater Management Act has since been modified by SB 1938 in 2002 and Assembly Bill 359 in 2011.

Sustainable Groundwater Management Act of 2014

On September 16, 2014, a three-bill legislative package was signed into law, composed of AB 1739, SB 1168, and SB 1319, collectively known as the Sustainable Groundwater Management Act.⁵ The Governor's signing message states "a central feature of these bills is the recognition that groundwater management in California is best accomplished locally." The Sustainable Groundwater Management Act requires the formation of local groundwater sustainability agencies (GSAs) who must assess conditions in their local groundwater basins and then prepare locally based management plans but the act gives the GSAs 20 years to implement the plans.

The Water Conservation Act of 2009 (SB X7-7)⁶

SB X7-7, which was enacted in 2009, requires all water suppliers to increase water use efficiency. The legislation sets an overall goal of reducing per capita water use by 20 percent by 2020, with an interim goal of a 10 percent reduction in per capita water use by 2015.

State Updated Model Water Efficient Landscape Ordinance

Assembly Bill 1881 (AB 1881) required cities and counties to adopt the Model Water Efficient Landscape Ordinance (WELO) by January 31, 2010 or to adopt a different ordinance that is at least as effective in conserving water as the Model WELO. In accordance with AB 1881, Morgan Hill adopted its WELO on June 3, 2009; it was amended on July 28, 2010. The ordinance is codified in the Morgan Hill Municipal

⁴ Department of Water Resources Planning and Local Assistance Central District, Groundwater, *Groundwater Management*, <http://www.cd.water.ca.gov/groundwater/gwab3030.cfm>, accessed on February 5, 2015.

⁵ Department of Water Resources, Groundwater Information Center, http://www.water.ca.gov/groundwater/groundwater_management/legislation.cfm, accessed on February 5, 2015.

⁶ Department of Water Resources, Senate Bill SBX7-7 2009 Information, <http://www.water.ca.gov/wateruseefficiency/sb7/>, accessed on February 5, 2015.

UTILITIES AND SERVICE SYSTEMS

Code, Chapter 18.73 – *Water Conservation in Landscaping*. See Morgan Hill Municipal Code below for a discussion of local ordinances that are required to reduce water consumption and conserve water.

Executive Order B-29-15, signed by Governor Brown on April 1, 2015, imposed mandatory water restrictions in California and required the Department of Water Resources to prepare an updated Model WELO. In July 2015, the California Water Commission adopted an updated Model WELO. Local jurisdictions have until December 1, 2015 to adopt the Model WELO or adopt an equally effective ordinance and have until December 31, 2015 to meet reporting requirements. Local jurisdictions, such as Morgan Hill, that are working together to develop a regional ordinance have until February 1, 2016 to adopt the ordinance but must still meet the reporting deadline. The City of Morgan Hill is considering adoption of an updated local WELO in early 2016. More detail on Executive Order B-29-15 is provided below.

Executive Order 29-B-15 (Mandatory Water Use Restrictions)

Executive Order B-29-15 requires the State Water Resources Control Board (SWRCB) to impose restrictions to achieve a statewide 25 percent reduction in potable urban water usage through February 28, 2016. These restrictions require that water suppliers to California's cities and towns reduce usage as compared to the amount used in 2013. These restrictions should consider the relative per capita water usage of each water suppliers' service area, and require that those areas with high per capita use achieve proportionally greater reductions than those with low use. In addition to requiring cities and towns to save water, the Order is intended to increase enforcement to prevent wasteful water use, streamline the state's drought response and invest in new technologies, making California more drought resilient. The order also requires:

- Replacement of 50 million square feet of lawns throughout the state with drought tolerant landscaping.
- Creation of a temporary, statewide consumer rebate program to replace old appliances with more water and energy efficient models.
- Requirement that campuses, golf courses, cemeteries, and other large landscapes make significant cuts to water use.
- Prohibit new homes and development from irrigating with potable water unless water-efficient drip irrigation systems are used and ban the watering of ornamental grass on public street medians.

CALGreen Building Code

On July 17, 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code (Part 11, Title 24, known as "CALGreen") was adopted as part of the California Building Standards Code (Title 24, California Code of Regulations [CCR]) to apply to the planning, design, operation, construction, use, and occupancy of every newly constructed building or structure, unless otherwise indicated in this code, throughout the State of California. CALGreen established planning and design standards for sustainable site development including water conservation and requires new

UTILITIES AND SERVICE SYSTEMS

buildings to reduce water consumption by 20 percent.⁷ The mandatory provisions of the California Green Building Code Standards became effective January 1, 2011. The building efficiency standards are enforced through the local building permit process.

The purpose of CALGreen is to improve public health, safety, and general welfare by enhancing the design and construction of buildings through the use of building concepts having a reduced negative impact or positive environmental impact and encouraging sustainable construction practices in the following categories:

- Planning and design
- Energy efficiency
- Water efficiency and conservation
- Material conservation and resource efficiency
- Environmental quality

The provisions of this code apply to the planning, design, operation, construction, use, and occupancy of each newly constructed building or structure, unless otherwise indicated in this code, throughout the State of California. Compliance with the CALGreen Code is not a substitution for meeting the certification requirements of any green building program.

The California Plumbing Code

The 2013 California Plumbing Code (Part 5, Title 24, CCR) was adopted as part of the California Building Standards Code. The general purpose of the universal code is to prevent disorder in the industry as a result of widely divergent plumbing practices and the use of many different, often conflicting, plumbing codes by local jurisdictions. Among many topics covered in the code are water fixtures, potable and non-potable water systems, and recycled water systems. Water supply and distribution shall comply with all applicable provisions of the current edition of the California Plumbing Code.

State Emergency Regulations Restricting Use of Potable Water (CCR Title 23, Sections 863, 864, 865 and 866)

Water Code section 1058.5 grants the SWRCB the authority to adopt emergency regulations in certain drought years in order to “prevent the waste, unreasonable use, unreasonable method of use, or unreasonable method of diversion, of water, to promote water recycling or water conservation, to require curtailment of diversions when water is not available under the diverter’s priority of right, or in furtherance of any of the foregoing, to require reporting of diversion or use or the preparation of monitoring reports.”

On May 5, 2015, the SWRCB approved a resolution⁸ resulting in adoption of emergency drought regulations,⁹ implementing the Governor’s April 1, 2015 Executive Order mandating a statewide 25

⁷ The green building standards became mandatory in the 2010 edition of the code.

UTILITIES AND SERVICE SYSTEMS

percent reduction in potable water use. The regulations require each water supplier to California cities and towns to reduce water usage compared to 2013 levels. The conservation target for each city, town, or water supplier depends on the residential gallons per capita per day (R-GPCD) used by that city, town, or water supplier. The conservation target is to be met each month from June 2015 through February 2016.

The water reductions vary from 8 percent to 36 percent depending on per capita water usage in each municipality and are based on the water usage for a three month period in 2014 (July through September). Cities that use more water will have to make larger cuts. Morgan Hill will be subject to a water use reduction of 28 percent compared to 2013 levels.

Local Regulations

The following are regional and local regulations that affect water service in Morgan Hill and its Sphere of Influence (SOI).

Santa Clara Valley Water District Comprehensive Water Resources Management Plan

As the primary water resources agency for Santa Clara County, the Santa Clara Valley Water District (SCVWD; or, District) has a Comprehensive Water Resources Management Plan that outlines the key water resource issues facing the County and provides a framework for understanding the SCVWD's policies related to water supply, natural flood protection, and water resources stewardship. The Plan provides factsheets for all cities within Santa Clara County that includes shared responsibilities with SCVWD, Citywide programs and projects related to water resources management issues, and a list of related Comprehensive Plan elements.

As the groundwater management agency for the Santa Clara County, the District works to protect and augment groundwater supplies.¹⁰ The 2012 Groundwater Management Plan, which was adopted by the District Board of Directors in July 2012, describes the district's groundwater basin management objectives and the strategies, programs, and activities that support those objectives.

2010 Urban Water Management Plan

As discussed in the state regulations section above, water suppliers must submit an UWMP to the California Department of Water Resources (DWR) in accordance with California Water Code requirements. The purpose of the UWMP is to implement and maintain the reliability of urban water supplies, ensure that future beneficial use can be complemented by sufficient water supply, continue to promote policies and

⁸ SWRCB Resolution 2015-0032, http://www.waterboards.ca.gov/waterrights/water_issues/programs/drought/docs/emergency_regulations/rs2015_0032_with_adopted_regs.pdf, accessed September 23, 2015.

⁹ California Office of Administrative Law, Notice of Approval of Emergency Regulatory Actions, http://www.waterboards.ca.gov/waterrights/water_issues/programs/drought/docs/emergency_regulations/oal_approved_regs2015.pdf, accessed September 23, 2015.

¹⁰ SCVWD Groundwater Management, <http://www.valleywater.org/services/groundwater.aspx>, accessed September 8, 2015.

UTILITIES AND SERVICE SYSTEMS

programs that benefit water conservation, and provide a means for response during water supply shortages and drought conditions.

The City of Morgan Hill prepared the 2010 UWMP in compliance with state mandates and in accordance with water best management practices (BMPs) which addresses the following goals:

- Quantify and compare water supply and water demands through the planning horizon year of 2030.
- Address the requirements of the Water Conservation Act of 2009 (SB x7-7).
- Provide a local perspective on current and proposed water conservation programs.
- Review current conservation programs and efforts.
- Evaluate potential conservation methods and identify improvements.
- Provide a general framework for the development of mechanisms for coping with short-term and long-term deficiencies in regional and/or local water supplies.
- Serve as a flexible plan that can be updated periodically to reflect changes in regional and local trends (at least once every five years, in accordance with Sections 10621 and 10644 of AB 797).
- Coordinate with the Santa Clara Valley Water District.

2002 Morgan Hill Water System Master Plan

The 2002 Morgan Hill Water System Master Plan addresses the following goals:

- Establish water system design and planning criteria.
- Evaluate the capacity of the existing water distribution system using computer hydraulic modeling.
- Perform a demand analysis and review supply capacity.
- Perform a system-wide storage analysis.
- Summarize existing system deficiencies and propose improvements to enhance system reliability.
- Recommend improvements needed for the current system and for future growth.
- Develop a capital improvement program with a planning horizon year of 2020.

City of Morgan Hill Municipal Code

The City of Morgan Hill Municipal Code contains all ordinances for the City. The Municipal Code is organized by Title, Chapter, and Section.

Chapter 13.04, Water System

Chapter 13.04 of the City's Municipal Code describes the rules, rates, and requirements to obtain water service from the City.

UTILITIES AND SERVICE SYSTEMS

Chapter 15.65, Sustainable Building Regulations

The purpose of Chapter 15.65 of the City's Municipal Code is to assure that commercial and residential development is consistent with the City's environmental agenda to create a more sustainable community by incorporating sustainable building measures into the design, construction, and maintenance of new and existing buildings. The sustainable building provisions referenced in this chapter are designed to achieve the following objectives:

- Increase energy efficiency in buildings.
- Encourage water and resource conservation.
- Reduce waste generated by construction projects.
- Provide durable buildings that are efficient and economical to own and operate.
- Promote healthy and productive indoor environments for residents, workers, and visitors to the City.
- Recognize and conserve the energy embodied in existing buildings.

Chapter 18.73, Water Conservation in Landscaping

Chapter 18.73 of the City's Municipal Code is intended to reduce water waste in landscaping by promoting the use of region-appropriate plants that require minimal supplemental irrigation, and by establishing standards for irrigation efficiency. This chapter implements the California Water Conservation in Landscaping Act.

Existing Conditions

The City provides water service to over 13,300 metered customers inside and outside the City limits. About 85 percent of customers are residential (single and multi-family) and are responsible for approximately 70 percent of total water consumption. Commercial, industrial, government, and institutional users account for the remaining customers and usage.

Water Sources

The City of Morgan Hill receives its water from groundwater wells that feed an interconnected grid of pipelines to deliver water to homes and businesses in the community. The sources (and percentages) of groundwater recharge are local rainfall (40 percent), local reservoirs (34 percent), and imported water (26 percent). Imported water for replenishing groundwater is provided by the Santa Clara Valley Water District (SCVWD). The SCVWD manages groundwater in Santa Clara County, including the Santa Clara sub-basin (Coyote Valley subarea) and the Llagas sub-basin; these are the sources of Morgan Hill's groundwater.

The SCVWD and the City depend on regional, state, and federal water agencies to supply additional water to replenish the groundwater. Imported water originates from natural runoff and releases from statewide reservoirs and is pumped out of the Sacramento San Joaquin Delta by the State Water Project (SWP) and the federal Central Valley Project (CVP). The SCVWD manages water recharge by releasing water captured and stored in local reservoirs, and water imported from the Delta, to creeks and recharge ponds.

UTILITIES AND SERVICE SYSTEMS

Recycled Water

By the year 2020, the SCVWD predicts that the South Bay could have severe water shortages during a drought without additional water supplies. To ensure an adequate and reliable supply of high-quality water, the SCVWD has partnered with cities and water retailers in the county to develop recycled water supplies. About 4 percent of the County's total water use currently consists of recycled water, limited primarily to landscaping and industrial uses.

Currently, Morgan Hill's water enterprise does not utilize recycled water. The SCVWD and the South County Regional Wastewater Authority (SCRWA), which provides wastewater treatment for the cities of Morgan Hill and Gilroy, collaborated on a Recycled Water Master Plan that was completed in 2004. The Recycled Water Master Plan found that, while potential customers for recycled water could be identified in Morgan Hill, the capital costs of running a pipeline to Morgan Hill rendered the project economically unfeasible. The SCRWA and the SCVWD are teaming up again to update the 2004 Master Plan.¹¹ The 2015 South County Recycled Water Master Plan Update is in the latter stages of development with a final report due in 2016. The purpose of the Master Plan Update is to:

- Identify potential new customers and recycled water needs.
- Update regulatory and treatment requirements.
- Update demand projections.
- Develop and evaluate alternatives.
- Evaluate recycled water options for Morgan Hill.
- Prepare 10 percent designs of near term projects.
- Identify outreach, environmental, and funding needs.

Water Demand and Supply Projections

The 2010 UWMP is the document the City uses to quantify water supply and water demands and set conservation goals through the UWMP planning horizon year of 2030. Therefore, this section focuses on the 2010 UWMP. However, it should be noted that the 2010 UWMP does not reflect the severe drought that has affected Morgan Hill and California as a whole since 2011. The effects of the current drought on Morgan Hill's water supply, and the regional and local response to the drought, are addressed below.

The water demand projections for the 2010 UWMP were developed with an end-use model that 1) establishes base-year water demand at the end-use level (e.g., toilets, showers) and calibrates the model to initial conditions; and 2) forecasts future water demand based on future demands of existing water service accounts and future growth in the number of water service accounts.

In 2010 the City used 6.778 acre-feet per year (AFY) of water, all of it pumped from the Llagas sub-basin and the Coyote sub-area of the Santa Clara sub-basin. The UWMP projects water demand would increase

¹¹ City of Morgan Hill Comprehensive Water Report, 2015, part of City Council Staff Report, for April 1, 2015 meeting, <http://www.morgan-hill.ca.gov/DocumentCenter/View/15899>, accessed September 8, 2015.

UTILITIES AND SERVICE SYSTEMS

from 6,778 AFY in 2010 to 9,637 AFY in 2030. This forecast includes an anticipated 20 percent reduction in per capita water use by 2020¹² and a projected 33 percent increase in the total number of water service accounts (from 12,132 in 2010 to 16,087 in 2030, see tables 3.2.3 and 3.2.6 in the 2010 UWMP).

The City of Morgan Hill obtains all of its water supply from groundwater. About 25 percent of its supply is extracted from the Coyote Valley sub-area of the Santa Clara sub-basin; about 75 percent is extracted from the Llagas sub-basin. The maximum capacity of the City's 17 wells was 18,054 AFY in 2010;¹³ however, only a fraction of this capacity is utilized. Since the basins are not adjudicated, the maximum supply available to the City is its maximum pumping capacity.

SCVWD manages the groundwater basins, including the groundwater recharge program to replenish the basins. The District provides about 26 percent of recharge with imported raw water and about 34 percent via releases from local reservoir storage. Rainfall percolation accounts for the remaining 40 percent of replenishment.

Table 4.15-1 shows demand and supply projections for a normal hydrologic year. Table 4.15-2 shows demand and supply projections for a single dry year. Table 4.15-3 shows demand and supply projections for multiple-dry years.

The UWMP demonstrates that supply available to the City far exceeds demand during normal, dry, and multiple-dry hydrologic years. Tables 4.15-1, 4.15-2, and 4.15-3 above, which are derived from the UWMP, show supply exceeding demand by at least 6,000 AFY (or greater than 38 percent) under all scenarios. However, continued pumping at rates that exceed the total groundwater recharge can be harmful to the basins (i.e., subsidence, etc.). For this reason, especially during single-dry and multiple-dry years, the SCVWD and the City of Morgan Hill (a member agency of the SCVWD) are committed to additional focus on monitoring groundwater levels and implementing water conservation strategies before water levels become dangerously low.

To address potential changes in supply and demand projections, in 2013 the City reportedly was planning to add a new supply well in the near term. As the City continues to grow, the demand requirements will continue to increase and another supply well will be needed in the long-term (2020-2025).¹⁴

Due to the drought, the City is currently experiencing a drop in groundwater levels in City wells. The Comprehensive Water Report submitted to the City Council in April 2015 noted that July 2015 well levels were projected to drop to the lowest recorded water level for one representative well, the Nordstrom Well. Based on that well, the Public Works Department anticipated that only 66 percent of the water that was

¹² The 20x2020 Water Conservation Plan (20x2020 Plan) calls for California to reduce its per capita use 20 percent, from the 192 gallons per capita daily (GPCD) in 2009 to 154 GPCD in 2020.

¹³ City of Morgan Hill 2010 UWMP.

¹⁴ Transportation and Public Infrastructure White Paper, Morgan Hill 2035, May 16, 2013, http://morganhill2035.org/wp-content/uploads/2013/05/6_Trans_PubInf.pdf, accessed September 23, 2015.

UTILITIES AND SERVICE SYSTEMS

TABLE 4.15-1 SUPPLY AND DEMAND COMPARISON – NORMAL YEAR

		2015	2020	2025	2030
Normal Year	Supply Totals	15,946	15,946	15,946	15,946
	Demand Totals	9,023	8,571	9,049	9,637
	Difference	6,923	7,375	6,897	6,309
	Difference as % of Supply	43%	46%	43%	40%
	Difference as % of Demand	77%	86%	76%	65%

Note: Units = Acre-feet per year

Source: 2010 UWMP. City of Morgan Hill; Table 5.4.4.

TABLE 4.15-2 SUPPLY AND DEMAND COMPARISON – SINGLE DRY YEAR

		2015	2020	2025	2030
Single Dry Year	Supply Totals	15,946	15,946	15,946	15,946
	Demand Totals	9,255	8,791	9,281	9,885
	Difference	6,691	7,155	6,665	6,061
	Difference as % of Supply	42%	45%	42%	38%
	Difference as % of Demand	74%	84%	74%	63%

Note: Units = Acre-feet per year

Source: 2010 UWMP. City of Morgan Hill; Table 5.4.5.

available as of July 2011 would be available for City use in July 2015. The water levels in all of the City's wells are expected to drop in a similar manner.¹⁵

Water System

The City's water system consists of 17 wells, 10 booster stations, 12 storage tanks, 1,927 fire hydrants, and over 180 miles of water pipeline.¹⁶ Water wells in Morgan Hill range in depth from 220 feet to 530 feet deep. The amount of water flowing into the well determines the amount the City can pump out. As water levels drop, so does the amount of water that can effectively be extracted from the well.

¹⁵ City of Morgan Hill Comprehensive Water Report, 2015, part of City Council Staff Report, for April 1, 2015 meeting, page 6. <http://www.morgan-hill.ca.gov/DocumentCenter/View/15899>, accessed September 8, 2015.

¹⁶ City of Morgan Hill Comprehensive Water Report, 2015, part of City Council Staff Report, for April 1, 2015 meeting, <http://www.morgan-hill.ca.gov/DocumentCenter/View/15899>, accessed September 8, 2015.

UTILITIES AND SERVICE SYSTEMS

TABLE 4.15-3 SUPPLY AND DEMAND COMPARISON – MULTIPLE DRY YEARS

		2015	2020	2025	2030
Multiple-Dry Year First Year Supply	Supply Totals	15,946	15,946	15,946	15,946
	Demand Totals	9,237	8,774	9,264	9,865
	Difference	6,709	7,172	6,682	6,081
	Difference as % of Supply	42%	45%	42%	38%
	Difference as % of Demand	74%	84%	74%	63%
Multiple-Dry Year Second Year Supply	Supply Totals	15,946	15,946	15,946	15,946
	Demand Totals	9,166	8,706	9,192	9,789
	Difference	6,780	7,240	6,754	6,197
	Difference as % of Supply	43%	45%	42%	39%
	Difference as % of Demand	75%	84%	75%	64%
Multiple-dry year third year supply	Supply Totals	15,946	15,946	15,946	15,946
	Demand Totals	9,183	8,723	9,210	9,808
	Difference	6,763	7,223	6,736	6,138
	Difference as % of Supply	42%	45%	42%	38%
	Difference as % of Demand	75%	84%	74%	64%

Note: Units = Acre-feet per year

Source: 2010 UWMP, City of Morgan Hill; Table 5.4.6.

With over 1 million feet of water main below-ground and out of sight in Morgan Hill, an asset management program helps City engineers systematically evaluate the pipeline conditions and guides them in determining where to invest the community's infrastructure replacement dollars. In 2011, the City Council made a commitment to maintain a certain level of service to the community when the Council adopted a five-year water rate structure.

In Morgan Hill, the fiscal resources needed to operate the City's water enterprise are paid for by the revenues generated from customer charges. On November 16, 2011, the City Council approved a resolution revising the monthly water system fees for the next five years beginning in January 2012. The Council approved water rate increases of 16.50 percent in January 2012, and an increase of 6.25 percent annually from January 2013 through January 2016.

UTILITIES AND SERVICE SYSTEMS

The Council adopted a “conservation tier structure” (Increasing Block Rates) in residential water accounts so that the majority of indoor household water use is captured in the lowest rate tier to accommodate nondiscretionary use that represents the bare minimum level households need to function, such as water used to wash dishes, shower, and do laundry. The second and third tiers capture water use for discretionary purposes, such as landscape irrigation and washing cars. The current rate was designed so that approximately 16 percent of the water operation revenue is fixed and collected through meter charges. The remaining 84 percent is variable revenue derived from water sales (commodity) charges.

The City is currently evaluating its water rate structure and levels and is likely to be proposing rate adjustments in early 2016.

Drought Response

As noted above, the Governor declared a “statewide water emergency” in January 2014. The declaration alerts the public to have heightened awareness and that all water agencies should implement their contingency plans. Morgan Hill is complying with the declaration by implementing the contingency measures found in the 2010 UWMP. In March 2015, the SCVWD called for a 30 percent reduction in water demand below 2013 levels for all of its retail customers, including the City.

Governor Brown signed Executive Order B-29-15 on April 1, 2015, imposing mandatory water restrictions in California. The Order requires the SWRCB to impose restrictions to achieve a statewide 25 percent reduction in potable urban water usage through February 28, 2016. These restrictions require water suppliers to California’s cities and towns to reduce usage as compared to the amount used in 2013. The SWRCB placed the City of Morgan Hill in a 28 percent conservation tier. For the period of July 2015, the City conserved 42 percent, compared to comparable period in 2013.

Level 1 (2014)

In response to calls from Governor Brown’s Office and the District for a 20 percent reduction in water demand in early 2014, the City Council adopted a resolution on April 2, 2014 declaring a Level 1 Water Supply Shortage and directed staff to further engage customers using the WaterSmart program. Under a Level 1 Water Supply Shortage, landscape irrigation is limited to three days per week, leaks must be repaired quickly, and the washing down of hard or paved surfaces is prohibited except when necessary to alleviate safety or sanitary hazards. With the City actively engaging the community in the Level 1 Shortage by sending out notices and using the full array of City communication resources, the community collectively reduced water demand by 550 million gallons and conserved over 20 percent between March and December 2014.

Level 2 (2015)

In response to ongoing drought conditions in the state, and in partnership with the SCVWD, the City Council adopted a resolution at the April 1, 2015 City Council meeting declaring a Level 2 Water Supply

UTILITIES AND SERVICE SYSTEMS

Shortage¹⁷ in Morgan Hill. Level 2 Water Supply Shortage calls for 30 percent reduction in water use as described in the City's Urban Water Management Plan

During a Level 2 condition, the following provisions apply:

1. **Limits on Watering Days:** Watering or irrigating of lawn, landscape or other vegetated area with potable water is limited to two days per week during the months of April through October as follows:
 - Mondays and Thursdays for odd numbered addresses.
 - Tuesdays and Fridays for even numbered addresses.
 - Watering limitations decrease further, to one day a week beginning in November. That day will be Wednesday.
2. **Obligation to Fix Leaks, Breaks, or Malfunctions:** All leaks, breaks, or other malfunctions in the water user's plumbing or distribution system must be repaired within 48 hours of notification by the City unless other arrangements are made with the City.
3. **No Washing Down Hard or Paved Surfaces:** Washing down hard or paved surfaces is prohibited except when necessary to alleviate safety or sanitary hazards.
4. **Limits on Filling Ornamental Lakes or Ponds:** Filling or refilling ornamental lakes or ponds with potable water is prohibited, except to the extent needed to sustain aquatic life, provided that such animals are of significant value and have been actively managed within the water feature prior to the declaration of a Level 2 shortage.
5. **Limits on Washing Vehicles:** Using water to wash or clean a vehicle, including but not limited to, any automobile, truck, van, bus, motorcycle, boat, or trailer, whether motorized or not, is prohibited except at a commercial car washing facility that utilizes a re-circulating water system to capture or reuse water.
6. **Limits on Filling Residential Swimming Pools and Spas:** Refilling of more than one foot and initial filling of residential swimming pools or outdoor spas with potable water is prohibited.

In addition, the following provisions are always in effect in Morgan Hill:

1. **Limits on Watering Hours:** Watering or irrigating of lawn, landscape or other vegetated area with potable water is prohibited between the hours of 9:00 a.m. and 5:00 p.m. on any day, except by use of a hand-held bucket or similar container, a hand-held hose equipped with a positive self-closing water shut-off nozzle or device, or for very short periods of time for the express purpose of adjusting or repairing an irrigation system.
2. **Limit on Watering Duration:** Watering or irrigating of lawn, landscape or other vegetated area with potable water using a landscape irrigation system or a watering device that is not continuously attended is limited to no more than 15 minutes watering per day per station. This subsection does not apply to landscape irrigation systems that exclusively use very low-flow drip type irrigation systems when no

¹⁷ <http://www.morganhill.ca.gov/834/2015-Drought-Response-in-Morgan-Hill>, accessed September 23, 2015.

UTILITIES AND SERVICE SYSTEMS

emitter produces more than 2 gallons of water per hour and weather based controllers or stream rotor sprinklers that meet a 70 percent efficiency standard.

3. **No Excessive Water Flow or Runoff:** Watering or irrigating of any lawn, landscape or other vegetated area in a manner that causes or allows excessive water flow or runoff onto an adjoining sidewalk, driveway, street, alley, gutter, or ditch is prohibited.
4. **Recirculating Water Required for Water Fountains and Decorative Water Features:** Operating a water fountain or other decorative water feature that does not use recirculated water is prohibited.
5. **Limits on Washing Vehicles:** Using water to wash or clean a vehicle, including but not limited to any automobile, truck, van, bus, motorcycle, boat or trailer, whether motorized or not is prohibited, except by use of a hand-held bucket or similar container or a hand-held hose equipped with a positive self-closing water shut-off nozzle or device. This subsection does not apply to any commercial car washing facility. Note: Vehicle washing is prohibited in a Level 2 or Level 3 Water Supply Shortage.
6. **Drinking Water Served Upon Request Only:** Eating or drinking establishments, including but not limited to a restaurant, hotel, cafe, cafeteria, bar, or other public place where food or drinks are sold, served, or offered for sale, are prohibited from providing drinking water to any person unless expressly requested.
7. **Commercial Lodging Establishments Must Provide Guests Option to Decline Daily Linen Services:** Hotels, motels and other commercial lodging establishments must provide customers the option of not having towels and linen laundered daily. Commercial lodging establishments must prominently display notice of this option in each bathroom using clear and easily understood language.

Water Conservation Results – July 2015

The City Of Morgan Hill achieved 42 percent reduction in water consumption in July 2015 compared to the same time period in 2013¹⁸ (July is the month of greatest water use in Morgan Hill). This satisfies the SWRCB-mandated 28 percent reduction target applicable to Morgan Hill, based on the City's 136.50 gallons per capita per day – residential (R-GPCD) water use average rate -- calculated for July through September 2014. The base R-GPCD rate is used by SWRCB to place water agencies into one of nine tiers of reduction targets.

The City of Morgan Hill Comprehensive Water Report¹⁹ shows the R-GPCD rate decreased throughout the last half of 2014, reaching a low of about 60 R-GPCD in December 2014/January 2015. The rate in July 2015 is 94.2 R-GPCD.

¹⁸ <http://projects.scpr.org/applications/monthly-water-use/city-of-morgan-hill/>, accessed September 23, 2015.

¹⁹ City of Morgan Hill Comprehensive Water Report, 2015, part of City Council Staff Report, for April 1, 2015 meeting, <http://www.morgan-hill.ca.gov/DocumentCenter/View/15899>, accessed September 8, 2015.

UTILITIES AND SERVICE SYSTEMS

4.15.1.2 STANDARDS OF SIGNIFICANCE

The proposed Project would result in significant utilities and service systems impact if it would:

1. Have insufficient water supplies available to serve the proposed Project from existing entitlements and resources, or new or expanded entitlements are needed.
2. Require or result in the construction of new water facilities or expansion of existing facilities, the construction of which would cause significant environmental effects.

4.15.1.3 IMPACT DISCUSSION

This section analyzes potential Project-specific impacts to water supply utilities and service systems.

UTIL-1	Sufficient water supplies would be available to serve the proposed Project from existing entitlements and resources and new or expanded entitlements would not be required.

General Plan

Table 3-2, *2035 Horizon Year Growth Projections*, indicates 68,057 residents at buildout of the proposed General Plan in the horizon year 2035. In accordance with the Water Conservation Act of 2009 [SB X7-7], the daily per capita interim (2015) urban water use target for Morgan Hill is 179 R-GPCD.²⁰ This target rate, which is to be reported in the 2015 update to the UWMP, likely overestimates water use in the future because it doesn't account for the conservation achievements demonstrated during the current drought that show per capita use less than 100 R-GPCD. Nevertheless, assuming conservatively that the interim rate of 179 R-GPCD applied up through the horizon year (2035), the total water demand at buildout of the proposed General Plan would be 12,182,203 gallon per day (rounded to 12 MGD); or 13,655 AFY. This demand is significantly less than the available supply of 15,946 AFY predicted to be available to the City from 2010 through 2030 by the 2010 UWMP. As discussed above and in the 2010 UWMP, water demands will be met by available supply including during multiple dry years. By extension, this supply also is anticipated to be available in 2035. Thus, according to the UWMP, annual supply will exceed annual demand through buildout.

The City's total operational summer supply capacity of its groundwater supply wells was estimated at 10,736 gallons per minute (gpm), while the City's "firm" supply capacity was estimated at 9,309 gpm, or 13.4 million gallons per day (MGD).²¹ The firm supply capacity is determined by excluding the capacity of the largest well (in this case, the Diana #2 well, at 1,427 gpm) from the total, to account for possible

²⁰ City of Morgan Hill 2010 UWMP, page 3-5.

²¹ City of Morgan Hill, 2013, Transportation and Public Infrastructure Existing Conditions White Paper, page 6-22.

UTILITIES AND SERVICE SYSTEMS

equipment malfunction or other operational emergencies.²² In 2012, the City's water supply capacity requirement was estimated at 14.2 MGD, which exceeded the firm supply capacity of 13.4 MGD, as determined with the assumptions identified above (i.e., excluding the capacity of the largest well and using summer "operational" capacities for the remaining wells). Thus, in 2013 the City was planning the construction of new supply wells to mitigate the firm operational capacity. However, the City's operational supply capacity requirement of 14.2 MGD, as reported in the 2013 Transportation and Public Infrastructure White Paper, would be met by the total summer operational supply capacity for all wells (15.46 MGD; i.e., including the Diana #2 well).

California is currently experiencing its fourth year of drought, which may continue into a fifth year and beyond. As noted above, as of 2015, the City measured a 66 percent drop in the Nordstrom Well's water level, which is assumed to be representative of a similar drop in other wells.

In response to the drought and their determination of groundwater recharge requirements, the SCVWD has requested a 30 percent water consumption reduction. The City has responded to water consumption reduction requests and requirements and achieved an approximate 42 percent²³ reduction in water use in July 2015 compared to July 2013. In addition, pursuant to the SWRCB's mandatory water use restrictions, the City of Morgan Hill now is required to reduce potable water use by 28 percent each month compared to the same month in 2013, and must report use on a monthly basis to SWRCB from June 2015 through February 2016. The fact that the City achieved 42 percent reduction in July 2015 compared with July 2013 suggests the SWRCB's mandated 28 percent reduction is achievable going forward if conservation efforts continue.

Water conservation is the easiest, most efficient and most cost-effective way to quickly reduce water demand and extend supplies into the next year, providing flexibility for all communities.²⁴ The City has demonstrated its ability to conserve voluntarily in times of drought.

The City also plans to add new supply wells, if necessary, as the City continues to grow and the demand requirements continue to increase. However, as noted above, the current drought has reduced groundwater levels in the City's wells between 2011 and 2015.

The following proposed goals, policies, and actions in Chapter 9, Safety, Services and Infrastructure Element, and Chapter 8, Natural Resources and Environment Element of the proposed General Plan would enhance water supply and conservation:

²² The operational capacity (and the firm capacity), as determined in the City of Morgan Hill's 2013 Transportation and Public Infrastructure White Paper, excludes the capacity of one of the 17 City wells (Burnett well; 900 gpm) which was designated for fire protection only.

²³ SWRCB, July 2015 Water Conservation Report by Supplier (by hydro region, then R-GPCD) http://www.waterboards.ca.gov/waterrights/water_issues/programs/drought/docs/rgpcd_2015july.pdf, accessed September 23, 2015.

²⁴ SWRCB Resolution No. 2015-0032, to adopt an emergency regulation for statewide urban water conservation, http://www.waterboards.ca.gov/waterrights/water_issues/programs/drought/docs/emergency_regulations/rs2015_0032_with_adopted_regs.pdf, accessed September 23, 2015.

UTILITIES AND SERVICE SYSTEMS

Water Supply

Goal SSI-14	<i>High quality water resources, managed effectively.</i>
Policy SSI-14.1	Efficient Water Management. Manage the supply and use of water more efficiently through appropriate means, such as watershed protection, percolation, conservation, and reclamation.
Policy SSI-14.2	Water Conservation. Support water conservation measures that comply with state and federal legislation and that are consistent with measures adopted in the Urban Water Management Plan.
Policy SSI-14.3	SB-X7-7. Implement water conservation policies contained within Morgan Hill's Urban Water Management Plan to achieve 20 percent per capita water reductions by 2020.
Policy SSI-14.4	Drought Planning. Encourage water agencies to develop and maintain drought contingency plans, including emergency water connections and related measures to ensure adequate water during drought.
Policy SSI-14.5	Water Supply. Routinely evaluate the impact of new development proposals in Morgan Hill and require appropriate measures (fees, water supply assessments, etc.) to ensure long-term water supplies are available.
Policy SSI-14.6	Well Pumping. Support cooperation among all jurisdictions and agencies pumping water from wells in order to manage the aquifer to preserve the natural ecology of the region, secure the aquifer's utility as a water resource, and ensure the water's quality.
Policy SSI-14.7	Water District Programs. Encourage the Santa Clara Valley Water District to continue developing programs to assure effective management of water resources, such as well monitoring, percolation of imported water, reclamation, and conservation.
Policy SSI-14.8	Sufficient Supply. Ensure that new development does not exceed the water supply.
Policy SSI-14.9	Well Monitoring. Continue to monitor wells and provide the results to the Santa Clara Valley Water District which would coordinate the data and make it available to all jurisdictions and agencies.
Policy SSI-14.10	Private Well Monitoring Programs. Expand programs for monitoring private wells by including tests of more wells, tests on constituents not yet tested in private wells (i.e., volatile organics, bacteriological, radiological, etc.), and periodic retesting of selected private wells.
Policy SSI-14.11	Urban Encroachment. Protect streambeds and other appropriate percolation areas from encroachment by urban development.
Policy SSI-14.12	Water Reclamation Facilities. Encourage the development of water reclamation facilities where feasible, in order to make reclaimed water available to help meet the growing water needs of the South County region.
Policy SSI-14.13	Use of Recycled Water. Increase use of recycled water in development projects and landscaping; implement best practices (e.g., dual plumbing) to expand recycled water use when safe, practical, and available.
Action SSI-14.A	Tiered Water Rates. Review the tiered system for water rates to ensure that it encourages conservation without unduly burdening local residents.
Action SSI-14.B	Gray Water. Explore use of gray water to help mitigate long-term water shortages.
Action SSI-14.C	Reclaimed Water Importation. Explore opportunities to import reclaimed water from the wastewater treatment plant and other geographically feasible sources.

UTILITIES AND SERVICE SYSTEMS

Action SSI-14.D	Untreated Water Usage. Encourage the Santa Clara Valley Water District to continue to allow use of untreated water for irrigating large landscaped areas.
Action SSI-14.E	Well Pumping Impacts. Partner with other South County jurisdictions to assess the demand that the City's well pumping imposes on the direction of flow of water and how it affects others that are pumping from the same aquifer, in order to prevent adverse impacts on existing groundwater contamination problems.
Action SSI-14.F	San Felipe Water. Continue coordination among the South County jurisdictions and the Santa Clara Valley Water District to ensure that the South County will get sufficient deliveries of San Felipe water as needs require.
Action SSI-14.G	Abandoned and Unused Wells. Continue programs to identify and seal abandoned and unused wells, as such wells may be prime sources for transferring contaminants from the upper to lower aquifer.
Action SSI-14.H	Monitoring Programs. Work with other South County jurisdictions to track existing water quality, water supply, and water flow monitoring programs. This information should be used to evaluate current regulations and procedures, and to assess the need for new monitoring programs or for revisions or consolidation of existing programs.
Action SSI-14.I	Water District Programs. Work with the Santa Clara Valley Water District to encourage water use efficiency and conservation programs for residences, businesses, and agriculture and to increase public awareness of the need for efficient management of water resources, including but not limited to, conservation and reuse practices.

Water Quality and Conservation

Goal NRE-7	<i>Conservation of water resources.</i>
Policy NRE-7.1	Water Standards for Private Development. Promote water conservation and efficient water use in all private development projects. Require development to exceed state standards for the use of water.
Policy NRE-7.2	Water Standards for Public Development. Promote water conservation and efficient water use in all public development projects. All new public buildings shall be designed to exceed state standards for water efficiency.
Policy NRE-7.3	Water Efficiency and Landscaping. Promote water conservation and efficient water use in all public and private landscaping plans.
Policy NRE-7.4	Non-Potable Water for Irrigation. Encourage use of non-potable water for landscape irrigation.
Policy NRE-7.5	Dual Plumbing. Explore installation of dual plumbing in large, new commercial and/or residential developments to enable future use of recycled non-potable water generated on- or off-site.
Action NRE-7.A	Infrastructure Maintenance. Correct known deficiencies in the City's sewer, storm drain, and water systems and work toward environmentally sustainable systems. Maintain the City's infrastructure to ensure that facilities are up to date and incorporate efficiency and conservation mechanisms.
Action NRE-7.B	Drought-Tolerant Landscaping. Develop local ordinances that require new commercial and industrial development to use only drought-tolerant landscaping and that increase the use of drought-tolerant landscaping in new residential development.

UTILITIES AND SERVICE SYSTEMS

- Action NRE-7.C **Water Fixture Retrofitting.** Create incentives for homeowners of older residential buildings to retrofit water fixtures to improve water efficiency and conservation. Explore ways to link homeowners with incentive programs offered by other agencies or organizations. Options for creating a City-sponsored retrofit program could include using Measure C funds or creating Citywide fees for water usage. Work with utility providers and City departments to market the program owners who own older homes, are undertaking renovations, or are new owners.
- Action NRE-7.D **Water Efficiency at City Facilities.** Develop a comprehensive strategy for using water efficiently at all City facilities.

The experience of the past four years of drought demonstrates that sufficient water supplies would be available to serve the proposed General Plan from existing entitlements and resources and new or expanded entitlements would not be required during single- and multiple-dry years. Therefore, in accordance with the applicable regulations listed below and with the proposed water conservation policies and actions of the proposed General Plan discussed above, impacts under normal, single-dry and multiple-dry years would be *less than significant*.

Applicable Regulations:

- California Water Conservation Act of 2009 (SB X7-7)
- California Plumbing Code that requires water conserving fixtures
- California Emergency Regulations Restricting Use of Potable Water (CCR Title 23, Sections 863, 864, 865 and 866)
- City of Morgan Hill Water Shortage Contingency Plan, adopted as part of the Urban Water Management Plan (2010 UWMP)
- City of Morgan Hill Municipal Code Chapter 13.04; Section 13.04.330 – Waste Water Prohibitions; Chapter 15.65, Sustainable Building Regulations; Chapter 18.73, Water Conservation in Landscaping
- City of Morgan Hill Water Supply Shortage Program, adopted as Ordinance 1932 by the City council on May 27, 2009
- Morgan Hill City Council resolution adopted at the April 1, 2015 City Council meeting declaring a Level 2 Water Supply Shortage in Morgan Hill

Significance Before Mitigation: Less than significant.

Residential Development Control System

The Residential Development Control System, known as the RDCS, regulates population growth through the provision of residential building allotments. The RDCS, and the proposed updates to the RDCS as part of the proposed Project, affect the pace of development in the City but do not determine the location, type, or intensity of development. By metering residential growth, the RDCS is an important tool the City uses to ensure that infrastructure and services, including water supply, are in place before development is approved. Therefore, in accordance with the policies and actions of the proposed General Plan and applicable

UTILITIES AND SERVICE SYSTEMS

regulations listed above, the proposed RDCS would not have a substantial adverse effect on water supply. The proposed RDCS would have *less-than-significant* impact.

Significance Before Mitigation: Less than significant.

UTIL-2	Implementation of the proposed Project would not require or result in the construction of new water facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

General Plan

The City receives 100 percent of its water from groundwater wells that feed a system of storage tanks, pumps and water pipes leading to customers. The City periodically makes improvements to its infrastructure to improve system reliability and accommodate projected growth in its regional service areas. As discussed above, available capacity is sufficient to meet projected demand from buildout of the proposed General Plan. As a result, the proposed General Plan would not prompt a need to expand treatment facilities or regional water system conveyance and storage facilities in order to meet its demand and this impact would be *less than significant*.

It is possible that existing local distribution lines within the City may be undersized for future projects and improvements under the proposed General Plan, which could require replacement with larger diameter pipes. Similarly, the City regularly assesses whether new groundwater wells may be required to ensure an adequate reliable water supply. Potential environmental impacts could result from construction and operation of these pipeline improvements and/or new well(s); however, such impacts would be project-specific. A generic summary of the types of potential impacts associated with water production facilities is provided in Table 4.15-4. Any new or expanded local water supply and distribution facilities would require permitting and review in accordance with CEQA, which would ensure environmental impacts are disclosed and mitigated to the extent possible. Therefore, in accordance with the proposed policies and programs in the proposed General Plan listed above under UTIL-1 and the applicable regulations also listed above, impacts related to the construction or expansion of water facilities or infrastructure would be *less than significant*.

Significance Before Mitigation: Less than significant.

Residential Development Control System

The RDCS regulates population growth through the provision of residential building allotments. The RDCS, and the proposed updates to the RDCS as part of the proposed Project, affect the pace of development in the City but do not determine the location, type, or intensity of development. By metering residential growth, the RDCS is an important tool the City uses to ensure that infrastructure and services, including new water supply facilities, are in place before development is approved. In addition, the proposed RDCS

UTILITIES AND SERVICE SYSTEMS

TABLE 4.15-4 POTENTIAL ENVIRONMENTAL IMPACTS FROM NEW OR EXPANDED GROUNDWATER SUPPLY AND WASTEWATER FACILITY PROJECTS

Types of Potentially Affected Resources	Possible Impacts Unless New or Expanded Facilities are Carefully Planned and Executed	Possible Mitigations to Impacts Associated with New or Expanded Facilities
Geology and Soils	Increase in erosion and sedimentation from construction activities, change in sediment transport in streams, geologic hazards could cause problems for new facilities and their operators if they are not sited carefully.	Requirement to incorporate a strict SWPPP with project specific limitations during construction. Facilities sited to minimize the impact.
Water Quality	Changes in stream and reservoir/lake temperature, dissolved oxygen, turbidity, total suspended solids and other water quality parameters of concern during construction and operation of new facilities.	Requirement to incorporate a strict SWPPP with project specific limitations during construction. Treatment processes approved to mitigate any impact to existing stream and reservoir/lake.
Wetlands and Riparian Habitat	Changes in the amount or functions and values of various types of wetlands from the construction of new facilities, or in riparian areas from changes in the operation of reservoir/lakes and changes in stream flows. Riparian habitat could be affected by hydrology changes or new construction and is especially important habitat for wildlife and botanical species.	Facilities are sited in areas that mitigate the impact to Wetlands and Riparian Habitat. In addition, project specific requirements may be imposed to limit the impact and ensure the Wetlands and Riparian Habitat is not severely impacted without proper mitigation.
Botanical Resources including Special-Status Species	Disturbance to rare plants and their habitat and other types of vegetation from construction activities.	Facilities are sited in areas that mitigate the impact to Botanical Resources. In addition, project specific requirements may be imposed to limit the impact and ensure the Botanical Resources are not severely impacted without proper mitigation.
Wildlife Resources including Special-Status Species	Changes in the amount and quality of wildlife habitat where facilities would be located.	Facilities are sited in areas that mitigate the impact to Wildlife Resources. In addition, project specific requirements may be imposed to limit the impact and ensure the Wildlife Resources are not severely impacted without proper mitigation.
Visual Resources	The addition of new project facilities could affect the visual environment. New pipelines, pumping stations, or transmission lines near or in residential areas or scenic vistas could cause negative impacts.	Facilities must be planned and designed to mitigate any aesthetic impacts. Impacts to Visual Resources are typically mitigated by incorporating design features that limit the Visual impact near or in residential areas, including scenic vistas.
Agriculture	Some irrigated land or grazing land could be taken out of production where project conveyance facilities need to be located and to accommodate growth.	Facilities are sited in areas where minimal impact is anticipated to existing agricultural land.
Cultural Resources	Historic, prehistoric, and ethnographic resources could be affected by hydrology changes or the construction and maintenance of new facilities.	Facilities are sited in areas that mitigate the impact to Cultural Resources. In addition, project specific requirements may be imposed to limit the impact and ensure the Cultural Resources are not severely impacted without proper mitigation during construction.

UTILITIES AND SERVICE SYSTEMS

TABLE 4.15-4 POTENTIAL ENVIRONMENTAL IMPACTS FROM NEW OR EXPANDED GROUNDWATER SUPPLY AND WASTEWATER FACILITY PROJECTS

Types of Potentially Affected Resources	Possible Impacts Unless New or Expanded Facilities are Carefully Planned and Executed	Possible Mitigations to Impacts Associated with New or Expanded Facilities
Compatibility with Existing Land Uses and Other Policies and Plans	Some new project facilities may not be compatible with surrounding land uses, or may be inconsistent with related federal, state, tribal, and local plans and policies.	Facilities are sited in areas that mitigate the impact to any compatibility with existing land uses or other policy plans. If necessary, a change in land use request is presented to the public for review and approval prior to implementation of the new facility.
Public Utilities	The routing and siting of new project facilities could interfere with the operation or maintenance of existing or planned public utilities, including communication and energy infrastructure.	Facilities are sited in areas that mitigate the impact to Public Utilities. In addition, project specific requirements may be imposed to limit the impact and ensure the existing or planned Public Utilities are taken into consideration during design, construction and operation of the facility.
Air Quality and Noise	Air emissions from construction equipment and traffic and loud noises could occur during the construction phase of new projects. New pumping stations could cause adverse noise impacts for nearby residents and recreationists.	New or Expanded Facilities would be designed with noise attenuation features that limit the noise during operation and/or construction. All construction activities are required to limit the air emissions and adhere to local ordinances during construction.
Transportation	Local roads would experience traffic increases during construction.	Facilities are sited in areas that limit the impact to traffic and incorporate traffic control plans that are proven to minimize the impact.
Public Health and Safety	Construction activities could create some safety hazards.	Facilities must be designed and implemented during construction with project specific requirements that mitigate any impact to Public Health and Safety.
Growth-Inducing Effects	New system infrastructure and water supply projects could cause growth-inducing impacts.	Facilities must be designed and implemented to limit the potential for growth inducing impacts. This is typically accomplished by ensuring the facilities are sized for the project specific capacity and sited in areas that have strict requirements for potential growth.

Note: This table identifies examples of potential environmental impacts that could result from new or expanded water facilities necessary to support additional growth. The potential impacts listed in this table are not location specific. Similarly, the mitigation impacts listed in this table are not location specific.

Source: County of Napa, 2007, *Napa County General Plan Update Draft Environmental Impact Report*, February.

Competition Standards award points to projects that require no off-site extension of utility lines and/or for projects that do not require water improvements beyond minimum requirements. Therefore, in accordance with the policies and actions of the proposed General Plan, applicable regulations listed above under UTIL-1, and RDCS Competition Standards that encourage infrastructure upgrades, the proposed RDCS would not have a substantial adverse effect related to the construction or expansion of water facilities or infrastructure. The proposed RDCS would have *less-than-significant* impact.

Significance Before Mitigation: Less than significant.

UTILITIES AND SERVICE SYSTEMS

4.15.1.4 CUMULATIVE IMPACTS

UTIL-3	Implementation of the proposed Project, in combination with past, present, and reasonably foreseeable projects, would not result in significant cumulative impacts with respect to water supply.

General Plan

The City's 2010 UWMP indicates that the City has sufficient water supply to meet demand in normal, single-dry, and multiple-dry years through 2030, and by extension through 2035. The last four years of drought have demonstrated that existing water supplies from the City's well system, along with replenishment of groundwater via natural precipitation infiltration, and SCVWD's releases from local reservoirs and imported water, were sufficient to serve the City during the current multiple-year drought period. The 2010 UWMP, the City's Water Shortage Contingency Plan, and mandatory state emergency water use restrictions also indicate that there are plans and programs in place to ensure sufficient water during future single- and multiple-dry years.

Cumulative projects would contribute to additional water demands. However, future projects would be subject to substantially similar water conservation efforts, water efficiency measures, and water supply improvements to balance supply and demand as would the proposed General Plan. In particular, cumulative projects within the SCVWD wholesale service area would be subject to state and SCVWD voluntary and mandatory conservation measures to reduce usage, and the SCVWD's projects²⁵ to improve the regional water supply system.

The SCVWD's UWMP²⁶ shows supplies from carryover storage are needed to meet the annual demands under all demand scenarios. Demand reductions are indicated for all demand years in the late stages of the multiple year drought scenario. Total countywide demand (2010) can be met through treated water, groundwater, recycled water and existing contracted outside supplies (SFPUC). However, the UWMP indicates a reduction of between 15 to 20 percent in estimated contract treated water deliveries for the years 2015, 2020, and 2025. Demand reduction values indicated for 2030 and 2035 range from 0 percent to 20 percent for the normal, dry, and multi-dry years. However, these values (0 to 20 percent) assume the implementation of supply and storage enhancement projects, to be identified in a Water Supply and Infrastructure Master Plan (Water Master Plan), prior to 2030. If *existing* levels of supply and storage are assumed (i.e., no new projects per the Master Plan) the projected demand reductions after 2025 would *exceed* 20 percent of the 2010 level of supplies and storage. This exceedance is outside the 0 to 20 percent target level identified as a planning constraint for the Water Master Plan. The appropriate target level of

²⁵ SCVWD's 5-year Capital Improvement Program (CIP), approved May 2015, <http://www.valleywater.org/cip.aspx>, accessed September 23, 2015.

²⁶ SCVWD 2010 UWMP, http://www.valleywater.org/Services/Clean_Reliable_Water/Water_Supply_Planning/2010_Urban_Water_Management_Plan.aspx, accessed September 23, 2015.

UTILITIES AND SERVICE SYSTEMS

demand reductions after 2025 (i.e., within the 0 to 20 percent range) will be determined as part of the benefit-cost analysis work of the Water Master Plan.

Additional water supply investments will be needed in the future to meet the County's water needs. Reserves would be depleted during extended droughts and short-term water use reductions of up to almost 30 percent would be needed to avoid land subsidence. The Water Supply and Infrastructure Master Plan²⁷ presents the SCVWD's strategy for meeting those future needs. One of the District's strategies for achieving this goal is to develop water supplies designed to meet at least 100 percent of average annual water demand identified in the SCVWD's Urban Water Management Plan during non-drought years and at least 90 percent of average annual water demand in drought years.

In March 2015, the SCVWD board called for a 30 percent reduction in water use over 2013 levels based on local conditions, including the amount of groundwater SCVWD projects by the end of 2015, and the amount of imported and local water available in its reservoirs. The board also called for a two-day-a-week limit on watering landscapes, a call that local water providers echoed. Countywide, local water providers adopted a watering schedule allowing those with odd-numbered addresses to water on Mondays and Thursdays and those on the even-numbered addresses to water Tuesdays and Fridays. In July 2015, SCVWD residents and businesses cut water usage by 36 percent from July 2013 levels.²⁸ During the period January to July 2015, the cumulative savings was 25 percent from the same period in 2013.

Based on the supply and demand projections in the SCVWD's UWMP, the strategies and plans to increase supplies outlined in the Water Master Plan, and the demonstrated success of conservation efforts in the SCVWD service area, the cumulative water supply needs of the proposed General Plan could be met. Future water supply needs in the Study Area, in combination with past, present, and reasonably foreseeable projects in the SCVWD wholesale service territory during normal, single- and multiple-dry years, could be met by existing and projected supplies, in conjunction with 1) state voluntary and mandatory water conservation and water efficiency measures, 2) SCVWD voluntary and mandatory water conservation and water efficiency measures, and 3) City water conservation measures called for in the municipal code.

There would be adequate water supplies to serve the proposed General Plan in combination with other reasonably foreseeable projects in the SCVWD wholesale service area. Therefore, in accordance with the policies and actions in the proposed General Plan listed above under UTIL-1, and with the applicable regulations listed also listed above, cumulative impacts would be *less than significant*.

Significance Before Mitigation: Less than significant.

²⁷ SCVWD's Water Master Plan, 2012, <http://www.valleywater.org/WorkArea/linkit.aspx?LinkIdentifier=id&ItemID=8618>, accessed September 23, 2015.

²⁸ SCVWD conservation web page, <http://www.valleywater.org/EkContent.aspx?id=12920>, accessed September 17, 2015.

UTILITIES AND SERVICE SYSTEMS

Residential Development Control System

The RDCS regulates population growth through the provision of residential building allotments. The RDCS, and the proposed updates to the RDCS as part of the proposed Project, affect the pace of development in the City but do not determine the location, type, or intensity of development. By metering residential growth, the RDCS is an important tool the City uses to ensure that water supply and necessary new water supply facilities are available in light of cumulative development within the SCVWD service area, and are in place before development is approved. Therefore, in accordance with the policies and actions of the proposed General Plan and applicable regulations listed above, the proposed RDCS would have *less-than-significant* impact on cumulative water supply.

Significance Before Mitigation: Less than significant.

4.15.2 WASTEWATER

This section outlines the regulatory setting, describes existing conditions, and discusses potential impacts from buildout of the proposed General Plan with regard to wastewater collection and treatment facilities.

The analysis in this section is based in part of information provided in the following reports:

- City of Morgan Hill Sewer System Master Plan, prepared by Carollo Engineers, January 2002.
- Wastewater Flow Projections, South County Regional Wastewater Authority, Cities of Gilroy and Morgan Hill, prepared by MWH and AKEL Engineering Group, dated August 2011.

The City is preparing a Wastewater Infrastructure Master Plan that will assess existing wastewater demand and capacity and determine what types of improvements are necessary to meet projected future demand. However, the Wastewater Infrastructure Master Plan will not be complete before the publication of the Draft EIR. As a result, the conditions and impact analyses for wastewater treatment and collection services presented in this EIR are subject to change (e.g., via an Addendum to the EIR) after the Wastewater Infrastructure Master Plan is prepared.

4.15.2.1 ENVIRONMENTAL SETTING

Regulatory Framework

Federal Regulations

The federal government regulates wastewater treatment and planning through the Federal Water Pollution Control Act of 1972, more commonly known as the Clean Water Act (CWA), as well as through the National Pollutant Discharge Elimination System (NPDES) permit program, both of which are discussed in further detail below.

UTILITIES AND SERVICE SYSTEMS

Clean Water Act

The CWA regulates the discharge of pollutants into watersheds throughout the nation. It is the primary federal law governing water pollution. Under the CWA, the US EPA implements pollution control programs and sets wastewater standards. The objective of the CWA is to restore and maintain the chemical, physical, and biological integrity of the nation's waters by preventing point and nonpoint pollution sources, providing assistance to publicly owned treatment works for the improvement of wastewater treatment, and maintaining the integrity of wetlands.

National Pollutant Discharge Elimination System

The NPDES permit program was established in the CWA to regulate municipal and industrial discharges to surface waters of the United States. Federal NPDES permit regulations have been established for broad categories of discharges, including point-source municipal waste discharges and nonpoint-source stormwater runoff. NPDES permits generally identify effluent and receiving water limits on allowable concentrations and/or mass emissions of pollutants contained in the discharge; prohibitions on discharges not specifically allowed under the permit; and provisions that describe required actions by the discharger, including industrial pretreatment, pollution prevention, self-monitoring, and other activities. Wastewater discharge is regulated under the NPDES permit program for direct discharges into receiving waters and by the National Pretreatment Program for indirect discharges to a sewage treatment plant.

State Regulations

Wastewater treatment and planning is regulated at the state level. Specific regulations relevant to the proposed Project are described below.

State Water Resources Control Board

On May 2, 2006, the SWRCB adopted a General Waste Discharge Requirement (Order No. 2006-0003) for all publicly owned sanitary sewer collection systems in California with more than 1 mile of sewer pipe. The order provides a consistent statewide approach to reducing sanitary sewer overflows (SSOs) by requiring that public sewer system operators take all feasible steps to control the volume of waste discharged into the system, to prevent sanitary sewer waste from entering the storm sewer system, and to develop a Sewer System Management Plan (SSMP). The General Waste Discharge Requirement also requires that storm sewer overflows be reported to the SWRCB using an online reporting system.

The SWRCB has delegated authority to nine Regional Water Quality Control Boards (RWQCB) to enforce waste discharge requirements within their region. The Central Coast RWQCB issues and enforces NPDES permits in Morgan Hill. NPDES permits allow the RWQCB to regulate where and how the waste is disposed, including the discharge volume and effluent limits of the waste and the monitoring and reporting responsibilities of the discharger. The RWQCB is also charged with conducting inspections of permitted discharges and monitoring permit compliance.

UTILITIES AND SERVICE SYSTEMS

Local Regulations

Central Coast Regional Water Quality Control Board

The regional boards are required to formulate and adopt water quality control plans for all areas in the region and establish water quality objectives in the plans. Morgan Hill is within the jurisdiction of the Central Coast RWQCB (Region 3). The Central Coast RWQCB addresses region-wide water quality issues through the creation of the Water Quality Control Plan for Central Coast Basin (Basin Plan). The Basin Plan was updated most recently in June 2011. This Basin Plan designates beneficial uses of the state waters within Region 3, describes the water quality that must be maintained to support such uses, and provides programs, projects, and other actions necessary to achieve the standards established in the Basin Plan.²⁹

Morgan Hill Sewer System Master Plan

The 2002 Morgan Hill Sewer System Master Plan addresses the following goals:

- Establish sewer system design and planning criteria.
- Review infiltration and inflow flow monitoring data.
- Evaluate the capacity of the existing sewer collection system.
- Summarize existing system deficiencies and propose improvements to enhance system reliability.
- Recommend improvements needed for the current system and for future growth.
- Develop a capital improvement program with a planning horizon year of 2020.

City of Morgan Sewer System Management Plan

The Sewer System Management Plan (SSMP) for the City of Morgan Hill documents the proper operation and maintenance of the City's sanitary sewer system, including capacity management and system audits. The City of Morgan Hill is one of two sewer systems that feed the South Coast Regional Wastewater Authority treatment plant in Gilroy, where the wastewater is treated before discharge. The SWRCB has issued statewide waste discharge requirements for sanitary sewer systems, which include requirements for development of an SSMP. The State Water Board requirements are outlined in Order No. 2006-0003-DWQ, Statewide General Waste Discharge Requirements (GWDR) for Sanitary Sewer Systems, dated May 2, 2006 (SSO WDR), and amended by Order No. 2013-0058-EXEC, dated July 30, 2013.

City of Morgan Hill Municipal Code

The City of Morgan Hill Municipal Code contains all ordinances for the City. The Municipal Code is organized by Title, Chapter, and Section.

²⁹ Central Coast RWQCB, 2011, *Central Coast (Region 3) Water Quality Control Plan (Basin Plan)*. Latest revision June 2011. http://www.waterboards.ca.gov/centralcoast/publications_forms/publications/basin_plan/docs/basin_plan_2011.pdf, accessed September 23, 2015.

UTILITIES AND SERVICE SYSTEMS

Chapter 13.16, Sewer Rates and Interim Growth Management

Chapter 13.16 of the City's Municipal Code regulates sewer rates in the City.

Chapter 13.20, Sewers and Industrial Waste

Chapter 13.20 of the City's Municipal Code is intended to protect the City from the creation of public nuisances, menace to the public peace, health or safety, and damage or expenses resulting from the discharge or depositing of unpolluted waters or of industrial wastes into the public sewers and sewage treatment facilities of the City and to ensure the proper maintenance of private sewer facilities. This chapter also ensures users shall provide necessary wastewater treatment to comply with this chapter and shall achieve compliance with all Federal Categorical Pretreatment Standards within the time limitations as specified by the federal pretreatment regulations.

Chapter 15.65, Sustainable Building Regulations

The purpose of Chapter 15.65 is to assure that commercial and residential development is consistent with the City's environmental agenda to create a more sustainable community by incorporating sustainable building measures into the design, construction and maintenance of new and existing buildings. The sustainable building provisions referenced in this chapter are designed to achieve the following objectives:

- Increase energy efficiency in buildings.
- Encourage water and resource conservation.
- Reduce waste generated by construction projects.
- Provide durable buildings that are efficient and economical to own and operate.
- Promote healthy and productive indoor environments for residents, workers and visitors to the City.
- Recognize and conserve the energy embodied in existing buildings

Existing Conditions

Wastewater from Morgan Hill is collected in the City's sewer collection system and treated at the South County Regional Wastewater Authority (SCRWA) Wastewater Treatment Plant (Facility).

Collection System

The City of Morgan Hill sewer collection system consists of approximately 135 miles of 6-inch through 30-inch diameter sewers, and includes 15 sewage lift stations and associated force mains. The system consists of the trunk sewers, generally 12-inches in diameter and larger, that convey the collected wastewater flows to the SCRWA treatment facility in Gilroy. The City's existing sewer collection system meets the needs of existing customers. The City has planned and constructed sewer facilities in conjunction with new street construction in anticipation of future growth and sewage needs.

UTILITIES AND SERVICE SYSTEMS

Treatment Plant

The SCRWA facility is subject to the permit conditions under Waste Discharge Requirements (WDR) Order No. R3-2010-0009 and National Pollutant Discharge Elimination System (NPDES) No. CA0049964 by the Regional Water Quality Control Board (RWQCB), Central Coast Region.³⁰ The Facility is permitted to treat up to 8.5 MGD of wastewater, average dry weather flow (ADWF).

The SCRWA facility discharges wastewater to the Pajaro River basin. RWQCB Resolution No. R3-2015-0004, adopted on July 31, 2015, amended the Water Quality Control Plan for the Central Coast Basin to adopt Total Maximum Daily Loads (TMDLs) for nitrogen compounds and orthophosphate in streams of the Pajaro River basin. The SCRWA facility is one of the dischargers responsible for allocation of the Waste Load Allocations (WLAs) established for nitrate compounds and orthophosphates.

The SCRWA treats wastewater from the cities of Gilroy and Morgan Hill. Historically, approximately 40 to 45 percent of the flow to the SCRWA is from Morgan Hill and 55 to 60 percent is from Gilroy. For the past few years the total volume of wastewater treated at the plant has held steady around 6.2 MGD ADWF.

The SCRWA is a joint powers authority of the cities of Gilroy and Morgan Hill. Formed in 1992, the SCRWA serves both cities and treats approximately 2.2 to 2.4 billion gallons of wastewater and produces 700 to 720 million gallons of recycled wastewater each year for use in landscaping, agricultural, industrial and other applications. Administration of the plant is primarily by the City of Gilroy. The SCRWA daily operations are provided under a third party contract with CH2M.

In 2010, wastewater flow projections for the SCRWA facility indicated it will exceed the current capacity of 8.5 MGD in 2019 or 2021, depending on growth assumptions and the method of analysis.³¹ The 10-year average per capita flow rate in 2010 was 78 gallons per capita per day. The average dry weather flow (ADWF) within the Urban Growth Boundary (UGB) is estimated to be 10.0 MGD in 2030. If anticipated additional water conservation is taken into account, the UGB ADWF is reduced to 9.6 MGD.

A subsequent analysis³² of flow projections in 2012 extended the time to reach capacity by approximately 6 to 12 months, due to unaccounted for lower precipitation and/or water conservation in the subsequent years. However, the flow is still expected to exceed current capacity in about 2020 or 2021.

The City of Morgan Hill has an allocation of 3.56 MGD (of the total 8.5 MGD). The latest projections in November 2013, based on the City's existing General Plan, show this allocation is projected to be reached

³⁰ The existing permit (R3-2010-0009 technically has an expiration date of March 18, 2015. An application (ROWD) to renew the existing permit was submitted several months prior to the expiration date. The RWQCB has not yet responded with the new permit. However, the current permit provisions and authority are extended until the RWQCB acts on the application for the new permit. Personal communication with Mr. Thom Vincent, SCRWA plant Project Manager (CH2M), September 17, 2015.

³¹ SCRWA, 2011, *Wastewater Flow Projections*, prepared by MWH and AKEL Engineering Group, August.

³² SCRWA Board Agenda, December 3, 2013. Technical memorandum – SCRWA Wastewater Flow Projections (2012), http://www.cityofgilroy.org/CityOfGilroy_Files/city_hall/meetings/52fd58ad_12-4-13%20SCRWA%20packet.pdf, accessed September 23, 2015.

UTILITIES AND SERVICE SYSTEMS

by about 2023. The City of Gilroy's allocation (4.94 MGD) is projected to be reached a little earlier, in about 2019. Flow projections are ongoing and have changed over the past years, depending on changing per capita flow rates and other variables in the projection calculations.

It is the goal of SCRWA to build, maintain, and operate infrastructure required to support the treatment facility and to continue to provide high quality wastewater treatment and reclamation services professionally and competitively to preserve the environment and ensure the health, safety, and economic vitality of the Gilroy-Morgan Hill region. To achieve this goal, SCRWA prepared a Capital Improvements Strategic Plan to identify the projects necessary to maintain permit compliance; improve redundancy, efficiency and reliability; and expand future treatment capacity in accordance with both cities' General Plans.

Consideration of these "drivers" helped to further prioritize the planned improvements. The most recent flow projection analysis refines the timing of the next long-term capacity increase for the plant to an expected construction completion in 2022. The capital improvement budget (CIB) for FY 2016 – 2021 adopted for the SCRWA in May 2015,³³ and associated exhibits, show the timeline for designing, planning and constructing capital improvements to increase plant capacity. The CIB timeline is based on the latest flow projections in 2015. Expansion design is slated to begin in 2016; a Capacity Study is slated to begin in 2018; and construction of expansion is slated to begin 2019. Various improvement projects (e.g., redundancy, efficiency, reliability) are shown ongoing from 2012 through 2017. CEQA impact evaluation is shown as extending through 2017.

Like Morgan Hill, Gilroy is in the process of creating a new General Plan charting its long-term growth, with an expected completion date in mid-2016. SCRWA plans to evaluate the potential growth factors resulting from both the Morgan Hill and Gilroy General Plan updates in considering long-term expansion needs at the SCRWA beyond the 2022 planned expansion. The next major expansion after 2022 is currently anticipated to be in the mid-2030s.³⁴

4.15.2.2 STANDARDS OF SIGNIFICANCE

The proposed Project would result in a significant utilities and service systems impact if it would:

1. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board.
2. Require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.
3. Result in a determination by the wastewater treatment provider which serves or may serve the proposed Project that it does not have adequate capacity to serve the proposed Project's projected demand in addition to the provider's existing commitments.

³³ Memo to SCRWA Board, from T. Hauglund, Authority Manager, May 6, 2015, http://www.cityofgilroy.org/cityofgilroy_files/city_hall/finance/fy16fy17/6-SCRWAFinalPacket.pdf, accessed September 23, 2015.

³⁴ SCRWA Biennial Budget Transmittal - FY 16 & FY 17, April 1, 2015, http://www.cityofgilroy.org/cityofgilroy_files/city_hall/finance/fy16fy17/6-SCRWAFinalPacket.pdf, accessed September 23, 2015.

UTILITIES AND SERVICE SYSTEMS

4.15.2.3 IMPACT DISCUSSION

This section analyzes potential Project-specific impacts to wastewater utilities and service systems.

UTIL-4	The proposed Project would not exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board.

General Plan

As discussed in Chapter 3, Project Description, of this Draft EIR, the proposed General Plan includes a range of land uses. The residential, industrial, office, retail, service, and public facilities land uses that would result from buildout of the proposed General Plan would not generate wastewater of different quality and treatability than wastewater currently generated by those land uses in the City. The SCRWA wastewater treatment plant is an award-winning³⁵ facility currently in compliance with its NPDES permit requirements. As such, buildout of the Project Area would not be expected to generate wastewater that would exceed the treatment requirements of the Central Coast RWQCB (e.g., NPDES effluent limits applicable to the SCRWA plant).

The following proposed policies and programs in Chapter 9, Safety, Services, and Infrastructure, of the proposed General Plan would enhance compliance with wastewater treatment requirements and capacity:

Wastewater

Goal SSI-15	<i>Efficient, effective, and sustainable wastewater treatment.</i>
Policy SSI-15.1	Septic Systems. Allow septic systems for low-intensity uses where they will not have a negative impact on the environment.
Policy SSI-15.2	Wastewater Treatment Facility and Growth. Ensure that the total capacity for the Gilroy/Morgan Hill Wastewater Treatment Facility, its timing for expansion, and configuration are consistent with adopted policies for the overall growth of Morgan Hill and Gilroy. Plans for the expansion of the Wastewater Treatment Facility should be based on the flow projections found in the Gilroy and Morgan Hill Sewer Master Plans.
Policy SSI-15.3	Wastewater Treatment Facility Funding. Fund the Wastewater Treatment Facility expansion in a manner which considers the financing needs of other infrastructure in the South County.
Policy SSI-15.4	Alternative Sewer Systems. Prohibit the use of alternative sewage treatment and disposal systems until a reliable track record for the type of system has been documented and conditions for ongoing safe and effective operation have been established.
Policy SSI-15.5	County and Water District Assistance. Encourage Santa Clara County and the Santa Clara Valley Water District to assist in the Cities' wastewater treatment program, if feasible and agreed to by the participants.

³⁵ SCRWA wins 2014 Plant of the year award from CWEA, http://www.cityofgilroy.org/CityOfGilroy_Files/city_hall/announcements/0954813b_Spring%2015%20Final.pdf, accessed September 23, 2015.

UTILITIES AND SERVICE SYSTEMS

- Action SSI-15.A **Wastewater Treatment Facility Capacity.** Work with the City of Gilroy to determine the best method to increase and fund sewer treatment capacity in order to facilitate development that is consistent with both cities' general plans.
- Action SSI-15.B **Alternative Methods for Wastewater Treatment.** Investigate alternative methods for wastewater treatment.

With continued compliance with applicable regulations listed below, and in accordance with the goals, policies, and actions in the proposed General Plan listed above, wastewater generated from buildout of the Project Area would not exceed the Central Coast RWQCB's applicable treatment requirements in Order No. R3-2010-0009 (NPDES No. CA0049964), and renewals/extensions of this Order. Therefore, the wastewater treatment requirements of the Central Coast RWQCB would not be exceeded due to buildout of the proposed General Plan, resulting in a *less-than-significant* impact.

Applicable Regulations:

- Central Coast RWQCB NPDES Permit (Order No. R3-2010-0009 (NPDES No. CA0049964) for SCRWA facility
- Central Coast RWQCB Resolution No. R3-2015-0004
- SWRCB Order No. 2006-0003-DWQ for Statewide General Waste Discharge Requirements for Sanitary Sewer Systems
- City of Morgan Hill Municipal Code - Chapter 13.16, Sewer Rates and Interim Growth Management; Chapter 13.20, Sewers and Industrial Waste; Chapter 15.65, Sustainable Building Regulations
- Morgan Hill Sewer System Management Plan

Significance Before Mitigation: Less than significant.

Residential Development Control System

The RDCS regulates population growth through the provision of residential building allotments. The RDCS, and the proposed updates to the RDCS as part of the proposed Project, affect the pace of development in the City but do not determine the location, type, or intensity of development. By metering residential growth, the RDCS is an important tool the City uses to ensure that infrastructure and services are in place before development is approved, including adequate wastewater treatment facilities that comply with all regulations. Therefore, in accordance with the policies and actions of the proposed General Plan and applicable regulations listed above, the proposed RDCS would not have a substantial adverse effect related to compliance with wastewater treatment requirements. As such, the proposed RDCS would have *less-than-significant* impact.

Significance Before Mitigation: Less than significant.

UTILITIES AND SERVICE SYSTEMS

UTIL-5	Implementation of the proposed Project would not require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

General Plan

As discussed above, the SCRWA treatment plant is permitted by the Central Coast RWQCB to treat an average of 8.5 MGD dry weather flow. Average dry weather flow has been about 6.2 MGD in recent years. The 8.5 MGD capacity is projected to be exceeded by the year 2022 due to development allowed by the existing General Plans of Morgan Hill and Gilroy, without considering the proposed General Plan for Morgan Hill (or the future General Plan Update for Gilroy). In recognition of this projected exceedance of capacity, the SCRWA is planning to fund, design, and construct expansion of the facility by 2022.

According to these projections, and as discussed in UTIL-6 below, future wastewater flows from buildout of the proposed General Plan would exceed the current design or permitted dry weather treatment capacity of the wastewater treatment plant serving the Project Area. As noted above, the treatment plant's current capacity is projected to be exceeded—and plans are underway to expand capacity at the treatment plant—even without development allowed under the proposed General Plan. Nevertheless, development allowed under the proposed General Plan, in combination with anticipated future development in Gilroy, would require expansion of the existing wastewater treatment facilities. The design and planning of the expansion is expected to begin in 2016. Therefore, an evaluation of possible environmental effects of the needed expansion would be speculative and beyond the scope of this Draft EIR.

Table 4.15-4, above, lists some examples of the types of potential impacts that may be associated with wastewater treatment plant expansion. The SCRWA, as lead agency, anticipates that a detailed CEQA review of environmental impacts associated with the planned 2022 expansion of the treatment plant will be completed after the expansion design has begun. The capital improvement budget (CIB) for FY 2016 – 2021 adopted for the SCRWA in May 2015 indicates expansion design beginning in 2016 and CEQA review extending through 2017. It is further anticipated that the plant will need to be expanded again in the mid-2030s. Similarly, evaluation of impacts associated with insufficient capacity at the SCRWA facility before and after 2022 will be addressed when those impacts are more certain, including after completion of the Wastewater Infrastructure Master Plan currently under development. A discussion of impacts is also presented under the UTIL-6 impact below.

After buildout, the Project Area would continue to be provided with wastewater collection and treatment services from the SCRWA facility, which will have been expanded once by 2022 and possibly again in the 2030s. Existing infrastructure would be preserved in place and, if necessary, extensions and/or replacement of sewer pipes/lift stations would be installed to provide wastewater service to portions of the proposed Project Area, as discussed further under UTIL-6 below.

UTILITIES AND SERVICE SYSTEMS

After expansion of the treatment plant, it is anticipated the NPDES discharge permit will be amended to reflect the expanded capacity of the plant. As such, wastewater generated from the Project Area would not exceed the expanded permitted treatment capacity of the SCRWA facility specified in the anticipated revisions to RWQCB's Order No. R3-2010-0009 (NPDES No. CA0049964).

Therefore, in accordance with the proposed General Plan policies and actions and the applicable regulations listed above (UTIL-4/General Plan), the proposed General Plan would not require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects, resulting in a *less-than-significant* impact.

Significance Before Mitigation: Less than significant.

Residential Development Control System

The RDCS regulates population growth through the provision of residential building allotments. The RDCS, and the proposed updates to the RDCS as part of the proposed Project, affect the pace of development in the City but do not determine the location, type, or intensity of development. By metering residential growth, the RDCS is an important tool the City uses to ensure that infrastructure and services are in place before development is approved, including adequate wastewater treatment plant capacity. In addition, the proposed RDCS Competition Standards award points to projects that require no off-site extension of utility lines and/or for projects that do not require water improvements beyond minimum requirements.

Therefore, in accordance with the proposed policies and actions of the proposed General Plan, applicable regulations listed above under UTIL-4/General Plan, and RDCS Competition Standards that encourage limited infrastructure upgrades, the proposed RDCS would have *less-than-significant* impact related to the construction of new wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

Significance Before Mitigation: Less than significant.

UTIL-6	Implementation of the proposed Project would not result in a determination by the wastewater treatment provider, which serves or may serve the proposed Project that it does not have adequate capacity to serve the proposed Project's projected demand in addition to the provider's existing commitments.

General Plan

As presented in Table 3-2, buildout of the Project Area would result in a total projected horizon year population of 68,057. Based on a per capita wastewater generation rate of 78 gallons per day per capita,³⁶

³⁶ Wastewater Flow Projections, SCRWA, Cities of Gilroy and Morgan Hill, prepared by MWH and AKEL, August 2011; page 7.

UTILITIES AND SERVICE SYSTEMS

the wastewater generated at buildout would be 5.31 MGD.³⁷ The projected wastewater generation of 5.31 MGD at buildout is a conservative estimate since this projection assumes that existing properties outside the City limit, but within the SOI, that are not currently connected to the sewer, would connect to the City sewer by 2035, which is an unlikely scenario. However, this Draft EIR analyzes the most conservative wastewater generation scenario which would exceed the total capacity of the SCRWA allotted to Morgan Hill (3.56 MGD).

Total average dry weather flow to the plant (combined from both Morgan Hill and Gilroy) has been about 6.2 MGD in recent years. The 8.5 MGD total plant capacity is projected to be exceeded around 2022, based on the existing Morgan Hill and Gilroy General Plans, without considering the proposed General Plan Update for Morgan Hill or the General Plan Update for Gilroy. In recognition of this projected exceedance of capacity, the SCRWA is currently planning to fund, design, and construct an expansion of the facility by 2022.

As noted above under Impact UTIL-5, the SCRWA projects that CEQA review of environmental impacts associated with the planned 2022 expansion of the treatment plant will extend through 2017, after expansion design has begun in 2016. It is further anticipated that the plant will need to be expanded again in the mid-2030s, in conjunction with buildout of the proposed General Plan and Gilroy's General Plan Update. CEQA evaluation of impacts associated with expansion of the SCRWA facility to address insufficient capacity before and *after* 2022 will be addressed by SCRWA when those impacts are more certain, including after future contemporary flow projections (Capacity Study) and after completion of the Wastewater Infrastructure Master Plan.

The City regularly replaces aging components of its wastewater collection and transmission system. The proposed General Plan will include extensions and/or replacement of sewer pipes/lift stations required to provide wastewater service to portions of the proposed Project Area.

Although creation of new or extended wastewater collection pipes, lift stations and increased capacity projects could create short-term construction-related environmental effects (e.g., noise, dust, traffic, temporary service interruption, etc.), such as those listed in Table 4.15-4, above, the work would be subject to compliance with the City's and the SCRWA's regulations and standard conditions for new construction related to wastewater collection and treatment. For example, these regulations and conditions would require the construction to include BMPs that require construction areas to minimize dust generation, limit construction noise to daytime hours to limit impacts to sensitive receptors, and use modern equipment to limit emissions. In addition, proposed General Plan policies, as discussed below, would further ensure any potential adverse physical effects of these activities are *less than significant*.

The proposed General Plan policies and actions (listed under UTIL-4/General Plan) require that adequate wastewater treatment capacity infrastructure be provided in conjunction with new development.

³⁷ 68,057 x 78 gallons/capita per day = 5.31 MGD.

UTILITIES AND SERVICE SYSTEMS

The policies and actions referenced above, along with continued compliance with applicable regulations listed above (UTIL-4/General Plan), ensure that wastewater generated from buildout of the proposed General Plan would not exceed the treatment capacity of the SCRWA plant or the permitted capacity specified in the RWQCB's Order No. R3-2010-0009 (NPDES No. CA0049964). Therefore, the proposed General Plan would not result in the determination by the wastewater treatment provider that it does not have adequate treatment capacity to serve the proposed General Plan's projected demand in addition to the provider's existing commitments, resulting in a *less-than-significant* impact.

Significance Before Mitigation: Less than significant.

Residential Development Control System

The Residential Development Control System, known as the RDCS, regulates population growth through the provision of residential building allotments. The RDCS, and the proposed updates to the RDCS as part of the proposed Project, affect the pace of development in the City but do not determine the location, type, or intensity of development. By metering residential growth, the RDCS is an important tool the City uses to ensure that infrastructure and services are in place before development is approved, including adequate wastewater treatment plant capacity. Therefore, in accordance with the proposed policies and actions of the proposed General Plan and applicable regulations listed above under UTIL-4/General Plan, the proposed RDCS would not result in the determination by the wastewater treatment provider that it does not have adequate treatment capacity to serve the proposed General Plan's projected demand in addition to the provider's existing commitments. As such, the proposed RDCS would have a *less-than-significant* impact.

Significance Before Mitigation: Less than significant.

4.15.2.4 CUMULATIVE IMPACTS

UTIL-7	Implementation of the proposed Project, in combination with past, present, and reasonably foreseeable projects, would result in less-than-significant cumulative impacts with respect to wastewater.

This section analyzes potential impacts related to wastewater treatment that could occur from the proposed Project in combination with reasonably foreseeable growth within the SCRWA service area.

The cumulative setting for this impact analysis is the area served by the SCRWA Wastewater Treatment Plant, which treats wastewater from the cities of Gilroy and Morgan Hill. Development allowed under the proposed Project would contribute to an increase in the volume of wastewater delivered for treatment at the SCRWA treatment plant. This increase would occur incrementally until the 2035 buildout horizon. The SCRWA is currently on track to exceed its permitted and design capacity with or without the proposed Project. Based on the cumulative wastewater treatment demand predicted in the service area of the plant, the SCRWA plans to construct expanded capacity by 2022, and additional expansion of the plant is already

UTILITIES AND SERVICE SYSTEMS

anticipated in the 2030s. Based on cumulative long-term demand forecasts prepared by the SCRWA using data from Morgan Hill and Gilroy, and in accordance with proposed policies and actions of the proposed General Plan, existing or planned capacity of the wastewater treatment system will be sufficient for flow that would be produced by the proposed Project, plus cumulative flow from development allowed under the Gilroy General Plan Update. Thus, the construction of new or expanded wastewater treatment facilities beyond the expansions already anticipated would not be necessary.

Additionally, future development in the SCRWA service area would be subject to the environmental review process and would be required to mitigate any effects to wastewater treatment services on a project-by-project basis. Future development would also be required to comply with all applicable regulations and ordinances protecting wastewater treatment services as described in the Regulatory Framework section above.

Wastewater from cumulative projects would be treated according to the wastewater treatment requirements documented in the NPDES permit for the SCRWA and enforced by the Central Coast RWQCB.

Therefore, cumulative development combined with the proposed Project would not exceed wastewater treatment requirements, and cumulative impacts to sanitary wastewater service would be *less than significant*.

Significance Before Mitigation: Less than significant.

4.15.3 SOLID WASTE

This section outlines the regulatory setting, describes existing conditions, and discusses potential impacts from the proposed Project with regard to solid waste disposal services.

4.15.3.1 ENVIRONMENTAL SETTING

Regulatory Framework

State Laws and Regulations

California Integrated Waste Management Act

California's Integrated Waste Management Act of 1989 (AB 939) requires that cities and counties divert 50 percent of all solid waste from landfills as of January 1, 2000 through source reduction, recycling, and composting. AB 939 also establishes a goal for all California counties to provide at least 15 years of ongoing landfill capacity. To help achieve this, the act requires that each city and county prepare a Source Reduction and Recycling Element to be submitted to the Department of Resources Recycling and Recovery (CalRecycle), a new department within the California Natural Resources Agency, which administers programs formerly managed by the state's Integrated Waste Management Board and Division of Recycling.

UTILITIES AND SERVICE SYSTEMS

In 2007, SB 1016 amended AB 939 to establish a per capita disposal measurement system. The per capita disposal measurement system is calculated as a jurisdiction's reported total disposal of solid waste divided by a jurisdiction's population. CalRecycle sets a target per capita disposal rate for each jurisdiction. Each jurisdiction must submit an annual report to CalRecycle with an update of its progress in implementing diversion programs and its current per capita disposal rate.³⁸

In 2011, Assembly Bill 341 was passed, which sets a state policy goal of not less than 75 percent of solid waste that is generated to be source reduced, recycled, or composted by the year 2020.

California Solid Waste Reuse and Recycling Access Act of 1991³⁹

The California Solid Waste Reuse and Recycling Access Act of 1991 required CalRecycle to develop a model ordinance for adoption of recyclable materials in development projects by March 1, 1993. Local agencies were then required to adopt the model, or an ordinance of their own, that establishes standards that including space allocation for the collection and loading of recyclable materials in new development projects by September 1, 1993.

CARB Scoping Plan Mandatory Commercial Recycling Measure⁴⁰

Pursuant to the California Global Warming Solutions Act of 2006, which set the 2020 greenhouse gas (GHG) emissions reduction into law, the Air Resources Board (ARB) adopted the Assembly Bill 32 Scoping Plan, which includes the Mandatory Commercial Recycling Measure. The Mandatory Commercial Recycling Measure focuses on increasing commercial waste diversion as a way to reduce GHG emissions. Its goal is to reduce GHG emissions by 5 million metric tons of carbon dioxide (CO₂) equivalents. To achieve the measure's objective, an additional 2 to 3 million tons of materials annually will need to be recycled from the commercial sector by the year 2020 and beyond.

CalRecycle adopted the regulation at its January 17, 2012 Monthly Public Meeting. The regulation was approved by the Office of Administrative Law on May 7, 2012 and became effective immediately. On June 27, 2012, the Governor signed SB 1018, which included an amendment requiring businesses that generate 4 cubic yards or more of commercial solid waste per week or a multi-family residential dwelling with five or more units to arrange for recycling services. This requirement became effective on July 1, 2012.

Cal-Green Building Code

The California Green Building Standards Code (Cal-Green) came into effect for all projects beginning after January 1, 2011. Cal-Green Section 4.408, Construction Waste Reduction Disposal and Recycling, mandates that, in the absence of a more stringent local ordinance, a minimum of 50 percent of non-

³⁸ California Integrated Waste Management Board, <http://www.calrecycle.ca.gov/LGCentral/Basics/PerCapitaDsp.htm#Jurisdiction>, accessed on February 4, 2015.

³⁹ CalRecycle, <http://www.calrecycle.ca.gov/LGCentral/Library/localdocs/policy.htm>, accessed on February 4, 2015.

⁴⁰ CalRecycle, <http://www.calrecycle.ca.gov/recycle/commercial/>, accessed on February 4, 2015.

UTILITIES AND SERVICE SYSTEMS

hazardous construction and demolition debris must be recycled or salvaged. Cal-Green requires that all applicants have a waste management plan for on-site sorting of construction debris. The waste management plan shall do the following:

- Identify the materials to be diverted from disposal by recycling, reuse on the project, or salvage for future use or sale.
- Specify if materials will be sorted on-site or mixed for transportation to a diversion facility.
- Identify the diversion facility where the material collected will be taken.
- Identify construction methods employed to reduce the amount of waste generated.
- Specify that the amount of materials diverted shall be calculated by weight or volume, but not by both.

Regional and Local Regulation

Santa Clara County Integrated Waste Management Plan

The California Integrated Waste Management Act of 1989 (Assembly Bill 939) was passed to address concerns about increases in waste, which limits landfill capacity. As noted, AB 939 mandated jurisdictions to divert 50 percent of their landfill waste by the year 2000. The Act (AB 939) also requires that each county adopt a Countywide Integrated Waste Management Plan (CIWMP) to provide structure and guidance for waste management programs on a countywide basis. The Santa Clara CIWMP includes an analysis of Santa Clara County demographics and population. The CIWMP serves as the planning document to ensure that the mandated 50 percent reduction in the amount of solid waste disposed in landfills by the year 2000 level is maintained and efforts continue for further waste reduction. The CIWMP incorporates the following solid waste planning documents for the County:

- Source Reduction and Recycling Element
- Non-disposal Facility Element
- Household Hazardous Waste Element

City of Morgan Hill Municipal Code

The City of Morgan Hill Municipal Code contains all ordinances for the City. The Municipal Code is organized by Title, Chapter, and Section.

Chapter 13.28, Solid Waste Collection and Disposal

Chapter 13.28 of the City's Municipal Code regulates solid waste collection and disposal in the City.

Chapter 15.65, Sustainable Building Regulations

The purpose of Chapter 15.65 is to assure that commercial and residential development is consistent with the City's environmental agenda to create a more sustainable community by incorporating sustainable

UTILITIES AND SERVICE SYSTEMS

building measures into the design, construction, and maintenance of new and existing buildings. The sustainable building provisions referenced in this chapter are designed to achieve the following objectives:

- Increase energy efficiency in buildings.
- Encourage water and resource conservation.
- Reduce waste generated by construction projects.
- Provide durable buildings that are efficient and economical to own and operate.
- Promote healthy and productive indoor environments for residents, workers and visitors to the City.
- Recognize and conserve the energy embodied in existing buildings.

Existing Conditions

An outside vendor, Recology, provides garbage service, including recycling, composting, and garbage collection to the City of Morgan Hill. The City of Morgan Hill uses single-stream recycling, meaning that all types of recyclable materials are mixed together upon collection and sorted later at a materials recovery facility.

In 2013, Morgan Hill's per capita solid waste disposal rate for residents was 5.3 pounds per day (PPD); this is less than the CalRecycle estimated per capita disposal rate target for residents of 6.1 PPD.⁴¹ The City's per capita solid waste disposal rate for employees in 2013 was 15.1 PPD; this is less than the CalRecycle per capita disposal rate target for employees of 16.3 PPD.⁴² CalRecycle indicates Morgan Hill has 34 disposal diversion programs.

CalRecycle reports that in 2014 a total of 39,454 tons of solid waste from Morgan Hill was disposed at 11 different landfills.⁴³ Ninety-five percent (37,679 tons) of the City's solid waste in 2014 went to three of those facilities:

- John Smith Road Landfill (17,410 tons)
- Johnson Canyon Sanitary Landfill (18,196 tons)
- Kirby Canyon Landfill (2,073 tons)

⁴¹ The per capita disposal rate target is also known as "the 50 percent equivalent per capita disposal target." It is the amount of disposal Morgan Hill would have had during the 2003 to 2006 base period (designated by CalRecycle) if it had been exactly at a 50 percent diversion rate as required by State law in effect at that time. It is calculated by CalRecycle using the average base period per capita generation for Morgan Hill (in pounds), then dividing this generation average in half to determine the 50 percent equivalent per capita disposal target. The target is an indicator for comparison with that jurisdiction's annual per capita per day disposal rate beginning with the 2007 program year.

⁴² CalRecycle Jurisdiction Diversion/Disposal Rate Summary, <http://www.calrecycle.ca.gov/LGCentral/reports/diversionprogram/JurisdictionDiversionPost2006.aspx>, accessed September 10, 2015.

⁴³ CalRecycle Jurisdiction Disposal by Facility Report, <http://www.calrecycle.ca.gov/LGCentral/Reports/Viewer.aspx?P=OriginJurisdictionIDs%3d305%26ReportYear%3d2013%26ReportName%3dReportEDRSJurisDisposalByFacility>, accessed September 10, 2015.

UTILITIES AND SERVICE SYSTEMS

John Smith Road Landfill

The landfill is located at 2650 John Smith Road, Hollister, CA. It has a permitted throughput capacity of 1,000 tons/day. Its maximum permitted capacity is 9,354,000 cubic yards. It has a “cease operation date” of January 1, 2032.⁴⁴

Johnson Canyon Sanitary Landfill

The landfill is located at 31400 Johnson Canyon Road, Gonzales, CA. It has a permitted throughput capacity of 1,574 tons/day. Its maximum permitted capacity is 13,834,328 cubic yards. It has a “cease operation date” of December 21, 2040.⁴⁵

Kirby Canyon Landfill

The Kirby Canyon Recycling & Disposal Facility is located at 910 Coyote Creek Golf Drive, San Jose, California. It has a permitted throughput capacity of 2,600 tons/day. Its maximum permitted capacity is 36,400,000 cubic yards. It has a “cease operation date” of December 31, 2022.⁴⁶

4.15.3.2 STANDARDS OF SIGNIFICANCE

The proposed Project would have a significant impact on solid waste disposal if it would:

1. Not be served by a landfill with sufficient permitted capacity to accommodate the proposed Project’s solid waste disposal needs.
2. Be out of compliance with federal, state, and local statutes and regulations related to solid waste.

4.15.3.3 IMPACT DISCUSSION

UTIL-8	Implementation of the proposed Project would be served by a landfill with sufficient permitted capacity to accommodate the proposed Project’s solid waste disposal needs.

⁴⁴ CalRecycle, John Smith Road Landfill (35-AA-0001), <http://www.calrecycle.ca.gov/SWFacilities/Directory/35-AA-0001/Detail/>, accessed September 10, 2015.

⁴⁵ CalRecycle, Johnson Canyon Landfill (27-AA-0005), <http://www.calrecycle.ca.gov/SWFacilities/Directory/27-AA-0005/Detail/>, accessed September 10, 2015.

⁴⁶ CalRecycle, Kirby Canyon Recycl. & Disp. Facility (43-AN-0008), <http://www.calrecycle.ca.gov/SWFacilities/Directory/43-AN-0008/Detail/>, accessed June 27, 2015.

UTILITIES AND SERVICE SYSTEMS

General Plan

In 2013, CalRecycle reported that an overall total of 39,454 tons of solid waste was generated from Morgan Hill. The City's disposal rates for both residents and employees have been below target rates since 2007.

The proposed General Plan at buildout would generate 22,888 new residents and 9,326 employees. For analysis purposes, solid waste generation is assumed to be the actual 2013 per capita generation rates of 5.3 ppd for residents and 15.1 ppd for employees. Accordingly, the incremental solid waste generated by the Project's residents and employees is estimated to be 262,129 ppd, or 131 tons per day.⁴⁷

The incremental solid waste generation rate for the proposed General Plan of 131 tons per day is less than three percent of the combined daily capacity (i.e., 5,174 tons/day) of the three landfills providing 95 percent disposal services to the City in 2014, as shown on Table 4.15-4. As such, buildout of the proposed General Plan would have a *less-than-significant* impact with regard to daily capacity at the landfill facilities.

Two of the three landfills that receive the majority of the City's solid waste are likely to reach their permitted maximum capacity prior to 2035. However, the Johnson Canyon Landfill is not estimated to close until 2040. In addition, there are eight other landfills that received waste from Morgan Hill in 2014. If one or more of the three landfills listed above were unavailable in the future, it is likely Morgan Hill's solid waste volume could be increased at one or more of the other landfills that already serve Morgan Hill.

Additionally, future development would be required to comply with the CBC Section 4.408, which requires a minimum of 50 percent of non-hazardous construction and demolition debris to be recycled or salvaged. Per Section 4.408, the individual development projects implemented under the proposed General Plan would be required to have a Waste Management Plan for on-site sorting of construction debris, which is submitted to the City for approval in order to ensure that the covered project meets the diversion requirement for reused or recycled construction and demolition debris.

The following proposed goal, policies and actions in Chapter 9, Safety, Services, and Infrastructure Element, of the proposed General Plan would enhance solid waste diversion and management:

Solid Waste

Goal SSI-17

Reduced generation of solid waste and increased diversion of waste from landfills

Policy SSI-17.1

Waste Diversion. Maximize reuse, recycling, and composting Citywide to reduce the amount of waste disposed of in landfills.

⁴⁷22,888 x 5.3 = 121,306 pounds, plus 9,326 x 15.1 = 140,822 pounds; totaling 262,129 pounds per day, or 131 tons per day.

UTILITIES AND SERVICE SYSTEMS

Policy SSI-17.2	Waste Management Technologies. Support adoption of new technologies for waste management activities, including collection, sorting, and processing, that can maximize waste stream materials recovery.
Policy SSI-17.3	Public Waste Reduction. Reduce the amount of waste disposed of in landfills through waste prevention, reuse, and recycling at venues, public facilities, and special events.
Policy SSI-17.4	Food Scrap and Yard Waste Diversion. Promote the collection of food scraps and compostable paper in yard waste bins through public outreach campaigns.
Policy SSI-17.5	Single-Use Materials. Support programs and incentives to reduce the manufacture and use of materials that are difficult to recycle or are non-compostable substitutes for compostable materials.
Policy SSI-17.6	Local Materials. Encourage the use of locally extracted, manufactured, recycled, and reused materials, including construction materials and compost.
Policy SSI-17.7	Citywide Recycling Program. Maintain the Citywide recycling program, including commercial and industrial efforts, as well as downtown recycling bins.
Policy SSI-17.8	Public Participation. Increase program participation and reduce disposal of recyclable or compostable materials through a combination of intensive outreach, incentives, enforcements, and mandates.
Policy SSI-17.9	Litter Control. Promote aggressive litter control.
Policy SSI-17.10	Energy Generation. Encourage the development of energy generation and conservation technologies for converting residual solid waste into energy.
Policy SSI-17.11	Hard-to-Recycle Materials. Expand programs and facilities that accept hazardous and hard-to-recycle materials.
Policy SSI-17.12	Building Reuse. Promote the use of recycled materials, including reuse of existing building shells and elements, as part of new construction or renovations.
Policy SSI-17.13	Public Venues and Events. Encourage commercial businesses, public facilities, and permitted events to provide composting and recycling bins with signage and labels to educate members of the public about proper use.
Action SSI-17.A	Zero Waste Goal. Prepare a zero-waste strategic plan to maximize solid waste diversion community-wide.
Action SSI-17.B	Public Participation. Investigate ways to increase public awareness and participation in recycling programs.
Action SSI-17.C	Litter Control in Commercial Development. Require litter control considerations in all commercial development.

With continued compliance with applicable regulations listed below, and in accordance with the above listed policies and actions proposed in the General Plan, solid waste generated from development allowed under the proposed General Plan would not exceed the landfill capacity available to the City. Therefore, the proposed General Plan would have a *less-than-significant* impact.

Applicable Regulations:

- California Integrated Waste Management Act
- Global Warming Solutions Act of 2006, Scoping Plan
- CAL Green Building Code

UTILITIES AND SERVICE SYSTEMS

- City of Morgan Hill Municipal Code – Chapter. 13.28, Solid Waste Collection and Disposal; Chapter 15.65, Sustainable Building Regulations

Significance Before Mitigation: Less than significant.

Residential Development Control System

The Residential Development Control System, known as the RDCS, regulates population growth through the provision of residential building allotments. The RDCS, and the proposed updates to the RDCS as part of the proposed Project, affect the pace of development in the City but do not determine the location, type, or intensity of development. By metering residential growth, the RDCS is an important tool the City uses to ensure that services like solid waste disposal are in place before development occurs. In combination with the proposed policies and actions of the proposed General Plan and applicable regulations listed above under UTIL-8/General Plan, the proposed RDCS would not result in landfills that do not have adequate permitted capacity to serve the proposed General Plan’s projected demand in addition to the landfill’s existing commitments. As such, the proposed RDCS would have a *less-than-significant* impact.

Significance Before Mitigation: Less than significant.

UTIL-9	The proposed Project would comply with federal, state, and local statutes and regulations related to solid waste.

General Plan

As discussed above, the City has complied with state requirements to reduce the volume of solid waste through recycling and reuse of solid waste. The City’s per capita disposal rates are below the target rates established by CalRecycle. The City has also established solid waste recycling requirements in its Municipal Code.

As shown above, the proposed General Plan includes policies and actions that promote recycling and conservation, and help ensure adequate waste collection and disposal facilities are available for the residents and workers of Morgan Hill.

Therefore, in accordance with the applicable regulations, policies, and actions listed above (UTIL-8/General Plan), adoption and implementation of the proposed General Plan would comply with applicable statutes and regulations related to solid waste, resulting in no impact.

Significance Before Mitigation: No Impact.

UTILITIES AND SERVICE SYSTEMS

Residential Development Control System

The Residential Development Control System, known as the RDCS, regulates population growth through the provision of residential building allotments. The RDCS, and the proposed updates to the RDCS as part of the proposed Project, affect the pace of development in the City but do not determine the location, type, or intensity of development. By metering residential growth, the RDCS is an important tool the City uses to ensure that services like solid waste disposal are in place before development occurs. In combination with the proposed policies and actions of the proposed General Plan and applicable regulations listed above under UTIL-8/General Plan, the proposed RDCS would have no adverse effect related to compliance with solid waste regulations. As such, the proposed RDCS would have *no impact*.

Significance Before Mitigation: No impact.

4.15.3.4 CUMULATIVE IMPACTS

UTIL-10	The proposed Project, in combination with past, present, and reasonably foreseeable projects, would result in less-than-significant cumulative impacts with respect to solid waste.

Buildout of the proposed Project will incrementally increase the quantity of solid waste for disposal by 131 tons/day over baseline. The permitted daily throughput capacity and permitted maximum lifetime capacity of the three main landfills that currently (2014) serve the City can accommodate solid waste generation rates for baseline plus incremental increases at buildout (2035).

Although AB 939 established a goal for all California cities to provide at least 15 years of ongoing landfill capacity, growth from other cities in the region may exceed that which was taken into account when calculating landfill capacity. Also, because two of the three landfill facilities that take approximately 95 percent of the City's solid waste (in 2014) are expected to close by 2022 and 2032, respectively, Morgan Hill or other jurisdictions that use the same facilities may eventually experience insufficient future capacity at a specific landfill to accommodate existing or increased population and employment levels.

However, one of the three main landfills serving the City is estimated to remain open until 2040 (Johnson Canyon Landfill). In addition, there are eight other landfills that received waste from Morgan Hill in 2014. Therefore, if one or more of the main three landfills serving Morgan Hill in 2014 were unavailable in the future, it is likely Morgan Hill's solid waste volume could be increased at one or more of the other landfills that already serve the City.

Therefore, with continued compliance with the applicable regulations listed above (UTIL-8), and in accordance with the proposed policies and actions in the proposed General Plan listed above (UTIL-8), the solid waste related cumulative impact of the proposed Project, in combination with past, present, and reasonably foreseeable development, would be *less than significant*.

UTILITIES AND SERVICE SYSTEMS

Significance Before Mitigation: Less than significant.

4.15.4 ENERGY CONSERVATION

In order to assure that energy implications are considered in project decisions, CEQA Guidelines (Appendix F) require that EIRs include a discussion of the potential energy impacts of proposed projects, with particular emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy. This section outlines the regulatory setting, describes existing conditions, and discusses potential impacts from buildout of the proposed General Plan and implementation of the proposed RDCS with regard to energy conservation.

4.15.4.1 ENVIRONMENTAL SETTING

This section provides a general description of the regulatory setting addressing existing electric and natural gas services and infrastructure, and supply and demand in Morgan Hill.

Regulatory Framework

Federal Regulations

Energy Independence and Security Act of 2007

Signed into law in December 2007, this Act is an energy policy law that contains provisions designed to increase energy efficiency and the availability of renewable energy. The Act contains provisions for increasing fuel economy standards for cars and light trucks, while establishing new minimum efficiency standards for lighting as well as residential and commercial appliance equipment.

Energy Policy Act of 2005

Passed by Congress in July 2005, the Energy Policy Act contains a comprehensive set of provisions to address energy issues. The Act includes tax incentives including energy conservation improvements in commercial and residential buildings, fossil fuel production and clean coal facilities, and construction and operation of nuclear power plants, among other things. Subsidies are also included for geothermal, wind energy, and other alternative energy producers.

National Energy Policy

Established in 2001 by the National Energy Policy Development Group, this policy is designed to help the private sector and state and local governments promote dependable, affordable, and environmentally sound production and distribution of energy for the future. Key issues addressed by the energy policy are energy conservation, repair and expansion of energy infrastructure, and ways of increasing energy supplies while protecting the environment.

UTILITIES AND SERVICE SYSTEMS

State Regulations

California Public Utilities Commission

In September 2008, the California Public Utilities Commission (CPUC) adopted the *Long Term Energy Efficiency Strategic Plan*, which provides a framework for energy efficiency in California through the year 2020 and beyond. It articulates a long-term vision, as well as goals for each economic sector, identifying specific near-term, mid-term, and long-term strategies to assist in achieving these goals. The *Long Term Energy Efficiency Strategic Plan* sets forth the following four goals, known as Big Bold Energy Efficiency Strategies, to achieve significant reductions in energy demand:

- All new residential construction in California will be zero net energy by 2020.
- All new commercial construction in California will be zero net energy by 2030.
- Heating, Ventilation and Air Conditioning (HVAC) will be transformed to ensure that its energy performance is optimal for California's climate.
- All eligible low-income customers will be given the opportunity to participate in the low-income energy efficiency program by 2020.

With respect to the commercial sector, the *Long Term Energy Efficiency Strategic Plan* notes that commercial buildings, which include schools, hospitals, and public buildings, consume more electricity than any other end-use sector in California. The commercial sector's five billion-plus square feet of space accounts for 38 percent of the state's power use and over 25 percent of natural gas consumption. Lighting, cooling, refrigeration, and ventilation account for 75 percent of all commercial electric use, while space heating, water heating, and cooking account for over 90 percent of gas use. In 2006, schools and colleges were in the top five facility types for electricity and gas consumption, accounting for approximately 10 percent of state's electricity and gas use.

The CPUC and the California Energy Commission (CEC) have adopted the following goals to achieve zero net energy (ZNE) levels by 2030 in the commercial sector:

<i>Goal 1</i>	<i>New construction will increasingly embrace zero net energy performance (including clean, distributed generation), reaching 100 percent penetration of new starts in 2030.</i>
<i>Goal 2</i>	<i>50 percent of existing buildings will be retrofit to zero net energy by 2030 through achievement of deep levels of energy efficiency and with the addition of clean distributed generation.</i>
<i>Goal 3</i>	<i>Transform the commercial lighting market through technological advancement and innovative utility initiatives.</i>

California Building Standards Code

Title 24, Part 6, Energy, of the California Code of Regulations, and Part 11, CalGreen, regulate energy conservation standards and green building, respectively.

UTILITIES AND SERVICE SYSTEMS**Energy Code (Title 24, Part 6)**

Energy conservation standards for new residential and nonresidential buildings were adopted by the California Energy Resources Conservation and Development Commission in June 1977 and most recently revised in 2008 (Title 24, Part 6, of the California Code of Regulations [CCR]). Title 24, Part 6 (Energy Code) requires the design of building shells and building components to conserve energy. The standards are updated periodically to allow for consideration and possible incorporation of new energy efficiency technologies and methods. On May 31, 2012, the California Energy Commission (CEC) adopted the 2013 Building Energy Efficiency Standards, which went into effect on July 1, 2014. Buildings that are constructed in accordance with the 2013 Building Energy Efficiency Standards are 25 percent (residential) to 30 percent (nonresidential) more energy efficient than the 2008 standards as a result of better windows, insulation, lighting, ventilation systems, and other features that reduce energy consumption in homes and businesses.

CEC has a goal of achieving Zero Net Energy (ZNE) building standards by 2020 for residential buildings and by 2030 for commercial buildings.

CalGreen Code (Title 24, Part 11)

On July 17, 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code (Part 11, Title 24, known as "CalGreen") was adopted as part of the 2010 California Building Standards Code (Title 24, California Code of Regulations), and has since been updated as discussed below. CalGreen established planning and design standards for sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and internal air contaminants. The mandatory provisions of the updated CalGreen became effective January 1, 2014 as part of the 2013 California Building Standards Code. Additional requirements may be adopted by local jurisdictions in recommended "tiers," or per local preference. Local jurisdictions may use a local Green Building Ordinance that is equal or more stringent than CalGreen. The building efficiency standards are enforced through the local building permit process.

The purpose of CalGreen is to improve public health, safety, and general welfare by enhancing the design and construction of buildings through the use of building concepts having a reduced negative impact or positive environmental impact and encouraging sustainable construction practices in the following categories:

- Planning and design.
- Energy efficiency.
- Water efficiency and conservation.
- Material conservation and resource efficiency.
- Environmental quality.

UTILITIES AND SERVICE SYSTEMS

California 2012 Appliance Efficiency Regulations

The 2012 Appliance Efficiency Regulations (Title 20, CCR Sections 1601 through 1608) were adopted by the CEC on January 12, 2012, and went into effect on February 1, 2013. The regulations include standards for both federally regulated appliances and non-federally regulated appliances. Though these regulations are now often viewed as “business-as-usual,” they exceed the standards imposed by all other states and they reduce GHG emissions by reducing energy demand.

State Greenhouse Gas Regulations

The Governor’s GHG Reduction Executive Order S-3-05 was signed on June 1, 2005, and set GHG reduction targets for the state. Soon after, AB 32 was passed by the California state legislature on August 31, 2006, to place the state on a course toward reducing its contribution of GHG emissions. In response to AB 32, the California Air Resources Board (CARB) developed a *Scoping Plan* outlining California’s approach to achieving the goal of reducing GHG emissions to 1990 levels by 2020. The final *Scoping Plan* was adopted by CARB on December 11, 2008. CARB approved the first 5-year *Update to the Climate Change Scoping Plan* on May 22, 2014, as required by AB 32. For a detailed discussion on these regulations, see Chapter 4.6, Greenhouse Gas Emissions, of this Draft EIR

Senate Bill X1-2

Signed into law in 2011, SB X1-2 directs CPUC’s Renewable Energy Resources Program to increase the amount of electricity generated from eligible renewable energy resources per year to an amount that equals at least 20 percent of the total electricity sold to retail customers in California per year by December 31, 2013, 25 percent by December 31, 2016, and 33 percent by December 31, 2020. SB X1-2 codifies the 33 percent by 2020 renewable portfolio standard (RPS) goal established pursuant to the Global Warming Solutions Act of 2006. This new RPS applies to all electricity retailers in the state including publicly owned utilities, investor-owned utilities, electricity service providers, and community choice aggregators. All of these entities must adopt the new RPS goals of 20 percent of retail sales from renewables by the end of 2013, 25 percent by the end of 2016, and the 33 percent requirement being met by the end of 2020.

California Energy Efficiency in Existing Buildings

AB 758 (2009) requires the California Energy Commission, in collaboration with the CPUC and stakeholders, to develop a comprehensive program to achieve greater energy savings in the state’s existing buildings.

Local Regulations

City of Morgan Hill Municipal Code

The City of Morgan Hill Municipal Code contains all ordinances for the City. The Municipal Code is organized by Title, Chapter, and Section.

UTILITIES AND SERVICE SYSTEMS

Chapter 15.08, Building Code

Section 15.08.010 of the City's Municipal Code adopts by reference the California Building Code, the California Residential Code and other parts of the state Building Standards Code. Adopted codes include 2013 California Energy Code (California Code of Regulations Title 24, Part 6) and the 2013 California Green Building Standards Code (California Code of Regulations Title 24, Part 11). These codes are part of the Morgan Hill building Code and enforced by the City

Chapter 15.65, Sustainable Building Regulations

The purpose of Chapter 15.65 is to assure that commercial and residential development is consistent with the City's environmental agenda to create a more sustainable community by incorporating sustainable building measures into the design, construction, and maintenance of new and existing buildings. The sustainable building provisions referenced in this chapter are designed to achieve the following objectives:

- Increase energy efficiency in buildings.
- Encourage water and resource conservation.
- Reduce waste generated by construction projects.
- Provide durable buildings that are efficient and economical to own and operate.
- Promote healthy and productive indoor environments for residents, workers and visitors to the City.
- Recognize and conserve the energy embodied in existing buildings

Section 17.32.040 – Design; Energy conservation

The design of a subdivision for which a tentative map is required, pursuant to Chapter 17.16 of this title, shall provide, to the extent feasible, for future passive or natural heating or cooling opportunities in the subdivision.

Existing Setting

PG&E provides electricity and natural gas services to the City. PG&E is a publicly traded utility company which generates, purchases, and transmits energy under contract with the CPUC. PG&E owns and maintains above- and below-ground networks of electric and gas transmission and distribution facilities throughout the City.

PG&E's total service territory is 70,000 square miles in area, roughly extending north to south from the City of Eureka to the City of Bakersfield, and east to west from the Sierra Nevada mountain range to the Pacific Ocean.

Electricity

PG&E's total service territory electricity distribution system consists of 141,215 circuit miles of electric distribution lines and 18,616 circuit miles of interconnected transmission lines. PG&E electricity is

UTILITIES AND SERVICE SYSTEMS

generated by a combination of sources such as coal-fired power plants, nuclear power plants, and hydroelectric dams, as well as newer sources of energy, such as wind turbines and photovoltaic plants or “solar farms.” “The grid,” or bulk electric grid, is a network of high-voltage transmission lines that link power plants with the PG&E system. The distribution system, comprised of lower voltage secondary lines, is at the street and neighborhood level and consists of overhead or underground distribution lines, transformers, and individual service “drops” that connect to the individual customer.

PG&E produces or buys its energy from a number of conventional and renewable generating sources, which travel through PG&E’s electric transmission and distribution systems. The power mix PG&E provided to customers in 2012 consisted of non-emitting nuclear generation (21 percent), large hydroelectric facilities (11 percent) and eligible renewable resources (19 percent), such as wind, geothermal, biomass, solar and small hydro. The remaining portion came from natural gas/other (27 percent) and unspecified power (21 percent). Unspecified power refers to electricity that is not traceable to specific generation sources by any auditable contract trail. In addition, PG&E has plans to increase the use of renewable power. For instance, PG&E purchases power from customers that install small-scale renewable generators (e.g., wind turbines or photovoltaic cells) up to 1.5 megawatts in size. In 2013, PG&E served 23.8 percent of their retail electricity sales with renewable power.⁴⁸

PG&E’s projected annual electricity demand growth between 2012 and 2024 is 1.25 percent.⁴⁹ Energy providers in the state forecast demand by assuming future economic growth and taking into account projects such as the proposed General Plan.

PG&E is currently planning for upgrades to south Santa Clara County’s electric system. Specifically, the proposed project would increase the capacity of the electricity grid for the Cities of Morgan Hill, Gilroy, and unincorporated areas of southern Santa Clara County by constructing a new substation, two new transmission lines to connect the new substation to the electric system, and upgrades to key transmission lines in the vicinity.⁵⁰

Natural Gas

PG&E’s natural gas (methane) pipe delivery system includes 42,141 miles of distribution pipelines, and 6,438 miles of transportation pipelines. Gas delivered by PG&E originates in gas fields in California, the US Southwest, US Rocky Mountains, and from Canada. Transportation pipelines send natural gas from fields and storage facilities in large pipes under high pressure. The smaller distribution pipelines deliver gas to individual businesses or residences.

⁴⁸ California Public Utilities Commission (CPUC), 2014. California Renewables Portfolio Standard (RPS), <http://www.cpuc.ca.gov/PUC/energy/Renewables/index.htm>, accessed February 27, 2015.

⁴⁹ California Energy Commission (CEC), 2013. California Energy Demand 2014-2024 Preliminary Forecast, CEC-200-2013-004-SD-V2, May 2013.

⁵⁰ Pacific Gas & Electric (PG&E), <http://www.pge.com/en/safety/southcounty/details/index.page>, accessed on September 21, 2015.

UTILITIES AND SERVICE SYSTEMS

PG&E gas transmission pipeline systems serve approximately 4.2 million gas customers in northern and central California. The system is operated under an inspection and monitoring program. The system operates in real time on a 24-hour basis, and includes leak inspections, surveys, and patrols of the pipelines. A new program, the Pipeline 2020 program, aims to modernize critical pipeline infrastructure, expand the use of automatic or remotely-operated shut-off valves, catalyze development of next-generation inspection technologies, develop industry-leading best practices, and enhance public safety partnerships with local communities, public officials, and first responders.

Several PG&E gas transportation pipelines run through the Project Area. Two main lines run roughly parallel to and 1 to 2 miles east of Highway 101. Two other pipelines “T” off those main lines and run under Diana Avenue and Cochrane Road, respectively, to the west of 101.⁵¹ Distribution gas pipelines are located throughout the City.

4.15.4.2 STANDARDS OF SIGNIFICANCE

Appendix F, Energy Conservation, of the CEQA Guidelines, requires a discussion of the potential energy impacts of proposed projects; however, no specific thresholds of significance for potential energy impacts are suggested in the CEQA Guidelines or are established by the City. Therefore, this EIR analysis determined that impacts would be significant if the proposed General Plan, upon buildout, would result in a substantial increase in natural gas and electrical service demands that would require the new construction of energy supply facilities and transmission infrastructure, or capacity enhancing alterations to existing facilities. This parallels the threshold determinations for other utility and service systems under Appendix G of the CEQA Guidelines. In addition, to further the intent of Appendix F, relevant potential impacts related to energy demand and energy conservation listed in Appendix F are also incorporated in the evaluation of impacts.

Appendix F lists the following impacts to energy conservation that may result from projects:

1. The project’s energy requirements and its energy use efficiencies by amount and fuel type for each stage of the project including construction, operation, maintenance and/or removal. If appropriate, the energy intensiveness of materials maybe discussed.
2. The effects of the project on local and regional energy supplies and on requirements for additional capacity.
3. The effects of the project on peak and base period demands for electricity and other forms of energy.
4. The degree to which the project complies with existing energy standards.
5. The effects of the project on energy resources.
6. The project’s projected transportation energy use requirements and its overall use of efficient transportation alternatives.

⁵¹ Pacific Gas & Electric, 2014. Gas Transmission System Map web page, <http://www.pge.com/en/safety/systemworks/gas/transmissionpipelines/index.page>, accessed September 11, 2015.

UTILITIES AND SERVICE SYSTEMS

The Appendix F list of potential energy conservation impacts represents a range of impacts that might be applicable to a range of project types. When assessing the potential impacts of the proposed Project, the analysis included in Section 4.15.4.3 below focuses on discussions related to item numbers 2, 4, 5, and 6 on the list. Focus was placed on these potential impacts because the proposed Project does not represent a unique or energy-intensive use that would be substantially different than other similar plans.

4.15.4.3 IMPACT DISCUSSION

UTIL-11	The proposed Project would result in a substantial increase in natural gas and electrical service demands, would use appropriate energy conservation and efficiency measures, and would not require new energy supply facilities and distribution infrastructure or capacity enhancing alterations to existing facilities.

General Plan

New development under the proposed General Plan would continue to be served by PG&E, as described in Section 4.15.4.1, Environmental Setting, above. The proposed increase in development would result in a long-term increase in energy demand associated with the operation of lighting and space heating/cooling in the added building space, and vehicle travel. In addition, construction activities associated with development require the use of energy (e.g., electricity and fuel) for various purposes such as the operation of construction equipment and tools, as well as excavation, grading, demolition, and construction vehicle travel.

Construction

Even with energy saving practices in place (as discussed above and below), new electrical connections, switches and/or transformers will be required to serve new structures and/or carry additional loads within the Project Area. Similarly, new gas distribution lines and connections may be necessary. These are anticipated infrastructure improvements. Most of the work would be in existing public rights-of-way or facilities. Although creation of new or re-located gas and electric lines could create short-term construction-related environmental effects (e.g., noise, dust, traffic, temporary service interruption, etc.), the work would be subject to compliance with the City's and PG&E's regulations and standard conditions for new construction related to infrastructure improvements. For example, these regulations and conditions would require gas and electric line construction to include BMPs that require construction areas to minimize dust generation, limit construction noise to daytime hours to limit impacts to sensitive receptors, and use modern equipment to limit emissions. In addition, these types of infrastructure improvements are anticipated as part of the future development projects during the buildout period. Any such projects would be subject to project-specific compliance with CEQA as well as compliance with applicable regulations and standard conditions of approval for construction projects, including City permits/review for construction (e.g., grading permits, private development review, encroachment permits, etc.).

UTILITIES AND SERVICE SYSTEMS

Construction vehicles would consume fuel. As discussed in Section 4.6, Greenhouse Gas Emissions, the US EPA adopted the Heavy-Duty National Program to establish fuel efficiency and GHG emission standards in the heavy-duty highway vehicle sector, which includes combination tractors (semi-trucks), heavy-duty pickup trucks and vans, and vocational vehicles (including buses and refuse or utility trucks). These standards include targets for gallons of fuel consumed per mile beginning in model year 2014. These standards are being extended through model year 2018 through current rulemaking by the US EPA. While construction activities require a commitment of energy sources, these efficiency standards improve energy security and innovation in clean energy technology and further the goal of conserving energy in the context of project development. As a result, in accordance with the Applicable Regulations and proposed General Plan policies and actions listed below (UTIL-11 / General Plan), construction impacts for future development under the proposed General Plan would be addressed in project-specific analysis. As a result Plan impacts would be *less-than-significant*.

Operational

Implementation of the proposed General Plan at buildout would result in a net growth of 1,855 single-family residences, 5,006 multi-family residences, 755,548 square feet retail space, 628,698 square feet of office space, 1,752,385 square feet of industrial space, 329,557 square feet of service space, and 287,377 square feet of public facilities space. The proposed increase in development would result in a long-term increase in energy demand associated with the operation of lighting and space heating/cooling in the added building space, and vehicle travel. In addition, construction activities associated with development require the use of energy (e.g., electricity and fuel) for various purposes such as the operation of construction equipment and tools, as well as excavation, grading, demolition, and construction vehicle travel.

Development Energy Impacts

Proposed new development would be constructed using energy efficient modern building materials and construction practices in accordance with CalGreen Building Code, CPUC's *Long Term Energy Efficiency Strategic Plan* (2008), and Chapters 15.08, 15.65, 17.32, and 18.78 of the City's Municipal Code, which contain a range of energy conservation and renewable energy measures. The new buildings also would use new modern appliances and equipment in accordance with the 2015 Appliance Efficiency Regulations (Title 20, CCR Sections 1601 through 1608). Under these requirements, future development under the proposed General Plan would use recycled construction materials, environmentally sustainable building materials, building designs that reduce the amount of energy used in building heating and cooling systems as compared to conventionally built structures, and landscaping that incorporates water efficient irrigation systems, all of which would conserve energy.

The following proposed goal, policies and actions in Chapter 8, Natural Resources and Environment Element, of the proposed General Plan would enhance energy conservation:

UTILITIES AND SERVICE SYSTEMS

Energy Conservation

Goal NRE-16	<i>Conservation of energy resources.</i>
Policy NRE-16.1	Energy Standards for New Development. New development, including public buildings, should be designed to exceed state standards for the use of energy.
Policy NRE-16.2	Energy Conservation. Promote energy conservation techniques and energy efficiency in building design, orientation, and construction.
Policy NRE-16.3	Energy Use Data and Analysis. Provide information to increase building owner, tenant, and operator knowledge about how, when, and where building energy is used.
Policy NRE-16.4	Retrofit Financing. Promote existing and support development of new private financing options for building retrofits and renewable energy development.
Policy NRE-16.5	Energy Efficiency. Encourage development project designs that protect and improve air quality and minimize direct and indirect air pollutant emissions by including components that promote energy efficiency.
Policy NRE-16.6	Landscaping for Energy Conservation. Encourage landscaping plans for new development to address the planting of trees and shrubs that will provide shade to reduce the need for cooling systems and allow for winter daylighting.
Policy NRE-16.7	Renewable Energy. Encourage new and existing development to incorporate renewable energy generating features, like solar panels.
Policy NRE-16.8	Residential Development Code. Emphasize energy conservation building techniques for new residential construction through the implementation of Chapter 18.78 of the Municipal Code.
Policy NRE-16.9	Subdivision Design. In compliance with Section 66473.1 of the state Subdivision Map Act, promote subdivision design that provides for passive solar heating and natural cooling through the Development Review Committee subdivision review procedures.
Action NRE-16.A	Community Choice Aggregation. Partner with other Santa Clara County jurisdictions to determine the feasibility for development of a regional CCA program, including identification of the geographic scope, potential costs to participating jurisdictions and residents, and potential liabilities.
Action NRE-16.B	Municipal Energy Audit. In cooperation with PG&E, subject all municipal buildings to an energy audit and perform practicable energy conservation alterations on municipal buildings. Such alterations can include modifying automatic heating, cooling, and lighting systems, and installing natural ventilation methods and solar hot water systems, etc.
Action NRE-16.C	Local Energy Ordinances. Develop local ordinances that promote energy conservation and efficiency. Examples of such ordinances include: energy audits, solar access, solar swimming pool heating, insulation and solar retrofit, and solar water heating.
Action NRE-16.D	Energy Efficiency Plan. Develop a comprehensive strategy for using energy efficiently at all City facilities.

Therefore, with the implementation of these proposed General Plan policies and actions above, and in accordance with the applicable state and local energy efficiency measures cited above and below, significant energy conservation and savings would be realized from future development under the proposed General Plan. Therefore, energy impacts from development would be *less than significant* and no mitigation measures are required.

UTILITIES AND SERVICE SYSTEMS**Transportation Energy Impacts**

The proposed General Plan inherently furthers objectives of energy conservation related to transportation by focusing activities in areas of existing infrastructure and services. Transportation design features that are priorities of the proposed General Plan include enhancing pedestrian circulation systems, enhancing bicycle circulation systems, prioritizing intermodal transit connectivity, and facilitating improved connections to transit facilities for bicycles and pedestrians. These elements all promote non-motorized transportation within the Project Area, thereby potentially reducing energy consumption that would otherwise be related to motorized vehicle use (e.g., automobiles).

Chapter 4.13, Transportation and Traffic, provides an evaluation of the expected traffic and transit trips generated by the proposed General Plan. As discussed, the proposed General Plan would potentially generate an increase in trips consisting of vehicular, transit and walk/bike trips that would vary between 2014 and 2035 due to region-wide transportation system improvements that are projected to alter travel patterns and modes of project trips.

As discussed above, the US EPA adopted standards that include targets for gallons of fuel consumed per mile beginning in model year 2014. These standards are being extended through model year 2018 via current rulemaking by the US EPA. While future transportation would require a commitment of energy sources, these efficiency standards improve energy security and innovation in clean energy technology furthering the goal of energy conservation in the context of project development. As with impacts of future development discussed above, implementation of proposed General Plan policies and compliance with proposed General Plan policies listed above would ensure energy impacts from transportation would be *less than significant*.

Renewable Energy Impacts

The Project Area would be within the 70,000-square-mile PG&E service territory for electricity and natural gas generation, transmission, and distribution. Due to the Project Area's size, buildout of the proposed General Plan would not significantly increase energy demands proposed within the service territory and would not require new energy supply facilities. Where new transportation/transmission infrastructure is required, as discussed above under Future Construction Energy Impacts, these projects would be subject to separate environmental review and would be required to comply with applicable regulations for construction projects, including construction permits/review for construction within public rights-of-way (e.g., grading permits, private development review, encroachment permits). In addition, developments such as the proposed General Plan are anticipated in the energy projections of energy providers within the state. As a result, renewable energy impacts from new energy supply facilities and transportation/transmission infrastructure, or capacity-enhancing alterations to existing facilities, would be *less than significant* and no mitigation measures are required.

Applicable Regulations:

- National Energy Policy Act of 2005
- California (CEC's) 2015 Appliance Efficiency Regulations

UTILITIES AND SERVICE SYSTEMS

- California Global Warming Solutions Act of 2006, *Scoping Plan*
- CAL Green Building Code
- City of Morgan Hill Municipal Code; Chapter 15.08, Building Code; Chapter 15.65, Sustainable Building Regulations; Section 17.32.040 – Design; Energy Conservation

Significance Before Mitigation: Less than significant.

Residential Development Control System

The RDCS regulates population growth through the provision of residential building allotments. The RDCS, and the proposed updates to the RDCS as part of the proposed Project, affect the pace of development in the City but do not determine the location, type, or intensity of development. In addition, the proposed RDCS Competition Standards would encourage energy efficient residential projects by awarding points for new residential projects that do one or a combination of the following:

- Exceed the minimum building energy efficiency required by the California Energy Code.
- Incorporate infrastructure to accommodate the installation of photovoltaic solar equipment at a later date.
- Incorporate on-site solar or wind energy generation.
- Exceed minimum requirements of the California Green Building Code related to:
 - Energy efficient public infrastructure.
 - Electric vehicle or other alternative fuel vehicle charging stations
 - Other green building techniques important in Morgan Hill.

Therefore, in accordance with the policies and actions of the proposed General Plan and applicable regulations listed above under UTIL-11/General Plan as well as by encouraging energy efficient residential projects, the proposed RDCS would not have a substantial adverse effect related to energy conservation. As such, the proposed RDCS would have a *less-than-significant* impact.

Significance Before Mitigation: Less than significant.

4.15.5 SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION MEASURES

The proposed Project would not result in any significant project-specific or cumulative impacts to utilities and service systems and therefore no mitigation measures are required.

UTILITIES AND SERVICE SYSTEMS

4.15.6 FULL BUILDOUT

The full buildout anticipated under the proposed Project would include significantly more non-residential development than the 2035 horizon-year development projection analyzed above, in terms of both the amount and the extent of development. Therefore, the potential for impacts related to utilities and service systems would increase. However, as discussed in Chapter 3, Project Description, it is extremely unlikely that full buildout would ever occur under the proposed Project. Therefore, an analysis of full buildout is not required by CEQA.

UTILITIES AND SERVICE SYSTEMS

5. Significant Unavoidable Adverse Impacts

Section 15126.2 of the California Environmental Quality Act (CEQA) Guidelines requires that “direct and indirect significant effects of the project on the environment shall be clearly identified and described, giving due consideration to both the short- and long-term effects.”

Chapter 1, Executive Summary, contains Table 1-1, which summarizes the impacts, mitigation measures, and levels of significance before and after mitigation. While actions from the Project and mitigation measures, where feasible, would reduce the level of impact to less than significant, the following impacts would remain significant and unavoidable after mitigation measures are applied:

5.1 AGRICULTURE AND FORESTRY RESOURCES

AG-1	Implementation of the proposed Project would convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use.

While the Project would continue to support the City’s Agricultural Lands Preservation Program and associated Agricultural Mitigation Ordinance, which are intended to mitigate impacts to agricultural lands by requiring agricultural mitigation at a ratio of 1:1,¹ and encouraging dedications of conservation easements within the Project Area, with particular emphasis on the lands within the Southeast Quadrant (SEQ) area, the proposed General Plan would convert 504 acres of farmland to non-agricultural use. In addition to the measures prescribed by the Agricultural Mitigation Ordinance, mitigation recommended by LAFCO, as discussed in detail under Impact Discussion AG-1 in Chapter 4.2, Agriculture and Forestry, of this Draft EIR, would help to reduce impacts related to the conversion of farmland as a result of implementation of the Project. Nevertheless, because the Project would still result in conversion of 504 acres of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use, and would convert less farmland to non-agricultural use compared to the existing

¹ A 1:1 ratio means for every one acre of farmland development/conversion, one acre of farmland preservation in-perpetuity (along with necessary funding for stewardship and program administration) must be achieved.

SIGNIFICANT UNAVOIDABLE ADVERSE IMPACTS

General Plan, a significant impact would occur. Given that the only way to fully avoid the agricultural impact of the Project is to not allow development in such areas, mitigation is infeasible and the impact would remain *significant and unavoidable*.

AG-2	Implementation of the proposed Project would conflict with existing zoning for agricultural use, or a Williamson Act contract.

As discussed in Impact Discussion AG-2 in Chapter 4.2, Agriculture and Forestry Resources, in this Draft EIR, the Project would designate for non-agricultural use one 16-acre parcel in the southwestern portion of the Project Area on Olive Avenue outside of the City limit currently under a Williamson Act contract. The proposed General Plan would designate this parcel as Residential Detached Medium, which would conflict with agricultural use. Because the parcel is outside of the City limit and, therefore, would not be developed until annexed into the City, nevertheless this would result in a significant impact. Given that the only way to fully avoid the agricultural impact of the Project is to not allow development on this parcel, mitigation is infeasible and the impact would remain *significant and unavoidable*.

AG-6	Implementation of the proposed Project would contribute to cumulative impacts to agriculture in the area.

Given that the Project would result in the designation of land to non-agricultural use, the Project would contribute to cumulative impacts to agriculture in the area. Although there are policies and actions in the proposed General Plan that would reduce and partially offset regional agricultural impacts, the Project, nevertheless, would contribute to cumulatively significant agricultural impacts in the region. Further, the amount of development foreseen in the region and the decisions of Santa Clara County and other surrounding counties regarding conversion of agricultural lands are outside the control of Morgan Hill. Therefore, this impact would remain *significant and unavoidable*.

5.2 AIR QUALITY

AQ-1	Implementation of the proposed Project would be consistent with Clean Air Plan policies, but due to the anticipated level of growth accommodated by the General Plan Update, it could conflict with or obstruct implementation of the applicable air quality plan.

The General Plan would reduce Vehicles Miles Traveled (VMT) per population and VMT per service population (SP, defined as residents and employees) as described in Chapter 4.3, Air Quality. The policies identified in the General Plan Update would not hinder Bay Area Air Quality Management District's (BAAQMDs) implementation of the 2010 Bay Area Clean Air Plan. However, because implementation of the proposed Project would exceed regional projections by 13,357 people and 4,373 employees, and because

SIGNIFICANT UNAVOIDABLE ADVERSE IMPACTS

there are no mitigation measures available that would reduce impacts associated with exceeding regional growth projections, the impact is considered *significant and unavoidable*.

AQ-2	Implementation of the proposed Project would violate any air quality standard or contribute substantially to an existing or projected air quality violation.

As discussed in Impact Discussion AQ-2 of Chapter 4.3, Air Quality, of this Draft EIR, the Project would violate air quality standards and contribute substantially to an existing or projected air quality violation during construction and operation. Mitigation Measures AQ-2a-1, AQ-2a-2, AQ-2b-1, and AQ-2b-2 would lessen the impacts related to construction and operation regarding future buildout under implementation of the Project; however, given the programmatic nature of this impact, and because the specific extent and location of future development has not yet been identified, the potential to violate air quality standards in exceedance of BAAQMD thresholds remains, and this would be a *significant and unavoidable* impact related to construction and operation impacts.

AQ-3	Implementation of the proposed Project would result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).

Criteria air pollutant emissions generated by land uses within the proposed Project could exceed the BAAQMD thresholds (see AQ-2). Air quality impacts identified in the discussions of Impact AQ-2 in Chapter 4.3, Air Quality, of this Draft EIR, constitute the proposed Project's contribution to cumulative air quality impacts in the San Francisco Bay Area Air Basin (SFBAAB). Mitigation measures AQ-2a-1, AQ-2a-2, and AQ-2b-1, identified above to reduce Project-related emissions, would reduce impacts to the extent feasible. However, due to the programmatic nature of the proposed Project, no additional mitigation measures are available. Air pollutant emissions associated with the proposed Project would result in a cumulatively considerable contribution to air quality impacts. Therefore, this impact would remain *significant and unavoidable*.

AQ-5	Implementation of the proposed Project would cumulatively contribute to air quality impacts in the San Francisco Bay Area Air Basin.

Criteria air pollutant emissions generated by land uses within the proposed Project could exceed the BAAQMD thresholds (see AQ-2). Air quality impacts identified in the discussions of Impact AQ-2 in Chapter 4.3, Air Quality, of this Draft EIR, constitute the proposed Project's contribution to cumulative air quality impacts in the SFBAAB. Mitigation measures AQ-2a-1, AQ-2a-2, and AQ-2b-1, identified above to

SIGNIFICANT UNAVOIDABLE ADVERSE IMPACTS

reduce Project-related emissions, would reduce impacts to the extent feasible. Due to the programmatic nature of the proposed Project, no additional mitigation measures are available. Air pollutant emissions associated with the proposed Project would result in a cumulatively considerable contribution to air quality impacts. Therefore, this impact would remain *significant and unavoidable*.

5.3 GREENHOUSE GAS EMISSIONS

GHG-1	The proposed General Plan Update would result in a substantial increase in GHG emissions.

As discussed in Chapter 4.7, Greenhouse Gas Emissions, in this Draft EIR, there are no additional feasible mitigation measures that would reduce GHG emissions for the long-term GHG emissions scenario beyond what was described in Chapter 4.7 under Impact Discussion GHG-1. Further, the state has not identified plans to reduce emissions beyond 2020. In addition, as part of the General Plan Update, GHG emissions mitigation measures identified through the regional climate mitigation initiative SV 2.0 were integrated into the General Plan Update policies to support collaborative opportunities for plan implementation. Despite inclusion of these measures in the General Plan, additional statewide reductions are needed to achieve the long-term GHG reduction goals identified in Executive Order S-03-05, and the impact is considered *significant and unavoidable*.

5.4 TRAFFIC AND TRANSPORTATION

TRAF-2	The proposed General Plan would conflict with an applicable congestion management program as all freeway segments through Morgan Hill, both northbound and southbound, would continue to operate at LOS F.

Freeway segments along US 101 through the City are currently operating at LOS F and each of the segments would continue to operate at LOS F under 2035 buildout conditions. Implementation of the proposed General Plan would constitute more than 1 percent of freeway capacity at the 2035 buildout horizon. There are no feasible mitigation measures that would reduce this to a less than significant impact. Full mitigation of significant impacts on freeway segments would require freeway widening to construct five lanes through Morgan Hill, thereby increasing freeway capacity. However, the City of Morgan Hill does not have a funding strategy in place to contribute towards regional improvements. City representatives should work collaboratively with San Jose, Gilroy, Santa Clara County, counties to the south (Monterey, San Benito, and Merced Counties), the Valley Transportation Authority, and Caltrans to prepare and develop a funding strategy for South County roadway improvements. Payment of traffic impact fees or a fair share contribution is expected to fulfill the City's obligations for mitigating regional traffic impacts; however, unless other funding sources such as a new regional impact fee, additional sales tax measures, contributions from other

SIGNIFICANT UNAVOIDABLE ADVERSE IMPACTS

developers, or state funds are made available, feasible roadway improvements will not be implemented, and the identified freeway impacts will remain *significant and unavoidable*.

SIGNIFICANT UNAVOIDABLE ADVERSE IMPACTS

6. Alternatives to the Proposed Project

The following discussion is intended to inform the public and decision makers of feasible alternatives to the proposed Project that would avoid or substantially lessen any significant effects of the proposed General Plan, proposed Climate Action Plan (CAP), and Residential Development Control System (RDCS) (proposed Project).

The California Environmental Quality Act (CEQA) Guidelines set forth the intent and extent of alternatives analysis to be provided in an EIR. Section 15126.6(a) of the CEQA Guidelines states that:

An EIR shall describe a range of reasonable alternatives to the project, or the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives. An EIR need not consider every conceivable alternative to a project. Rather it must consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation. An EIR is not required to consider alternatives which are infeasible. The lead agency is responsible for selecting a range of project alternatives for examination and must publicly disclose its reasoning for selecting those alternatives. There is no ironclad rule governing the nature or scope of the alternatives to be discussed other than the rule of reason.

6.1 PURPOSE

The alternatives evaluated in this Draft EIR were developed consistent with Section 15126.6(b) of the CEQA Guidelines, which states that:

Because an EIR must identify ways to mitigate or avoid the significant effects that a project may have on the environment (Public Resources Code Section 21002.1), the discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly.

Since the analysis in this Draft EIR did not identify any significant effects resulting from the proposed CAP and proposed updates to the RDCS, alternatives to the proposed RDCS and CAP are not considered in this discussion of project alternatives. Since the RDCS is currently in place, it is considered under the No Project Alternative.

ALTERNATIVES TO THE PROPOSED PROJECT

6.2 POTENTIALLY SIGNIFICANT IMPACTS

Environmental analysis of the proposed Project concluded that implementation may result in the following combination of impact levels: less than significant, less than significant with mitigation, and significant and unavoidable. A summarized list of the potential impacts is provided below.

6.2.1 IMPACTS LESS THAN SIGNIFICANT WITH MITIGATION

Impacts that are less than significant with mitigation are more fully described in their respective sections of Chapter 4, Environmental Evaluation. Mitigation measures may be found in the various sections of Chapter 4, as well as in Table 1-1, Summary of Impacts and Mitigation Measures. The impacts that would be potentially significant, but less than significant with mitigation include the following:

- AQ-4: Implementation of the proposed Project would expose sensitive receptors to substantial concentrations of air pollution.
- HYDRO-7: Implementation of the proposed Project could place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map. Implementation of the proposed Project could place within a 100-year flood hazard area structures which would impede or redirect flood flows.
- TRAF-1: Implementation of the proposed General Plan would result in the intersection of Monterey Road and Central Avenue (Intersection #10) to degrade to LOS F during the AM peak hour, and the intersection of Tennant Avenue and Murphy Avenue (Intersection #40) to degrade to LOS F during both the AM and PM peak hours.

6.2.2 SIGNIFICANT AND UNAVOIDABLE IMPACTS

The impacts that would be significant and unavoidable include the following:

- AG-1: Implementation of the proposed Project would convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use.
- AG-2: Implementation of the proposed Project would conflict with existing zoning for agricultural use, or a Williamson Act contract.
- AG-6: Implementation of the proposed Project would contribute to cumulative impacts to agriculture and forestry resources in the area.
- AQ-2: Implementation of the proposed Project would violate any air quality standard or contribute substantially to an existing or projected air quality violation.

ALTERNATIVES TO THE PROPOSED PROJECT

- AQ-3: Implementation of the proposed Project would result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is designated as a nonattainment area under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).
- AQ-6: Implementation of the proposed Project would cumulatively contribute to air quality impacts in the San Francisco Bay Area Air Basin.
- GHG-1: Implementation of the proposed Project would directly or indirectly generate GHG emissions that may have a significant impact on the environment.
- GHG-3: Implementation of the proposed Project would contribute to cumulative GHG impacts.
- NOISE-3: Implementation of the proposed Project would result in a substantial permanent increase in ambient noise levels in the Project vicinity above levels existing without the Project.
- NOISE-5: Implementation of the proposed Project, in combination with past, present, and reasonably foreseeable projects, would result in significant cumulative impacts with respect to noise.
- TRAF-2: Implementation of the proposed Project would conflict with an applicable congestion management program as all freeway segments through Morgan Hill, both northbound and southbound, would continue to operate at LOS F.

6.3 PROJECT OBJECTIVES

The proposed General Plan is based on the overarching goal of the General Plan Vision, which aims to maintain Morgan Hill's family-friendly character and strong sense of community while the community grows and prospers. Building upon the General Plan Vision, the following 13 Guiding Principles outline the objectives of the General Plan.

1. Provide a mix of housing types and sizes, including universal design concepts, while maintaining a majority of single-family housing.
2. Offer and improve services, amenities, educational opportunities, and improvements that encourage an active, healthy lifestyle.
3. Regulate development through a clear, fair, flexible, and streamlined growth management system.
4. Preserve viable agricultural land, important habitat areas, and recreational open space.
5. Support and connect all modes of transportation.
6. Support a diverse local economy and an expanded tax base by preserving our existing job-generating land.
7. Provide high-quality internet connectivity.
8. Protect environmental resources for future generations.

ALTERNATIVES TO THE PROPOSED PROJECT

9. Require high-quality design in all development.
10. Allow some residential growth on undeveloped land to fill in the gaps in our boundaries.
11. Focus more intensive, mixed-use development in and near downtown.
12. Transform Monterey Road into a revitalized mixed-use corridor.
13. Provide open space in new developments.

6.4 SELECTION OF A REASONABLE RANGE OF ALTERNATIVES

Section 15126.6(c) of the State CEQA Guidelines states:

The range of potential alternatives to the proposed Project shall include those that could feasibly accomplish most of the basic objectives of the project and could avoid or substantially lessen one or more of the significant effects. The EIR should briefly describe the rationale for selecting the alternatives to be discussed. The EIR should also identify any alternatives that were considered by the lead agency but were rejected as infeasible during the scoping process and briefly explain the reasons underlying the lead agency's determination. Additional information explaining the choice of alternatives may be included in the administrative record. Among the factors that may be used to eliminate alternatives from detailed consideration in an EIR are: (i) failure to meet most of the basic project objectives, (ii) infeasibility, or (iii) inability to avoid significant environmental impacts.

6.4.1 ALTERNATIVES CONSIDERED AND REJECTED AS BEING INFEASIBLE

As described above, Section 15126.6(c) of the State CEQA Guidelines requires EIRs to identify any alternatives that were considered by the lead agency but were rejected as infeasible during the scoping process, and briefly explain the reasons underlying the lead agency's determination. Section 15126.6(c) provides that among the factors that may be used to eliminate alternatives from detailed consideration in an EIR are (i) failure to meet most of the basic project objectives, (ii) infeasibility, or (iii) inability to avoid significant environmental impacts.

During the land use alternatives phase of the Morgan Hill 2035 process, three alternatives were developed through an extensive public process with input from the community, GPAC, Planning Commission, and City Council. These alternatives were then analyzed in a Growth Alternatives Workbook to compare and contrast the positive and negative impacts of each.¹ The subsequent public process to review and discuss the findings in the Growth Alternatives Workbook resulted in the Preferred Land Use Plan that is the basis of the proposed General Plan land use map.

¹ City of Morgan Hill, *Growth Alternatives Workbook*, June 13, 2014. Available at <http://morganhill2035.org/documents/project-documents/> along with other documents related to the Growth Alternatives process.

ALTERNATIVES TO THE PROPOSED PROJECT

Growth Alternative A formed the basis of the Low Growth Alternative analyzed below, with some tweaks to the land use map to reduce impacts to agricultural resources. The remaining Growth Alternatives developed and analyzed in 2013 to 2014 were rejected from consideration as project alternatives for the purposes of this Draft EIR, since it was determined that they would not adequately avoid the significant environmental impacts of the Proposed Project.

In addition, the City of Morgan Hill considered an alternative that would downzone vacant land with a residential designation located on prime agricultural land to reduce agricultural impacts. However, during the General Plan Land Use alternatives process, the City Council rejected alternatives that downzoned residential properties. Therefore, this alternative was rejected from further analysis because it would not offer a feasible alternative to the proposed project.

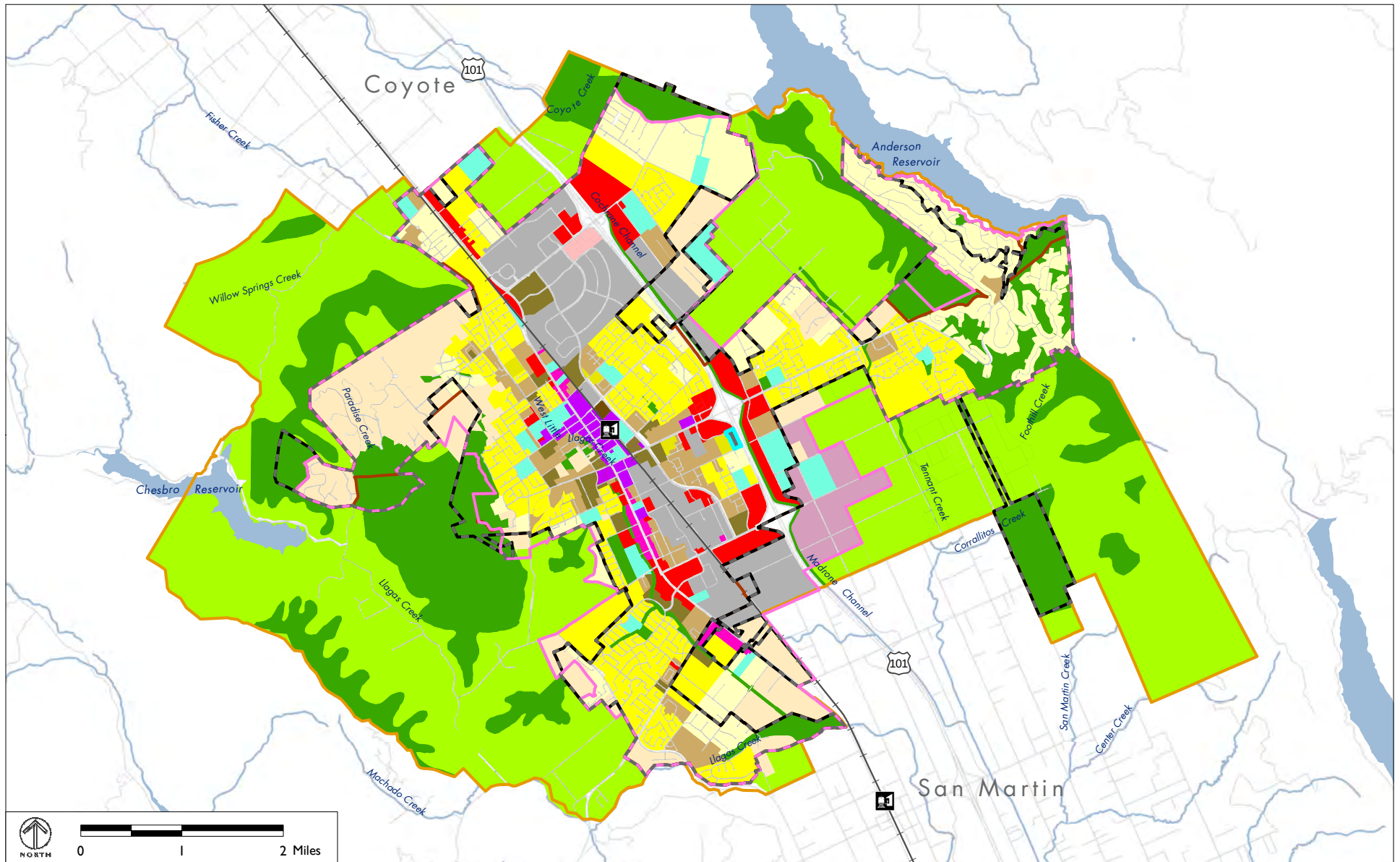
6.4.2 OVERVIEW OF ALTERNATIVES ANALYZED

A “No Project” Alternative is required as part of the “reasonable range of alternatives” that could feasibly attain most or all of the project’s objectives. Each alternative is analyzed against the significance thresholds considered in Chapter 4, Environmental Evaluation. This chapter assesses whether the impacts of the alternatives would be greater than, less than, or similar to those of the proposed Project.

The alternatives to the proposed Project are:

- **No Project Alternative.** Under the No Project Alternative, the proposed Project would not be adopted, and future development in the Project Area would continue to be subject to existing policies, regulations, development standards, and land use designations as per the City of Morgan Hill’s adopted General Plan and Residential Development Control System. Overall, the No Project Alternative would involve slightly less residential development and slightly more non-residential development than the proposed Project. The No Project Alternative would include a General Plan land use map that, in comparison to the land use map for the proposed Project, designates fewer lands in the SOI for development and designates more lands in the SOI for Rural County uses. A General Plan land use map for the No Project Alternative is shown in Figure 6-1. It is the same as the City’s current General Plan land use map, including all approved General Plan Amendments.
- **Low Growth Alternative.** The Low Growth Alternative would include a General Plan land use map that, in comparison to the land use map for the proposed Project, designates fewer lands in the SOI for development and designates more lands in the SOI for Rural County uses. This alternative also designates fewer sites along Monterey Road for mixed-use development. Future development under the Low Growth Alternative would be subject to the proposed policies of the proposed Plan and the current RDCS. In comparison to the proposed Plan, the Low Growth Alternative would result in less housing, with a greater portion of housing as single-family homes, and less non-residential development. A General Plan land use map for the Low Growth Alternative is shown in Figure 6-2.

ALTERNATIVES TO THE PROPOSED PROJECT



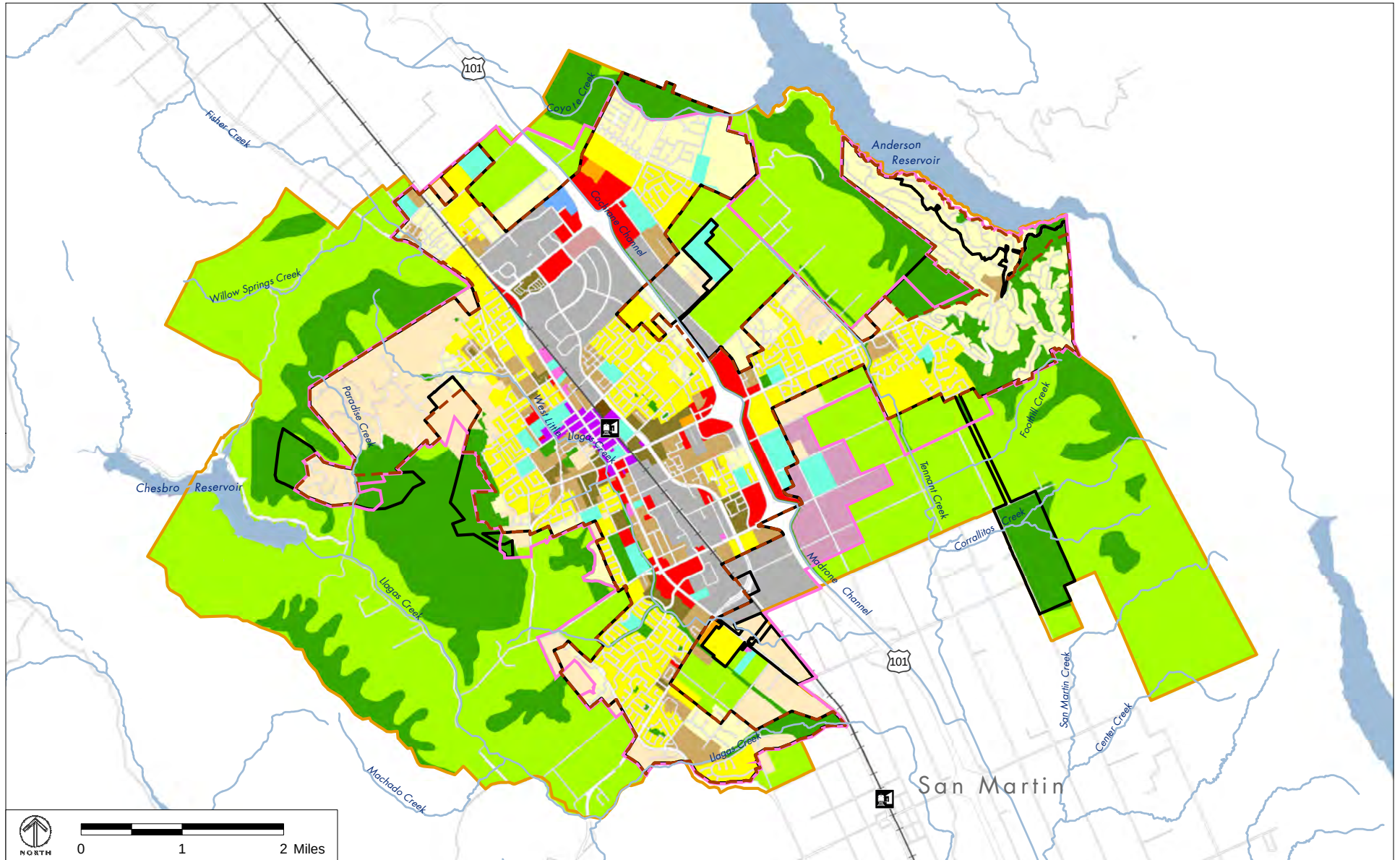
Residential Estate	Multi-Family High	Office Industrial	Sphere of Influence
Single Family Low	Mixed Use	Public Facilities	Urban Growth Boundary
Single Family Medium	Commercial	Sports Recreation/Leisure	Urban Service Area
Single Family High	General Commercial	Open Space	Urban Limit Line
Multi-Family Low	Non-Retail Commercial	Rural County	City Boundary
Multi-Family Medium	Industrial		Train Station

Source: City of Morgan Hill and PlaceWorks, 2015.

Figure 6-1

No Project Alternative
General Plan Land Use Map

ALTERNATIVES TO THE PROPOSED PROJECT



Source: City of Morgan Hill and PlaceWorks, 2015.

Figure 6-2

Low Growth Alternative General Plan Land Use Map

ALTERNATIVES TO THE PROPOSED PROJECT

- Compact Development Alternative.** The Compact Development Alternative would include a General Plan land use map that, in comparison to the land use map for the proposed Project, designates fewer lands in the SOI for development and designates more lands in the SOI for Rural County uses. This alternative also designates fewer sites along Monterey Road for mixed-use development. This alternative also assumes that new development would be built at closer to the top of the allowable density range than under the proposed Plan. Overall, this alternative is envisioned to result in a more compact development pattern than the proposed Plan. Future development under the Compact Development Alternative would be subject to the proposed policies of the proposed Plan and the current RDCS. In comparison to the proposed Plan, the Compact Development Alternative would result in more housing, with a greater portion of housing as multi-family units, and less non-residential development. A General Plan land use map for the Compact Development Alternative is shown in Figure 6-3.

The estimated buildout of each alternative, as well as the proposed Plan, is provided in Table 6-1. A comparison of the potential impacts of each alternative is provided in Table 6-2.

TABLE 6-1 COMPARISON OF ESTIMATED BUILDOUT OF ALTERNATIVES AND PROPOSED PLAN (NET + PIPELINE NEW GROWTH, 2015-2035)

	Housing Units ^a				Non-Residential Square Footage	Jobs ^c
	Single-Family	Multi-Family	Total	Residents ^b		
Proposed Project	2,360	5,071	7,431	22,887	3,866,565	9,326
No Project Alternative ^d	Fewer than the proposed Project				More than the proposed Project	
Low Growth Alternative	4,049	1,821	5,870	18,080	3,167,377	7,247
Compact Development Alternative	2,827	6,347	9,174	28,256	3,563,977	8,194

a. Housing unit calculations for all alternatives reflect full residential capacity and do not factor in growth control from the Residential Development Control System beyond sunset of the current system in 2020.

b. Based on a persons per household rate of 3.08 for both single-family and multi-family units, per Department of Finance statistics.

c. Based on the following employment assumptions: 1 employee per 500 square feet of retail space, 1 employee per 333 square feet of office space, 1 employee per 400 square feet of industrial space, 1 employee per 333 square feet of service space, and 1 employee per 1,250 square feet of public facilities space.

d. Precise buildout calculations were not developed for the No Project Alternative. Table 6-1 provides a comparison between the No Project Alternative and proposed Project.

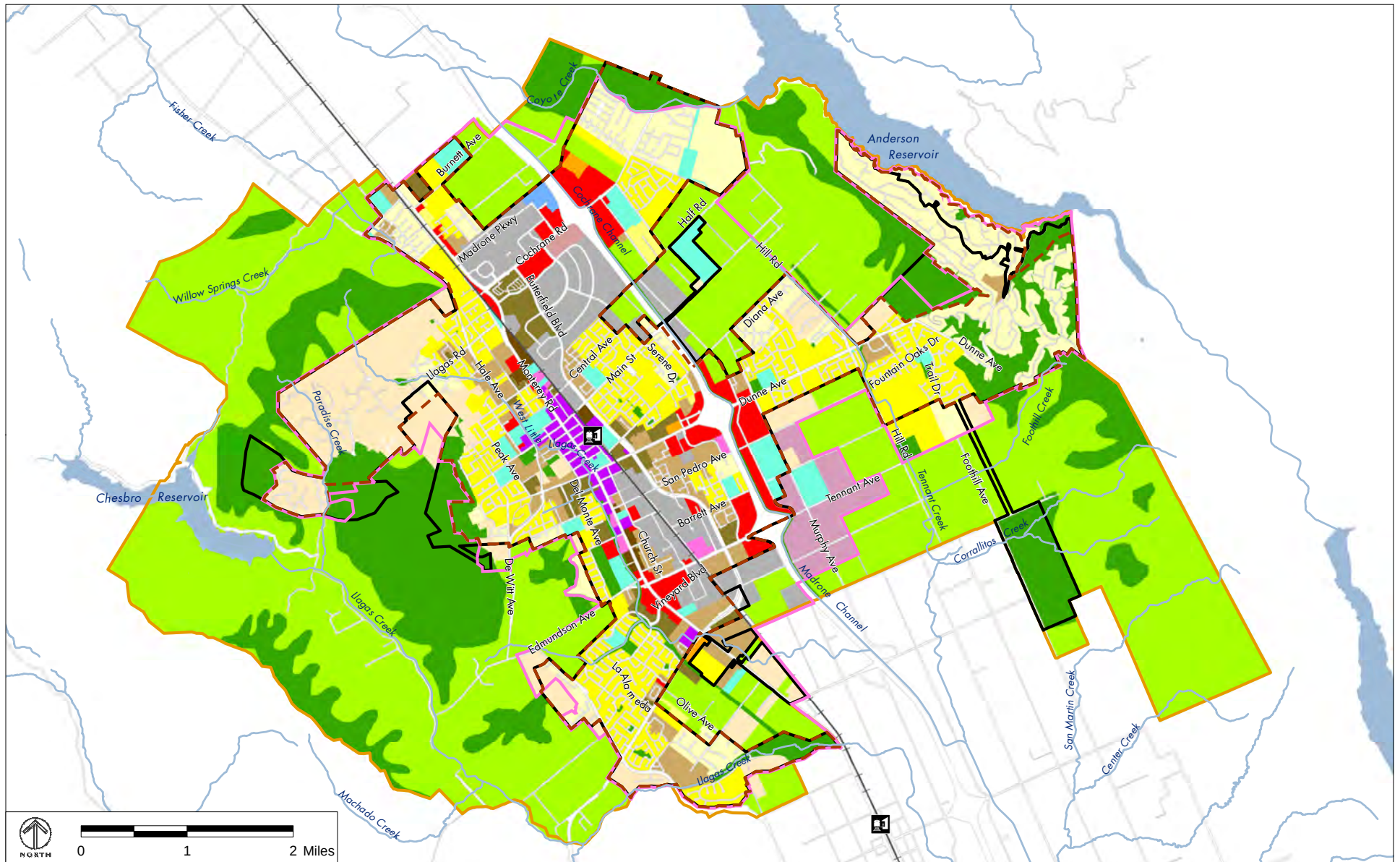
Source: PlaceWorks, 2015.

6.5 NO PROJECT ALTERNATIVE

6.5.1 PRINCIPAL CHARACTERISTICS

Under the No Project Alternative, the proposed Project would not be adopted, and future development in the Project Area would continue to be subject to existing policies, regulations, development standards, and

ALTERNATIVES TO THE PROPOSED PROJECT



Source: City of Morgan Hill and PlaceWorks, 2015.

Figure 6-3

Compact Development Alternative General Plan Land Use Map

ALTERNATIVES TO THE PROPOSED PROJECT

TABLE 6-2 COMPARISON OF ALTERNATIVES TO THE PROPOSED PROJECT

Topic	No Project Alternative	Low Growth Alternative	Compact Development Alternative
Aesthetics	—	==	==
Agriculture and Forestry Resources	—	—	+
Air Quality	—	==	==
Biological Resources	—	==	==
Cultural Resources	==	==	==
Geology, Soils, and Seismicity	==	==	==
Greenhouse Gas Emissions	—	==	==
Hazards and Hazardous Materials	—	==	==
Hydrology and Water Quality	==	==	==
Land Use and Planning	—	==	==
Noise	==	==	==
Population and Housing	—	==	==
Public Services and Recreation	—	==	==
Transportation and Traffic	==	+	==
Utilities and Service Systems	—	==	==
++	Substantial improvement compared to the proposed Project.		
+	Slight improvement compared to the proposed Project.		
==	Similar to the proposed Project.		
—	Slight deterioration compared to the proposed Project.		
--	Substantial deterioration compared to the proposed Project.		

land use designations as per the City of Morgan Hill's adopted General Plan. Overall, the No Project Alternative would allow slightly less single-family and multi-family development than the proposed Project, and less mixed-use development, and would therefore result in less residential growth overall in comparison to the proposed Project as shown in Table 6-3. The No Project Alternative would allow slightly more commercial and industrial growth, and would therefore result in more non-residential growth and more jobs. The No Project Alternative would designate less land as Open Space and slightly more land as Rural County, allowing low-density residential development. The current General Plan land use map, which represents the No Project Alternative, is shown in Figure 6-1.

As explained in Chapter 3.0, Project Description, since it is not possible to guarantee that voters will extend the existing RDCE, or approve an updated RDCE, this EIR assumes full buildout for residential development through the horizon year of 2035 in order to analyze the most conservative scenario.

ALTERNATIVES TO THE PROPOSED PROJECT**TABLE 6-3 NO PROJECT ALTERNATIVE AND DRAFT GENERAL PLAN LAND USES**

General Plan Land Use Designation	Draft General Plan		No Project Alternative	
	Acres	% of Total	Acres	% of Total
Residential Estate	1,194	6.7%	1,297	7.2%
Single-Family Low	1,419	7.9%	1,342	7.5%
Single-Family Medium	1,934	10.8%	1,694	9.5%
Single-Family High	0.0	0.0%	30	0.2%
Multi-Family Low	488	2.7%	485	2.7%
Multi-Family Medium	346	1.9%	180	1.0%
Multi-Family High	6	0.0%	6	0.0%
Mixed Use	93	0.5%	98	0.5%
Mixed Use Flex	127	0.7%	0	0.0%
Commercial	385	2.1%	454	2.5%
General Commercial	24	0.1%	24	0.1%
Non-Retail Commercial	0	0.0%	60	0.3%
Commercial/Industrial	179	1.0%	0	0.0%
Industrial	757	4.2%	957	5.3%
Office Industrial	0	0.0%	6	0.0%
Public Facilities	375	2.1%	375	2.1%
Sports Rec/Leisure	251	1.4%	251	1.4%
Open Space	3,505	19.6%	3,449	19.3%
Rural County	6,829	38.1%	7,205	40.2%
Total	17,913	100.0%	17,913	100.0%

Source: PlaceWorks, 2015.

Therefore, to ensure an “apples to apples” comparison, this analysis of the No Project Alternative is based on a consistent assumption that the existing RDCS continues in place until 2020, then sunsets.

6.5.2 IMPACT DISCUSSION

6.5.2.1 AESTHETICS

The proposed Project would have less-than-significant impacts to aesthetics and scenic resources. Under the No Project Alternative, new development would continue throughout the Project Area under existing plans

ALTERNATIVES TO THE PROPOSED PROJECT

and regulations. As under the proposed Project, under the No Project Alternative much of the new development allowed under the General Plan would be on lands that are already developed, or on lands contiguous to urban uses and major roadways. However, as under the proposed Project, some future development allowed by the No Project Alternative would have the potential to partially or fully block scenic vistas or degrade the existing visual character. In addition, as under the proposed Project, new development throughout the Project Area could create new sources of light and glare.

Under the No Project Alternative, fewer lands in the SOI would be designated for urban uses and the City would not adopt new policies promoting the installation of solar panels, which would have the potential to create glare. As under the proposed Project, new development under the No Project Alternative would be subject to General Plan policies and design review procedures intended to promote high-quality development and protect scenic resources. However, the No Project Alternative would not involve proposed new policies that would be adopted under the proposed Project, which include many of the policies that would help to avoid significant impacts under the proposed Project. The proposed Project includes several new policies that promote specific design considerations to improve the visual character of new development and reduce potential aesthetics impacts associated with new development.

The existing General Plan identifies a Greenbelt, which is intended to physically define the City and separate it from San Jose and San Martin. Under the No Project Alternative, as under the proposed Project, land would not be designated within the Greenbelt for urban development that could affect scenic views to, from, or within these areas.

As described in Section 4.1, Aesthetics, there are no designated scenic highways in Morgan Hill or its Sphere of Influence (SOI). Therefore, like the proposed Project, the No Project Alternative would have no impact to scenic resources within a state scenic highway.

Although the No Project Alternative would designate fewer lands in the SOI for urban uses, the No Project Alternative would not include the proposed new General Plan policies that would protect scenic resources. Therefore, new development in the Project Area would not be held to the same design considerations as development under the proposed Project. Overall, the No Project Alternative would be a *slight deterioration* in comparison to the proposed Project.

6.5.2.2 AGRICULTURE AND FORESTRY RESOURCES

The proposed Project would result in three less-than-significant impacts to agriculture and forestry resources and three impacts that would be significant and unavoidable.

As described in Section 4.2, Agriculture and Forestry Resources, the Project Area contains 1,386 acres of Prime Farmland, 196 acres of Farmland of Statewide Importance, and 234 acres of Unique Farmland, and the proposed Project would designate approximately 1,125 acres of farmland of concern under CEQA for non-agricultural uses. The largest concentrations of land where conversion of farmland to development would be allowed by the proposed Project are located east of Highway 101 between Half Road and Diana

ALTERNATIVES TO THE PROPOSED PROJECT

Avenue, and in the southwestern portion of the City, west of Highway 101 and south of Tennant Avenue and Watsonville Road. The majority of these properties are outside of the City limit but within the SOI. Under the No Project Alternative, most of these areas would keep their current designations for residential and non-residential uses, so potential impacts would be the same.

The most significant differences between the proposed General Plan and the No Project Alternative designations are: the area of farmland of concern bounded by Main Street on the north and Diana Avenue on the south; a smaller area between Dunne Avenue and San Pedro Avenue, east of Highway 101; an area between Madrone Parkway and Burnett Avenue. In these locations, the No Project Alternative applies the Rural County designation to farmland of concern. The Rural County designation allows ongoing agricultural operations, as well as one single-family home per parcel and a minimum parcel size of 5 acres. The Rural County designation would allow a lower amount of single-family residential development, but would not eliminate the possibility of low-density residential development in this area, and would therefore potentially have similar impacts on the ongoing viability of agricultural uses on farmlands of concern.

On the Chiala property in the Southeast Quadrant (SEQ), within the area roughly between Hill Road and Carey Avenue to the west and east and Barrett Avenue and Maple Avenue to the north and south, the No Project Alternative designates the property as Rural County. It should be noted that approximately 20 parcels within this area are not owned by the Chiala family. Although the Chiala property would not be designated for low and medium density residential uses under the No Project Alternative, it would also not implement the proposed Transfer of Development Rights (TDR) system to permanently preserve agricultural land in the SEQ. Thus, the portions of the Chiala property and other areas in the SEQ designated with the Rural County designation would have the potential to develop with scattered, low density residential uses that could impact the viability of continued agricultural uses in this area. The No Project Alternative would not implement the TDR system to provide a funding mechanism to permanently preserve agricultural land and this significant unavoidable impact would still occur under the No Project Alternative.

The majority of Williamson Act contract lands are designated for agricultural use under both the proposed Project and No Project Alternative. However, there is one 16-acre parcel on Olive Avenue that is under a Williamson Act contract and would be given a conflicting land use designation under the proposed Project Area. Under the No Project Alternative, this parcel would be designated for residential use. Therefore, the No Project Alternative would not avoid this significant and unavoidable impact.

Neither the proposed Project nor the No Project Alternative would conflict with zoning for forest land or timberland.

Isolated woodlands are located within the Project Area that are primarily located in the vicinity of the Chesbro Reservoir with some additional forest resources located along the eastern border of the Project Area. As under the proposed Project, under the No Project Alternative most of the area that contains forestry resources would be designated as Open Space, although some areas would be designated for residential uses. Proposed policies under both proposed Project and No Project Alternative would serve to

ALTERNATIVES TO THE PROPOSED PROJECT

reduce potential impacts related to forestry resource, and these policies would remain under the No Project Alternative.

Like the proposed Project, the No Project Alternative would allow development that could result in potentially incompatible urban uses next to farms or ranches. However, proposed policies under the proposed Project would reduce potential conflict and protect agricultural lands, and these policies would remain under the No Project Alternative.

The No Project Alternative would not eliminate the potential for residential development on farmlands of concerns, would not include the proposed TDR funding mechanism to permanently preserve agricultural land and would not avoid the significant and unavoidable impact associated with conflicts with Williamson Act contracts. Otherwise, impacts would be the same under the proposed Plan and No Project Alternative. Overall, the No Project Alternative would be a *slight deterioration* compared to the proposed Project with respect to agricultural impacts.

6.5.2.3 AIR QUALITY

As shown in Section 6.2, the proposed Project would result in two less-than-significant impacts, one significant but mitigable impact, and three significant and unavoidable impacts to air quality.

Under the proposed Project, vehicle miles traveled (VMT) per population and per service population would be reduced, and the policies identified in the proposed Project would not hinder the Bay Area Air Quality Management District's (BAAQMD) implementation of the 2010 Bay Area Clean Air Plan. The No Project Alternative would result in slightly fewer residents and more jobs than the proposed Project. Generally, land uses that reflect a more balanced jobs-housing ratio result in lower per capita VMT. Because the No Project Alternative would increase jobs and reduce housing units in comparison to the proposed Project, it would be expected to result in a slightly higher jobs-to-housing ratio. Therefore, although the overall level of growth under the No Project Alternative would be similar to the proposed Project, the No Project Alternative may result in a slightly higher level of VMT. However, the difference would be slight and it is expected that, as under the proposed Project, emissions resulting from future development allowed by the No Project Alternative would not hinder BAAQMD's ability to attain the California or National ambient air quality standards (AAQS). However, the No Project Alternative would not include several new policies proposed to achieve consistency with regional air quality policies and control measures.

Future development allowed by either the proposed Project or the No Project Alternative would be required to adhere to statewide measures that have been adopted to achieve the greenhouse gas (GHG) reduction targets of Assembly Bill (AB) 32. The proposed Project would be consistent with regional strategies for infill development identified by the Metropolitan Transportation Commission (MTC)/Association of Bay Area Governments (ABAG) in *Plan Bay Area* and would achieve the plan-level BAAQMD efficiency target. The proposed Project would also be on a trajectory to achieve the 2035 target recently identified in Executive Order B-30-15. The No Project Alternative would include an overall similar level of growth and would be expected to achieve similar targets. However, the No Project Alternative

ALTERNATIVES TO THE PROPOSED PROJECT

would not include the same GHG emissions reductions policies that would be adopted under the proposed Project.

Under the proposed Project, because cumulative development within the City could exceed regional significance thresholds, the project could contribute to an increase in adverse health effects in the Air Basin until air quality standards are met. This would be a significant and unavoidable impact. The proposed Project includes policies to reduce criteria air pollutants to the maximum extent practicable, several of which would not be adopted under the No Project Alternative. Under both the proposed Project and No Project Alternative, subsequent environmental review of development projects would be required to assess potential operational emissions impacts under BAAQMD's project-level thresholds. Measures to reduce criteria air pollutant emissions would be considered during individual project-level review under both the proposed Project and No Project Alternative. However, those projects and measures cannot be known at this time. Therefore, the No Project Alternative would not avoid this significant and unavoidable impact.

Under the proposed Project, if uncontrolled, fugitive dust (PM_{10} and $PM_{2.5}$) levels during construction could violate air quality standards or contribute substantially to an existing or projected air quality violation and expose sensitive receptors to elevated concentrations of pollutants. This would be a significant and unavoidable impact. The proposed Project includes policies and actions would minimize impacts during construction. These policies and actions would not be adopted under the No Project Alternative. Construction emissions associated with individual development projects under either the proposed Project or the No Project Alternative would generate an increase in criteria air pollutants and toxic air contaminants (TACs). Continued compliance with existing regulations under either the proposed Project or the No Project Alternative would reduce construction-related impacts to the extent feasible. However, it is not possible to predict the specific characteristics of the construction and operation of those projects and accurately model their individual emissions. Therefore, the No Project Alternative would not avoid this significant and unavoidable impact.

At a plan level, air quality impacts are measured by the potential for a project to exceed BAAQMD's significance criteria and contribute to the state and federal nonattainment designations in the San Francisco Bay Area Air Basin (Air Basin). An attainment area is a geographic area that meets or exceeds an ambient air quality standard. A nonattainment area does not meet the standard. The Air Basin is currently designated a nonattainment area for ozone (O_3), $PM_{2.5}$, and PM_{10} . Any project that produces a significant regional air quality impact in an area that is in nonattainment – that is, is currently not meeting an air quality standard - adds to the cumulative impact. Both the proposed Project and the No Project Alternative would generate a substantial increase in criteria air pollutant emissions from construction and operational activities. Due to the programmatic nature of both the proposed Project and No Project Alternative, no additional mitigation measures are available and the impact would be significant and unavoidable.

The Air Basin has been designated an attainment area under both the national and California AAQA for carbon monoxide (CO), meaning the Air Basin meets current air quality standards for that pollutant, and the trips associated with the proposed Project do not exceed BAAQMD screening criteria. Therefore, the

ALTERNATIVES TO THE PROPOSED PROJECT

proposed Project would not have the potential to substantially increase CO hotspots at intersections in Morgan Hill. Because the No Project Alternative would result in a similar overall level of growth, it is expected that the No Project Alternative would also not increase CO hotspots. However, the proposed Project includes several policies that would encourage bicycle, pedestrian, and transit use to tie land use and transportation, which ensures consistency with Valley Transit Authority's (VTA) 2013 Congestion Management Program. Several of these policies would not be adopted under the No Project Alternative.

Industrial and commercial processes allowed under either the proposed Project or the No Project Alternative would be expected to release TACs, as would mobile sources under either the proposed Project or the No Project Alternative. Both the proposed Project and No Project Alternative would also site sensitive receptors in proximity to TAC sources. Proposed policies under the proposed Project would minimize impacts from community risk and hazards but would not avoid significant impacts associated with creating new sources of TACs and siting sensitive receptors near TACs. These impacts would be mitigated to a less-than-significant level under the proposed Project. Proposed policies that would minimize community risks and hazards would not be adopted under the No Project Alternative and it is expected that the No Project Alternative would result in the same significant but mitigable impact.

Odor impacts can occur when sensitive receptors are sited near nuisance odors, or when new sources of nuisance odors are sited near sensitive receptors. In general, both the land use plan under both the proposed Project and No Project Alternative would designate residential areas and commercial/industrial areas of the City to prevent potential mixing of incompatible land use types, with the exception of mixed-use areas that combine commercial and residential uses. The proposed Project includes policies that would reduce potential land use incompatibilities regarding objectionable odors. These policies would not be adopted under the No Project Alternative.

Overall, the No Project Alternative would result in similar air quality impacts due to the similar levels of growth, types of uses, and land use patterns under both proposed Project and No Project Alternative. The No Project Alternative would not avoid the significant and unavoidable impacts of the proposed Project, and significant impacts that would be mitigable to less-than-significant levels under the proposed Project could also be mitigated under the No Project Alternative. However, the No Project Alternative would not include the adoption of several proposed new policies intended to minimize air quality impacts. Therefore, the No Project Alternative would be a *slight deterioration* in comparison to the proposed Project.

6.5.2.4 BIOLOGICAL RESOURCES

As shown in Section 6.2, the proposed Project would have less-than-significant impacts to biological resources. Under the No Project Alternative, new development would continue throughout the Project Area under existing plans and regulations.

As under the proposed Project, future development and land use activities under the No Project Alternative would occur primarily in urbanized areas where biological resources are generally limited. The potential for occurrence of special-status species, sensitive natural communities, wetlands, riparian habitat, or wildlife

ALTERNATIVES TO THE PROPOSED PROJECT

corridors in developed areas is generally very remote in comparison to undeveloped lands with natural habitat that contain essential habitat characteristics for the range of species known to occur within the Project Area. Although creeks and channels are present within the urbanized areas of the City, most of these creeks and channels have been straightened and channelized to prevent flooding. While buildout of either the proposed Project or No Project Alternative would primarily occur in previously urbanized areas, there is the potential for future development associated to occur on undeveloped land which could significantly impact – either directly, or through habitat modifications – special-status plant and animal species, sensitive natural communities, wetlands, riparian habitat, wildlife corridors, or areas covered under the Santa Clara Valley Habitat Plan (Habitat Plan). As under the proposed Project, under the No Project Alternative some areas within the Urban Growth Boundary (UGB) and the Urban Service Area (USA) have a land use designation that would allow residential development or agricultural uses that would have the potential to affect biological resources. Like the proposed Project, the No Project Alternative itself does not propose any removal of trees; however, there is the potential for future development to result in the removal of trees which could conflict with local policies and ordinances protection biological resources.

Under both the proposed Project and No Project Alternative, compliance with the federal, state, regional, and local regulations would protect biological resources. As under the proposed Project, under the No Project Alternative future development, as a condition of approval and in support of the Habitat Plan, would be required to contribute mitigation fees to offset impacts that may occur as a result of development activities. In addition, the proposed Project includes policies that are intended to further minimize potential impacts to biological resources, including proposed Policy 5.6, which establishes creek setback requirements, and Policy 6.2, which specifically supports implementation of the Habitat Plan. These policies would not be adopted under the No Project Alternative.

Although the No Project Alternative would result in less overall development and would maintain rural uses in portions of the SOI that would be designated for urban development under the proposed Project, the No Project Alternative would not include several new policies in the proposed Project that are intended to protect biological resources. Therefore, overall the No Project Alternative would be a *slight deterioration* in comparison to the proposed Project.

6.5.2.5 CULTURAL RESOURCES

As shown in Section 6.2, the proposed Project would have less-than-significant impacts to cultural resources. Under the No Project Alternative, new development would continue throughout the Project Area under existing plans and regulations. As under the proposed Project, under the No Project Alternative new development allowed under the General Plan could involve activities that could affect cultural resources or the development or redevelopment of sites containing cultural resources. For example, development activities for projects allowed by the No Project Alternative could involve demolition, inappropriate modification, or inappropriate new construction that could be incompatible with historical resources. In addition, ground disturbing activities associated with new development allowed by the No Project

ALTERNATIVES TO THE PROPOSED PROJECT

Alternative could disturb archaeological and paleontological resources or human remains interred outside of formal cemeteries.

As under the proposed Project, development allowed by the No Project Alternative would be subject to existing local, state, and federal laws and procedures to protect cultural resources. Compliance with existing regulations described in Section 4.5, Cultural Resources, would ensure less-than-significant impacts under both the proposed Project and No Project Alternative. Therefore, the No Project Alternative would be *similar* to the proposed Project.

6.5.2.6 GEOLOGY, SOILS, AND SEISMICITY

As shown in Section 6.2, the proposed Project would have less-than-significant impacts associated with geology, soils, and seismicity. As described in Section 4.5, Geology, Soils, and Seismicity, the Project Area is subject to a number of seismic and geological hazards. These hazards would apply to the No Project Alternative as they would to the proposed Project. Although no earthquake fault zones have been designated within the Project Area, several other known faults have been identified, including as the Silver Creek, Coyote Creek and Range Front Faults. The Project Area, as well as nearly all of the San Francisco Bay area, is expected to experience significant ground shaking during a major earthquake. Most of the northern portion of the Project Area has been designated as a seismically-induced liquefaction hazard zone. Earthquake hazard maps show isolated, small seismic-induced landslide hazard areas in the Project Area, primarily in the northeastern portion beyond Hill Road where they are almost exclusively limited to steeper hillsides. Areas of the Project Area may also contain unstable geologic units, such as expansive soils, that would need to be identified and mitigated through geotechnical investigations as new development occurs. The proposed Project includes a number of policies relevant to these potential hazards that would remain in place under the No Project Alternative, with the exception that some proposed policy revisions would not be adopted. Existing County General Plan policies would continue to apply to lands within the SOI under the No Project Alternative and would help to protect development from geologic and seismic hazards. As under the proposed Project, development allowed under the No Project Alternative would be required to comply with the California Building Code (CBC) and Morgan Hill Building Code, which provide standards to protect property and public safety by regulating the design and construction of excavations, foundations, building frames, retaining walls, and other building elements, which will further mitigate the effects of fault rupture.

Most soils in the Project Area are mapped as loams or gravelly loams, and their erodibility is judged low to moderate. However, under both the proposed Project and No Project Alternative clearing, grading, excavation, and construction activities associated with allowed development would have the potential to impact water quality through soil erosion and increasing the amount of silt and debris carried in runoff. As under the proposed Project, under the No Project Alternative federal, state and regional regulations would address erosion and runoff and prevent significant impacts. In addition, the proposed Project includes a number of policies relevant to erosion that would remain in place under the No Project Alternative, with the exception that some proposed policy revisions would not be adopted.

ALTERNATIVES TO THE PROPOSED PROJECT

The majority of the anticipated development within the Project Area is expected to be serviced by the present-day wastewater collection and treatment system. However, the City does allow installation of septic systems when a connection to the public sewer system is not readily available. As under the proposed Project, under the No Project Alternative the Morgan Hill Municipal Code would require applicants to submit detailed plans addressing potential drainage and soils issues as part of the permitting process. In addition, the proposed Project includes a number of policies relevant to the use of septic systems that would remain in place under the No Project Alternative, with the exception that some proposed policy revisions would not be adopted.

Neither the proposed Project nor the No Project Alternative would result in significant impacts associated with geology, soils, or seismicity. Therefore, the No Project Alternative would be *similar* to the proposed Project.

6.5.2.7 GREENHOUSE GAS EMISSIONS

As shown in Section 6.2, the proposed Project would result in one less-than-significant impact and one significant and unavoidable impact associated GHG emissions.

As discussed in Chapter 4.7, Greenhouse Gas Emissions, state and federal reductions by year 2020 would negate much of the emissions increase as a result in population and employment growth in the City. The proposed Project would achieve the BAAQMD efficiency metric for year 2020 and year 2035 that would ensure the City maintains a trajectory that is consistent with the GHG reduction target of Executive Order B-30-15. However, despite state and federal regulations, the proposed Project would result in a substantial increase in GHG emissions from existing conditions by the proposed General Plan horizon year 2035. This is considered a significant impact, and there are no additional feasible GHG reduction measures that would mitigate impacts for the long-term GHG emissions scenario. The majority of the post-2035 reductions needed to reach the 2050 target will likely come from state measures, and the City does not have authority over such measures. Therefore, this impact is significant and unavoidable. The No Project Alternative would result in an overall similar level of growth, with slightly fewer housing units and more non-residential development, in comparison to the proposed Project. As under the proposed Project, under the No Project Alternative the City would not be able to demonstrate an ability to reach the 2050 target through City measures alone. Therefore, the No Project Alternative would not avoid this significant and unavoidable impact.

The proposed Project includes several policies that incorporate GHG emissions mitigation measures identified through the regional climate mitigation initiative Silicon Valley 2.0 (SV 2.0). With these policies, the proposed Project would be consistent with the programs identified within the California Air Resources Board (CARB) Scoping Plan. Several of these policies, including the proposed policies that are specific to GHG emissions, would not be adopted under the No Project Alternative.

The MTC/ABAG *Plan Bay Area* includes a land use concept plan for the region that concentrates the majority of new population and employment growth in the region in Priority Development Areas (PDAs).

ALTERNATIVES TO THE PROPOSED PROJECT

In Morgan Hill, *Plan Bay Area* includes the Morgan Hill Downtown Transit Town Center PDA. The proposed Project would encourage development consistent with the goals and objectives for this PDA and includes policies that, once adopted, would reduce GHG emissions from transportation sources to the maximum extent practicable. Therefore, the proposed Project would be consistent with land use concept plan for Morgan Hill identified in *Plan Bay Area*. Although the No Project Alternative would not propose any land uses inconsistent with the PDA land use concept, many proposed policies supporting mixed-use development in the PDA would not be adopted under the No Project Alternative.

The No Project Alternative would not include the adoption of several policies intended to support collaborative opportunities to implement the CARB Scoping Plan and reduce GHG emissions from transportation sources. Therefore, the No Project Alternative could result in a new significant impact. This impact could be mitigated to a less-than-significant impact through the adoption of policies included in the proposed Project. The No Project Alternative would also not avoid the significant and unavoidable impact of the proposed Project. Overall, the No Project Alternative would be a *slight deterioration* in comparison to the proposed Project.

6.5.2.8 HAZARDS AND HAZARDOUS MATERIALS

As shown in Section 6.2, the proposed Project would have less-than-significant impacts associated with hazards and hazardous materials. As described in Section 4.8, Hazards and Hazardous Materials, future development in the Project Area would be subject to or could involve the use or handling of hazardous materials. These hazards would apply to the No Project Alternative as they would to the proposed Project. Hazardous materials are routinely used, transported, and handled throughout the Project Area. Commercial and industrial land uses under either the proposed Project or No Project Alternative could use, store, or generate hazardous materials, and agricultural land uses may also use or transport hazardous materials such as pesticides. It is possible that some of these uses could occur within a quarter mile of an existing or proposed school. Under both the proposed Project and No Project Alternative, new development could occur on properties that possibly are contaminated and inactive, undergoing evaluation, and/or undergoing corrective action. Construction activities could have the potential to release potentially hazardous soil-based materials into the environment, and demolition of existing structures could potentially result in release of hazardous building materials. Use of hazardous materials on newly-developed properties could include cleaning solvents, fertilizers, pesticides, and other materials used in the regular maintenance and operation of the uses that could occur under either the proposed Project or No Project Alternative.

These activities are subject to a variety of federal, state, and local laws, policies, and regulations. In addition, the proposed Project contains policies that would further ensure that new development would not create a significant hazard through routine transport, use, or handling of hazardous materials. These policies would remain in place under the No Project Alternative, with the exception that some proposed policy revisions would not be adopted.

ALTERNATIVES TO THE PROPOSED PROJECT

As described in Section 4.8, Hazards and Hazardous Materials, a small portion of the Project Area extends into the Airport Influence Area (AIA) of the South County Airport. However, the Project Area is located outside of the airport's noise contours and safety zones. The proposed Project includes policies intended to enhance compatibility between and safety for future development and airport operations. These policies would not be adopted under the No Project Alternative. However, because the Project Area is outside of the airport's safety zones, a significant impact would not be expected under the No Project Alternative.

As described in Section 4.8, Hazards and Hazardous Materials, there are no private airstrips in the vicinity of the locations where future development could occur as a result of implementation of the Project Area. Therefore, neither the proposed Project nor the No Project Alternative would expose people to hazards associated with private airstrips.

The proposed Project contains new policies that would ensure that new development would not conflict with emergency operations in Morgan Hill. Several of these policies would not be adopted under the No Project Alternative.

Neither the proposed Project nor the No Project Alternative would result in significant impacts associated with hazardous materials. However, the No Project Alternative would not include the adoption of several proposed policies that would help to ensure that future development would not interfere with emergency operations. Therefore, the No Project Alternative could result in a significant impact that would not occur under the proposed Project. This impact could be mitigated to a less-than-significant level through policy amendments. Therefore, the No Project Alternative would be a *slight deterioration* in comparison to the proposed Project.

6.5.2.9 HYDROLOGY AND WATER QUALITY

As shown in Section 6.2, hydrology and water quality impacts under the proposed Project would primarily be less than significant, with the exception of one impact that would be less than significant after mitigation.

Construction and operation of development projects allowed by either the proposed Project or No Project Alternative would have the potential to impact water quality and cause erosion and siltation. However, development under either the proposed Project or No Project Alternative would be required to comply with existing regulations and guidance documents that would minimize these impacts. The proposed Project includes policies that would ensure potential impacts to water quality would not occur with the implementation of the proposed Project. Most of these policies would remain in place under the No Project Alternative, with the exception that some proposed policy revisions and new policies would not be adopted. However, compliance with applicable regulations would be expected to prevent significant impacts under the No Project Alternative.

As under the proposed Project, much of the future development permitted by the No Project Alternative would be located on sites that have already been developed and currently have a high percentage of impervious surfaces. However, infill development could take place on undeveloped and unpaved sites and

ALTERNATIVES TO THE PROPOSED PROJECT

development would be allowed in some areas that are currently agricultural or contain only sparse development. Overall, development allowed under either the proposed Project or No Project Alternative would be expected to increase impervious surfaces above the current amount, which could result in a change in drainage patterns that would interfere with groundwater recharge, exceed the capacity of existing or planned stormwater drainage systems, or contribute to on-site or off-site flooding. Applicants for new development and redevelopment under either the proposed Project or No Project Alternative would be required to implement design measures to contribute to groundwater recharge and minimize stormwater runoff.

As discussed in Section 4.9, Hydrology and Water Quality, the City of Morgan Hill obtains all of its water supply from groundwater. While development allowed under either the proposed Project or No Project Alternative could lead to an increased demand for water, there is a sufficient supply of water through 2035 even for multiple dry years. The proposed Project includes policies that would reduce these potential impacts. Most of these policies would remain in place under the No Project Alternative. However, some proposed policy revisions and new policies would not be adopted.

Development under with the proposed Project or No Project Alternative could place housing or structures within existing 100-year floodplains or Special Flood Hazard Areas (SFHAs), which could expose residents to flood hazards and could also impede or redirect flood flows. Like the proposed Project, it is expected that this impact could be reduced to a less-than-significant level with mitigation.

As discussed in Section 4.9, Hydrology and Water Quality, failure of nearby dams could result in the release of water held behind the dams and result in flooding of parts of the City and surrounding area. Existing assessment and monitoring procedures would ensure that impacts would be less-than-significant under either the proposed Project or No Project Alternative. As discussed in Section 4.9, Hydrology and Water Quality, there is no potential for a tsunami to impact the Project Area. A seiche could theoretically occur in one of the nearby reservoirs as the result of an earthquake or other disturbance, but the flooding impact would be less than that of the dam inundation zone. Limited portions of Morgan Hill are within areas that could be subject to debris flows. Development under either the proposed Project or No Project Alternative would be subject to Municipal Code requirements that would reduce these risks. In addition, the proposed Project includes policies that would reduce potential impacts regarding landslides and other hazards. These policies would remain in place under the No Project Alternative.

The No Project Alternative would allow less overall development than the proposed Project, thereby exposing fewer people and structures to flooding risks, creating less impervious surfaces, increasing water demands by a lesser amount, and decreasing potential water quality impacts. However, the No Project Alternative would not involve the same beneficial new policies that are included in the proposed Project and would help to protect water quality and reduce hydrological impacts associated with future development. Overall, neither the proposed Project nor the No Project Alternative would result in significant impacts associated with hydrology and water quality. Therefore, the No Project Alternative would be *similar* to the proposed Project.

ALTERNATIVES TO THE PROPOSED PROJECT

6.5.2.10 LAND USE AND PLANNING

As shown in Section 6.2, the proposed Project would have less-than-significant land use impacts. Under the No Project Alternative, new development would continue throughout the Project Area under existing plans and regulations.

The land uses under the No Project Alternative, as under the proposed Project, are largely consistent with existing development patterns. Future development under the No Project Alternative would retain the existing roadway patterns, and no new major roadways or other physical features through existing residential neighborhoods would be developed that would create new barriers. Although both the No Project Alternative and the proposed Project would include the Hale Avenue/Santa Teresa Boulevard extension, this new roadway would traverse undeveloped land and therefore would not divide an established community. Future development under the proposed Project would be required to be consistent with proposed Project polices that promote cohesive and compatible neighborhoods and prevent new development from dividing existing uses. Several of these policies would not be adopted under the No Project Alternative.

The proposed Project would be consistent with existing City of Morgan Hill plans and policies following adoption and subsequent updates to ensure consistency with the updated General Plan. The No Project Alternative would leave all existing plans in place. Both would be consistent with other plans and policies and no impact would occur.

Under the proposed Project, some lands outside the City limits but within the SOI have land use designations that conflict with County General Plan land use designations. Under the No Project Alternative, the following land use designation conflicts would occur outside the City limits, but within the SOI:

- East of Highway 101, roughly between San Pedro Ave and the SOI (the area known as the Southeast Quadrant), the City designates this area as a combination of Sports Recreation Leisure, Public Facilities, and Residential Estate which conflicts with the county designation of Agriculture Medium Scale.
- West of Highway 101 roughly between Vineyard Boulevard to the north, the SOI to the south, and Monterey Road, the City designates this area as Industrial and the county designates this area as Agriculture Medium Scale.
- West of the City limit roughly between Edmundson Avenue to the south and San Pedro Avenue to the north, the City designates a small area as Residential Estate and the county designates this area as Hillsides.
- East of the City limit between Diana Avenue and Main Street, the City designates a small area as Industrial and the county designates this area as Agriculture Medium Scale.

Because land outside the City limits is currently subject to county land use regulations, and would only come under City land use jurisdiction upon annexation, only one set of land use policies apply at a given

ALTERNATIVES TO THE PROPOSED PROJECT

time, and there cannot be a conflict between the City and County General Plan policies. As a result, neither the proposed Project nor the No Project Alternative would conflict with the County General Plan.

The proposed Project includes many goals and policies that support the planning efforts of other agencies and provide consistency with other plans, including Plan Bay Area, the South County Airport Comprehensive Land Use Plan (CLUP), the Santa Clara Valley Water District (SCVWD) *Guidelines and Standards for Land Use Near Streams*, and the Santa Clara Valley Habitat Plan. Several of these policies would not be adopted under the No Project Alternative.

Overall, the No Project Alternative would not include several policies in the proposed Project that are intended to promote cohesive and compatible neighborhoods and ensure consistency with planning documents adopted by other agencies to reduce environmental effects. Therefore, the No Project Alternative could result in significant impacts that would not occur under the proposed Project. These impacts could be mitigated to less-than-significant levels through policy amendments. Therefore, the No Project Alternative would be a *slight deterioration* in comparison to the proposed Project.

6.5.2.11 NOISE

As shown in Section 6.2, the proposed Project would result in three less-than-significant noise impacts and two significant and unavoidable impacts.

Under the proposed Project, new development would avoid significant impacts associated with exposure to excessive noise levels by conforming with requirements for acoustic analysis under the proposed Plan, as well as by achieving subsequent compliance with interior and exterior noise standards through application of any necessary special construction or noise insulation techniques. The Municipal Code contains multiple provisions to limit the generation and reception of excessive noise. These requirements would continue to apply under the No Project Alternative. Under both the proposed Project and the No Project Alternative, as individual projects are proposed, project applicants would be required, as necessary, to perform site-level acoustic analysis to demonstrate compliance with applicable standards. Under both the proposed Project and No Project Alternative, it is likely that some new development would require special noise-insulating features or construction techniques, and therefore additional project-level acoustical analysis would be necessary to demonstrate consistency with applicable land use compatibility requirements and interior noise standards. The City would ensure such compliance through the development review process. Under the proposed Project, policies would also provide guidelines for noise compatibility levels. These policies would be maintained under the No Project Alternative. These policies, along with adherence to existing regulations, would serve to ensure that land use and development decisions consider and seek to prevent potential noise impacts under both the proposed Project and No Project Alternative.

Under both the proposed Project and No Project Alternative, vibration generated by construction equipment would have the potential to be substantial. Without specific development details, it is not possible to quantify potential construction vibration impacts. Overall, vibration impacts under both the proposed Plan and No Project Alternative related to construction would be short-term, temporary, and

ALTERNATIVES TO THE PROPOSED PROJECT

generally restricted to the areas in the immediate vicinity of active construction equipment. Proposed policies under the proposed Project would serve to reduce vibration impacts from construction. These policies would be maintained under the No Project Alternative.

Development under either the proposed Project or No Project Alternative could result in long-term, operations-related vibration impacts to sensitive receptors if sensitive land uses are located in close proximity to land uses with the potential to generate significant vibration levels. Municipal Code provisions would require strategies to prevent vibration impacts. These requirements would continue to apply under the No Project Alternative. In addition, policies under the proposed Project would offer generalized direction for the City to consider noise and vibration impacts during development decisions and to provide specific policies in respect to these considerations. These policies would be maintained under the No Project Alternative.

Under both the proposed Project and the No Project Alternative, substantial permanent increases in ambient noise levels would be most likely to result from development of commercial, industrial, mixed-use, and certain institutional or active recreational land uses. Addressing impacts from these noise sources would be handled via the pertinent sections of Morgan Hill's Municipal Code. These requirements would continue to apply under the No Project Alternative. In addition, the proposed Project includes policies that would serve to prevent substantial permanent increases to ambient noise levels. These policies would be maintained under the No Project Alternative.

Under both the proposed Project and the No Project Alternative, as a result of implementation of the General Plan and ongoing regional growth, it is anticipated that there would be substantial permanent increases to the ambient noise levels throughout Morgan Hill. These increases would primarily result from increases to transportation-related noise, especially that of automobile traffic. Policies under the proposed Project would serve to reduce noise from vehicles at the source and to otherwise shield sensitive uses from excessive noise. Under the No Project Alternative, most of these policies would be maintained, although some relevant revisions would not be adopted. Even with existing regulations and proposed policies, this would be a significant and unavoidable impact for both the project-specific and cumulative setting under both the proposed Project and No Project Alternative.

Under both the proposed Project and No Project Alternative, noise from construction equipment and various construction-related activities would be a cause of temporary or periodic increases in ambient noise levels. The Municipal Code restricts hours of construction and the City reviews project noise impacts as part of the planning and permitting processes. These requirements would continue to apply under the No Project Alternative. In addition, the policies under the proposed Project would serve to reduce temporary or periodic increases to ambient noise. These policies would be maintained under the No Project Alternative.

The No Project Alternative would include the adoption of most of the policies that would be adopted under the proposed Project to reduce potential noise impacts. The No Project Alternative would result in the same less-than-significant impacts as the proposed Project and would not avoid the significant and unavoidable

ALTERNATIVES TO THE PROPOSED PROJECT

impacts of the proposed Project. Therefore, the No Project Alternative would be *similar* to the proposed Project.

6.5.2.12 POPULATION AND HOUSING

As shown in Section 6.2, the proposed Project would have less-than-significant population and housing impacts. The No Project Alternative is projected to result in slightly fewer housing units and new residents than the proposed Project.

Buildout of the proposed Project would exceed regional projections. Although the No Project Alternative would result in less population growth, this alternative would similarly exceed regional projections because it cannot be guaranteed that voters would renew or extend the existing RDCS. The proposed Project includes policies that would provide a robust planning framework for the growth projected to occur under the proposed General Plan. Several proposed policies related to growth control would not be adopted under the No Project Alternative.

Redevelopment under either the proposed Project or No Project Alternative would have the potential to displace existing residential units or people. However, all redevelopment under either the proposed Project or No Project Alternative would be voluntary in nature, and no housing units would be displaced without permission of the property owners. New development would replace existing development and the City would experience a net increase in all land use types. In addition, existing policies in Morgan Hill's adopted Housing Element would minimize potential impacts related to the displacement of housing units under either the proposed Project or No Project Alternative.

The No Project Alternative would not include the adoption of proposed policies in support of growth management. Therefore, the No Project Alternative would provide less of a policy framework for planned growth and the No Project Alternative would be a *slight deterioration* in comparison to the proposed Project.

6.5.2.13 PUBLIC SERVICES AND RECREATION

As shown in Section 6.2, the proposed Project would have less-than-significant impacts to public services. As shown in Table 6-1, the No Project Alternative is expected to result in fewer new residents than the proposed Project.

Like the proposed Project, the No Project Alternative would increase the service population served by the Morgan Hill Fire Department (MHFD), South Santa Clara County Fire District (SSCCFD), Morgan Hill Police Department (MHPD) and Sheriff's Office. Under the proposed Project, proposed policies would support fire protection services that keep pace with development and ensure that services are adequate to provide protection to Morgan Hill. Some of these policies would not be adopted under the No Project Alternative. As described in Section 4.13, Public Services and Recreation, the MHPD has indicated that existing stations would be inadequate to accommodate future needs under either the No Project Alternative or the proposed project, and the Department is planning to undergo a Master Plan process to guide the

ALTERNATIVES TO THE PROPOSED PROJECT

development of a new station. The Sheriff's Office has indicated that currently there are no plans to expand or relocate, and that no existing facility deficiencies exist that would be exacerbated by the proposed Project. The Sheriff's Office would likely upgrade equipment accordingly over time to incorporate new technologies as they emerge. Under the proposed Project, new policies would serve to ensure that police services keep pace with population growth and that services are adequate to provide protection to Morgan Hill. These policies would remain under the No Project Alternative, although some revisions would not be adopted.

With 2035 buildout of the proposed Project, and without assuming any increases in existing capacity, Morgan Hill Unified School District (MHUSD) elementary schools would be 2,855 students over capacity, middle schools would be 136 students over capacity, high schools would be 865 students over capacity, and the district as a whole would be 3,857 students over capacity. With the No Project Alternative, fewer new students would attend MHUSD but schools would likely still be over capacity because the No Project Alternative would involve only slightly less residential growth than the proposed Project. Under both the proposed Project and the No Project Alternative, the MHUSD would need to expand existing facilities to accommodate students. The school district does not currently have plans to expand existing facilities. Under Section 65995 of the California Government Code, the payment of impact fees is deemed to fully mitigate the impacts of new development on school facilities, regardless of whether the fees are adequate to fully fund the expansion or construction of needed facilities. Proposed policies under the proposed Project would help to reduce potential impacts to the MHUSD. Some of these policies would not be adopted under the No Project Alternative.

The Santa Clara County Library District (SCCLD) has indicated that further study would be needed to determine the current and future needs and whether additional facility expansion would be needed to maintain adequate services under the proposed Project. The No Project Alternative would involve a lower residential buildout but would still increase service demands in need of further study by the SCCLD. Under both the proposed Project and No Project Alternative, as specific library expansion or improvement projects are identified, additional project-specific, environmental analysis pursuant to CEQA would be completed. The proposed Project includes policies and support adequate library facilities. None of these policies would be adopted under the No Project Alternative.

Neither the proposed Project nor the No Project Alternative directly proposes the construction of any parks or recreational facilities. As noted in Chapter 4.13, the City has an existing park service standard of providing 5 acres of parkland for every 1,000 Morgan Hill residents. Based on existing park and recreational facilities of 208 acres and a 2035 population of 68,057 under the proposed Project, the parkland ratio in 2035 would be approximately 3.1 acres per 1,000 residents. The No Project Alternative would result in a slightly lower 2035 population, and would therefore result in a slightly higher parkland ratio. However, the decrease in residential growth under this alternative would not be sufficient to achieve the City's goal of 5 acres for every 1,000 residents. To meet the City's existing service standards, additional parkland would be needed by 2035 under both the proposed Project and No Project Alternative. New residential development under both the proposed Project and No Project Alternative would be required to pay park impact fees to

ALTERNATIVES TO THE PROPOSED PROJECT

generate revenue to fund the park facilities needed to serve new development. It is not known at what time or location future facilities funded by impact fees from future development would be constructed or what the exact nature of these facilities would be, so it cannot be determined what project-specific environmental impacts would occur from their construction and operation. In addition, if future park and recreational facility use results in the physical deterioration of facilities, it is not known what the exact nature of these physical deteriorations would be, so it cannot be determined what environmental impacts may occur. Impacts associated with constructing new parks or recreational facilities, or upgrading and improving existing facilities, would be project-specific, and would require permitting and review in accordance with CEQA, which would ensure that any environmental impacts are disclosed and mitigated to the extent possible. Under both the proposed Project and No Project Alternative, future development would be required to comply with General Plan policies that would ensure adequate park and recreational facilities are available for the residents of Morgan Hill, although some policy revisions would not be adopted under the No Project Alternative.

Although the No Project Alternative would result in a lower 2035 population, and would therefore result in a lesser increase in service demands, neither the proposed Project nor the No Project Alternative would result in significant public service impacts. However, the No Project Alternative would not involve the adoption of policy revisions and new policies intended to reduce service demands and improve the provision of public services. Therefore, the No Project Alternative would be a *slight deterioration* in comparison to the proposed Project.

6.5.2.14 TRANSPORTATION AND TRAFFIC

As shown in Section 6.2, the proposed Project would have one significant and unavoidable impact and one impact that would be less than significant after mitigation, and the remainder of the impacts would be less than significant.

In comparison to the proposed Project, the No Project Alternative would result in slightly less residential growth and more non-residential growth. The No Project Alternative would have a higher proportion of single-family homes and lower proportion of multi-family homes in comparison to the proposed Project. In addition, the No Project Alternative would have less mixed use areas. Although the land use mix for the proposed Project and No Project differ, the No Project Alternative would generate a similar amount of traffic as the proposed Project. Because the No Project Alternative would result in a similar trip generation levels as the proposed Project, this alternative is expected to result in similar impacts at intersections as identified for the proposed Project.

Under the proposed Project, seven of the eight study freeway segments are projected to operate at an unacceptable LOS F. However, even with no growth within the City of Morgan Hill, Highway 101 would likely operate at unacceptable levels in the future due to the amount of external pass-through trips on Highway 101. Therefore, this significant and unavoidable impact would also be expected to occur under the No Project Alternative.

ALTERNATIVES TO THE PROPOSED PROJECT

Both the proposed Project and No Project Alternative would allow an increase in both residential and non-residential development above existing conditions. Construction and modifications of new and existing roadways would be necessary to support the allowed growth. The proposed Project contains policies that would reduce potential hazards due to roadway design or incompatible uses. These policies would also be adopted under the No Project Alternative, although some policy revisions would not be adopted.

The proposed General Plan contains new policies that ensure efficient circulation and adequate access would be provided in the City, which would help facilitate emergency response. Some of these policies would not be adopted under the No Project Alternative.

The proposed Project includes policies that provide for an integrated network of bicycle facilities, as well as for the needs of transit users. Some of these policies would not be adopted under the No Project Alternative.

Overall, the No Project Alternative would generate similar traffic volumes. Therefore, the No Project Alternative would be *similar* to the proposed Project.

6.5.2.15 UTILITIES AND SERVICE SYSTEMS

As shown in Section 6.2, the proposed Project would have less-than-significant impacts to utilities and service systems. As shown in Table 6-1, the No Project Alternative is expected to result in fewer new residents than the proposed Project. However, the No Project Alternative would also result in a higher agricultural uses. Agricultural uses, in general, generate higher water demand on a per acre basis compared to urban uses (such as residential, office, and commercial).

Under the proposed Project, total water demand at buildout of the proposed General Plan would be significantly less than the available supply predicted to be available to the City. Compared to the proposed General Plan, the No Project Alternative would have capacity for slightly less residential development (meaning slightly lower residential water demand), more retail, office, and industrial development (meaning higher non-residential water demand), and more agricultural use (meaning higher agricultural water demand). Overall, water demand would likely be similar, due to the higher percentage of Rural County designated land (i.e., agricultural land), although supplies would likewise be sufficient. As under the proposed Project, because available capacity would be sufficient to meet projected demand, the No Project Alternative would not require expanded treatment facilities or regional water system conveyance and storage facilities in order to meet demands. Under both the proposed Project and the No Project Alternative, any new or expanded local water supply and distribution facilities would require permitting and review in accordance with CEQA, which would ensure environmental impacts are disclosed and mitigated to the extent possible. Proposed water conservation policies would be adopted under the proposed Project that would help to conserve water supply resources. Many of these policies would not be adopted under the No Project Alternative.

ALTERNATIVES TO THE PROPOSED PROJECT

The residential, industrial, office, retail, service, and public facilities land uses that would result from either the proposed Project or the No Project Alternative would not generate wastewater of different quality and treatability than wastewater currently generated by those land uses in the City. The South County Regional Water Authority (SCRWA) wastewater treatment plant is currently in compliance with its National Pollutant Discharge Elimination System (NPDES) permit requirements. As such, buildout under the proposed Project or No Project Alternative would not be expected to generate wastewater that would exceed the treatment requirements of the Central Coast Regional Water Quality Control Board (RWQCB). In addition, under both the proposed Project and the No Project Alternative proposed policies would enhance compliance with wastewater treatment requirements and capacity, although some policy revisions would not be adopted under the No Project Alternative.

The SCRWA treatment plant capacity is projected to be exceeded by the year 2022 due to development allowed by the existing General Plans of Morgan Hill and Gilroy. In recognition of this, the SCRWA is planning to fund, design, and construct expansion of the facility by 2022. After expansion of the treatment plant, it is anticipated the NPDES discharge permit will be amended to reflect the expanded capacity of the plant. Therefore, wastewater generated from either the proposed Project or the No Project Alternative would not exceed the expanded permitted treatment capacity of the SCRWA facility. Creation of new or extended wastewater collection pipes, lift stations, and increased capacity projects under the proposed Project or No Project Alternative could create short-term construction-related environmental effects. However, compliance with the City's and the SCRWA's regulations and standard conditions for new construction related to wastewater collection and treatment would be required. Proposed policies under both the proposed Project and No Project Alternative would help to ensure that construction of new wastewater treatment facilities or expansion of existing facilities would not be required, although some policy revisions would not be adopted under the No Project Alternative.

The incremental solid waste generation under either the proposed Project or the No Project Alternative would be a nominal percentage of the combined daily capacity of the three landfills providing 95 percent disposal services to the City. In addition, future development under either the proposed Project or No Project Alternative would be required to comply with the CBC Section 4.408, which requires a minimum of 50 percent of non-hazardous construction and demolition debris to be recycled or salvaged, as well as a Waste Management Plan for on-site sorting of construction debris. Compliance with applicable regulations and proposed policies that would be adopted under the proposed Project would enhance solid waste diversion and management and ensure continued compliance with regulations related to solid waste. However, several of these proposed policies would not be adopted under the No Project Alternative.

As under the proposed Project, construction and operation of development allowed by No Project Alternative would require a commitment of energy resources. Proposed new development under either the proposed Project or No Project Alternative would be constructed using energy efficient modern building materials and construction practices in accordance with the California Green Building Standards Code ("CalGreen"), California Public Utility Commission's (CPUC) *Long Term Energy Efficiency Strategic Plan*, and the City's Municipal Code, which contain a range of energy conservation and renewable energy measures.

ALTERNATIVES TO THE PROPOSED PROJECT

The new buildings also would use new modern appliances and equipment in accordance with the 2015 Appliance Efficiency Regulations. Accordance with applicable regulations and proposed policies that would be adopted under either the proposed Project or the No Project Alternative would ensure that construction and operation impacts for future development would be addressed in project-specific analysis and would enhance energy conservation, although some policy revisions would not be adopted under the No Project Alternative.

Neither the proposed Project nor the No Project Alternative would result in significant utility and service system impacts. Although the No Project Alternative would result in a slightly lower 2035 population, and would therefore result in a lesser increase in utility demands, the No Project Alternative would not include policy revisions and new policies intended to manage utility demands and improve the provision of utilities. Therefore, the No Project Alternative would be a *slight deterioration* in comparison to the proposed Project.

6.6 LOW GROWTH ALTERNATIVE

6.6.1 PRINCIPAL CHARACTERISTICS

The Low Growth Alternative would include a General Plan land use map that, in comparison to the land use map for the proposed Project, designates fewer lands in the SOI for development and designates more lands in the SOI for Rural County uses. This alternative also designates fewer sites along Monterey Road for mixed-use development. Future development under the Low Growth Alternative would be subject to the proposed policies of the proposed Project and the current RDCS.

As shown in Table 6-1, the Low Growth Alternative would have a buildout of 4,249 new single-family homes and 1,821 new multi-family units, for a total of 6,070 new units. This residential development would represent a population increase of 18,696. The Low Growth Alternative would have a non-residential buildout of 3.2 million square feet, with a job growth of 7,247 jobs. In comparison to the proposed Project, the Low Growth Alternative would result in less housing, with a greater portion of housing as single-family homes, less population growth, less non-residential development, and fewer jobs.

A General Plan land use map for the Low Growth Alternative is shown in Figure 6-2.

6.6.2 IMPACT DISCUSSION

6.6.2.1 AESTHETICS

As shown in Section 6.2, the proposed Project would have less-than-significant impacts to aesthetics and scenic resources. Under the Low Growth Alternative, new development would occur throughout the Project Area under the policies of the proposed Project and a modified land use map that preserves more lands in the SOI for rural uses. As under the proposed Project, under the Low Growth Alternative much of the new development allowed under the Low Growth Alternative would be on lands that are already

ALTERNATIVES TO THE PROPOSED PROJECT

developed, or on lands contiguous to urban uses and major roadways. However, as under the proposed Project, some future development allowed by the General Plan would have the potential to partially or fully block scenic vistas or degrade the existing visual character. In addition, as under the proposed Project, new development throughout the Project Area could create new sources of light and glare.

As under the proposed Project, new development under the Low Growth Alternative would be subject to proposed General Plan policies and design review procedures intended to promote high-quality development and protect scenic resources. In addition, under the Low Growth Alternative, as under the proposed Project, land would not be designated within the Greenbelt for urban development that could affect scenic views to, from, or within these areas.

As described in Section 4.1, Aesthetics, there are no designated scenic highways in Morgan Hill or its Sphere of Influence (SOI). Therefore, like the proposed Project, the Low Growth Alternative would have no impact to scenic resources within a state scenic highway.

Although the Low Growth Alternative would designate fewer lands in the SOI for urban uses, neither the proposed Project nor the Low Growth Alternative would result in significant aesthetics impacts. Therefore, the Low Growth Alternative would be *similar* to the proposed Project.

6.6.2.2 AGRICULTURE AND FORESTRY RESOURCES

As shown in Section 6.2, the proposed Project would result in three less-than-significant impacts to agriculture and forestry resources and three impacts that would be significant and unavoidable. Under the Low Growth Alternative, new development would occur throughout the Project Area under the policies of the proposed Project and a modified land use map that preserves more lands in the SOI for rural uses.

As described in Section 4.5.2.2, the largest concentrations of land where conversion of farmland to development would be allowed by the proposed Project are located east of Highway 101 between Half Road and Diana Avenue, and in the southwestern portion of the City, west of Highway 101 and south of Tennant Avenue and Watsonville Road. Under the Low Growth Alternative, some of these areas – including sites north and south of Half Road east of Highway 101, the Chiala property in the SEQ, and scattered sites in the southwest of the City – would be designated as Rural County rather than for urban residential and non-residential uses. The Rural County designation allows ongoing agricultural operations, as well as one single-family home per parcel and a minimum parcel size of 5 acres. The Rural County designation allows ongoing agricultural operations, as well as one single-family home per parcel and a minimum parcel size of 5 acres. The Rural County designation would allow a lower amount of single-family residential development, but would not eliminate the possibility of low-density residential development in this area, and would therefore potentially have similar impacts on the ongoing viability of agricultural uses on farmlands of concern.

Although the Chiala property would not be designated for low and medium density residential uses under the Low Growth Alternative, it would also not implement the proposed Transfer of Development Rights (TDR) system to permanently preserve agricultural land in the Southeast Quadrant. Thus, the Chiala

ALTERNATIVES TO THE PROPOSED PROJECT

property and other areas in the SEQ would have the potential to develop with scattered, low density residential uses that could impact the viability of continued agricultural uses in this area, and no mechanism would be put in place to provide a source of funding for agricultural conservation easements. Nonetheless, the Low Growth Alternative would reduce, but not eliminate, the amount of farmland of concern that is designated for urban uses and this significant and unavoidable impact would still occur under the Low Growth Alternative.

The majority of Williamson Act contract lands are designated for agricultural use under both the proposed Project and Low Growth Alternative, which would avoid a conflict with the Williamson Act contracts on these sites. As described in Section 4.5.2.2, there is one parcel under a Williamson Act contract that would be given a conflicting land use designation under the proposed Project that would conflict with agriculture. Under the Low Growth Alternative, this parcel would be designated as Rural County. Therefore, the Low Growth Alternative would avoid this significant and unavoidable impact.

The Morgan Hill Municipal Code does not contain a zoning district for forest land or timberland. Therefore, neither the proposed Project nor the Low Growth Alternative would conflict with zoning for forest land or timberland.

As described in Section 4.5.2.2, isolated woodlands in the Project Area are primarily located in the vicinity of the Chesbro Reservoir with some additional forest resources located along the eastern border of the Project Area. As under the proposed Project, under the Low Growth Alternative most of the area that contains forestry resources would be designated as Open Space, although some areas would be designated for residential uses. Proposed policies under both the proposed Project and Low Growth Alternative would serve to reduce potential impacts related to forestry resource.

Like the proposed Project, the Low Growth Alternative would allow development that could result in potentially incompatible urban uses next to farms or ranches. However, proposed policies under both the proposed Project and Low Growth Alternative would reduce potential conflict and protect agricultural lands.

The Low Growth Alternative would avoid one of the significant and unavoidable impacts of the proposed Project, associated with conflicts with Williamson Act contracts. The Low Growth Alternative would not avoid the proposed Project's impacts to farmland of concern, and it would not include the proposed TDR system for funding agricultural preservation. Otherwise, impacts would be the same under the proposed Project and Low Growth Alternative. Overall, the Low Growth Alternative would be a *slight deterioration compared to* the proposed Project.

6.6.2.3 AIR QUALITY

As shown in Section 6.2, the proposed Project would result in two less-than-significant impacts, one significant but mitigable impact, and three significant and unavoidable impacts to air quality.

ALTERNATIVES TO THE PROPOSED PROJECT

Under the proposed Project, VMT per population and per service population would be reduced, and the policies identified in the proposed Project would not hinder the BAAQMD's implementation of the 2010 Bay Area Clean Air Plan. The Low Growth Alternative would result in fewer residents and jobs than the proposed Project. Therefore, as under the proposed Project, emissions resulting from future development allowed by the Low Growth Alternative would not hinder BAAQMD's ability to attain the California or National AAQS. In addition, the proposed Project and Low Growth Alternative would include the same policies to achieve consistency with regional air quality policies and control measures.

Future development allowed by either the proposed Project or the Low Growth Alternative would be required to adhere to statewide measures that have been adopted to achieve the GHG reduction targets of AB 32. The proposed Project would be consistent with regional strategies for infill development identified by the MTC/ABAG in *Plan Bay Area* and would achieve the plan-level BAAQMD efficiency target. The proposed Project would also be on a trajectory to achieve the 2035 target recently identified in Executive Order B-30-15. The Low Growth Alternative would include less growth and would be expected to achieve similar targets. In addition, the Low Growth Alternative would include the same GHG emissions reductions policies to reduce GHG emissions.

Under the proposed Project, because cumulative development within the City could exceed regional significance thresholds, the project could contribute to an increase in adverse health effects in the Air Basin until air quality standards are met. This would be a significant and unavoidable impact. The proposed Project includes policies to reduce criteria air pollutants to the maximum extent practicable, which would also be adopted under the Low Growth Alternative. Under both the proposed Project and Low Growth Alternative, subsequent environmental review of development projects would be required to assess potential operational emissions impacts under BAAQMD's project-level thresholds. Measures to reduce criteria air pollutant emissions would be considered during individual project-level review under both the proposed Project and Low Growth Alternative. However, those projects and measures cannot be known at this time. Therefore, the Low Growth Alternative would not avoid this significant and unavoidable impact.

Under the proposed Project, if uncontrolled, fugitive dust (PM_{10} and $PM_{2.5}$) levels during construction could violate air quality standards or contribute substantially to an existing or projected air quality violation and expose sensitive receptors to elevated concentrations of pollutants. This would be a significant and unavoidable impact. The proposed Project includes policies and actions would minimize impacts during construction. These policies and actions would also be adopted under the Low Growth Alternative. Construction emissions associated with individual development projects under either the proposed Project or the Low Growth Alternative would generate an increase in criteria air pollutants and TACs. Continued compliance with existing regulations under either the proposed Project or the Low Growth Alternative would reduce construction-related impacts to the extent feasible. However, it is not possible to predict the specific characteristics of the construction and operation of those projects and accurately model their individual emissions. Therefore, the Low Growth Alternative would not avoid this significant and unavoidable impact.

ALTERNATIVES TO THE PROPOSED PROJECT

At a plan level, air quality impacts are measured by the potential for a project to exceed BAAQMD's significance criteria and contribute to the state and federal nonattainment designations in the San Francisco bay Area Air Basin (Air Basin). An attainment area is a geographic area that meets or exceeds an ambient air quality standard. A nonattainment area does not meet the standard. The Air Basin is currently designated a nonattainment area for ozone (O_3), $PM_{2.5}$, and PM_{10} . Any project that produces a significant regional air quality impact in an area that is in nonattainment – that is, is currently not meeting an air quality standard - adds to the cumulative impact. Both the proposed Project and the Low Growth Alternative would generate a substantial increase in criteria air pollutant emissions from construction and operational activities. Due to the programmatic nature of both the proposed Project and Low Growth Alternative, no additional mitigation measures are available and the impact would be significant and unavoidable.

The Air Basin has been designated an attainment area under both the national and California AAQA for CO, meaning the Air Basin meets current air quality standards for that pollutant, and the trips associated with the proposed Project do not exceed BAAQMD screening criteria. Therefore, the proposed Project would not have the potential to substantially increase CO hotspots. Because the Low Growth Alternative would result in less growth, it is expected that the Low Growth Alternative would also not increase CO hotspots. In addition, the proposed Project includes several policies that would encourage bicycle, pedestrian, and transit use to tie land use and transportation, which ensures consistency with VTA's 2013 Congestion Management Program. These policies would also be adopted under the Low Growth Alternative.

Industrial and commercial processes allowed under either the proposed Project or the Low Growth Alternative would be expected to release TACs, as would mobile sources under either the proposed Project or the Low Growth Alternative. Both the proposed Project and Low Growth Alternative would also site sensitive receptors in proximity to TAC sources. Proposed policies under both the proposed Project and Low Growth Alternative would minimize impacts from community risk and hazards but would not avoid significant impacts associated with creating new sources of TACs and siting sensitive receptors near TACs. These impacts would be mitigated to a less-than-significant level under the proposed Project. It is expected that the Low Growth Alternative would result in the same significant but mitigable impact.

Odor impacts can occur when sensitive receptors are sited near nuisance odors, or when new sources of nuisance odors are sited near sensitive receptors. In general, the land use plan under both the proposed Project and Low Growth Alternative would designate residential areas and commercial/industrial areas of the City to prevent potential mixing of incompatible land use types, with the exception of mixed-use areas that combine commercial and residential uses. The proposed Project includes policies that would reduce potential land use incompatibilities regarding objectionable odors. These policies would also be adopted under the Low Growth Alternative.

Overall, the Low Growth Alternative would result in slightly lesser air quality impacts due to the lower level of growth. However, the Low Growth Alternative would not avoid the significant and unavoidable impacts of the proposed Project, and significant impacts that would be mitigable to less-than-significant levels under the proposed Project could also be mitigated under the Low Growth Alternative. In addition, the Low

ALTERNATIVES TO THE PROPOSED PROJECT

Growth Alternative would also include the adoption of several proposed policies intended to minimize air quality impacts. Therefore, the Low Growth Alternative would be *similar* to the proposed Project.

6.6.2.4 BIOLOGICAL RESOURCES

As shown in Section 6.2, the proposed Project would have less-than-significant impacts to biological resources. Under the Low Growth Alternative, new development would occur throughout the Project Area under the policies of the proposed Project and a modified land use map that preserves more lands in the SOI for rural uses.

As under the proposed Project, future development and land use activities under the Low Growth Alternative would occur primarily in urbanized areas where biological resources are generally limited. The potential for occurrence of special-status species, sensitive natural communities, wetlands, riparian habitat, or wildlife corridors in developed areas is generally very remote in comparison to undeveloped lands with natural habitat that contain essential habitat characteristics for the range of species known to occur within the Project Area. Although creeks and channels are present within the urbanized areas of the City, most of these creeks have been straightened and channelized to prevent flooding. While buildout of either the proposed Project or Low Growth Alternative would primarily occur in previously urbanized areas, there is the potential for future development to occur on undeveloped land which could significantly impact – either directly, or through habitat modifications – special-status plant and animal species, sensitive natural communities, wetlands, riparian habitat, wildlife corridors, or areas covered under the Habitat Plan. As under the proposed Project, under the Low Growth Alternative some areas within the UGB and the USA have a land use designation that would allow residential development or agricultural uses that would have the potential to affect biological resources. Like the proposed Project, the Low Growth Alternative itself does not propose any removal of trees; however, there is the potential for future development to result in the removal of trees which could conflict with local policies and ordinances protection biological resources.

Under both the proposed Project and Low Growth Alternative, compliance with the federal, state, regional, and local regulations would protect biological resources. As under the proposed Project, under the Low Growth Alternative future development, as a condition of approval and in support of the Habitat Plan, would be required to contribute mitigation fees to offset impacts that may occur as a result of development activities. In addition, both the proposed Project and the Low Growth Alternative include policies that are intended to further minimize potential impacts to biological resources.

Neither the proposed Project nor the Low Growth Alternative would result in significant biological resource impacts. Therefore, the Low Growth Alternative would be *similar* to the proposed Project.

6.6.2.5 CULTURAL RESOURCES

As shown in Section 6.2, the proposed Project would have less-than-significant impacts to cultural resources. Under the Low Growth Alternative, new development would occur throughout the Project Area under the policies of the proposed Project and a modified land use map that preserves more lands in the SOI

ALTERNATIVES TO THE PROPOSED PROJECT

for rural uses. As under the proposed Project, under the Low Growth Alternative new development allowed under the General Plan could involve activities that could affect cultural resources or the development or redevelopment of sites containing cultural resources. For example, development activities for projects allowed by the Low Growth Alternative could involve demolition, inappropriate modification, or inappropriate new construction that could be incompatible with historical resources. In addition, ground disturbing activities associated with new development allowed by the Low Growth Alternative could disturb archaeological and paleontological resources or human remains interred outside of formal cemeteries.

As under the proposed Project, development allowed by the Low Growth Alternative would be subject to existing local, state, and federal laws and procedures to protect cultural resources. Compliance with existing regulations described in Section 4.5, Cultural Resources, would ensure less-than-significant impacts under both the proposed Project and Low Growth Alternative.

Although the Low Growth Alternative would involve the development of fewer lands to urban uses, which could reduce the potential to disturb undiscovered cultural resources, neither the proposed Project nor the Low Growth Alternative would result in a significant impact. Therefore, the Low Growth Alternative would be *similar* to the proposed Project.

6.6.2.6 GEOLOGY, SOILS, AND SEISMICITY

As shown in Section 6.2, the proposed Project would have less-than-significant impacts associated with geology, soils, and seismicity. As described in Section 6.5.2.6, the Project Area is subject to a number of seismic and geological hazards. These hazards would apply to the Low Growth Alternative as they would to the proposed Project. The proposed Project includes a number of policies relevant to these potential hazards that would also be adopted under the Low Growth Alternative. Existing County General Plan policies would continue to apply to lands within the SOI under the Low Growth Alternative and would help to protect development from geologic and seismic hazards. As under the proposed Project, development allowed under the Low Growth Alternative would be required to comply with the CBC and Morgan Hill Building Code, which provide standards to protect property and public safety by regulating the design and construction of excavations, foundations, building frames, retaining walls, and other building elements, which will further mitigate the effects of fault rupture.

As described in Section 6.5.2.6, most soils in the Project Area are considered to have low to moderate erodibility. However, under both the proposed Project and Low Growth Alternative clearing, grading, excavation, and construction activities associated with allowed development would have the potential to impact water quality through soil erosion and increasing the amount of silt and debris carried in runoff. As under the proposed Project, under the Low Growth Alternative federal, state and regional regulations would address erosion and runoff and prevent significant impacts. In addition, the proposed Project includes a number of policies relevant to erosion that would also be adopted under the Low Growth Alternative.

The majority of the anticipated development within the Project Area is expected to be serviced by the present-day wastewater collection and treatment system. However, the City does allow installation of septic

ALTERNATIVES TO THE PROPOSED PROJECT

systems when a connection to the public sewer system is not readily available. As under the proposed Project, under the Low Growth Alternative the Morgan Hill Municipal Code would require applicants to submit detailed plans addressing potential drainage and soils issues as part of the permitting process. In addition, the proposed Project includes a number of policies relevant to the use of septic systems that would also be adopted under the Low Growth Alternative.

Although the Low Growth Alternative would allow less overall development than the proposed Project, thereby exposing fewer people and structures to geologic and seismic hazards, neither the proposed Project nor the Low Growth Alternative would result in significant impacts associated with geology, soils, or seismicity. Therefore, the Low Growth Alternative would be *similar* to the proposed Project.

6.6.2.7 GREENHOUSE GAS EMISSIONS

As shown in Section 6.2, the proposed Project would result in one less-than-significant impact and one significant and unavoidable impact associated GHG emissions.

As discussed in Section 6.5.2.7, the proposed Project would achieve the BAAQMD efficiency metric for year 2020 and year 2035 that would ensure the City maintains a trajectory that is consistent with the GHG reduction target of Executive Order B-30-15. However, despite state and federal regulations, the proposed Project would result in a substantial increase in GHG emissions from existing conditions by the proposed General Plan horizon year 2035. This is considered a significant and unavoidable impact. The Low Growth Alternative would result in less growth than the proposed Project and would therefore result in fewer emissions. However, as under the proposed Project, under the Low Growth Alternative the City would not be able to demonstrate an ability to reach the 2050 target through City measures alone. Therefore, the Low Growth Alternative would not avoid this significant and unavoidable impact.

The proposed Project and Low Growth Alternative both include several policies that incorporate GHG emissions mitigation measures identified through the regional climate mitigation initiative SV 2.0. With these policies, the proposed Project and Low Growth Alternative would be consistent with the programs identified within the CARB Scoping Plan.

The MTC/ABAG *Plan Bay Area* includes a land use concept plan for the region that concentrates the majority of new population and employment growth in the region in PDAs. In Morgan Hill, *Plan Bay Area* includes the Morgan Hill Downtown Transit Town Center PDA. Both the proposed Project and Low Growth Alternative would encourage development consistent with the goals and objectives for this PDA and include policies that, once adopted, would reduce GHG emissions from transportation sources to the maximum extent practicable. Therefore, the proposed Project and Low Growth Alternative would be consistent with land use concept plan for Morgan Hill identified in *Plan Bay Area*.

The Low Growth Alternative would include the adoption of policies intended to support collaborative opportunities to implement the CARB Scoping Plan and reduce GHG emissions from transportation sources. In addition, the Low Growth Alternative would also not avoid the significant and unavoidable

ALTERNATIVES TO THE PROPOSED PROJECT

impact of the proposed Project. Therefore, overall the Low Growth Alternative would be *similar* to the proposed Project.

6.6.2.8 HAZARDS AND HAZARDOUS MATERIALS

As shown in Section 6.2, the proposed Project would have less-than-significant impacts associated with hazards and hazardous materials. As described in Section 6.5.2.8, future development, land uses, and construction activities could involve the use or handling of hazardous materials. Under both the proposed Project and Low Growth Alternative, new development could occur on properties that possibly are contaminated and inactive, undergoing evaluation, and/or undergoing corrective action. These hazards would apply to the Low Growth Alternative as they would to the proposed Project. These activities are subject to a variety of federal, state, and local laws, policies, and regulations. In addition, both the proposed Project and Low Growth Alternative include the adoption of policies that would further ensure that new development would not create a significant hazard through routine transport, use, or handling of hazardous materials.

As described in Section 6.5.2.8, a small portion of the Project Area extends into the South County Airport AIA. However, the Project Area is located outside of the airport's noise contours and safety zones. The proposed Project and Low Growth Alternative include policies intended to enhance compatibility between and safety for future development and airport operations. As there are no private airstrips in the vicinity of the locations where future development could occur under either the proposed Project or the Low Growth Alternative, neither the proposed Project nor this alternative would expose people to hazards associated with private airstrips.

Both the proposed Project and Low Growth Alternative include policies that ensure that new development would not conflict with emergency operations in Morgan Hill.

Although the Low Growth Alternative would allow less overall development than the proposed Project, thereby exposing fewer people and structures to potential hazards and hazardous materials, neither the proposed Project nor the Low Growth Alternative would result in significant impacts associated with hazardous materials. Therefore, the Low Growth Alternative would be *similar* to the proposed Project.

6.6.2.9 HYDROLOGY AND WATER QUALITY

As shown in Section 6.2, hydrology and water quality impacts under the proposed Project would be less than significant, with the exception of one impact that would be less than significant after mitigation.

Construction and operation of development projects allowed by either the proposed Project or the Low Growth Alternative would have the potential to impact water quality and cause erosion and siltation. However, development under either the proposed Project or Low Growth Alternative would be required to comply with existing regulations and guidance documents that would minimize these impacts. The proposed

ALTERNATIVES TO THE PROPOSED PROJECT

Project and the Low Growth Alternative include policies that would ensure that potential impacts to water quality would not occur.

As under the proposed Project, much of the future development permitted by the Low Growth Alternative would be located on sites that have already been developed and currently have a high percentage of impervious surfaces. However, infill development could take place on undeveloped and unpaved sites and development would be allowed in some areas that are currently agricultural or contain only sparse development. Overall, development allowed under either the proposed Project or Low Growth Alternative would be expected to increase the amount of impervious surfaces, which could result in a change in drainage patterns that interfere with groundwater recharge, exceed the capacity of existing or planned stormwater drainage systems, or contribute to on-site or off-site flooding. Applicants for new development and redevelopment under either the proposed Project or Low Growth Alternative would be required to implement design measures to contribute to groundwater recharge and minimize stormwater runoff. The City of Morgan Hill obtains all of its water supply from groundwater. While development allowed under either the proposed Project or Low Growth Alternative could lead to an increased demand for water, there is a sufficient supply of water through 2035 even in the event of multiple dry years. The proposed Project and the Low Growth Alternative include policies that would reduce these potential impacts.

Development under with the proposed Project or Low Growth Alternative could place housing or structures within the existing 100-year floodplains or SFHAs, which could expose residents to flood hazards and could also impede or redirect flood flows. Like the proposed Project, the flooding impact under the Low Growth Alternative could be reduced to a less-than-significant level with implementation of federal and local requirements regulating construction of new development within a 100-year flood plain, alongside the proposed General Plan policies and actions that address this issue.

Failure of nearby dams could result in the release of water held behind the dams and result in flooding of parts of the City and surrounding area. Existing assessment and monitoring procedures would ensure that impacts would be less-than-significant under either the proposed Project or Low Growth Alternative. There is no potential for a tsunami to impact the Project Area. A seiche could theoretically occur in one of the nearby reservoirs as the result of an earthquake or other disturbance, but the extent of the flooding impact would be less than that of the flooding impact from a dam failure as shown in Figure 4.9-6, Dam Inundation Areas. Limited portions of Morgan Hill are within areas that could result in debris flows. Development under either the proposed Project or Low Growth Alternative would be subject to Municipal Code requirements that would reduce these risks. In addition, the proposed Project includes policies that would reduce potential impacts regarding landslides and other hazards. These policies would also be adopted under the Low Growth Alternative.

The Low Growth Alternative would allow less overall development than the proposed Project, thereby exposing fewer people and structures to flooding risks, creating less impervious surfaces, increasing water demands by a lesser amount, and decreasing potential water quality impacts. Overall, neither the proposed

ALTERNATIVES TO THE PROPOSED PROJECT

Project nor the Low Growth Alternative would result in significant impacts associated with hydrology and water quality. Therefore, the Low Growth Alternative would be *similar* to the proposed Project.

6.6.2.10 LAND USE AND PLANNING

As shown in Section 6.2, the proposed Project would have less-than-significant land use impacts. Under the Low Growth Alternative, new development would occur throughout the Project Area under the policies of the proposed Project and a modified land use map.

The land uses under the Low Growth Alternative, as under the proposed Project are largely consistent with existing development patterns. As under the proposed Project, future development under the Low Growth Alternative would retain the existing roadway patterns, and no new major roadways or other physical features through existing residential neighborhoods would be developed that would create new barriers. Under both the proposed Project and the Low Growth Alternative, future development would be required to be consistent with proposed Project policies that promote cohesive and compatible neighborhoods and prevent new development from dividing existing uses.

Like the proposed Project, the Low Growth Alternative would be consistent with existing City of Morgan Hill plans and policies following adoption and subsequent updates to ensure consistency with the proposed Project.

Because land outside the City limits is currently subject to county land use regulations, and would only become under City land use jurisdiction upon annexation, only one set of land use policies apply at a given time, and there cannot be a conflict between the City and County General Plan policies. As a result, neither the proposed Project nor the Low Growth Alternative would conflict with the County General Plan.

Both the proposed Project and the Low Growth Alternative include goals and policies that support the planning efforts of other agencies and provide consistency with other plans, including Plan Bay Area, the South County Airport CLUP, the SCVWD *Guidelines and Standards for Land Use Near Streams*, and the Santa Clara Valley Habitat Plan.

Neither the proposed Project nor the Low Growth Alternative would result in significant land use impacts. Therefore, the Low Growth Alternative would be *similar* to the proposed Project.

6.6.2.11 NOISE

As shown in Section 6.2, the proposed Project would result in three less-than-significant noise impacts and two significant and unavoidable impacts.

Under the proposed Project, new development would avoid significant impacts associated with exposure to excessive noise levels by conforming with requirements for acoustic analysis under the proposed Plan, as well as by achieving subsequent compliance with interior and exterior noise standards through application of

ALTERNATIVES TO THE PROPOSED PROJECT

any necessary special construction or noise insulation techniques. The Municipal Code contains multiple provisions to limit the generation and reception of excessive noise. These requirements would continue to apply under the Low Growth Alternative. Under both the proposed Project and the Low Growth Alternative, as individual projects are proposed, project applicants would be required, as necessary, to perform site-level acoustic analysis to demonstrate compliance with applicable standards. Under both the proposed Project and Low Growth Alternative, it is likely that some new development would require special noise-insulating features or construction techniques, and therefore additional project-level acoustical analysis would be necessary to demonstrate consistency with applicable land use compatibility requirements and interior noise standards. The City would ensure such compliance through the development review process. Under both the proposed Project and Low Growth Alternative, policies would also provide guidelines for noise compatibility levels. These policies, along with adherence to existing regulations, would serve to ensure that land use and development decisions consider and seek to prevent potential noise impacts under both the proposed Project and Low Growth Alternative.

Under both the proposed Project and Low Growth Alternative, vibration generated by construction equipment would have the potential to be substantial. Without specific development details, it is not possible to quantify potential construction vibration impacts. Overall, vibration impacts under both the proposed Plan and Low Growth Alternative related to construction would be short-term, temporary, and generally restricted to the areas in the immediate vicinity of active construction equipment. Proposed policies under both the proposed Project and Low Growth Alternative would serve to reduce vibration impacts from construction.

Development under either the proposed Project or Low Growth Alternative could result in long-term, operations-related vibration impacts to sensitive receptors if sensitive land uses are located in close proximity to land uses with the potential to generate significant vibration levels. Municipal Code provisions would require strategies to prevent vibration impacts. These requirements would also apply under the Low Growth Alternative. In addition, policies under both the proposed Project and Low Growth Alternative would offer generalized direction for the City to consider noise and vibration impacts during development decisions and to provide specific policies in respect to these considerations.

Under both the proposed Project and the Low Growth Alternative, substantial permanent increases in ambient noise levels would likely result from development of commercial, industrial, mixed-use, and certain institutional or active recreational land uses. Addressing impacts from these noise sources would be handled via the pertinent sections of Morgan Hill's Municipal Code. These requirements would also apply under the Low Growth Alternative. In addition, both the proposed Project and Low Growth Alternative include policies that would prevent substantial permanent increases to ambient noise levels.

Under both the proposed Project and the Low Growth Alternative, and as a result of implementation of the General Plan and ongoing regional growth, it is anticipated that there would be substantial permanent increases to the ambient noise levels throughout Morgan Hill. These increases would primarily result from increases to transportation-related noise, especially that of automobile traffic. Policies under both the

ALTERNATIVES TO THE PROPOSED PROJECT

proposed Project and Low Growth Alternative would reduce noise from vehicles at the source and to otherwise shield sensitive uses from excessive noise. Even with existing regulations and proposed policies, this would be a significant and unavoidable impact for both the project-specific and cumulative setting under both the proposed Project and Low Growth Alternative.

Under both the proposed Project and Low Growth Alternative, noise from construction equipment and various construction-related activities would be a cause of temporary or periodic increases in ambient noise levels. The Municipal Code restricts hours of construction and the City reviews project noise impacts as part of the planning and permitting processes. These requirements would continue to apply under the Low Growth Alternative. In addition, policies under both the proposed Project and Low Growth Alternative would serve to reduce temporary or periodic increases to ambient noise.

The Low Growth Alternative would include the same policies that would be adopted under the proposed Project to reduce potential noise impacts. Although the Low Growth Alternative would result in less development than the proposed Project, the Low Growth Alternative would result in the same less-than-significant impacts as the proposed Project and would not avoid the significant and unavoidable impacts of the proposed Project. Therefore, the Low Growth Alternative would be *similar* to the proposed Project.

6.6.2.12 POPULATION AND HOUSING

As shown in Section 6.2, the proposed Project would have less-than-significant population and housing impacts. The Low Growth Alternative is projected to result in fewer new residents and housing units than the proposed Project.

Buildout of the proposed Project would exceed regional projections. Although the Low Growth Alternative would result in less population growth, this alternative would similarly exceed regional projections. The proposed Project includes policies that would provide a robust planning framework for the growth projected to occur under the proposed General Plan. These policies would also be adopted under the Low Growth Alternative.

Redevelopment under either the proposed Project or Low Growth Alternative would have the potential to displace existing residential units or people. However, all redevelopment under either the proposed Project or Low Growth Alternative would be voluntary in nature, and no housing units would be displaced without permission of the property owners. New development would replace existing development and the City would experience a net increase in all land use types. In addition, existing policies in Morgan Hill's adopted Housing Element would minimize potential impacts related to the displacement of housing units under either the proposed Project or Low Growth Alternative.

Overall, the Low Growth Alternative would result in less growth than the proposed Project and would include the adoption of proposed policies in support of growth management. However, as noted above, the proposed Project would also result in less-than-significant population and housing impacts, so the Low Growth Alternative would be *similar* compared to the proposed Project.

ALTERNATIVES TO THE PROPOSED PROJECT

6.6.2.13 PUBLIC SERVICES AND RECREATION

As shown in Section 6.2, the proposed Project would have less-than-significant impacts to public services. As shown in Table 6-1, the Low Growth Alternative is projected to result in fewer new residents than the proposed Project. Although the Low Growth Alternative would result in greater employment growth, employees tend to place lower demands on public services and recreation than residents.

Like the proposed Project, the Low Growth Alternative would increase the service population served by the MHFD, SSCCFD, MHPD and Sheriff's Office. As under the proposed Project, under the Low Growth Alternative proposed policies would support adequate fire protection services that keep pace with development and ensure that services are adequate to provide protection to Morgan Hill. As described in Section 4.13, Public Services and Recreation, the MHPD has indicated that existing police station is adequately sized to meet long-term future needs. Future expansion can be accommodated by utilizing space within the existing building that is currently occupied by a private company. The Sheriff's Office has indicated that currently there are no plans to expand or relocate, and that no existing facility deficiencies exist that would be exacerbated by the proposed Project. The Sheriff's Office would likely upgrade equipment accordingly over time to incorporate new technologies as they emerge. As under the proposed Project, the Low Growth Alternative's proposed policies would serve to ensure that police services keep pace with population growth and that services are adequate to provide protection to Morgan Hill.

With 2035 buildout of the proposed Project, and without assuming any increases in existing capacity, MHUSD elementary schools would be 2,855 students over capacity, middle schools would be 136 students over capacity, high schools would be 865 students over capacity, and the district as a whole would be 3,857 students over capacity. With the Low Growth Alternative, fewer new students would attend MHUSD but schools would still be over capacity: elementary schools would be 2,306 students over capacity, middle schools would be at full capacity, high schools would be 593 students over capacity, and the district as a whole would be 2,899 students over capacity. Under both the proposed Project and the Low Growth Alternative, the MHUSD would need to expand existing facilities to accommodate students. The school district does not currently have plans to expand existing facilities. Under Section 65995 of the California Government Code, the payment of impact fees is deemed to fully mitigate the impacts of new development on school facilities, regardless of whether the fees are adequate to fully fund the expansion or construction of needed facilities. Proposed policies under both the proposed Project and the Low Growth Alternative would help to reduce potential impacts to the MHUSD.

The SCCLD has indicated that further study would be needed to determine the current and future needs and whether additional facility expansion would be needed to maintain adequate services under the proposed Project. The Low Growth Alternative would involve a lower buildout but would still increase service demands in need of further study by the SCCLD. The proposed Project and Low Growth Alternative both include policies and support adequate library facilities. Under both the proposed Project and Low Growth Alternative, as specific library expansion or improvement projects are identified, additional project-specific, environmental analysis pursuant to CEQA would be completed.

ALTERNATIVES TO THE PROPOSED PROJECT

Neither the proposed Project nor the Low Growth Alternative directly proposes the construction of any parks or recreational facilities. As noted in Chapter 4.13, the City's existing park service standard is to provide 5 acres of parkland for every 1,000 Morgan Hill residents. Based on existing park and recreational facilities of 208 acres and a 2035 population of 68,057 under the proposed Project, the parkland ratio in 2035 would be approximately 3.1 acres per 1,000 residents. The Low Growth Alternative would result in a lower 2035 population of 63,251,² and a parkland ratio of 3.3 acres per 1,000 residents. To meet the City's service standards, additional parkland would be needed by 2035 under both the proposed Project and Low Growth Alternative. New residential development under both the proposed Project and Low Growth Alternative would be required to pay park impact fees to generate revenue to fund the park facilities needed to serve new development. It is not known at what time or location future facilities funded by impact fees from future development would be constructed or what the exact nature of these facilities would be, so it cannot be determined what project-specific environmental impacts would occur from their construction and operation. In addition, if future park and recreational facility use results in the physical deterioration of facilities, it is not known what the exact nature of these physical deteriorations would be, so it cannot be determined what environmental impacts may occur. Impacts associated with constructing new parks or recreational facilities, or upgrading and improving existing facilities, would be project-specific, and would require permitting and review in accordance with CEQA, which would ensure that any environmental impacts are disclosed and mitigated to the extent possible. Under both the proposed Project and Low Growth Alternative, future development would be required to comply with proposed General Plan policies that would ensure adequate park and recreational facilities are available for the residents of Morgan Hill.

Neither the proposed Project nor the Low Growth Alternative would result in significant public service impacts. Therefore, the Low Growth Alternative would be *similar* to the proposed Project.

6.6.2.14 TRANSPORTATION AND TRAFFIC

As shown in Section 6.2, the proposed Project would have one significant and unavoidable impact and one impact that would be less than significant after mitigation, and the remainder of the impacts would be less than significant.

In comparison to the proposed Project, the Low Growth Alternative would result in less residential and non-residential growth. Therefore, the Low Growth Alternative would generate less traffic than the proposed Project. Under the proposed Project, two of the 42 study intersections (Monterey Road/Central Avenue and Tennant Avenue/Murphy Avenue) would exceed level of service standards during one or both peak hours. Due to the reduced number of trips generated by the Low Growth Alternative in comparison with the proposed Project, it is possible that a significant impact at these two intersections would not occur or could be mitigated to a less-than-significant level.

² Based on an existing population of 45,171 and household size of 3.08. $5,870 \text{ new housing units} \times 3.08 \text{ persons per household} = 18,080 \text{ new population}$.

ALTERNATIVES TO THE PROPOSED PROJECT

Under the proposed Project, daily roadway segment volumes for all 45 study roadway segments would meet the City of Morgan Hill LOS standard of LOS D or better. Because the Low Growth Alternative would result in less residential and non-residential growth than the proposed Project, this alternative would also not be expected to create unacceptable roadway segment volumes.

Under the proposed Project, seven of the eight study freeway segments are projected to operate at an unacceptable LOS F. However, even with no growth within the City of Morgan Hill, Highway 101 would likely operate at unacceptable levels in the future due to the high amount of pass-through trips not related to the City on Highway 101. Therefore, this significant and unavoidable impact would also be expected to occur under the Low Growth Alternative.

Both the proposed Project and Low Growth Alternative would allow an increase in both residential and non-residential development above existing conditions. Construction and modifications of new and existing roadways would be necessary to support the allowed growth. The proposed Project contains policies that would reduce potential hazards due to roadway design or incompatible uses. These policies would also be adopted under the Low Growth Alternative.

The proposed General Plan contains new policies that ensure efficient circulation and that adequate access be provided within the City, which would help facilitate timely emergency response. These policies would also be adopted under the Low Growth Alternative.

The proposed Project includes policies that provide for an integrated network of bicycle facilities, as well as for the needs of transit users. These policies would also be adopted under the Low Growth Alternative.

Overall, the Low Growth Alternative would result in less new development than the proposed Project, and would therefore reduce traffic volumes. While it is possible that the Low Growth Alternative could eliminate impacts at City intersections, significant impacts on Freeway segments would still occur. Therefore, the Low Growth Alternative would be a *slight improvement compared* to the proposed Project.

6.6.2.15 UTILITIES AND SERVICE SYSTEMS

As shown in Section 6.2, the proposed Project would have less-than-significant impacts to utilities and service systems. As shown in Table 6-1, the Low Growth Alternative is projected to result in fewer new residents than the proposed Project.

Under the proposed Project, total water demand at buildout of the proposed General Plan would be significantly less than the available supply predicted to be available to the City. Because the Low Growth Alternative would result in fewer residents than the proposed Project, water demand would be lower and supplies would likewise be sufficient. As under the proposed Project, because available capacity would be sufficient to meet projected demand, the Low Growth Alternative would not require expanded treatment facilities or regional water system conveyance and storage facilities in order to meet demands. Under both the proposed Project and the Low Growth Alternative, any new or expanded local water supply and

ALTERNATIVES TO THE PROPOSED PROJECT

distribution facilities would require permitting and review in accordance with CEQA, which would ensure environmental impacts are disclosed and mitigated to the extent possible. In addition, proposed water conservation policies would be adopted under the Low Growth Alternative as they would be under the proposed Project.

The residential, industrial, office, retail, service, and public facilities land uses that would result from either the proposed Project or the Low Growth Alternative would not generate wastewater of different quality and treatability than wastewater currently generated by those land uses in the City. The SCRWA wastewater treatment plant is currently in compliance with its NPDES permit requirements. As such, buildout under the proposed Project or Low Growth Alternative would not be expected to generate wastewater that would exceed the treatment requirements of the Central Coast RWQCB. In addition, under both the proposed Project and the Low Growth Alternative proposed policies would enhance compliance with wastewater treatment requirements and capacity.

The SCRWA treatment plant capacity is projected to be exceeded by the year 2022 due to development allowed by the existing General Plans of Morgan Hill and Gilroy. In recognition of this, the SCRWA is planning to fund, design, and construct expansion of the facility by 2022. After expansion of the treatment plant, it is anticipated the NPDES discharge permit will be amended to reflect the expanded capacity of the plant. As such, wastewater generated from either the proposed Project or the Low Growth Alternative would not exceed the expanded permitted treatment capacity of the SCRWA facility. Creation of new or extended wastewater collection pipes, lift stations, and increased capacity projects under the proposed Project or Low Growth Alternative could create short-term construction-related environmental effects. However, compliance with the City's and the SCRWA's regulations and standard conditions for new construction related to wastewater collection and treatment would be required. Proposed policies under both the proposed Project and Low Growth Alternative would help to ensure that construction of new wastewater treatment facilities or expansion of existing facilities would not be required.

The incremental solid waste generation under either the proposed Project or the Low Growth Alternative would be a nominal percentage of the combined daily capacity of the three landfills providing 95 percent disposal services to the City. In addition, future development under either the proposed Project or Low Growth Alternative would be required to comply with the CBC Section 4.408, which requires a minimum of 50 percent of non-hazardous construction and demolition debris to be recycled or salvaged, as well as a Waste Management Plan for on-site sorting of construction debris. Compliance with applicable regulations and proposed policies that would be adopted under either the proposed Project or the Low Growth Alternative would enhance solid waste diversion and management and ensure continued compliance with regulations related to solid waste.

As under the proposed Project, construction and operation of development allowed by Low Growth Alternative would require a commitment of energy resources. Proposed new development under either the proposed Project or Low Growth Alternative would be constructed using energy efficient modern building materials and construction practices in accordance with CalGreen Building Code, CPUC's *Long Term Energy*

ALTERNATIVES TO THE PROPOSED PROJECT

Efficiency Strategic Plan, and the City's Municipal Code, which contain a range of energy conservation and renewable energy measures. The new buildings also would use new modern appliances and equipment in accordance with the 2015 Appliance Efficiency Regulations. Accordance with applicable regulations and proposed policies that would be adopted under either the proposed Project or the Low Growth Alternative would ensure that construction and operation impacts for future development would be addressed in project-specific analysis and would enhance energy conservation.

Neither the proposed Project nor the Low Growth Alternative would result in significant utility and service system impacts. Therefore, the Low Growth Alternative would be *similar* in comparison to the proposed Project.

6.7 COMPACT DEVELOPMENT ALTERNATIVE

6.7.1 PRINCIPAL CHARACTERISTICS

The Compact Development Alternative would include a General Plan land use map that, in comparison to the land use map for the proposed Project, designates fewer lands in the SOI for development and designates more lands in the SOI for Rural County uses. This alternative would include the proposed TDR system and concentrate residential development in the SEQ area on the 50-acre portion of the Chiala property within the area located roughly between Hill Road, Carey Avenue, Barrett Avenue, and Tennant Avenue as shown on Figure 3-7 of the Project Description. This alternative also designates many sites along Monterey Road for attached residential development rather than mixed-use development, and replaces Commercial/Industrial designations along the south side of Tennant Avenue and the east side of Highway 101 with Residential Attached Low designations. This alternative also assumes that new development would be built at closer to the top of the allowable density range than under the proposed Project. Overall, this alternative is envisioned to result a more compact development pattern than the proposed Project. Future development under the Compact Development Alternative would be subject to the proposed policies of the proposed Project. This alternative assumes that the current RDCS sunsets in 2020 and is not replaced.

As shown in Table 6-1, the Compact Development Alternative would have a buildout of 2,821 new single-family homes and 6,347 new multi-family units, for a total of 9,174 new units. This residential development would represent a population increase of 28,256. The Compact Development Alternative would have a non-residential buildout of 3.6 million square feet, with a job growth of 8,194 jobs. In comparison to the proposed Project, the Compact Development Alternative would result in more housing, with a greater portion of housing as multi-family homes, more population growth, less non-residential development, and fewer jobs.

A General Plan land use map for the Compact Development Alternative is shown in Figure 6-3.

ALTERNATIVES TO THE PROPOSED PROJECT

6.7.2 IMPACT DISCUSSION

6.7.2.1 AESTHETICS

The proposed Project would have less-than-significant impacts to aesthetics and scenic resources. Under the Compact Development Alternative, new development would occur throughout the Project Area under the policies of the proposed Project and a modified land use map that preserves more lands in the SOI for rural uses and assumes a more compact development pattern. As under the proposed Project, under the Compact Development Alternative much of the new development allowed under the General Plan would be on lands that are already developed, or on lands contiguous to urban uses and major roadways. However, as under the proposed Project, some future development allowed by the Compact Development Alternative would have the potential to partially or fully block scenic vistas or degrade the existing visual character. In addition, as under the proposed Project, new development throughout the Project Area could create new sources of light and glare. Although the Compact Development Alternative is envisioned to result in higher densities and more compact growth, development allowed by this alternative would be subject to the same maximum building heights, densities, and intensities, as under the proposed Project.

As under the proposed Project, new development under the Compact Development Alternative would be subject to proposed General Plan policies and design review procedures intended to promote high-quality development and protect scenic resources. In addition, under the Compact Development Alternative, as under the proposed Project, land would not be designated within the Greenbelt for urban development that could affect scenic views to, from, or within these areas.

As described in Section 4.1, Aesthetics, there are no designated scenic highways in Morgan Hill or its Sphere of Influence (SOI). Therefore, like the proposed Project, the Compact Development Alternative would have no impact to scenic resources within a state scenic highway.

Neither the proposed Project nor the Compact Development Alternative would result in significant aesthetics impacts. Therefore, the Compact Development Alternative would be *similar* to the proposed Project.

6.7.2.2 AGRICULTURE AND FORESTRY RESOURCES

As shown in Section 6.2, the proposed Project would result in three less-than-significant impacts to agriculture and forestry resources and three impacts that would be significant and unavoidable. The Compact Development Alternative would preserve more lands in the SOI for rural uses.

As described in Section 4.5.2.2, the largest concentrations of land where conversion of farmland to development would be allowed by the proposed General Plan are located east of Highway 101 between Half Road and Diana Avenue, and in the southwestern portion of the City, west of Highway 101 and south of Tennant Avenue and Watsonville Road. Under the Compact Development Alternative, some of these areas –

ALTERNATIVES TO THE PROPOSED PROJECT

including sites north and south of Half Road east of Highway 101 and scattered sites in the southwest of the City –would be designated as Rural County rather than for urban residential and non-residential uses. Therefore, the Compact Development Alternative would reduce, but not eliminate, the amount of farmland of concern that is designated for urban uses and this significant unavoidable impact would still occur under the Compact Development Alternative. The Compact Development Alternative would include the same proposed TDR program to fund the purchase of agricultural conservation easements as the proposed Project, and so would have similar benefits to agricultural preservation in the SEQ area.

The majority of Williamson Act contract lands are designated for agricultural use under both the proposed Project and Compact Development Alternative, which would avoid a conflict with the Williamson Act contracts on these sites. As described in Section 4.5.2.2, there is one parcel under a Williamson Act contract that would be given a conflicting land use designation under the proposed Project that would conflict with agriculture. Under the Compact Development Alternative, this parcel would be designated as Rural County. Therefore, the Compact Development Alternative would avoid this significant and unavoidable impact.

The Morgan Hill Municipal Code does not contain a zoning district for forest land or timberland. Therefore, neither the proposed Project nor the Compact Development Alternative would conflict with zoning for forest land or timberland.

As described in Section 4.5.2.2, isolated woodlands are located within the Project Area are primarily located in the vicinity of the Chesbro Reservoir with some additional forest resources located along the eastern border of the Project Area. As under the proposed Project, under the Compact Development Alternative most of the area that contains forestry resources would be designated as Open Space, although some areas would be designated for residential uses. Proposed policies under both the proposed Project and Compact Development Alternative would serve to reduce potential impacts related to forestry resource.

Like the proposed Project, the Compact Development Alternative would allow development that could result in potentially incompatible urban uses next to farms or ranches. However, proposed policies under both the proposed Project and Compact Development Alternative would reduce potential conflict and protect agricultural lands.

The Compact Development Alternative would avoid one of the significant and unavoidable impacts of the proposed Project, associated with conflicts with Williamson Act contracts. The Compact Development Alternative would also include the same proposed TDR system to fund agricultural preservation. Otherwise, impacts would be the same under the proposed Project and Compact Development Alternative. Overall, the Compact Development Alternative would be a *slight improvement* over the proposed Project.

6.7.2.3 AIR QUALITY

As shown in Section 6.2, the proposed Project would result in two less-than-significant impacts, one significant but mitigable impact, and three significant and unavoidable impacts to air quality.

ALTERNATIVES TO THE PROPOSED PROJECT

Under the proposed Project, vehicle miles traveled (VMT) per population and per service population would be reduced, and the policies identified in the proposed Project would not hinder the Bay Area Air Quality Management District's (BAAQMD) implementation of the 2010 Bay Area Clean Air Plan. The Compact Development Alternative would result in slightly more residents and fewer jobs than the proposed Project. Generally, land uses that reflect a more balanced jobs-housing ratio result in lower per capita VMT. Because the Compact Development Alternative would reduce jobs and increase housing units in comparison to the proposed Project, it would be expected to result in a slightly lower jobs-to-housing ratio. Therefore, the Compact Development Alternative may result in a slightly lower level of per-capita VMT. As under the proposed Project, emissions resulting from future development allowed by the Compact Development Alternative would not hinder BAAQMD's ability to attain the California or National AAQS. In addition, the proposed Project and Compact Development Alternative would include the same policies to achieve consistency with regional air quality policies and control measures.

Future development allowed by either the proposed Project or the Compact Development Alternative would be required to adhere to statewide measures that have been adopted to achieve the GHG reduction targets of AB 32. The proposed Project would be consistent with regional strategies for infill development identified by the MTC/ABAG in *Plan Bay Area* and would achieve the plan-level BAAQMD efficiency target. The proposed Project would also be on a trajectory to achieve the 2035 target recently identified in Executive Order B-30-15. The Compact Development Alternative would include a similar level of overall growth and would be expected to achieve similar targets. In addition, the Compact Development Alternative would include the same GHG emissions reductions policies to reduce GHG emissions.

Under the proposed Project, because cumulative development within the City could exceed regional significance thresholds, the proposed Project could contribute to an increase in adverse health effects in the Air Basin until attainment standards are met. This would be a significant and unavoidable impact. The proposed Project includes policies to reduce criteria air pollutants to the maximum extent practicable, which would also be adopted under the Compact Development Alternative. Under both the proposed Project and Compact Development Alternative, subsequent environmental review of development projects would be required to assess potential operational emissions impacts under BAAQMD's project-level thresholds. Measures to reduce criteria air pollutant emissions would be considered during individual project-level review under both the proposed Project and Compact Development Alternative. However, those projects and measures cannot be known at this time. Therefore, the Compact Development Alternative would not avoid this significant and unavoidable impact.

Under the proposed Project, if uncontrolled, fugitive dust (PM₁₀ and PM_{2.5}) levels during construction could violate air quality standards or contribute substantially to an existing or projected air quality violation and expose sensitive receptors to elevated concentrations of pollutants. This would be a significant and unavoidable impact. The proposed Project includes policies and actions would minimize impacts during construction. These policies and actions would also be adopted under the Compact Development Alternative. Construction emissions associated with individual development projects under either the proposed Project or the Compact Development Alternative would generate an increase in criteria air

ALTERNATIVES TO THE PROPOSED PROJECT

pollutants and TACs. Continued compliance with existing regulations under either the proposed Project or the Compact Development Alternative would reduce construction-related impacts to the extent feasible. However, it is not possible to predict the specific characteristics of the construction and operation of those projects and accurately model their individual emissions. Therefore, the Compact Development Alternative would not avoid this significant and unavoidable impact.

At a plan level, air quality impacts are measured by the potential for a project to exceed BAAQMD's significance criteria and contribute to the state and federal nonattainment designations in the Air Basin. An attainment area is a geographic area that meets or exceeds an ambient air quality standard. A nonattainment area does not meet the standard. The Air Basin is currently designated a nonattainment area for ozone (O_3), $PM_{2.5}$, and PM_{10} . Any project that produces a significant regional air quality impact in an area that is in nonattainment – that is, is currently not meeting an air quality standard - adds to the cumulative impact. Both the proposed Project and the Compact Development Alternative would generate a substantial increase in criteria air pollutant emissions from construction and operational activities. Due to the programmatic nature of both the proposed Project and Compact Development Alternative, no additional mitigation measures are available and the impact would be significant and unavoidable.

The Air Basin has been designated an attainment area under both the national and California AAQA for carbon monoxide (CO), meaning the Air Basin meets current air quality standards for that pollutant, and the trips associated with the proposed Project do not exceed BAAQMD screening criteria. Therefore, the proposed Project would not have the potential to substantially increase CO hotspots. Because the Compact Development Alternative would result in a similar overall level of growth, it is expected that the Compact Development Alternative also would not increase CO hotspots. In addition, the proposed Project includes several policies that would encourage bicycle, pedestrian, and transit use to tie land use and transportation, which ensures consistency with VTA's 2013 Congestion Management Program. These policies would also be adopted under the Compact Development Alternative.

Industrial and commercial processes allowed under either the proposed Project or the Compact Development Alternative would be expected to release TACs, as would mobile sources under either the proposed Project or the Compact Development Alternative. Both the proposed Project and Compact Development Alternative would also site sensitive receptors in proximity to TAC sources. Proposed policies under both the proposed Project and Compact Development Alternative would minimize impacts from community risk and hazards but would not avoid significant impacts associated with creating new sources of TACs and siting sensitive receptors near TACs. These impacts would be mitigated to a less-than-significant level under the proposed Project. It is expected that the Compact Development Alternative would result in the same significant but mitigable impact.

Odor impacts can occur when sensitive receptors are sited near nuisance odors, or when new sources of nuisance odors are sited near sensitive receptors. In general, both the land use plan under both the proposed Project and Compact Development Alternative would designate residential areas and commercial/industrial areas of the City to prevent potential mixing of incompatible land use types, with the exception of mixed-

ALTERNATIVES TO THE PROPOSED PROJECT

use areas that combine commercial and residential uses. The proposed Project includes policies that would reduce potential land use incompatibilities regarding objectionable odors. These policies would also be adopted under the Compact Development Alternative.

Overall, the Compact Development Alternative and the proposed Project would result in similar air quality impacts due to the similar levels of growth, types of uses, and land use patterns. The Compact Development Alternative would not avoid the significant and unavoidable impacts of the proposed Project, and significant impacts that would be mitigable to less-than-significant levels under the proposed Project could also be mitigated under the Compact Development Alternative. In addition, the Compact Development Alternative would also include the adoption of several proposed policies intended to minimize air quality impacts. Therefore, the Compact Development Alternative would be *similar* to the proposed Project.

6.7.2.4 BIOLOGICAL RESOURCES

As shown in Section 6.2, the proposed Project would have less-than-significant impacts to biological resources. Under the Compact Development Alternative, new development would occur throughout the Project Area under the policies of the proposed Project and a modified land use map that preserves more lands in the SOI for rural uses.

As under the proposed Project, future development and land use activities under the Compact Development Alternative would occur primarily in urbanized areas where biological resources are generally limited. The potential for occurrence of special-status species, sensitive natural communities, wetlands, riparian habitat, or wildlife corridors in developed areas is generally very remote in comparison to undeveloped lands with natural habitat that contain essential habitat characteristics for the range of species known to occur within the Project Area. Although creeks and channels are present within the urbanized areas of the City, most of these creeks and channels have been straightened and channelized to prevent flooding. While buildout of either the proposed Project or Compact Development Alternative would primarily occur in previously urbanized areas, there is the potential for future development to occur on undeveloped land which could significantly impact – either directly, or through habitat modifications – special-status plant and animal species, sensitive natural communities, wetlands, riparian habitat, wildlife corridors, or areas covered under the Habitat Plan. As under the proposed Project, under the Compact Development Alternative some areas within the UGB and the USA have a land use designation that would allow residential development or agricultural uses that would have the potential to affect biological resources. Like the proposed Project, the Compact Development Alternative itself does not propose any removal of trees; however, there is the potential for future development to result in the removal of trees which could conflict with local policies and ordinances protection biological resources.

Under both the proposed Project and Compact Development Alternative, compliance with the federal, state, regional, and local regulations would protect biological resources. As under the proposed Project, under the Compact Development Alternative future development, as a condition of approval and in support of the Habitat Plan, would be required to contribute mitigation fees to offset impacts that may occur as a

ALTERNATIVES TO THE PROPOSED PROJECT

result of development activities. In addition, both the proposed Project and the Compact Development Alternative include policies that are intended to further minimize potential impacts to biological resources.

Although the Compact Development Alternative would allow more overall development than the proposed Project, the additional growth would be concentrated in urban areas of the Project Area that have limited biological resource value. Neither the proposed Project nor the Compact Development Alternative would result in significant biological resource impacts. Therefore, the Compact Development Alternative would be *similar* to the proposed Project.

6.7.2.5 CULTURAL RESOURCES

As shown in Section 6.2, the proposed Project would have less-than-significant impacts to cultural resources. Under the Compact Development Alternative, new development would occur throughout the Project Area under the policies of the proposed Project and a modified land use map that preserves more lands in the SOI for rural uses. As under the proposed Project, under the Compact Development Alternative new development allowed under the General Plan could involve activities that could affect cultural resources or the development or redevelopment of sites containing cultural resources. For example, development activities for projects allowed by the Compact Development Alternative could involve demolition, inappropriate modification, or inappropriate new construction that could be incompatible with historical resources. In addition, ground disturbing activities associated with new development allowed by the Compact Development Alternative could disturb archaeological and paleontological resources or human remains interred outside of formal cemeteries.

As under the proposed Project, development allowed by the Compact Development Alternative would be subject to existing local, state, and federal laws and procedures to protect cultural resources. Compliance with existing regulations described in Section 4.5, Cultural Resources, would ensure less-than-significant impacts under both the proposed Project and Compact Development Alternative.

Although the Compact Development Alternative would allow the development of fewer lands in the SOI to urban uses, which could reduce the potential to disturb undiscovered cultural resources, neither the proposed Project nor the Compact Development Alternative would result in a significant impact. Therefore, the Compact Development Alternative would be *similar* to the proposed Project.

6.7.2.6 GEOLOGY, SOILS, AND SEISMICITY

As shown in Section 6.2, the proposed Project would have less-than-significant impacts associated with geology, soils, and seismicity. As described in Section 6.5.2.6, the Project Area is subject to a number of seismic and geological hazards. These hazards would apply similarly to the Compact Development Alternative and the proposed Project. The proposed Project includes a number of policies relevant to these potential hazards that would also be adopted under the Compact Development Alternative. Existing County General Plan policies would continue to apply to lands within the SOI under the Compact Development Alternative and would help to protect development from geologic and seismic hazards. As under the

ALTERNATIVES TO THE PROPOSED PROJECT

proposed Project, development allowed under the Compact Development Alternative would be required to comply with the CBC and Morgan Hill Building Code, which provide standards to protect property and public safety by regulating the design and construction of excavations, foundations, building frames, retaining walls, and other building elements, which will further mitigate the effects of fault rupture.

As described in Section 6.5.2.6, most soils in the Project Area are considered to have low to moderate erodibility. However, under both the proposed Project and Compact Development Alternative clearing, grading, excavation, and construction activities associated with allowed development would have the potential to impact water quality through soil erosion and increasing the amount of silt and debris carried in runoff. As under the proposed Project, under the Compact Development Alternative federal, state and regional regulations would address erosion and runoff and prevent significant impacts. In addition, the proposed Project includes a number of policies relevant to erosion that would also be adopted under the Compact Development Alternative.

The majority of the anticipated development within the Project Area is expected to be serviced by the present-day wastewater collection and treatment system. However, the City does allow installation of septic systems when a connection to the public sewer system is not readily available. As under the proposed Project, under the Compact Development Alternative the Morgan Hill Municipal Code would require applicants to submit detailed plans addressing potential drainage and soils issues as part of the permitting process. In addition, the proposed Project includes a number of policies relevant to the use of septic systems that would also be adopted under the Compact Development Alternative.

Although the Compact Development Alternative would allow more overall development than the proposed Project, thereby exposing more people and structures to geologic and seismic hazards, neither the proposed Project nor the Compact Development Alternative would result in significant impacts associated with geology, soils, or seismicity. Therefore, the Compact Development Alternative would be *similar* to the proposed Project.

6.7.2.7 GREENHOUSE GAS EMISSIONS

As shown in Section 6.2, the proposed Project would result in one less-than-significant impact and one significant and unavoidable impact associated with GHG emissions.

As discussed in Section 6.5.2.7, the proposed Project would achieve the BAAQMD efficiency metric for year 2020 and year 2035 that would ensure the City maintains a trajectory that is consistent with the year 2050 GHG reduction target of Executive Order B-30-15. However, despite state and federal regulations, the proposed Project would result in a substantial increase in GHG emissions from existing conditions by the proposed General Plan horizon year 2035. This is considered a significant and unavoidable impact. The Compact Development Alternative would result in an overall similar level of growth, with more housing units and less non-residential development, in comparison to the proposed Project. As under the proposed Project, under the Compact Development Alternative the City would not be able to demonstrate an ability

ALTERNATIVES TO THE PROPOSED PROJECT

to reach the 2050 target through City measures alone. Therefore, the Compact Development Alternative would not avoid this significant and unavoidable impact.

The proposed Project and Compact Development Alternative both include several policies that incorporate GHG emissions mitigation measures identified through the regional climate mitigation initiative SV 2.0. With these policies, the proposed Project and Compact Development Alternative would be consistent with the programs identified within the CARB Scoping Plan.

The MTC/ABAG *Plan Bay Area* includes a land use concept plan for the region that concentrates the majority of new population and employment growth in the region in PDAs. In Morgan Hill, *Plan Bay Area* includes the Morgan Hill Downtown Transit Town Center PDA. Both the proposed Project and Compact Development Alternative would encourage development consistent with the goals and objectives for this PDA and include policies that, once adopted, would reduce GHG emissions from transportation sources to the maximum extent practicable. Therefore, the proposed Project and Compact Development Alternative would be consistent with land use concept plan for Morgan Hill identified in *Plan Bay Area*.

The Compact Development Alternative would include the adoption of policies intended to support collaborative opportunities to implement the CARB Scoping Plan and reduce GHG emissions from transportation sources. In addition, the Compact Development Alternative would not avoid the significant and unavoidable impact of the proposed Project. Therefore, overall the Compact Development Alternative would be *similar* to the proposed Project.

6.7.2.8 HAZARDS AND HAZARDOUS MATERIALS

As shown in Section 6.2, the proposed Project would have less-than-significant impacts associated with hazards and hazardous materials. As described in Section 6.5.2.8, future development, land uses, and construction activities could involve the use or handling of hazardous materials. Under both the proposed Project and Compact Development Alternative, new development could occur on properties that possibly are contaminated and inactive, undergoing evaluation, and/or undergoing corrective action. These hazards would apply to the Compact Development Alternative as they would to the proposed Project. These activities are subject to a variety of federal, state, and local laws, policies, and regulations. In addition, both the proposed Project and Compact Development Alternative include the adoption of policies that would further ensure that new development would not create a significant hazard through routine transport, use, or handling of hazardous materials.

As described in Section 6.5.2.8, a small portion of the Project Area extends into the South County Airport AIA. However, the Project Area is located outside of the airport's noise contours and safety zones. The proposed Project and Compact Development Alternative include policies intended to enhance compatibility between and safety for future development and airport operations. As there are no private airstrips in the vicinity of the locations where future development could occur under either the proposed Project or the Compact Development Alternative, neither the proposed Project nor this alternative would expose people to hazards associated with private airstrips.

ALTERNATIVES TO THE PROPOSED PROJECT

Both the proposed Project and Compact Development Alternative include policies that would ensure that new development would not conflict with emergency operations in Morgan Hill.

Although the Compact Development Alternative would allow more overall development than the proposed Project, thereby exposing more people and structures to potential hazards and hazardous materials, neither the proposed Project nor the Compact Development Alternative would result in significant impacts associated with hazardous materials. Therefore, the Compact Development Alternative would be *similar* to the proposed Project.

6.7.2.9 HYDROLOGY AND WATER QUALITY

As shown in Section 6.2, hydrology and water quality impacts under the proposed Project would primarily be less than significant, with the exception of one impact that would be less than significant after mitigation.

Construction and operation of development projects allowed by either the proposed Project or Compact Development Alternative would have the potential to impact water quality and cause erosion and siltation. However, development under either the proposed Project or Compact Development Alternative would be required to comply with existing regulations and guidance documents that would minimize these impacts. The proposed Project includes policies that would ensure potential impacts to water quality would not occur with the implementation of the proposed Project. These policies would also be adopted under the Compact Development Alternative.

As under the proposed Project, much of the future development permitted by the Compact Development Alternative would be located on sites that have already been developed and currently have a high percentage of impervious surfaces. However, infill development could take place on undeveloped and unpaved sites and development would be allowed in some areas that are currently agricultural or contain only sparse development. Overall, development allowed under either the proposed Project or Compact Development Alternative would be expected to increase impervious surfaces above the current amount, which could result in a change in drainage patterns that interfere with groundwater recharge, exceed the capacity of existing or planned stormwater drainage systems, or contribute to on-site or off-site flooding. Applicants for new development and redevelopment under either the proposed Project or Compact Development Alternative would be required to implement design measures to contribute to groundwater recharge and minimize stormwater runoff. The City of Morgan Hill obtains all of its water supply from groundwater. While development allowed under either the proposed Project or Compact Development Alternative could lead to an increased demand for water, there is a sufficient supply of water through 2035 even in the event of multiple dry years. The proposed Project includes policies that would reduce these potential impacts. These policies would also be adopted under the Compact Development Alternative.

Development under the proposed Project or Compact Development Alternative could place housing or structures within existing 100-year floodplains or SFHAs, which could expose residents to flood hazards and could also impede or redirect flood flows. Like the proposed Project, it is expected that this impact could be reduced to a less-than-significant level with mitigation.

ALTERNATIVES TO THE PROPOSED PROJECT

Failure of nearby dams could result in the release of water held behind the dams and result in flooding of parts of the City and surrounding area. Existing assessment and monitoring procedures would ensure that impacts would be less-than-significant under either the proposed Project or Compact Development Alternative. There is no potential for a tsunami to impact the Project Area. A seiche could theoretically occur in one of the nearby reservoirs as the result of an earthquake or other disturbance, but the flooding impact would be less than that in the dam inundation zone. Limited portions of Morgan Hill are within areas that could result in debris flows. Development under either the proposed Project or Compact Development Alternative would be subject to Municipal Code requirements that would reduce these risks. In addition, the proposed Project includes policies that would reduce potential impacts regarding landslides and other hazards. These policies would also be adopted under the Compact Development Alternative.

The Compact Development Alternative would allow more overall development than the proposed Project, thereby exposing more people and structures to flooding risks, creating more impervious surfaces, increasing water demands by a greater amount, and increasing potential water quality impacts. Overall, neither the proposed Project nor the Compact Development Alternative would result in significant impacts associated with hydrology and water quality. Therefore, the Compact Development Alternative would be *similar* to the proposed Project.

6.7.2.10 LAND USE AND PLANNING

As shown in Section 6.2, the proposed Project would have less-than-significant land use impacts. Under the Compact Development Alternative, new development would occur throughout the Project Area under the policies of the proposed Project and a modified land use map.

The land uses under the Compact Development Alternative, as under the proposed Project are largely consistent with existing development patterns. As under the proposed Project, future development under the Compact Development Alternative would retain the existing roadway patterns, and no new major roadways or other physical features through existing residential neighborhoods would be developed that would create new barriers. Under both the proposed Project and Compact Development Alternative, future development would be required to be consistent with proposed Project policies that promote cohesive and compatible neighborhoods and prevent new development from dividing existing uses.

Like the proposed Project, the Compact Development Alternative would be consistent with existing City of Morgan Hill plans and policies following adoption and subsequent updates to ensure consistency with the proposed Project.

Because land outside the City limits is currently subject to county land use regulations, and would only become under City land use jurisdiction upon annexation, only one set of land use policies apply at a given time, and there cannot be a conflict between the City and County General Plan policies. As a result, neither the proposed Project nor the Compact Development Alternative would conflict with the County General Plan.

ALTERNATIVES TO THE PROPOSED PROJECT

Both the proposed Project and the Compact Development Alternative include goals and policies that support the planning efforts of other agencies and provide consistency with other plans, including Plan Bay Area, the South County Airport CLUP, the SCVWD *Guidelines and Standards for Land Use Near Streams*, and the Santa Clara Valley Habitat Plan.

Neither the proposed Project nor the Compact Development Alternative would result in significant land use impacts. Therefore, the Compact Development Alternative would be *similar* to the proposed Project.

6.7.2.11 NOISE

As shown in Section 6.2, the proposed Project would result in three less-than-significant noise impacts and two significant and unavoidable impacts.

Under the proposed Project, new development would avoid significant impacts associated with exposure to excessive noise levels by conforming with requirements for acoustic analysis under the proposed Plan, as well as by achieving subsequent compliance with interior and exterior noise standards through application of any necessary special construction or noise insulation techniques. The Municipal Code contains multiple provisions to limit the generation and reception of excessive noise. These requirements would continue to apply under the Compact Development Alternative. Under both the proposed Project and the Compact Development Alternative, as individual projects are proposed, project applicants would be required, as necessary, to perform site-level acoustic analysis to demonstrate compliance with applicable standards. Under both the proposed Project and Compact Development Alternative, it is likely that some new development would require special noise-insulating features or construction techniques, and therefore additional project-level acoustical analysis would be necessary to demonstrate consistency with applicable land use compatibility requirements and interior noise standards. The City would ensure such compliance through the development review process. Under both the proposed Project and Compact Development Alternative, policies would also provide guidelines for noise compatibility levels. These policies, along with adherence to existing regulations, would ensure that land use and development decisions consider and seek to prevent potential noise impacts under both the proposed Project and Compact Development Alternative.

Under both the proposed Project and Compact Development Alternative, vibration generated by construction equipment would have the potential to be substantial. Without specific development details, it is not possible to quantify potential construction vibration impacts. Overall, vibration impacts under both the proposed Plan and Compact Development Alternative related to construction would be short-term, temporary, and generally restricted to the areas in the immediate vicinity of active construction equipment. Proposed policies under both the proposed Project and Compact Development Alternative would serve to reduce vibration impacts from construction.

Development under either the proposed Project or Compact Development Alternative could result in long-term, operations-related vibration impacts to sensitive receptors if sensitive land uses are located in close proximity to land uses with the potential to generate significant vibration levels. Municipal Code provisions would require strategies to prevent vibration impacts. These requirements would continue to apply under

ALTERNATIVES TO THE PROPOSED PROJECT

the Compact Development Alternative. In addition, policies under both the proposed Project and Compact Development Alternative would offer generalized direction for the City to consider noise and vibration impacts during development decisions and to provide specific policies in respect to these considerations.

Under both the proposed Project and the Compact Development Alternative, substantial permanent increases in ambient noise levels would be most likely to result from development of commercial, industrial, mixed-use, and certain institutional or active recreational land uses. Addressing impacts from these noise sources would be handled via the pertinent sections of Morgan Hill's Municipal Code. These requirements would continue to apply under the Compact Development Alternative. In addition, both the proposed Project and Compact Development Alternative include policies that would serve to prevent substantial permanent increases to ambient noise levels.

Under both the proposed Project and the Compact Development Alternative, as a result of implementation of the General Plan and ongoing regional growth, it is anticipated that there would be substantial permanent increases to the ambient noise levels throughout Morgan Hill. These increases would primarily result from increases to transportation-related noise, especially that of automobile traffic. Policies under both the proposed Project and Compact Development Alternative would serve to reduce noise from vehicles at the source and to otherwise shield sensitive uses from excessive noise. Even with existing regulations and proposed policies, this would be a significant and unavoidable impact for both the project-specific and cumulative setting under both the proposed Project and Compact Development Alternative.

Under both the proposed Project and Compact Development Alternative, noise from construction equipment and various construction-related activities would be a cause of temporary or periodic increases in ambient noise levels. The Municipal Code restricts hours of construction and the City reviews project noise impacts as part of the planning and permitting processes. These requirements would continue to apply under the Compact Development Alternative. In addition, policies under both the proposed Project and Compact Development Alternative would serve to reduce temporary or periodic increases to ambient noise.

The Compact Development Alternative would include the same policies that would be adopted under the proposed Project to reduce potential noise impacts. The Compact Development Alternative would result in the same less-than-significant impacts as the proposed Project and would not avoid the significant and unavoidable impacts of the proposed Project. Therefore, the Compact Development Alternative would be *similar* to the proposed Project.

6.7.2.12 POPULATION AND HOUSING

As shown in Section 6.2, the proposed Project would have less-than-significant population and housing impacts. The Compact Development Alternative is projected to result in more new residents and housing units than the proposed Project.

ALTERNATIVES TO THE PROPOSED PROJECT

Buildout of the proposed Project would exceed regional projections. The Compact Development Alternative would result in more population growth and would similarly exceed regional projections. The proposed Project includes policies that would provide a robust planning framework for the growth projected to occur under the proposed General Plan. These policies would also be adopted under the Compact Development Alternative.

Redevelopment under either the proposed Project or Compact Development Alternative would have the potential to displace existing residential units or people. However, all redevelopment under either the proposed Project or Compact Development Alternative would be voluntary in nature, and no housing units would be displaced without permission of the property owners. New development would replace existing development and the City would experience a net increase in all land use types. In addition, existing policy in Morgan Hill's Housing Element would minimize potential impacts related to the displacement of housing units under either the proposed Project or Compact Development Alternative.

Although the Compact Development Alternative would result in more growth than the proposed Project, neither the proposed Project nor the Compact Development Alternative would result in significant population and housing impacts. Therefore, the Compact Development Alternative would be *similar* to the proposed Project.

6.7.2.13 PUBLIC SERVICES AND RECREATION

As shown in Section 6.2, the proposed Project would have less-than-significant impacts to public services. As shown in Table 6-1, the Compact Development Alternative is projected to result in more new residents than the proposed Project.

Like the proposed Project, the Compact Development Alternative would increase the service population served by the MHFD, SSCCFD, MHPD and Sheriff's Office. As under the proposed Project, under the Compact Development Alternative proposed policies would serve to reduce the need for fire protection services and ensure that services are adequate to provide protection to Morgan Hill. As described in Section 4.13, Public Services and Recreation, the MHPD has indicated that the existing police station building is adequately sized to meet long-term future needs. Future expansion can be accommodated by utilizing space within the police station building that is currently occupied by a private company. The Sheriff's Office has indicated that currently there are no plans to expand or relocate, and that no existing facility deficiencies exist that would be exacerbated by the proposed Project. The Sheriff's Office would likely upgrade equipment accordingly over time to incorporate new technologies as they emerge. As under the proposed Project, under the Compact Development Alternative proposed policies would serve to reduce police service demands and ensure that services are adequate to provide protection to Morgan Hill.

With 2035 buildout of the proposed Project, and without assuming any increases in existing capacity, MHUSD elementary schools would be 2,855 students over capacity, middle schools would be 136 students over capacity, high schools would be 865 students over capacity, and the district as a whole would be 3,857 students over capacity. With the Compact Development Alternative, more new students would attend

ALTERNATIVES TO THE PROPOSED PROJECT

MHUSD, exacerbating over-capacity conditions: elementary schools would be 2,923 students over capacity, middle schools would 154 students over capacity, high schools would be 902 students over capacity, and the district as a whole would be 3,979 students over capacity. Under both the proposed Project and the Compact Development Alternative, the MHUSD would need to expand existing facilities to accommodate students. The school district does not currently have plans to expand existing facilities. Under Section 65995 of the California Government Code, the payment of impact fees is deemed to fully mitigate the impacts of new development on school facilities, regardless of whether the fees are adequate to fully fund the expansion or construction of needed facilities. Proposed policies under both the proposed Project and the Compact Development Alternative would help to reduce potential impacts to the MHUSD.

The SCCLD has indicated that further study would be needed to determine the current and future needs and whether additional facility expansion would be needed to maintain adequate services under the proposed Project. The Compact Development Alternative would involve a higher buildout and would likewise increase service demands in need of further study by the SCCLD. The proposed Project and Compact Development Alternative both include policies and support adequate library facilities. Under both the proposed Project and Compact Development Alternative, as specific library expansion or improvement projects are identified, additional project-specific, environmental analysis pursuant to CEQA would be completed.

Neither the proposed Project nor the Compact Development Alternative directly proposes the construction of any parks or recreational facilities. As noted in Chapter 4.13, the City has an existing park service standard of 5 acres of parkland for every 1,000 Morgan Hill residents. Based on existing park and recreational facilities of 208 acres and a 2035 population of 68,057 under the proposed Project, the parkland ratio in 2035 would be approximately 3.1 acres per 1,000 residents. The Compact Development Alternative would result in a higher 2035 population of 68,620,³ and a parkland ratio of 3.0 acres per 1,000 residents. To meet the City's service standards, additional parkland would be needed by 2035 under both the proposed Project and Compact Development Alternative. New residential development under both the proposed Project and Compact Development Alternative would be required to pay park impact fees to generate revenue to fund the park facilities needed to serve new development. It is not known at what time or location future facilities funded by impact fees from future development would be constructed or what the exact nature of these facilities would be, so it cannot be determined what project-specific environmental impacts would occur from their construction and operation. In addition, if future park and recreational facility use results in the physical deterioration of facilities, it is not known what the exact nature of these physical deteriorations would be, so it cannot be determined what environmental impacts may occur. Impacts associated with constructing new parks or recreational facilities, or upgrading and improving existing facilities, would be project-specific, and would require permitting and review in accordance with CEQA, which would ensure that any environmental impacts are disclosed and mitigated to the extent possible. Under both the proposed Project and Compact Development Alternative, future development

³ Based on an existing population of 45,171 and household size of 3.08. 7,613 new housing units x 3.08 persons per household = 23,449 new population.

ALTERNATIVES TO THE PROPOSED PROJECT

would be required to comply with proposed General Plan policies that would ensure adequate park and recreational facilities are available for the residents of Morgan Hill.

Although the Compact Development Alternative would result in a higher 2035 population, and would therefore result in a greater increase in service demands, neither the proposed Project nor the Compact Development Alternative would result in significant public service impacts. Therefore, the Compact Development Alternative would be *similar* to the proposed Project.

6.7.2.14 TRANSPORTATION AND TRAFFIC

As shown in Section 6.2, the proposed Project would have one significant and unavoidable impact and one impact that would be less than significant after mitigation, and the remainder of the impacts would be less than significant.

In comparison to the proposed Project, the Compact Development Alternative would result in slightly more residential growth and slightly less non-residential growth. The Compact Development Alternative would have a lower proportion of single-family homes and higher proportion of multi-family homes in comparison to the proposed Project and it would focus growth within the central portion of the Project Area. Overall, it is anticipated that the number of trips generated would be similar to the proposed Project. Therefore, this alternative would generate similar traffic than the proposed Project. Under the proposed Project, two of the 42 study intersections (Monterey Road/Central Avenue and Tennant Avenue/Murphy Avenue) would exceed level of service standards during one or both peak hours. A significant impact at these two intersections would likely remain under the Compact Development Alternative.

Under the proposed Project, daily roadway segment volumes for all 45 study roadway segments would meet the City of Morgan LOS standard of LOS D or better. Because this alternative would result in a similar level of overall growth as the proposed Project, this alternative would also not be expected to create unacceptable roadway segment volumes.

Under the proposed Project, seven of the eight study freeway segments are projected to operate at an unacceptable LOS F. However, even with no growth within the City of Morgan Hill, Highway 101 would likely operate at unacceptable levels in the future due to the amount of external pass-through trips on Highway 101. Therefore, this significant and unavoidable impact would also be expected to occur under the Compact Development Alternative.

Both the proposed Project and Compact Development Alternative would allow an increase in both residential and non-residential development above existing conditions. Construction and modifications of new and existing roadways would be necessary to support the allowed growth. The proposed Project contains policies that would reduce potential hazards due to roadway design or incompatible uses. These policies would also be adopted under the Compact Development Alternative.

ALTERNATIVES TO THE PROPOSED PROJECT

The proposed General Plan contains policies that ensure efficient circulation and adequate access would be provided in the City, which would help facilitate emergency response. These policies would also be adopted under the Compact Development Alternative.

The proposed Project includes policies that provide for an integrated network of bicycle facilities, as well as for the needs of transit users. These policies would also be adopted under the Compact Development Alternative.

Overall, the Compact Development Alternative and the proposed Project would generate similar traffic impacts. The Compact Development Alternative is not expected to avoid the significant impacts of the proposed Project. Therefore, the Compact Development Alternative would be *similar* to the proposed Project.

6.7.2.15 UTILITIES AND SERVICE SYSTEMS

As shown in Section 6.2, the proposed Project would have less-than-significant impacts to utilities and service systems. As shown in Table 6-1, the Compact Development Alternative is projected to result in more new residents than the proposed Project.

Under the proposed Project, total water demand at buildout of the proposed General Plan would be significantly less than the available supply predicted to be available to the City. The Compact Development Alternative would result in more residents than the proposed Project, but the increase in demand would not be enough to cause water demand to exceed supplies. As under the proposed Project, because available capacity would be sufficient to meet projected demand, the Compact Development Alternative would not require expanded treatment facilities or regional water system conveyance and storage facilities in order to meet demands. Under both the proposed Project and the Compact Development Alternative, any new or expanded local water supply and distribution facilities would require permitting and review in accordance with CEQA, which would ensure environmental impacts are disclosed and mitigated to the extent possible. In addition, proposed water conservation policies would be adopted under the Compact Development Alternative as they would be under the proposed Project.

The residential, industrial, office, retail, service, and public facilities land uses that would result from either the proposed Project or the Compact Development Alternative would not generate wastewater of different quality and treatability than wastewater currently generated by those land uses in the City. The SCRWA wastewater treatment plant is currently in compliance with its NPDES permit requirements. As such, buildout under the proposed Project or Compact Development Alternative would not be expected to generate wastewater that would exceed the treatment requirements of the Central Coast RWQCB. In addition, under both the proposed Project and the Compact Development Alternative proposed policies would enhance compliance with wastewater treatment requirements and capacity.

The SCRWA treatment plant capacity is projected to be exceeded by the year 2022 due to development allowed by the existing General Plans of Morgan Hill and Gilroy. In recognition of this, the SCRWA is

ALTERNATIVES TO THE PROPOSED PROJECT

planning to fund, design, and construct expansion of the facility by 2022. After expansion of the treatment plant, it is anticipated the NPDES discharge permit will be amended to reflect the expanded capacity of the plant. As such, wastewater generated from either the proposed Project or the Compact Development Alternative would not exceed the expanded permitted treatment capacity of the SCRWA facility. Creation of new or extended wastewater collection pipes, lift stations, and increased capacity projects under the proposed Project or Compact Development Alternative could create short-term construction-related environmental effects. However, compliance with the City's and the SCRWA's regulations and standard conditions for new construction related to wastewater collection and treatment would be required. Proposed policies under both the proposed Project and Compact Development Alternative would help to ensure that construction of new wastewater treatment facilities or expansion of existing facilities would not be required.

The incremental solid waste generation under either the proposed Project or the Compact Development Alternative would be a nominal percentage of the combined daily capacity of the three landfills providing 95 percent disposal services to the City. In addition, future development under either the proposed Project or Compact Development Alternative would be required to comply with the CBC Section 4.408, which requires a minimum of 50 percent of non-hazardous construction and demolition debris to be recycled or salvaged, as well as a Waste Management Plan for on-site sorting of construction debris. Compliance with applicable regulations and proposed policies that would be adopted under either the proposed Project or the Compact Development Alternative would enhance solid waste diversion and management and ensure continued compliance with regulations related to solid waste.

As under the proposed Project, construction and operation of development allowed by Compact Development Alternative would require a commitment of energy resources. Proposed new development under either the proposed Project or Compact Development Alternative would be constructed using energy efficient modern building materials and construction practices in accordance with the California Green Building Standards Code (CALGreen), CPUC's *Long Term Energy Efficiency Strategic Plan*, and the City's Municipal Code, which contain a range of energy conservation and renewable energy measures. The new buildings also would use new modern appliances and equipment in accordance with the 2015 Appliance Efficiency Regulations. Accordance with applicable regulations and proposed policies that would be adopted under either the proposed Project or the Compact Development Alternative would ensure that construction and operation impacts for future development would be addressed in project-specific analysis and would enhance energy conservation.

Although the Compact Development Alternative would result in a higher 2035 population, and would therefore result in a greater increase in utility demands, neither the proposed Project nor the Compact Development Alternative would result in significant utility and service system impacts. Therefore, the Compact Development Alternative would be *similar* to the proposed Project.

ALTERNATIVES TO THE PROPOSED PROJECT

6.8 ABILITY TO MEET PROJECT OBJECTIVES

6.8.1 NO PROJECT ALTERNATIVE

Overall, the No Project Alternative would meet many of the objectives of the proposed Project. However, the No Project Alternative would not include adoption of an updated RDCS, and so would not achieve Objective #3: “Regulate development through a clear, fair, flexible, and streamlined growth management system.” The No Project Alternative also would not include several proposed policies intended to reduce the environmental impacts associated with growth allowed by the General Plan through the horizon year of 2035. Therefore, the No Project Alternative would not achieve Objective #8 (“Protect environmental resources for future generations”) as fully as the proposed Project would. In addition, the No Project Alternative would not designate as many lands for mixed-use development as the proposed Project would. Therefore, the No Project alternative would not meet Objective #12 (“Transform Monterey Road into a mixed use corridor”) to the same extent that the proposed Project would.

6.8.2 LOW GROWTH ALTERNATIVE

Overall, the Low Growth Alternative would meet many of the objectives of the proposed Project. In addition, the Low Growth Alternative would avoid one of the proposed Project’s significant and unavoidable impacts to traffic and transportation. Therefore, the Low Growth Alternative would achieve Objective #5 (“Support and connect all modes of transportation”) more fully than the proposed Project would by reducing traffic impacts. However, as discussed in Chapter 4.2, Agriculture and Forestry Resources, leaving land in its existing Rural County designation does not guarantee that existing agriculture uses will continue. Moreover, by maintaining existing Rural County designations, the Low Growth Alternative precludes the ability to achieve Objective 4: “Preserve viable agricultural land, important habitat areas, and recreational open space” and Objective 10: “Allow some residential growth on undeveloped land to fill in the gaps in our boundaries.”

6.8.3 COMPACT DEVELOPMENT ALTERNATIVE

Overall, the Compact Development Alternative would meet many of the objectives of the proposed Project. In addition, the Compact Development Alternative would avoid one of the proposed Project’s significant and unavoidable impacts to agricultural resources. Therefore, the Compact Development Alternative would achieve Objective #4 (“Preserve viable agricultural land, important habitat areas, and recreational open space”) more fully than the proposed Project would. Because it focuses on residential growth to a greater degree than non-residential growth, the Compact Development Alternative redesignates some commercial and industrial land to residential designations. This makes it difficult for the Compact Development Alternative to achieve Objective 6: “Support a diverse local economy and an expanded tax base by preserving our existing job-generating land.”

ALTERNATIVES TO THE PROPOSED PROJECT

6.9 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

In addition to the discussion and comparison of impacts of the proposed Project and the alternatives, Section 15126.6 of the State CEQA Guidelines requires that an “environmentally superior” alternative be selected and the reasons for such a selection be disclosed. In general, the environmentally superior alternative is the alternative that would be expected to generate the least amount of significant impacts. Identification of the environmentally superior alternative is an informational procedure and the alternative selected may not be the alternative that best meets Project objectives. The proposed Project under consideration cannot be identified as the Environmentally Superior Alternative. As shown in Table 6-1, the Compact Development Alternative would have the fewest environmental impacts as compared to the other two alternatives, and would therefore be considered the environmentally superior alternative.

ALTERNATIVES TO THE PROPOSED PROJECT

7. CEQA Mandated Sections

This chapter provides an overview of the impacts of the proposed Project based on the analyses presented in Chapter 4 through Chapter 5 of this Draft EIR. The topics in this chapter include impacts found not to be significant, significant irreversible changes due to the proposed Project, and growth inducement. A more detailed analysis of the effects of the proposed Project would have on the environment and proposed mitigation measures to minimize significant impacts is provided in Sections 4.1 through 4.15.

7.1 IMPACTS FOUND NOT TO BE SIGNIFICANT

California Environmental Quality Act (CEQA) Guidelines Section 15128 allows environmental issues for which there is no likelihood of significant impacts to be “scoped out” and not analyzed further in the EIR. This section explains the reasoning by which it was determined that impacts to mineral resources resulting from implementation of the proposed Project would be less than significant.

7.1.1 MINERAL RESOURCES

The California Department of Conservation Geological Survey (CGS) has classified lands within Santa Clara County into Aggregate and Mineral Resource Zones (MRZs) based on guidelines adopted by the California State Mining and Geology Board, as mandated by the Surface Mining and Reclamation Act of 1974. These MRZs identify whether known or inferred significant mineral resources are present in an area. Lead agencies are required to incorporate identified MRZ resource areas delineated by the state into their General Plans. According to the California Department of Conservation Division of Mines and Geology, there are MRZs in Morgan Hill, which are areas containing mineral deposits for which the significance cannot be evaluated from available data. With the exception of the areas mentioned below, there are no areas within the Project Area identified for the protection or conservation of mineral resources.

There are three areas within Morgan Hill classified as MRZ-3 zones, including the flood plains of Coyote Creek, the Franciscan Complex greenstone located at two small knolls near Anderson dam and an area near Coyote, and two-small areas that lie on each side of a northwest-trending ridge that forms the western bank of Anderson Lake.¹ These locations are identified as containing sand and gravel, as well as greenstone; however, for reasons such as thickness of soil and because these areas typically have not had a history of being mined or have never been mined, are not considered areas for protection. Overall, because of the largely urbanized nature of the Project Area, and because there are no areas identified for the protection of

¹ California Department of Conservation Division of Mines and Geology, Mineral Land Classification: Aggregate Materials in the San Francisco-Monterey Bay Area, Special Report 146, Part IV, page 50 and 51.

CEQA MANDATED SECTIONS

mineral resources within the Project Area, implementation of the proposed Project would result in *no impact* with respect to mineral resources.

7.2 SIGNIFICANT IRREVERSIBLE CHANGES

Section 15126.2(c) of the CEQA Guidelines requires an EIR to discuss the extent to which a proposed project or plan would commit nonrenewable resources to uses that future generation would probably be unable to reserve. The three CEQA-required categories of irreversible changes are discussed below.

7.2.1 LAND USE CHANGES THAT COMMIT FUTURE GENERATIONS

As described in Chapter 3, Project Description, of this Draft EIR, the proposed Project generally maintains the land use pattern of the existing General Plan. The proposed Project is the adoption and implementation of the proposed General Plan and proposed Residential Development Control System (RDCS). The proposed General Plan includes land use, urban design, circulation, public services, natural resources, and safety goals, policies, and actions to guide investment and development in the Project Area over the next 20 years. The proposed RDCS would regulate population growth through the provision of residential building allotments on a yearly or bi-annual basis. Although the proposed Project would generally maintain the existing land use pattern, there are proposed changes that would allow for future development on lands not previously urbanized, such as the Southeast Quadrant and the East of 101 Area. Therefore, at least some of the development allowed under the proposed Project would most likely lead to irreversible changes in land use. Conversion of agricultural lands to urban development would likely make it infeasible for future generations to revert to agricultural cultivation on those lands. This impact is discussed in detail in Chapter 4.2, Agriculture and Forestry Resources.

7.2.2 IRREVERSIBLE DAMAGE FROM ENVIRONMENTAL ACCIDENTS

Irreversible changes to the physical environment could occur from accidental release of hazardous materials associated with development activities; however, compliance with the applicable regulations and implementation of the goals, policies, and actions in the proposed General Plan, as discussed in Chapter 4.8, Hazards and Hazardous Materials, would reduce this potential impact to a less-than-significant level. No other irreversible damage is expected to result from adoption and implementation of the proposed Project.

7.2.3 LARGE COMMITMENT OF NONRENEWABLE RESOURCES

Implementation of development allowed under the proposed Project would result in the commitment of limited, renewable resources such as lumber and water. In addition, development allowed by the proposed Project would irretrievably commit nonrenewable resources for the construction of buildings, infrastructure, and roadway improvements. These nonrenewable resources include mined minerals such as

CEQA MANDATED SECTIONS

sand, gravel, steel, lead, copper, and other metals. Future buildout under implementation of the proposed Project also represents a long-term commitment to the consumption of fossil fuels, natural gas, and gasoline. Increased energy demands would be used for construction, lighting, heating, and cooling of residences, and transportation of people within, to, and from Morgan Hill. However, as shown in Sections 4.15.1, Water; Section 4.15.3, Solid Waste; and Section 4.15.4, Energy Conservation, of Chapter 4.15, Utilities and Service Systems, of this Draft EIR, several regulatory measures and proposed General Plan goals, policies, and actions encourage energy and water conservation, alternative energy use, waste reduction, and green building.

Future development as a result of implementation of the proposed Project would be required to comply with all applicable building and design requirements, including those set forth in Title 24 relating to energy conservation. In compliance with CALGreen, the State's Green Building Standards Code, future development would be required to reduce water consumption by 20 percent, divert 50 percent of construction waste from land-fills, and install low pollutant-emitting materials.

Therefore, while the construction and operation of future development, as a result of implementation of the proposed Project, would involve the use of nonrenewable resources, compliance with applicable standards and regulations, as well as implementation of proposed General Plan goals, policies, and actions, would reduce the use of nonrenewable resources to the maximum extent practicable.

7.3 GROWTH-INDUCING IMPACTS

Section 15126.2(d) of the CEQA Guidelines requires that an EIR discuss the ways in which a proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Typical growth inducing factors might be the extension of urban services or transportation infrastructure to a previously unserved or under-served area, or the removal of major barriers to development. This section evaluates the proposed Project's potential to create such growth inducements. As Section 15126.2(d) requires, "...it must not be assumed that growth in an area is necessarily beneficial, detrimental, or of little significance to the environment." In other words, negative impacts associated with growth inducement occur only where the projected growth would cause significant adverse environmental impacts.

Growth-inducing impacts fall into two general categories: direct or indirect. Direct growth-inducing impacts are generally associated with providing urban services to an undeveloped area. Indirect, or secondary growth-inducing impacts, consist of growth induced in the region by additional demands for housing, goods, and services associated with the population increase caused by, or attracted to, a new project.

Implementation of the proposed Project would directly induce growth by establishing policies and land use designations to allow residential and non-residential development and to plan and construct infrastructure

CEQA MANDATED SECTIONS

to serve that development, as presented in Chapter 3, Project Description, and discussed in detail in Chapter 4.12, Population and Housing, of this Draft EIR. However, his growth would come incrementally over a period of 20 years and the proposed General Plan's policy framework would ensure that adequate planning occurs to accommodate it. Policies enacted under the General Plan would control the geographical extent of growth and encourage sustainable patterns of urban land uses.

In addition, growth under the proposed Project would have beneficial effects as well. Implementation of the proposed Project would provide additional housing for people working in Morgan Hill and other surrounding communities, including the City of Gilroy and the City of San José, and would also provide additional local job and shopping opportunities for existing and future residents, thereby reducing Morgan Hill's contribution to regional commute traffic. State law requires the City to promote the production of housing to meet its fair share of the regional housing needs distribution made by the Association of Bay Area Governments (ABAG), and implementation of the proposed Project would allow the City to satisfy these requirements. Although future development resulting from implementation of the proposed Project would involve construction activities that could generate some temporary employment opportunities, it is unlikely that construction workers would relocate to the City of Morgan Hill as result of this future development.

While the proposed General Plan does allow additional growth, it also includes specific policies that limit that growth to the City limits and UGB. The proposed General Plan land use map provides a mixture of housing, shopping, public, and employment opportunities so that as the number of residents increase, they do not pressure adjacent communities to provide new commercial and employment opportunities. The General Plan commits to only allow development where infrastructure is in place or is planned. In addition, the proposed General Plan discourages piecemeal development.

Overall, while implementation of the proposed Project would induce growth, this growth would occur incrementally over a period of 20 years and there is a policy framework in place at the local and regional level to ensure that adequate planning occurs to accommodate it.

8. Organizations and Persons Consulted

This Draft EIR was prepared by the following consultants and individuals:

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