2023-2031 Housing Element Implementation Project

Draft Environmental Impact Report

SCH# 2022020362

prepared by

City of Piedmont
120 Vista Avenue
Piedmont, California 94611
Contact: Kevin Jackson, AICP, Director of Planning & Building

prepared with the assistance of

Rincon Consultants, Inc.
449 15th Street, Suite 303
Oakland, California 94612

November 2023

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Table of Contents

Tables

Figures

Appendices

Executive Summary

This document is an Environmental Impact Report (EIR) analyzing the environmental effects of the City of Piedmont 2023-2031 Housing Element Implementation Project ("proposed project"). This section summarizes the characteristics of the proposed project, alternatives to the proposed project, and the environmental impacts and mitigation measures associated with the proposed project.

Project Synopsis

Lead Agency Name, Address and Contact

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Project Location

The study area considered in this EIR includes the entire city of Piedmont (hereinafter referred to as "City" or "Piedmont"), which encompasses approximately 1.7 square miles.

Project Description

This EIR has been prepared to examine the potential environmental effects of the proposed project. The following is a summary of the full project description, which can be found in Section 2, *Project Description*.

The proposed 2023-2031 Housing Element Implementation Project ("proposed project") would amend the City of Piedmont's 2009 General Plan (hereinafter referred to as the "Piedmont General Plan" or "General Plan"), including the Land Use Element and other elements, and amend the Piedmont City Code (PCC) to implement the City's 6th Cycle 2023-2031 Housing Element ("Housing Element"). The Housing Element is designed to allow for the capacity to build housing in accordance with the Regional Housing Needs Allocation (RHNA) assigned to Piedmont. The proposed project also includes development of a specific plan in the Moraga Canyon Specific Plan (MCSP) Area. The proposed project also includes updates to the Environmental Hazards Element (which serves as the Safety Element and Noise Element of the General Plan) to implement the Housing Element and reflect recent changes in State law.

Further, the proposed project includes updates to other elements of the General Plan to achieve internal consistency, implement the Housing Element, and reflect regulatory changes since original adoption of the Piedmont General Plan. Amendments to other General Plan elements include amendments to the: Land Use Element; Transportation Element; Parks, Recreation, and Open Space Element; Community Services and Facilities Element; Design and Preservation Element; and Natural Resources and Sustainability Element.

This EIR studies the future buildout of the implementation of the 2023-2031 Housing Element, including particular sites identified for growth in the Housing Element, sites within zoning districts identified for zoning amendments, and actions and programs intended to increase housing production in all areas of Piedmont. Projected buildout includes a projection based on the sites inventory in this EIR of 652 units and 394 units associated with the other Housing Element implementation programs. This includes an additional 192 units as ADUs, a projection of an additional 96 units as State and local density bonuses, and 106 housing units from implementation of the other housing programs, described above. Overall, this EIR assumes 1,048 housing units associated with the proposed project. Of the 1,048 units, up to 199 units could be within the MCSP Area (132 units plus 67 additional units from possible SB 9, ADU, and/or density bonus development in the area).

Project Objectives

The purpose of the project is to implement the policies and programs included in Piedmont's adopted 2023-2031 Housing Element and to update other elements of the 2009 City of Piedmont General Plan as needed for consistency with the Housing Element and State law. The proposed project includes the following goals and objectives:

1. Amend the General Plan for consistency with the adopted 6th Cycle 2023-2031 Housing Element and to accommodate the growth required by the State-mandated RHNA of 587 housing units, including amendments to the following elements: Land Use Element; Transportation Element; Environmental Hazards Element (Safety and Noise Elements); Parks, Recreation, and Open Space Element; Design & Preservation Element; Community Services and Facilities Element; and Natural Resources and Sustainability Element.
2. Revise the City's Zoning Ordinance as outlined in the programs of the adopted 6th Cycle 2023-2031 Housing Element. Under a maximum build-out scenario the revised Zoning Ordinance would allow for an estimated 1,048 new housing units, disbursed throughout the City, for occupants of all income levels.
3. Prepare a specific plan for the City-owned parcels in the Moraga Canyon area and the Moraga Avenue roadway that intersects them, located near Piedmont's northern border with the City of Oakland. The specific plan is expected to improve pedestrian, bicycle and vehicular safety in the Moraga Avenue roadway and to facilitate the development of below-market-rate housing and the accommodation of at least 132 housing units at all income levels while continuing existing recreational and Public Works Department uses and services.
4. Meet State-mandated RHNA for 6th Cycle Housing Element planning period of 2023-2031;
5. Enact new and amended General Plan goals, policies, and actions, and new and amended City Code regulations which affirmatively further fair housing in Piedmont; and
6. Bring the General Plan into conformance with recently enacted State laws.

Alternatives

As required by the California Environmental Quality Act (CEQA), this EIR examines alternatives to the proposed project. Studied alternatives include the following two alternatives. Based on the alternatives analysis, Alternative 2 was determined to be the environmentally superior alternative.

- Alternative 1: No Project
- Alternative 2: Reduced Buildout

Alternative 1 (No Project Alternative): The "No Project" Alternative is required to be analyzed under CEQA. In this case, the alternative involves continued implementation of the City's existing plans and policies that would accommodate development in accordance with the existing land use designations, policies, and zoning standards. Consistent with the buildout assumed in the City's previous 2015-2023 Housing Element, this alternative assumes development of 60 units, or approximately 527 units fewer than the 6th Cycle RHNA and 988 fewer units than the assumed development under the proposed project's maximum build-out scenario of 1,048 units. It is assumed that development would occur generally consistent with current development patterns and trends, which involve primarily small residential projects under four units, residential additions, and the construction of accessory dwelling units (ADUs). In addition, Alternative 1 would not include adoption of a specific plan that would facilitate residential development in the Moraga Canyon Specific Plan (MCSP) Area. Similarly, the proposed amendments to the Piedmont General Plan to implement the 2023-2031 Housing Element and bring the General Plan into conformance with recent State law would not be adopted. The No Project Alternative would not meet the project objectives because it would not implement the 6th Cycle 2023-2031 Housing Element, which was designed to satisfy the City's RHNA, would not prepare a Specific Plan for the City-owned parcels in the Moraga Canyon area, and would not bring the General Plan into conformance with recent State laws. This alternative would result in less impacts to aesthetics, air quality, biological resources, cultural resources, energy, geology and soils, greenhouse gas emissions, hazards and hazardous materials, hydrology and water quality, land use and planning, noise, population and housing, public services and recreation, tribal cultural resources, utilities and service systems, and wildfire due to the decrease in residential units developed. Because development could still occur and the exact nature and location of such development is unknown, impacts related to historical resources and greenhouse gas (GHG) emissions would remain significant and unavoidable. The significant and unavoidable VMT impact would be increased under Alternative 1 because this alternative would not reduce VMT per resident to the same extent as under the proposed project. However, this alternative would eliminate the significant and unavoidable impacts related to construction noise, wastewater infrastructure, and wildfire.

Alternative 2 (Reduced Buildout): This alternative assumes that the entirety of the Housing Element is not implemented, but that State laws such as SB 9, AB 1851, AB 2244 and the State Density Bonus Law, would continue to be implemented. This alternative would include continued implementation of regulations governing ADUs and Zone B development on sites less than 10 acres. Unlike the proposed project which proposes zoning changes to facilitate development on sites more than 10 acres, Alternative 2 only anticipates development on sites less than 10 acres at the existing allowed zoning of 5.445 units per acre. Alternative 2 assumes that the MCSP would be adopted in accordance with Program 1.L and assumes that developers in Moraga Canyon would request 80 percent density bonuses for 100 percent affordable housing. This alternative would include updates to elements of the General Plan to achieve internal consistency, implement the 2023-2031 Housing Element, and reflect regulatory changes since original adoption of the General Plan. Alternative 2 would result in the development of 587 units, or 461 fewer units when compared to the buildout assumed under the proposed project of 1,048 units. Alternative 2 would meet some of the project objectives because it would amend the General Plan for consistency with the 2023-2031 Housing Element and meet the number of new housing units in the RHNA of 587 units (Project Objectives #1 and #4), would prepare a Specific Plan for the City-owned parcels in the Moraga Canyon area (Project Objective #3), and would bring the General Plan into conformance with recent State laws (Project Objective #5). However, it would not facilitate the same level of development as the proposed project nor the affordability levels of the RHNA; thus, it may not achieve Project Objectives #2 and #4. It would not enact all of the General Plan programs and therefore would not affirmatively further fair housing in

Piedmont (Project Objective #5) to the same extent as under the proposed project, in compliance with State law. This alternative would result in less impacts to aesthetics, air quality, biological resources, cultural resources, energy, geology and soils, greenhouse gas emissions, hazards and hazardous materials, hydrology and water quality, land use and planning, noise, population and housing, public services and recreation, tribal cultural resources, utilities and service systems and wildfire due to the decrease in residential units developed. However, this alternative would not eliminate the unavoidably significant impacts related to historical resources, GHG, construction noise, wastewater infrastructure, or wildfire.

Refer to Section 6, *Alternatives*, for the complete alternatives analysis.

Areas of Known Controversy

The EIR scoping process identified several areas of known controversy for the proposed project. A summary of comments received in response to the Notice of Preparation of a Draft EIR and input received at the EIR scoping meeting held by the City is provided in Section 1, *Introduction*. Issues raised as areas of concern include public services impacts, parks and recreation impacts, biological resources impacts, wildfire hazards, geology and soils impacts, utilities impacts, transportation impacts, and the impacts associated with development in the Moraga Canyon Specific Plan Area.

Issues to be Resolved

There are no issues to be resolved that have been identified.

Issues Not Studied in Detail in the EIR

Due to the unique conditions of the City, there is no substantial evidence that significant impacts would occur related to agricultural and forestry resources and mineral resources. All other CEQA topics are discussed in the EIR.

Summary of Impacts and Mitigation Measures

Table ES-1 summarizes the environmental impacts of the proposed project, proposed mitigation measures, and residual impacts (the impact after application of mitigation, if required). Impacts are categorized as follows:

- **Significant and Unavoidable.** An impact that cannot be reduced to below the threshold level given reasonably available and feasible mitigation measures. Such an impact requires a Statement of Overriding Considerations to be issued if the project is approved per *CEQA Guidelines* Section 15093.
- **Less than Significant with Mitigation Incorporated.** An impact that can be reduced to below the threshold level given reasonably available and feasible mitigation measures. Such an impact requires findings under *CEQA Guidelines* Section 15091.
- **Less than Significant.** An impact that may be adverse, but does not exceed the threshold levels and does not require mitigation measures. However, mitigation measures that could further lessen the environmental effect may be suggested if readily available and easily achievable.
- **No Impact.** The proposed project would have no effect on environmental conditions or would reduce existing environmental problems or hazards.

Table ES-1 Summary of Environmental Impacts, Mitigation Measures, and Residual Impacts

Impact	Mitigation Measure (s)	Residual Impact
Aesthetics		
Impact AES-1. Implementation of the proposed project would allow increased density and height for new residential development on individual sites throughout the City such that scenic views from public viewpoints could be adversely affected from limited locations. However, this would occur on individual sites and would be minimized through required adherence to General Plan policies and Design Standards. This impact would be less than significant.	None required.	Less than Significant without Mitigation.
Impact AES-2. There are no designated or eligible Scenic Highways in Piedmont or with substantial views of Piedmont. Implementation of the proposed project would not damage scenic resources visible from a Scenic Highway. No impact would occur.	None required.	No impact.
Impact AES-3. Piedmont is urbanized and future development under the proposed project would not conflict with applicable zoning and other regulations governing scenic quality such that a significant impact would occur. This impact would be less than significant.	None required.	Less than Significant without Mitigation.
Impact AES-4. Development facilitated by the proposed project would create new sources of light or glare that could adversely affect daytime or nighttime views in the area. However, there are already sources of light and glare throughout the city, and development would not substantially add to existing light and glare that would adversely affect daytime or nighttime views. With compliance with existing city guidelines including General Plan policies and the PCC, this impact would be less than significant.	None required.	Less than Significant without Mitigation.
Air Quality		
Impact AQ-1. The proposed project would not conflict with the control measures within the 2017 Clean Air Plan, and VMT increase from the project would be less than the project's project population increase. Therefore, this impact would be less than significant.	None required.	Less than Significant without Mitigation.
Impact AQ-2. Construction facilitated by the proposed project would temporarily increase air pollutant emissions, which would affect local air quality. However, the proposed project includes new Piedmont General Plan policies to address construction emissions. Compliance with the proposed new policies would reduce this impact to a less than significant level.	None required.	Less than Significant without Mitigation.

Impact	Mitigation Measure (s)	Residual Impact
Impact AQ-3. Vehicle miles traveled (VMT) associated with development facilitated by the proposed project would increase at a lower rate than population growth facilitated by the project. Therefore, operational impacts on criteria pollutants would be less than significant.	None required.	Less than Significant without Mitigation.
Impact AQ-4. Construction activities for individual projects facilitated by the proposed project lasting longer than two months or located within 1,000 feet of sensitive receptors could expose sensitive receptors to substantial pollutant concentrations. Additionally, development facilitated by the proposed project could site new sensitive land uses near Interstate 580/80, which may expose them to substantial pollutant concentrations. However, the proposed project includes adding policies to the Piedmont General Plan to address these pollutants. With compliance with proposed new policies, this impact would be less than significant.	None required.	Less than Significant without Mitigation.
Impact AQ-5. Development facilitated by the proposed project would not create objectionable odors that could affect a substantial number of people. This impact would be less than significant.	None required.	Less than Significant
Biological Resources		
Impact BIO-1. Development facilitated by the proposed project may result in direct or indirect impacts to special-status species or their associated habitats, as well as impacts to nesting birds. However, the proposed project includes adding policies to the Piedmont General Plan to address potential impacts. With compliance with proposed new General Plan policies, as well as existing General Plan policies and other regulations, this impact would be less than significant.	None required.	Less than Significant without Mitigation.
Impact BIO-2. Development facilitated by the proposed project may directly or indirectly impact riparian habitat, sensitive natural communities, or protected wetlands in Piedmont. Implementation of existing Piedmont General Plan policies and federal, State, and local regulations would ensure riparian habitat and wetlands would not be significantly impacted. This impact would be less than significant.	None required.	Less than Significant without Mitigation.
Impact BIO-3. Development facilitated by the proposed project may result in impacts to state or federally protected wetlands; however, these potential impacts would be addressed by existing regulations that protect wetlands. This impact would be less than significant.	None required.	Less than Significant without Mitigation.

Impact	Mitigation Measure (s)	Residual Impact
Impact BIO-4. Implementation of the proposed project may impact the movement of native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors. However, with compliance with proposed new Piedmont General Plan policies, this impact would be less than significant.	None required.	Less than Significant without Mitigation.
Impact BIO-5. Implementation of the proposed project would not conflict with local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. This impact would be less than significant.	None required.	Less than Significant without Mitigation.
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. No impact would occur. .	None required.	No Impact
Cultural Resources		
Impact CUL-1. Development facilitated by the proposed project could adversely affect known and unidentified historical resources. Impacts to historical resources would be significant and unavoidable.	No feasible mitigation measures have been identified	Significant and Unavoidable
Impact CUL-2. Development facilitated by the proposed project could adversely affect identified and unidentified Archaeological resources. This impact would be less than significant with proposed General Plan policies and programs.	None required	Less than Significant without Mitigation.
Impact CUL-3. Ground-disturbing activities associated with development under the proposed project could result in damage to or destruction of human burials. Impacts would be less than significant through adherence to State Health and Safety Code Section 7050.5 and Public Resources Code Section 5097.98, as well as General Plan Action 30.B.	None required.	Less than Significant without Mitigation.

Impact	Mitigation Measure (s)	Residual Impact
Cumulative Impact: The potential for impacts to built environment historical resources from individual developments is site-specific and depends on the location and nature of each individual development proposal. Future development projects would continue to be subject to existing federal, State, and local requirements and discretionary projects may be subject to project-specific mitigation requirements as outlined herein. It is anticipated that cumulative impacts to historical resources can be avoided or minimized through implementation of Mitigation Measure CUL-1 on a project-by-project basis, but alteration or demolition of built environment historical resources remains a possibility citywide. Therefore, the incremental effect of the project on built environment historical resources would be cumulatively considerable.	No feasible mitigation measures have been identified.	Cumulatively considerable impact.
Energy		
Impact E-1. Development facilitated by the proposed project would not result in a significant environmental impact due to the wasteful, inefficient, or unnecessary consumption of energy resources during construction or operation. This impact would be less than significant.	None required.	Less than Significant without Mitigation.
Impact E-2. The proposed project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. This impact would be less than significant.	None required.	Less than Significant without Mitigation.
Geology and Soils		
Impact GEO-1. The Hayward Fault runs east of Piedmont. Since no part of Piedmont is located within an Alquist-Priolo zone, development facilitated by the project would not be subject to surface or ground rupture. Development facilitated by the proposed project would be subject to seismically-induced ground shaking and other seismic hazards, including liquefaction and landslides, which could damage structures and result in loss of property and risk to human health and safety. Impacts would be less than significant with required compliance with State-mandated building standards, Piedmont General Plan policies and actions, and the PCC citywide regulations. Impacts for the Moraga Canyon Specific Plan Area would be less than significant with mitigation incorporated and adherence to applicable laws, regulations, and policies.	**MCSP-GEO-1 Geotechnical Assessment for Moraga Canyon Specific Plan Area.** A geotechnical assessment shall be prepared for development in the Moraga Canyon Specific Plan Area by a qualified engineer prior to issuance of a grading permit. The geotechnical assessment shall include onsite sampling of existing soil to ascertain current conditions and characterize the potential for risks and implications for future building foundation elements. The analysis of the onsite conditions and risks shall be based on laboratory results generated in accordance with current procedures and applicable state and local construction, engineering, and geotechnical building standards at the time the assessment is prepared. The design of individual projects and/or construction shall incorporate all recommendations of the geotechnical assessment. The assessment and recommendations shall be prepared by a California-licensed professional engineer and shall comply with current state and local building codes. The intention of the geotechnical assessment is to	Less than Significant.

Impact	Mitigation Measure (s)	Residual Impact
	sufficiently inform design related to geologic hazards and to help ensure that the design of building foundations, subgrades, and transportation infrastructure can withstand existing conditions, or that the individual site can be treated in such a manner as to address hazardous geologic conditions.	
Impact GEO-2. With adherence to applicable laws and regulations, the proposed project would not result in substantial soil erosion or the loss of topsoil. Therefore, this impact would be less than significant.	None required.	Less than Significant without Mitigation.
Impact GEO-3. The City of Piedmont is located on soils with low to moderate expansivity. With adherence to CBC requirements, the PCC, and Piedmont General Plan policies, impacts associated with unstable or expansive soils would be less than significant.	None required.	Less than Significant without Mitigation.
Impact GEO-4. The proposed project would not include septic tanks or alternative wastewater disposal systems. No impact would occur.	None required.	Less than Significant without Mitigation.
Impact GEO-5. Development facilitated by the proposed project has the potential to impact paleontological resources. Nonetheless, with adherence to new General Plan policies included as part of the proposed project, this impact would be less than significant.	None required	Less than Significant without Mitigation.
Greenhouse Gas Emissions		
Impact GHG-1. The proposed project would not be consistent with BAAQMD's building and transportation thresholds. Even with implementation of proposed new policies in the General Plan Natural Resources and Sustainability Element and Transportation Element, this impact would remain significant and unavoidable.	No feasible mitigation measures have been identified.	Significant and Unavoidable
Impact GHG-2. The proposed project would be consistent with the 2022 Scoping Plan, Plan Bay Area 2050, the Piedmont General Plan, and the City's CAP. This impact would be less than significant with compliance with the proposed new General Plan policies.	None required.	Less than Significant without Mitigation.

Impact	Mitigation Measure (s)	Residual Impact
Cumulative Impact. The proposed project would be generally consistent with the State's 2022 Scoping Plan, Plan Bay Area 2050, the City of Piedmont General Plan, and the City's CAP 2.0. However, despite implementation of mitigation measures GHG-1 and T-1, the proposed project would still be inconsistent with BAAQMD's project-level thresholds, specifically transportation threshold 1.a., as VMT would not be guaranteed to be below the baseline regional threshold; building threshold 1.a., as the City's Reach Code does not regulate multi-family residences and the City's ability to regulate all electric development has been affected by recent caselaw; building threshold 1.b., as the City's EV requirements are less stringent than CALGreen Tier 2. Therefore, the proposed project would result in a significant and unavoidable cumulative impact on GHG emissions.	No feasible mitigation measures have been identified.	Cumulatively considerable impact
Hazards and Hazardous Materials		
Impact HAZ-1. Implementation of the proposed project would facilitate new residential development. Proposed residential development would not involve routine transportation, use, disposal of hazardous materials. However, construction of new residences could result in an increase in the overall routine, transport, use, and disposal of hazardous materials in piedmont near residential land uses. Nonetheless, required compliance with applicable regulations related to hazardous materials and compliance with general plan policies would minimize the risk of releases and exposure to these materials. Impacts would be less than significant.	None required.	Less than Significant without Mitigation.
Impact HAZ-2. Development facilitated by the proposed project would not emit hazardous emissions or handle hazardous or acutely hazardous material, substances, or waste within 0.25 mile of an existing or proposed school. This impact would be less than significant.	None required.	Less than Significant without Mitigation.
Impact HAZ-3. Implementation of the proposed project would accommodate development on or near hazardous materials sites. However, compliance with applicable regulations and standard conditions of approval requiring site characterization and cleanup would minimize hazards from development on contaminated sites. Impacts would be less than significant with mitigation incorporated.	**MCSP-HAZ-1 Property Assessment - Phase I and II ESAs**. Prior to the issuance of any grading, demolition or grading permit for development in the Moraga Canyon Specific Plan Area, the project applicant shall retain a qualified environmental professional (EP), as defined by ASTM E-1527 to prepare a project-specific Phase I Environmental Site Assessment (ESA) in accordance with standard ASTM methodologies, to assess the land use history of the project site. If the Phase I ESA identifies recognized environmental conditions or potential areas of concern, the project applicant shall retain a qualified environmental consultant, California Professional Geologist	Less than Significant.

Impact	Mitigation Measure (s)	Residual Impact
	(PG) or California Professional Engineer (PE), to prepare a Phase II ESA for the project site to determine whether the soil, groundwater, and/or soil vapor has been impacted at concentrations exceeding regulatory screening levels. The Phase II ESA shall be completed prior to the issuance of any building permit authorizing construction, grading permit or demolition permit and shall be based on the results of the Phase I ESA. As part of the Phase II ESA, the qualified environmental consultant (PG or PE) shall screen the analytical results against the San Francisco Bay Regional Water Quality Control Board environmental screening levels (ESL). These ESLs are risk-based screening levels under various depth and land use scenarios. The City shall review and approve the Phase II ESA prior to the issuance of any building, grading or demolition permit. If the Phase II ESA for the project site indicates that contaminants are present in the subsurface at the project site, the project applicant shall take appropriate steps to protect site workers and the public. This may include the preparation of a Soil Management Plan (see Mitigation Measure MCSP HAZ-2) prior to issuance of a building, grading or demolition permit. If the Phase II ESA for the project site indicates that contaminants are present at concentrations exceeding hazardous waste screening thresholds for contaminants in soil and/or groundwater (California Code of Regulations [CCR] Title 22, Section 66261.24 Characteristics of Toxicity), the project applicant shall take appropriate steps to protect site workers and the public. This may include the completion of remediation (see Mitigation Measure MCSP HAZ-3) at the project site prior to onsite construction. **MCSP-HAZ-2 Soil Management Plan**. For future development in the Moraga Canyon Specific Plan Area, if impacted soils or other impacted wastes are present at the project site, the project applicant shall retain a qualified environmental consultant (PG or PE), to prepare a Soil Management Plan (SMP) prior to issuance of a building, demolition or grading permit. The SMP, or equivalent document, shall address:	

Impact	Mitigation Measure (s)	Residual Impact
	1. On-site handling and management of impacted soils or other impacted wastes (e.g., stained soil, and soil or groundwater with solvent or chemical odors) if such soils or impacted wastes are encountered, and 2. Specific actions to reduce hazards to construction workers and offsite receptors during the construction phase. The plan must establish remedial measures and soil management practices to ensure construction worker safety, the health of future workers and visitors, and the off-site migration of contaminants from the project site. These measures and practices may include, but are not limited to: ▪ Stockpile management, including stormwater pollution prevention and the installation of BMPs ▪ Proper disposal procedures of contaminated materials ▪ Investigation procedures for encountering known and unexpected odorous or visually stained soils, other indications of hydrocarbon piping or equipment, and/or debris during ground-disturbing activities ▪ Monitoring and reporting ▪ A health and safety plan for contractors working at the project site that addresses the safety and health hazards of each phase of site construction activities with the requirements and procedures for employee protection ▪ The health and safety plan shall also outline proper soil handling procedures and health and safety requirements to minimize worker and public exposure to hazardous materials during construction The City of Piedmont Public Works Director or designee shall review and approve the project site SMP prior to issuing of any grading, demolition or grading permit. The project applicant shall implement the SMP during demolition, grading, and construction at the project site. **MCSP-HAZ-3 Remediation**. For future development in the Moraga Canyon Specific Plan Area, where contaminated soil is identified during implementation of Mitigation Measures MCSP HAZ-1 and/or MCSP HAZ-2 as present within the demolition, grading or	

Impact	Mitigation Measure (s)	Residual Impact
	construction envelope at the project site at chemical concentrations exceeding ESLs and/or hazardous waste screening thresholds for contaminants in soil (California Code of Regulations [CCR] Title 22, Section 66261.24), the project applicant shall retain a qualified environmental consultant (PG or PE), to properly dispose of the contaminated soil. The qualified environmental consultant shall utilize the project site analytical results for waste characterization purposes prior to offsite transportation or disposal of potentially impacted soils or other impacted wastes. The qualified consultant shall provide disposal recommendations and arrange for proper disposal of the waste soils or other impacted wastes (as necessary), and/or provide recommendations for remedial engineering controls, if appropriate. Remediation of impacted soils and/or implementation of remedial engineering controls may require: additional delineation of sub-surface impacts; additional analytical testing per landfill or recycling facility requirements; soil excavation; and offsite disposal or recycling. The City of Piedmont Public Works Director or designee shall review and approve the project site disposal recommendations prior to transportation of waste soils offsite, and review and approve remedial engineering controls, prior to construction. The project applicant shall review and implement the project site disposal recommendations prior to transportation of waste soils offsite and review and implement the remedial engineering controls prior to construction. The City of Piedmont shall review and approve the project site disposal recommendations and remedial engineering controls prior to issuing a building, demolition or grading permit.	
Impact HAZ-4. There are no airports within two miles of the City of Piedmont, and Piedmont is not within the influence area of an airport. No impact would occur.	None required.	No impact

Impact	Mitigation Measure (s)	Residual Impact
Hydrology and Water Quality		
Impact HYD-1. Future development under the proposed project would involve ground-disturbing activities and the use of heavy machinery that could release materials, including sediments and fuels, which could adversely affect water quality. Operation of potential future development could also result in discharges to storm drains that could be contaminated and affect downstream waters. However, compliance with required permits and existing regulations, and implementation of Best Management Practices contained therein, would ensure that potential water quality impacts would be less than significant.	None required.	Less than Significant without Mitigation.
Impact HYD-2. Future development facilitated under 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. Implementation of low impact development measures and on-site infiltration required under the C.3 provisions of the MRP, and compliance with the Piedmont City Code would increase the potential for groundwater recharge. Furthermore, the proposed project would not interfere with the objectives and goals within the Basin Plan. Impacts would be less than significant.	None required.	Less than Significant without Mitigation.
Impact HYD-3. Future development under the proposed project would not substantially alter the existing drainage pattern of future development sites, 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 or substantially increase the rate or amount of surface runoff in a manner which would result in flooding or exceed the capacity of stormwater drainage systems. Impacts related to drainage patterns would be less than significant.	None required.	Less than Significant without Mitigation.
Impact HYD-4. There are no FEMA-designated Flood Hazard Areas in Piedmont. Adherence to General Plan policies and compliance with the PCC and the California Health and Safety Code would reduce potential effects associated with flood events. This impact would be less than significant.	None required.	Less than Significant without Mitigation.

Impact	Mitigation Measure (s)	Residual Impact
Land Use and Planning		
Impact LU-1. Project implementation would not physically divide an established community. This impact would be less than significant.	None required.	Less than Significant without Mitigation.
Impact LU-2. The project would not result in a significant environmental impact due to a conflict with a land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. Therefore, this impact would be less than significant.	None required.	Less than Significant without Mitigation.
Noise		
Impact NOI-1. Construction associated with housing development facilitated by the proposed project would be required to comply with the allowed daytime construction hours regulated by the Piedmont City Code and, therefore, would not occur during nighttime hours when people are more sensitive to noise. However, larger developments could involve construction with lengthy durations, substantial soil movement, use of large, heavy-duty equipment, excavation of rocky conditions, and/or pile driving near noise-sensitive land uses that could exceed the applicable FTA daytime noise limits and Piedmont General Plan recommended maximum noise levels. Therefore, this impact would be significant and unavoidable.	No feasible mitigation measures have been identified.	Significant and Unavoidable
Impact NOI-2. Future residential development facilitated by the proposed project could include mechanical equipment (i.e., HVAC), delivery and trash trucks, and other noise-generating activities. However, such activities would be typical of the developed and urbanized environment. In addition, on-site activities would be required to comply with applicable noise standards in the Piedmont City Code. Furthermore, while housing development would generate vehicle trips in the city, the increase in mobile noise would not result in a perceptible 3-dBA increase. Therefore, permanent noise increases due to operation of the development facilitated by the proposed project would be less than significant.	None required.	Less than Significant without Mitigation.
Impact NOI-3. Housing development facilitated by the proposed project is not anticipated to involve operational activities that would result in substantial vibration levels. However, construction activities under the proposed project, specifically pile driving, could potentially generate vibration exceeding thresholds for buildings or structures susceptible to damage (e.g., historic structures). Nonetheless, with adherence to the proposed new General Plan vibration reduction policy, temporary construction-related vibration impacts would be less than significant.	None required.	Less than Significant without Mitigation.

Impact	Mitigation Measure (s)	Residual Impact
Impact NOI-4. The closest airport to Piedmont is the Oakland International Airport which is located approximately 7.8 miles south of the city. Housing development facilitated under the proposed project would not be within the Oakland International Airport's noise contours. Therefore, development facilitated by the proposed project would not be exposed to excess noise levels associated with airport operations and this impact would be less than significant.	None required.	Less than Significant without Mitigation.
Cumulative Impact: Construction of future development projects, facilitated by the proposed Housing Element Implementation project, in Piedmont would produce temporary noise impacts that would be localized to a project site and sensitive receivers within the immediate vicinity. Construction activities associated with future development would be required to comply with PCC Section 12.8.2 and would not occur during nighttime hours between the hours of 6:00 p.m. and 8:00 a.m. each day, Sunday evening through Saturday morning, and between the hours of 6:00 p.m. and 9:00 a.m. Saturday evening through Sunday morning. It is anticipated that, with adherence to the proposed Construction Nosie Reduction Measures and Construction Noise Study General Plan policies, construction noise levels for most projects would be reduced to below applicable FTA noise limits. However, construction noise levels associated with some of the housing development proposed under the proposed project would not be reduced below the applicable FTA noise limits for construction noise on a case-by-case basis. Further, larger development projects could combine together, or combine with smaller development projects, to substantially increase noise levels at specific neighboring noise-sensitive receivers. Therefore, concurrent construction of development projects accommodated under the proposed project could result in cumulatively considerable impacts. This impact from development facilitated by the proposed Housing Element Implementation project could be cumulatively considerable and cumulative impacts would be significant and unavoidable.	No feasible mitigation measures have been identified.	Cumulatively considerable impact.
Population and Housing		
Impact POP-1. Implementation of the proposed project would facilitate development of up to 1,048 additional housing units in the city and add an estimated 2,934 residents. Growth resulting from the project would therefore be anticipated and would not involve unplanned population growth. This impact would be less than significant.	None required.	Less than Significant without Mitigation.

Impact	Mitigation Measure (s)	Residual Impact
Impact POP-2. Implementation of proposed project would not result in the displacement of substantial numbers of people or housing. The proposed project would facilitate the development of new housing in accordance with state and local housing requirements. This impact would be less than significant.	None required.	Less than Significant without Mitigation.
Public Services and Recreation		
Impact PS-1. Development facilitated by the proposed project would result in an increase of population and buildings within Piedmont. This would increase demand for fire protection services, which could result in the need for new or expanded fire protection facilities. Nonetheless, this impact would be less than significant.	None required.	Less than Significant without Mitigation.
Impact PS-2. Development facilitated by the proposed project would result in an increase of population within Piedmont. This would increase demand for police protection services, which could result in the need for new or expanded police facilities. Nonetheless, this impact would be less than significant.	None required.	Less than Significant without Mitigation.
Impact PS-3. Development facilitated by the proposed project would result in an increase in population, including school-aged children served by Piedmont Unified School District. Nonetheless, the proposed project would not result in the need for new or physically altered school facilities. This impact would be less than significant.	None required.	Less than Significant without Mitigation.
Impact PS-4. Development facilitated by the proposed project would increase the population of Piedmont and the use of existing parks and recreational facilities. Further, the Moraga Canyon Specific Plan would involve the designation of sites for new housing and the reconfiguration and/or relocation of the City's Corporation Yard facilities, recreation facilities, open space and parkland, which may reduce the City's overall park acreage. Nonetheless, park acreage in Piedmont would continue to exceed State standards. Therefore, this impact would be less than significant.	None required.	Less than Significant without Mitigation.
Transportation		
Impact T-1. The proposed project would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, and bicycle and pedestrian facilities. This impact would be less than significant	None required.	Less than Significant without Mitigation.

Impact	Mitigation Measure (s)	Residual Impact
Impact T-2. The proposed project would result in home-based VMT per resident for the City of Piedmont that is higher than 15 percent below the regional average home-based VMT per resident. This impact would be Significant and Unavoidable.	No feasible mitigation measures have been identified	Significant and unavoidable
Impact T-3. 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). This impact would be less than significant.	None required.	Less than Significant without Mitigation.
Impact T-4. The proposed project would not result in inadequate emergency access. This impact would be less than significant.	None required.	Less than Significant without Mitigation.
Cumulative Impact. As discussed under Impact T-2, the proposed project would result in a decrease in the average home-based VMT per resident in the years 2031 and 2040 compared to the Baseline (2020) conditions but would exceed the significance threshold of 15 percent below the Bay Area Regional Baseline Average. Therefore, the home-based VMT per resident is also a cumulative impact. The cumulative impact would remain significant and unavoidable.	No feasible mitigation measures have been identified	Cumulatively Considerable impact
Tribal Cultural Resources		
Impact TCR-1. Future development facilitated by the proposed project could Significantly impact previously unidentified tribal cultural resources. However, with adherence to existing regulations and the proposed new General Plan Design and Preservation Element policy regarding the treatment of tribal cultural resources, impacts would be less than significant.	None required	Less than Significant without Mitigation.
Utilities and Service Systems		
Impact UTIL-1. Development facilitated by the proposed Housing Element Implementation project would require utility service and connections for water supply, wastewater conveyance, and stormwater conveyance, as well as telecommunications, electricity, and natural gas. The existing utility systems for water, stormwater, electric power, natural gas, and telecommunication facilities in Piedmont have sufficient capacity to serve the project. However, relocation, expansion, or construction of new wastewater conveyance facilities may be needed, which could result in environmental effects. This impact would be significant and unavoidable.	No feasible mitigation measures have been identified	Significant and Unavoidable

Impact	Mitigation Measure (s)	Residual Impact
Impact UTIL-2. Development under the proposed project would result in an increase in water demand. However, this increase in demand can be served by the East Bay Municipal Utility District (EBMUD) with demand management measures required by EBMUD. This impact would be less than significant.	None required.	Less than Significant without Mitigation.
Impact UTIL-3. Adequate wastewater treatment capacity is available to serve the additional demand generated by future development facilitated by the proposed project in addition to the provider's existing commitments. This impact would be less than significant.	None required.	Less than Significant without Mitigation.
Impact UTIL-4. Development facilitated by the proposed project would not generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure. The project would not impair the attainment of solid waste reduction goals and would comply with federal, State, and local statutes and regulations related to solid waste. Impacts would be less than significant.	None required	Less than Significant without Mitigation.
Cumulative Impact. As discussed under Impact UTIL-2, improvements to the sewer system may be needed. Therefore, the cumulative impact related to wastewater infrastructure would be significant, and the development facilitated by the proposed project would considerably contribute to significant cumulative impact to wastewater infrastructure.	No feasible mitigation measures have been identified	Cumulatively Considerable Impact
Wildfire		
Impact W-1. Development facilitated by the project would result in additional population and vehicles in the city. The project could increase roadway congestion such that the use of an evacuation route would be hindered. Therefore, this impact would be significant and unavoidable.	**W-1 Incorporation of Evacuation Analysis Recommendations.** The City shall implement all recommendations included in the City of Piedmont 2023-2031 Housing Element Update – Emergency Evacuation Time Assessment (Fehr & Peers 2023) and listed below: ▪ Develop emergency evacuation traffic signal timing plans for traffic signals on evacuation routes, prioritizing evacuation flows and minimizing opposing traffic flows. Emergency response vehicle access into evacuation areas can be maintained through traffic signal pre-emption. Coordinate with City of Oakland and Caltrans to develop corridor evacuation timing plans. ▪ Identify corridors where temporary evacuation capacity, such as reversible traffic lanes, temporary use of parking lanes, shoulders, or two-way-left-turn lanes, could be provided while maintaining emergency responder access in the opposite direction.	Significant and Unavoidable

Impact	Mitigation Measure (s)	Residual Impact
	▪ Explore limiting on-street parking on designated evacuation routes either permanently or during high fire risk periods to reduce potential conflicts with evacuating vehicles. ▪ As part of evacuation messaging, ensure evacuees are informed of the availability of multiple evacuation routes, to allow effective use of all available capacity. ▪ Work with Piedmont Unified School District (PUSD) and private schools to develop evacuation plans for the schools in the City of Piedmont. ▪ Consider staggering the evacuation orders for citywide or large area evacuations for different zones and account for the impact on potential bottleneck locations when determining the timing for evacuation of different zones. ▪ When considering roadway or intersection design modifications, especially in areas that have less accessibility and on key evacuation routes, consider evacuation capacity and consider design treatments that could allow reversible lanes or temporary use of parking lanes or shoulders as auxiliary lanes to provide additional capacity during an evacuation event. ▪ Educate residents and employees about the importance of carpooling in evacuations to reduce the number of evacuating vehicles and minimize evacuation times. ▪ Explore the potential use of the footpath and bicycle networks in evacuating pedestrians and cyclists to reduce the number of evacuating vehicles and minimize evacuation times. ▪ Examine areas that have a high concentration of residents with social vulnerability indicators such as age, disability, and other mobility factors to determine other potential barriers to evacuation besides distance to and capacity of evacuation routes. Advanced coordination between first responders to ensure an efficient and well-communicated process for evacuation may be needed in response to various hazard scenarios.	

Impact	Mitigation Measure (s)	Residual Impact
Impact W-2. Implementation of the proposed project would facilitate residential development in areas located in and near a Very High Fire Hazard Severity Zone. New development would be required to comply with extensive regulations and fire safety provisions in the Piedmont City Code, including the Fire Code, and other applicable regulations. Based on the existing regulatory framework and project review process with Piedmont Fire Department, impacts would be generally avoided. However, it remains possible that even with existing regulations, construction or other human activities related to development in or near a VHFHSZ could exacerbate wildfire risk and expose existing and new residents to pollutant concentrations and uncontrolled spread of a wildfire. Additionally, by increasing the population of the WUI area, more people would be directly threatened when a wildland fire occurs. Therefore, this impact would be significant and unavoidable.	No feasible mitigation measures have been identified.	Significant and Unavoidable
Impact W-3. Implementation of the proposed project would facilitate residential development in areas located in and near a Very High Fire Hazard Severity Zone. New development, especially development in the MCSP Area, could require the installation of infrastructure that may exacerbate fire risk. Future development facilitated by the proposed project would be required to comply with extensive regulations and fire safety provisions in the Piedmont City Code, including the Fire Code, and other applicable regulations. With adherence to these regulations, impacts would be generally avoided. However, it remains possible that even with existing regulations, installation or maintenance of associated infrastructure could exacerbate fire risk. This impact would be significant and unavoidable.	No feasible mitigation measures have been identified.	Significant and Unavoidable
Impact W-4. Implementation of the proposed project would encourage development of housing in and near VHFHSZs including in areas with steep terrain, such as the MCSP Area. Development facilitated by the proposed project could expose people and structures to risk due to the terrain and slope which could result in potential risks such as landslides. This impact would be significant and unavoidable.	No feasible mitigation measures have been identified.	Significant and Unavoidable
Impact W-5. Implementation of the proposed project would facilitate development in and near areas within VHFHSZs. Compliance with existing policies and regulations would reduce wildfire risks to the extent feasible. However, because the proposed project would encourage development in and near VHFHSZs and would lead to an overall increase in Piedmont's population, this impact would be significant and unavoidable.	No feasible mitigation measures have been identified.	Significant and Unavoidable.

Impact	Mitigation Measure (s)	Residual Impact
Cumulative Impact: The geographic scope for cumulative wildfire impacts is Piedmont and its surrounding areas. As described in Section 3, *Environmental Setting*, development that is considered part of the cumulative analysis includes buildout under the proposed project, which takes into account development that could occur with implementation of the City of Piedmont's Housing Element in coordination with development under the City of Piedmont's General Plan. Development facilitated by the proposed Housing Element Implementation project, including development pursuant to an adopted Moraga Canyon Specific Plan, would increase the density of development in urban areas and within designated urban service areas, which could exacerbate wildfire risks. All new development and infrastructure would be subject to statewide standards for fire safety in the California Fire Code, as well as proposed policies in the City of Piedmont General Plan Environmental Hazards Element. As discussed under Impacts W-1 through W-5 above, compliance with the California Fire Code and General Plan policies would reduce the risk of wildfire to the extent feasible. However, even with mitigation, it is not possible to prevent a significant risk of wildfires or fully protect people and structures from the risks of wildfires. Therefore, cumulative development under the proposed project would result in a significant cumulative wildfire impact. The proposed project would have a considerable contribution to a cumulative impact.	No feasible mitigation measures have been identified.	Cumulatively considerable impact.

1 Introduction

This Environmental Impact Report (EIR) evaluates potential environmental impacts associated with the 2023-2031 Housing Element Implementation Project ("proposed project"), which would amend the City of Piedmont's General Plan (hereinafter referred to as the "2009 General Plan"), including the Land Use Element and other elements, and amend the Piedmont City Code (PCC) to implement the City's 2023-2031 Housing Element. The 2023-2031 Housing Element is designed to allow for the capacity to build housing in accordance with the Regional Housing Needs Allocation (RHNA) assigned to Piedmont. This EIR evaluates impacts associated with implementation of the Housing Element, which includes a program to prepare a specific plan in the Moraga Canyon Specific Plan (MCSP) Area. The proposed project also includes updates to the Environmental Hazards Element (which serves as the Safety Element and Noise Element of the General Plan) to implement the 2023-2031 Housing Element and reflect recent changes in State law. Further, the proposed project includes updates to other elements of the General Plan to achieve internal consistency and make other updates, including: Land Use Element, Transportation Element; Parks, Recreation, and Open Space Element; Community Services and Facilities Element; Design and Preservation Element; and Natural Resources and Sustainability Element.

This document is a Program EIR. This section discusses: (1) the purpose of this EIR; (2) the purpose and legal basis for preparing an EIR; (3) the type of environmental document prepared; (4) documents incorporated by reference;, (5) future streamlining and tiering opportunities; (6) the public review and participation process; (7) EIR content; (8) the scope of the Program EIR; (9) the issue areas found not to be significant; (10) the lead, responsible, and trustee agencies pursuant to the California Environmental Quality Act (CEQA); and (11) an overview of the environmental review process required under CEQA.

The proposed project is described in detail in Section 2, *Project Description*.

1.1 Statement of Purpose

This Program EIR has been prepared in compliance with the CEQA Statutes and Guidelines (see *CEQA Guidelines* Section 15121[a]). In general, the purpose of an EIR is to:

1. Analyze the environmental effects of the adoption and implementation of the project;
2. Inform decision-makers, responsible and trustee agencies, and members of the public as to the range of the environmental impacts of the project;
3. Recommend a set of measures to mitigate significant adverse impacts; and
4. Analyze a range of reasonable alternatives to the proposed project.

As the lead agency for preparing this Program EIR, the City of Piedmont will rely on the EIR analysis of environmental effects in its review and consideration of the proposed project prior to its approval.

1.2 Purpose and Legal Authority

The proposed project requires the discretionary approval of the City of Piedmont; therefore, the project is subject to the environmental review requirements of California Public Resources Code Section 21000, commonly referred to as CEQA.

In accordance with *CEQA Guidelines* Section 15121 (California Code of Regulations, Title 14), the purpose of this EIR is to serve as an informational document that:

> "...will 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."

This Program EIR is to serve as an informational document for the public and City of Piedmont decision makers. The process will include public hearings before the Planning Commission and City Council to consider certification of a Final Program EIR and approval of the proposed project.

1.3 Program EIR Background

This document is a Program EIR. *CEQA Guidelines* Section 15168(a) states that:

> "A Program EIR is an EIR which may be prepared on a series of actions that can be characterized as one large project and are related either: (1) geographically; (2) as logical parts in a chain of contemplated actions; (3) in connection with issuance of rules, regulations, plans, or other general criteria, to govern the conduct of a continuing program; or (4) as individual activities carried out under the same authorizing statutory or regulatory authority and having generally similar environmental effects which can be mitigated in similar ways."

As a programmatic document, this EIR presents a citywide assessment of the impacts of the proposed project. Analysis of site-specific impacts of individual projects is not required in a Program EIR, unless components of the program are known in sufficient detail. Many specific projects are not currently defined to the level that would allow for such an analysis. Individual specific environmental analysis of each project will be performed as necessary by the City prior to each project being considered for approval. This Program EIR serves as a first-tier CEQA environmental document supporting second-tier environmental documents, if required, for development facilitated by the project.

Project applicants implementing subsequent projects may undertake future environmental review depending on the results of the analysis in this Program EIR and requirements of the mitigation measures. If project applicants are required to prepare subsequent environmental documents, they may reference the appropriate information from this Program EIR regarding secondary effects, cumulative impacts, broad alternatives, and other relevant factors. If the City finds that implementation of a later activity would have no new effects and that no new mitigation measures would be required, that activity would require no additional CEQA review and a consistency finding would be prepared. Where subsequent environmental review is required, such review would focus on significant effects specific to the project, or its site, that have not been considered in this Program EIR (*CEQA Guidelines* Section 15168).

The level of detail contained throughout this EIR is consistent with the requirements of CEQA and applicable court decisions. *CEQA Guidelines* Section 15151 provides the following standards related to the adequacy of an EIR:

> "An Environmental Impact Report should be prepared with a sufficient degree of analysis to provide decision-makers with information which enables them to decide which intelligently takes account of environmental consequences. An evaluation of the environmental effects of a proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in light of what is reasonably feasible. Disagreement among experts does not make an EIR inadequate,

but the EIR should summarize the main points of disagreement among experts. The courts have looked not for perfection; but for adequacy, completeness, and a good faith effort at full disclosure."

CEQA Guidelines Section 15146 provides the following additional standards related to the adequacy of an EIR:

The degree of specificity required in an EIR will correspond to the degree of specificity involved in the underlying activity which is described in the EIR.

(a) An EIR on a construction project will necessarily be more detailed in the specific effects of the project than will be an EIR on the adoption of a local general plan or comprehensive zoning ordinance because the effects of the construction can be predicted with greater accuracy.

(b) An EIR on a project such as the adoption or amendment of a comprehensive zoning ordinance or a local general plan should focus on the secondary effects that can be expected to follow from the adoption, or amendment, but the EIR need not be as detailed as an EIR on the specific construction projects that might follow.

1.4 Documents Incorporated by Reference

As permitted by *CEQA Guidelines* Section 15150, this EIR has referenced several technical studies, analyses, and previously certified environmental documentation. Information from the documents, which have been incorporated by reference, has been briefly summarized in the appropriate section(s). The relationship between the incorporated part of the referenced document and the EIR has also been described. The documents and other sources that have been used in the preparation of this EIR are listed in Section 7, *References and Preparers*, of this EIR.

1.5 Streamlining and Tiering Opportunities

The intent of this Program EIR is to enable development facilitated by the project to use streamlining and tiering opportunities set forth in the *CEQA Guidelines* Section 15183.3 for future CEQA compliance.

The lead agency may use this Program EIR for the purposes of allowed CEQA tiering (PRC Sections 21068.5, 21093-21094, *CEQA Guidelines* 15152, 15385). Tiering is the process by which general matters and environmental effects in an EIR prepared for a policy, plan, program, or ordinance are relied upon by a narrower second-tier or site-specific EIR or other CEQA document (PRC Section 21068.5). Moreover, by tiering from this Program EIR (once certified by the City Council), a later tiered EIR would not be required to examine effects that (1) were mitigated or avoided in this EIR, (2) were examined at a sufficient level of detail in this Program EIR to enable those effects to be mitigated or avoided by site specific revisions, the imposition of conditions, or by other means in connection with the approval of the later project (PRC Section 21094).

CEQA Guidelines Section 15183 allows a streamlined environmental review process for projects that are consistent with the densities established by zoning, community plan or general plan policies for which an EIR was certified. For these projects, the project-level environmental review is only required to analyze effects on the environment that are specific to the project or to the project site and were not addressed as significant effects in a prior planning-level or programmatic EIR unless new

information shows the effects will be more significant than described in the prior EIR. Moreover, the project-level environmental review is not required to consider potentially significant environmental effects of the project that may be reduced to a less-than-significant level by applying uniformly applicable development policies or standards adopted by the city, county, or the lead agency.

1.6 Public Review and Participation Process

The City of Piedmont distributed a Notice of Preparation (NOP) of the Program EIR for a 30-day agency and public review period commencing February 16, 2022, and closing March 18, 2022. In addition, the City held a virtual scoping meeting on March 1, 2022 at a special meeting of the Planning Commission. The meeting was aimed at providing information about the proposed project to members of public agencies, interested stakeholders, and residents/community members and at providing an opportunity for interested parties to submit verbal comments on the scope of the environmental issues to be addressed in the EIR. Due to the COVID-19 pandemic, the meeting was held through an online meeting platform and a call-in number.

The City received letters from three public agencies and 10 individuals or organizations in response to the NOP during the public review period. The NOP and scoping comment letters received are presented in Appendix A of this EIR. Table 1-1 summarizes the content of the letters and where the issues raised are addressed in the Program EIR.

Table 1-1 NOP Comments and EIR Response

Commenter	Comment/Request	How and Where It Was Addressed
Agency Comments		
Native American Heritage Commission	▪ Recommends consultation with all California Native American tribes traditionally and culturally affiliated with the project according to AB 52 and SB 18.	Consultation required by AB 52 and SB 18 was carried out by the City of Piedmont. A summary of the process and an analysis of impacts to tribal cultural resources are discussed in Section 4.15, *Tribal* Cultural Resources, of this EIR.
East Bay Municipal Utility District (EBMUD)	▪ Water service for new multi-unit structures shall be individually metered or sub-metered in compliance with Senate Bill 7. ▪ EBMUD will not install pipes or conduct service in contaminated soils. ▪ EBMUD's Main Wastewater Treatment Plant and interceptor system have adequate capacity to accommodate the proposed wastewater flow in dry conditions. However, additional wastewater infrastructure may be required to accommodate proposed wastewater flow in wet conditions. ▪ Project sponsors are required to provide an estimate of expected water demand for potential recycled water uses for each project in the HEU to explore options and requirements related to recycled water use. ▪ Requests City include compliance with AB 325 "Model Water Efficient Landscape Ordinance" as condition of approval on individual projects within the HEU.	Section 4.16, *Utilities and Service Systems,* includes an analysis of wastewater capacity and water efficiency requirements.

Commenter	Comment/Request	How and Where It Was Addressed
Alameda County Transportation Commission (ACTC)	▪ States if the project generates at least 100 p.m. peak hour trips over existing conditions, the Congestion Management Program (CMP) Land Use Analysis Program requires the City to conduct a transportation impact analysis of the project utilizing the Alameda Countywide Travel Demand Model for CMP Land Use Analysis. ▪ Identifies Metropolitan Transportation System facilities, service operators in area and requests all potential impacts to these facilities, operators, and users be addressed in the DEIR. ▪ Discusses mitigation measure requirements and suggestions, including multimodal tradeoffs, TDM measures, and consistency with transportation plans.	Transportation impact analyses are included in Section 4.14, *Transportation*.
Public Comments (by topic)		
Public Facilities	▪ Concern about impacts to schools ▪ Concern about impacts to emergency services (police, fire, and emergency medical services)	Section 4.13, *Public Services and Recreation,* includes an analysis of impacts to public services including police and fire protections services and schools.
Parks and Recreation	▪ Desire for more open space and preservation of city parks ▪ Concern about development in Blair Park	Section 4.13, *Public Services and Recreation,* includes an analysis of impacts to parks and recreational facilities.
Biological Resources	▪ Concern about wildlife impacts ▪ Concern about impacts to urban trees ▪ Concern about impacts to pollinators and birds and their habitat	Section 4.3, *Biological Resources,* includes an analysis of impacts to biological resources including birds and other wildlife, and habitat.
Wildfire	▪ Concern about proximity to wildfire hazard area	Section 4.17, *Wildfire,* includes an analysis of impacts related to wildfire.
Geology and Soils	▪ Proximity to earthquake fault ▪ Concern about landslide and erosion potential	Section 4.6, *Geology and Soils,* includes an analysis of impacts related to seismic hazards, landslides, and erosion.
Utilities	▪ Concern about provision of water ▪ Concern about sewer capacity	Section 4.16, *Utilities and Service Systems,* includes an analysis of impacts related to water supply and sewer capacity.
Transportation	▪ Concerns about a lack of parking in some areas of Piedmont ▪ Concerns about traffic in the City and traffic from Oakland ▪ Concern about narrow roads and safety ▪ Concern about pedestrian access ▪ Concern about emergency access and evacuation	Section 4.14, *Transportation,* includes an analysis of transportation-related impact for those items required under CEQA. Parking and traffic congestion (not related to emergency access) are not environmental issues requiring study in an EIR pursuant to CEQA. Section 4.17, *Wildfire,* includes an analysis related to emergency evacuation.

1.7 EIR Content

This EIR has been organized into seven sections. These include:

1) **Introduction.** Provides the project background, and information about the purpose and legal authority of an EIR, and EIR content and scope.
2) **Project Description.** Identifies the project lead agency, presents, and discusses the project objectives, project location, and specific project characteristics.
3) **Environmental Setting.** Provides a description of the existing physical setting of the project area and an overview of the progress in implementing the proposed project.
4) **Analysis of Environmental Issues.** Describes existing conditions found in the project area and assesses potential environmental impacts that may be generated by implementing the proposed project and cumulative development. These potential project impacts are compared to "thresholds of significance" in order to determine the nature and severity of the direct and indirect impacts. Mitigation measures, intended to reduce adverse, significant impacts below threshold levels, are proposed where feasible. Impacts that cannot be eliminated or mitigated to less-than-significant levels are also identified.
5) **Other CEQA-Required Discussions.** Identifies the spatial, economic, or population growth impacts that may result from implementation of the proposed project, as well as long-term effects of the project and significant, irreversible environmental changes.
6) **Alternatives.** Presents and assesses the potential environmental impacts of the alternatives (one being a no-project alternative) analyzed in addition to implementation of the proposed project.
7) **References/Preparers.** Lists published materials, federal, State, and local agencies, and other organizations and individuals consulted during the preparation of this EIR. It also lists the EIR preparers.

1.8 Scope of this EIR

As discussed in Section 1.6, a NOP was prepared and circulated (Appendix A), and responses received on the NOP were considered when setting the scope and content of the environmental information in the Program EIR. Sections 4.1 through 4.17 address the environmental topics outlined in the bullet points below. Section 5, *Other CEQA Required Discussions*, covers topics including growth-inducing effects, irreversible environmental effects, and significant and unavoidable impacts. Environmental topic areas addressed in this Program EIR include:

1. Aesthetics
2. Air Quality
3. Biological Resources
4. Cultural Resources
5. Energy
6. Geology and Soils
7. Greenhouse Gas Emissions
8. Hazards and Hazardous Materials
9. Hydrology and Water Quality
10. Land Use and Planning
11. Noise
12. Population and Housing
13. Public Services and Recreation
14. Transportation
15. Tribal Cultural Resources
16. Utilities and Service Systems
17. Wildfire

The alternatives section of the EIR (Section 6) was prepared in accordance with *CEQA Guidelines* Section 15126.6 and focuses on alternatives capable of eliminating or reducing significant adverse effects associated with the project while feasibly attaining most of the basic project objectives. In addition, the alternatives section identifies the "environmentally superior" alternative among the alternatives assessed. The alternatives evaluated include the CEQA-required "No Project" alternative and one alternative development scenario.

In preparing the Program EIR, use was made of pertinent City policies and guidelines, certified EIRs and adopted CEQA documents, and other background documents. A full reference list can be found in Section 7, *Reference and Preparers*.

1.9 Impacts Found to be Less than Significant

The following issue areas are determined to have less-than-significant impacts due to the unique conditions of the City of Piedmont and thus will not be analyzed in detail beyond the discussion included below.

1.9.1 Agriculture and Forestry Resources

The City of Piedmont lacks agricultural and forest lands. Neither agriculture nor forestry lands are a General Plan designation, zoning classification or use in Piedmont (City of Piedmont 2009). According to the California Department of Conservation's (DOC) Farmland Mapping and Monitoring program, the City of Piedmont is classified as urban and built-up land (DOC 2016). Additionally, there is no Williamson Act contract land within the City (DOC 2017).

Development facilitated by the proposed project would not: convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use; conflict with existing zoning for agricultural use, or a Williamson Act contract; conflict with existing zoning for or cause rezoning of forest land or timberland; result in loss of forest land or conversion of forest land to non-forest use; nor otherwise convert Farmland to non-agricultural use or conversion of forest land to non-forest use. Therefore, there would be no impacts on agriculture and forestry resources. This issue area will not be discussed further in the EIR.

1.9.2 Mineral Resources

The City of Piedmont does not have significant mineral resources or active mining sites within its boundaries. The City's main mineral resources are volcanic rocks, and two sandstone aggregate quarries once existed, one on Blair Avenue and one near the northern City limits on Moraga Avenue. However, the City's quarries were converted to other uses through urbanization and are not expected to resume operation due to the City's built up residential character and the lack of suitable sites. Piedmont contains no known oil, gas, or geothermal resources suitable for extraction. The State Mining and Geology Board has also identified no regionally significant aggregate or other mineral resources within Piedmont (City of Piedmont 2009).

Development under the proposed project would not result in the loss of availability of a known mineral resource that would be of value to the region and residents of the state nor result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan or other land use plan. Therefore, there would be no impacts related to mineral resources. This issue area will not be discussed further in the EIR.

1.10 Lead, Responsible, and Trustee Agencies

The *CEQA Guidelines* define lead, responsible, and trustee agencies. The City of Piedmont is the lead agency for the project because it holds principal responsibility for approving the project.

A responsible agency refers to a public agency other than the lead agency that has discretionary approval over the project. There are no responsible agencies for this project.

A trustee agency refers to a state agency having jurisdiction by law over natural resources affected by a project. There are no trustee agencies for the Program EIR itself. As a programmatic document, implementation of the proposed project would not directly cause development in areas where trustee agencies mentioned in *CEQA Guidelines* Section 15386 have jurisdiction. However, potential future development projects facilitated by the proposed project could be located on lands under trustee agency jurisdiction, such as the California Department of Fish and Wildlife, at which time subsequent environmental review would occur.

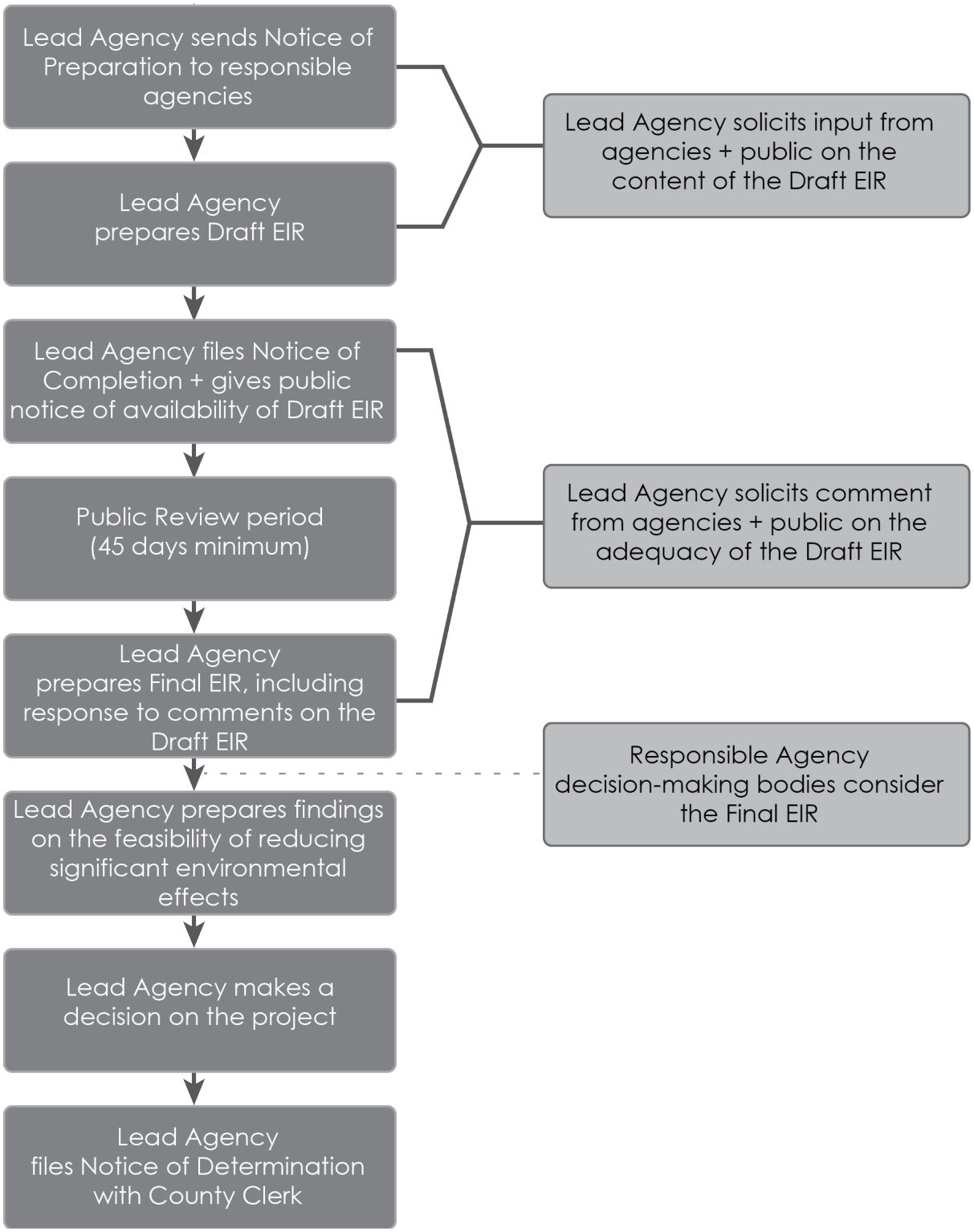
1.11 Environmental Review Process

The environmental impact review process, as required under CEQA, is summarized below and illustrated in Figure 1-1. The steps are presented in sequential order.

1. **Notice of Preparation (NOP)**. After deciding that an EIR is required, the lead agency (City of Piedmont) must file a NOP soliciting input on the EIR scope to the State Clearinghouse, other concerned agencies, and parties previously requesting notice in writing (*CEQA Guidelines* Section 15082; Public Resources Code Section 21092.2). The NOP must be posted in the County Clerk's office for 30 days. Tribal consultation begins between the Lead Agency and representatives of Tribal governments during this step.
2. **Draft EIR Prepared.** The Draft EIR must contain: a) table of contents or index; b) summary; c) project description; d) environmental setting; e) discussion of significant impacts (direct, indirect, cumulative, growth-inducing, and unavoidable impacts); f) a discussion of alternatives; g) mitigation measures; and h) discussion of irreversible changes.
3. **Notice of Availability (NOA) and Notice of Completion (NOC).** The lead agency must file a NOC with the State Clearinghouse when it completes a Draft EIR and prepare a Public Notice of Availability of a Draft EIR. The lead agency must place the NOC in the County Clerk's office for 30 days (Public Resources Code Section 21092) and send a copy of the NOC to anyone requesting it (*CEQA Guidelines* Section 15087). Additionally, public notice of Draft EIR availability must be given through at least one of the following procedures: a) publication in a newspaper of general circulation; b) posting on and off the project site; and c) direct mailing to owners and occupants of contiguous properties. The lead agency must solicit input from other agencies and the public and respond in writing to all comments received (Public Resources Code Sections 21104 and 21253). The minimum public review period for a Draft EIR is 30 days. When a Draft EIR is sent to the State Clearinghouse for review, the public review period must be 45 days unless the State Clearinghouse approves a shorter period (Public Resources Code 21091).
4. **Final EIR.** A Final EIR must include: a) the Draft EIR; b) copies of comments received during public review; c) list of persons and entities commenting; and d) responses to comments.

5. **Certification of Final EIR.** Prior to making a decision on a proposed project, the lead agency must certify that: a) the Final EIR has been completed in compliance with CEQA; b) the Final EIR was presented to the decision-making body of the lead agency; and c) the decision-making body reviewed and considered the information in the Final EIR prior to approving a project (*CEQA Guidelines* Section 15090).
6. **Lead Agency Project Decision.** The lead agency may: a) disapprove the project because of its significant environmental effects; b) require changes to the project to reduce or avoid significant environmental effects; or c) approve the project despite its significant environmental effects, if the proper findings and statement of overriding considerations are adopted (*CEQA Guidelines* Sections 15042 and 15043).
7. **Findings/Statement of Overriding Considerations**. For each significant impact of the project identified in the EIR, the lead agency must find, based on substantial evidence, that either: a) the project has been changed to avoid or substantially reduce the magnitude of the impact; b) changes to the project are within another agency's jurisdiction and such changes have or should be adopted; or c) specific economic, social, or other considerations make the mitigation measures or project alternatives infeasible (*CEQA Guidelines* Section 15091). If an agency approves a project with unavoidable significant environmental effects, it must prepare a written Statement of Overriding Considerations that sets forth the specific social, economic, or other reasons supporting the agency's decision.
8. **Mitigation Monitoring Reporting Program.** When the lead agency makes findings on significant effects identified in the EIR, it must adopt a reporting or monitoring program for mitigation measures that were adopted or made conditions of project approval to mitigate significant effects.
9. **Notice of Determination (NOD).** The lead agency must file a NOD after deciding to approve a project for which an EIR is prepared (*CEQA Guidelines* Section 15094). A local agency must file the NOD with the County Clerk. The NOD must be posted for 30 days and sent to anyone previously requesting notice. Posting of the NOD starts a 30-day statute of limitations on CEQA legal challenges (Public Resources Code Section 21167[c]).

Figure 1-1 Environmental Review Process



2 Project Description

The proposed 2023-2031 Housing Element Implementation Project ("proposed project") would amend the City of Piedmont's 2009 General Plan (hereinafter referred to as the "Piedmont General Plan" or "General Plan"), including the Land Use Element and other elements, and amend the Piedmont City Code (PCC) to implement the City's 6th Cycle 2023-2031 Housing Element ("Housing Element"). The Housing Element is designed to allow for the capacity to build housing in accordance with the Regional Housing Needs Allocation (RHNA) assigned to Piedmont. The proposed project also includes development of a specific plan in the Moraga Canyon Specific Plan (MCSP) Area. The proposed project also includes updates to the Environmental Hazards Element (which serves as the Safety Element and Noise Element of the General Plan) to implement the Housing Element and reflect recent changes in State law. Further, the proposed project includes updates to other elements of the General Plan to achieve internal consistency, implement the Housing Element, and reflect regulatory changes since original adoption of the Piedmont General Plan. Amendments to other General Plan elements include amendments to the: Land Use Element; Transportation Element; Parks, Recreation, and Open Space Element; Community Services and Facilities Element; Design and Preservation Element, and Natural Resources and Sustainability Element.

This section describes the proposed project in detail, including the project location, major project characteristics, project objectives, and discretionary actions needed for approval.

2.1 Project Title

2023-2031 Housing Element Implementation Project

2.2 Lead Agency Name, Address, and Contact

City of Piedmont
120 Vista Avenue
Piedmont, California 94611

Contact: Kevin Jackson, AICP, Director of Planning & Building,
kjackson@piedmont.ca.gov, (510) 420-3039

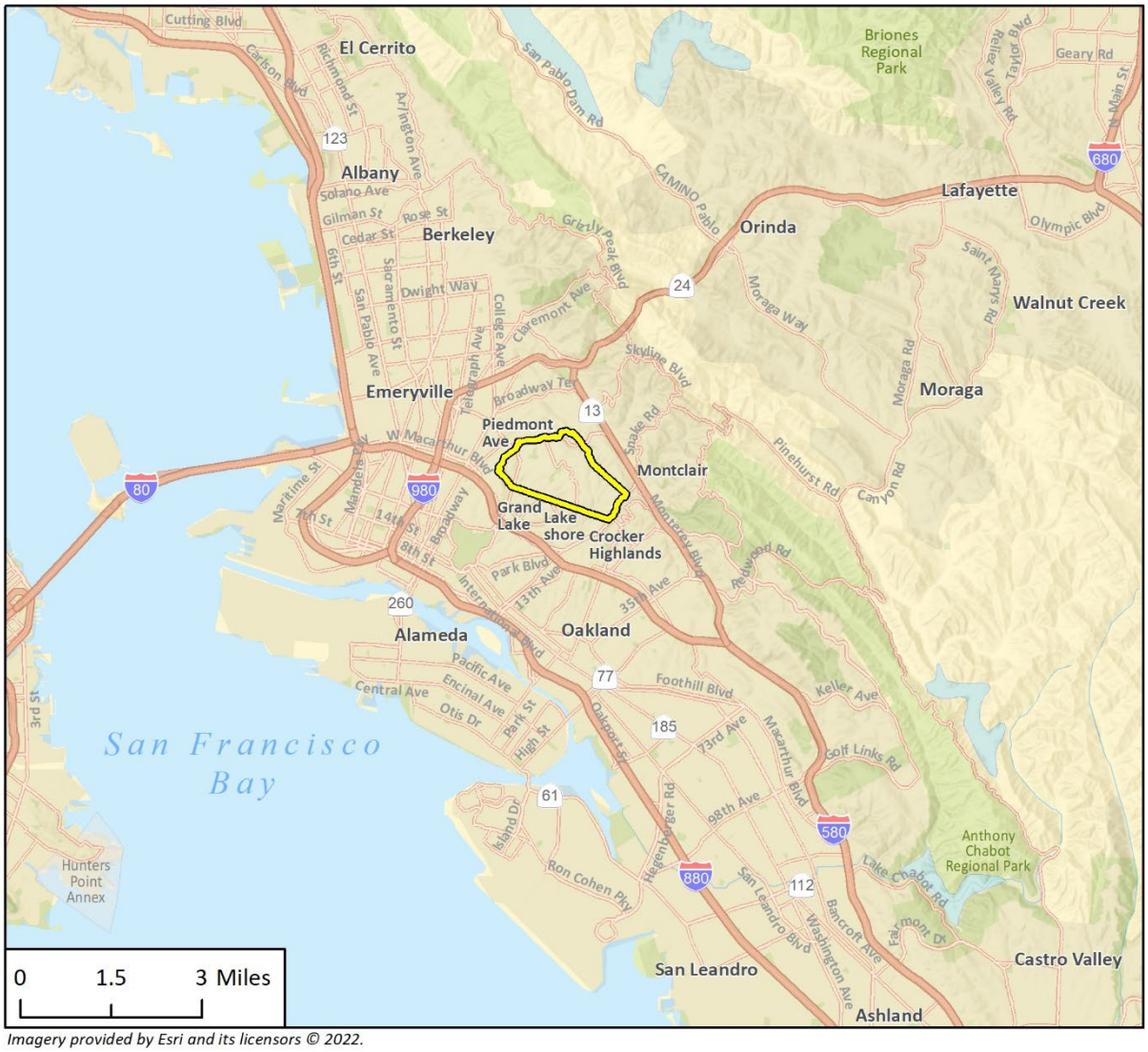
2.3 Project Location

The study area considered in this Environmental Impact Report (EIR) includes the entire city of Piedmont (hereinafter referred to as "City" or "Piedmont"), which encompasses approximately 1.7 square miles. The regional location of Piedmont is shown in Figure 2-1 and the city limits are show in Figure 2-2.

2.3.1 Regional Setting

Piedmont is located in the East Bay region of the San Francisco Bay Area in northern Alameda County. Piedmont is completely surrounded by the City of Oakland, bordering the Oakland neighborhoods of the Piedmont Avenue District to the northwest, Montclair District to the east, and Crocker Highlands, Lakeshore, and Grand Lake districts to the south and west.

Figure 2-1 Regional Location



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City of Piedmont

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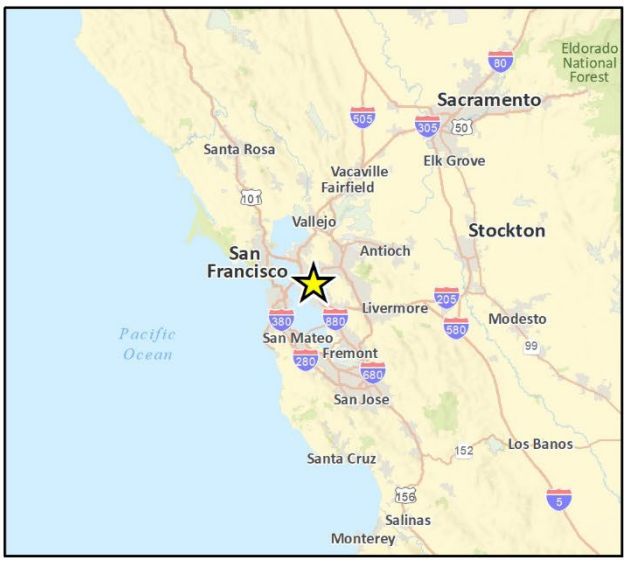
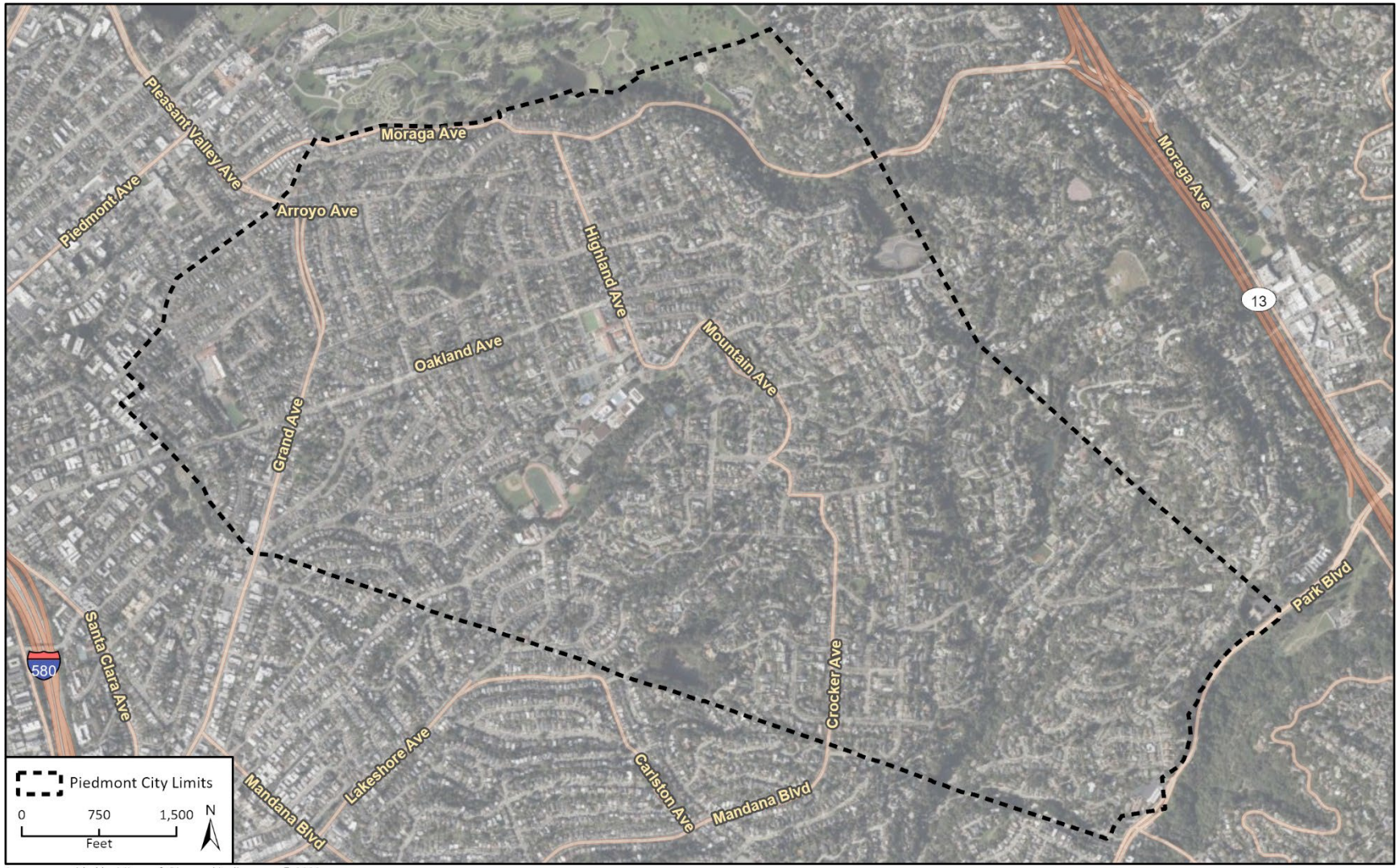


Figure 2-2 City of Piedmont Location



2.3.2 City of Piedmont Setting

Piedmont includes primarily single-family residential uses (approximately 68 percent of Piedmont) with the remainder occupied by schools, civic buildings, religious institutions, parks and open space, and commercial uses. There are no industrial uses in the city. Piedmont contains five city parks and other landscaped areas with wooded paths, tennis courts, children's playgrounds, and picnic facilities. Topography in the city is variable due to its setting within the greater East Bay Hills area. Land in Piedmont is almost entirely developed, and its landlocked setting has influenced its historic development patterns and affects its potential for new housing and employment.

Based on California Department of Finance (DOF) estimates, the housing stock of Piedmont in 2023 was made up of 3,689 (93 percent) single-family detached homes, 77 (2 percent) single-family attached homes, 135 (3 percent) multifamily homes with 2 to 4 units, and 78 (2 percent) multifamily homes with 5 or more units.

The greatest concentration of non-residential uses is in the Civic Center area, where a mix of commercial, public, open space, religious, and residential uses is present. The only other area with a concentration of non-residential uses is along Grand Avenue, extending west to Beach School, Linda Park, and the new Piedmont Station townhouses on the site of a former Pacific Gas & Electric (PG&E) substation. This is also where most of Piedmont's multi-family housing is located. Existing open space uses are scattered around Piedmont, with the highest acreage in Moraga Canyon (City of Piedmont 2009).

2.4 Project Background

2.4.1 Housing Element Background

The Housing Element is one of the State-mandated elements of the General Plan. The Housing Element identifies Piedmont's housing conditions and needs, and establishes the goals, objectives, and policies that comprise the city's housing strategy to accommodate projected housing needs, including the provision of adequate housing for low-income households and for special-needs populations (e.g., unhoused people, seniors, single-parent households, large families, and persons with disabilities), and the city's housing strategy to affirmatively further fair housing.

The 2023-2031 Housing Element was adopted by the City Council on March 20, 2023, and includes the following components, as required by State law:

- **Evaluation of the 2015-2023 Housing Element:** An evaluation of the results of the goals, policies, and programs adopted in the 2015 Housing Element that compares projected outcomes with actual achieved results.
- **Demographics and Housing Needs Assessment:** An analysis of the existing and projected housing needs of the community. It provides a profile of socio-demographic information, such as population characteristics, household information, housing stock, tenure, and housing affordability. The assessment also considers local special housing needs, such as seniors, farmworkers, unhoused persons, large households, and female-headed households.
- **Housing Capacity Analysis and Methodology:** An inventory listing adequate sites that are suitably zoned and available within the planning period to meet the City's fair share of regional housing needs across all income levels.

- **Housing Resources:** An identification of resources to support the development, preservation, and rehabilitation of housing.
- **Constraints to Housing Production:** An assessment of impediments to housing production across all income levels covering both governmental (e.g., zoning, fees, etc.) and nongovernmental (e.g., market, environmental, etc.).
- **Housing Plan:** This section provides a statement of the community's goals, quantified objectives, and policies to maintain, preserve, improve, and develop housing, as well as a schedule of implementable actions to be taken during the planning period to achieve the goals, objectives, and policies. Quantified objectives for new construction, rehabilitation, and conserved units by income category (i.e., very low, low, moderate, and above moderate) are included to make sure that both the existing and the projected housing needs are met, consistent with the City's share of the RHNA.
- **Affirmatively Furthering Fair Housing:** This section provides an analysis of existing fair housing and segregation issues and a plan to address any identified disparities in housing needs, displacement, housing mobility, or access to opportunity.

The adopted 2023-2031 Housing Element is available on the homepages of the City's website: https://www.piedmont.ca.gov and the City's housing website: https://www.piedmontishome.org/.

2.4.2 Regional Housing Needs Allocation

The RHNA is a State of California Housing Law requirement that is part of the periodic process of updating local general plan housing elements. It is a process that determines existing and projected housing need (i.e., RHNA allocation) for all jurisdictions in the State (including cities and unincorporated county areas) with the intent to provide opportunities for a mix of unit types, tenure, and affordability, and to help achieve greenhouse gas (GHG) emission reductions from cars and light trucks. The RHNA allocates housing need based on estimates of future housing unit growth need over the RHNA planning period (2023-2031). In December 2021, the ABAG Executive Board adopted the 6th Cycle Final RHNA, which included a fair share allocation for meeting regional housing needs for each community in the ABAG region. Adoption of the 2023-2031 Housing Element brought the element into compliance with State legislation passed since adoption of the 2014-2023 Housing Element and with the current ABAG RHNA for City of Piedmont.

As shown in Table 2-1, Piedmont's RHNA for the 2023-2031 planning period is 587 units, which is distributed among four income categories.

Table 2-1 RHNA Allocation and Percentage of Income Distribution for Piedmont

Income Level	Percent of Area Median Income (AMI)	Units	Percent
Extremely Low and Very Low	<50%	163	27.8%
Low	50-80%	94	16.0%
Moderate	80-120%	92	15.7%
Above Moderate	>120%	238	40.5%
Total	**–**	**587**	**100%**

Source: ABAG 2021

2.5 Project Characteristics

The proposed project consists of updates to the Piedmont General Plan and the Piedmont City Code (PCC) in order to implement the goals, policies and programs of the Housing Element. This section describes the implementation actions including: 1) a list of the goals and policies in the Housing Element; 2) strategies to meet the RHNA; 3) General Plan Element amendments; and 4) Zoning Ordinance amendments.

2.5.1 2023-2031 Housing Element Goals and Policies

Table 2-2 includes a full list of Housing Element goals and associated policies (based on pages 38 to 96 of the August 2023 publication). The impacts of future development made possible by implementation of the Housing Element policies and their programs are studied in this EIR.

Table 2-2 2023-2031 Housing Element Goals and Policies

Topic	Goals and Supportive Policies
Goal 1: New Housing Construction	
Policy 1.1: Adequate Sites	Maintain an adequate number of sites and opportunities for the development of housing consistent with the Regional Housing Needs Allocation.
Policy 1.2: Housing Diversity and Housing Mobility	Maintain planning, zoning, and building regulations that accommodate the development of housing for households at all income levels. Strengthen Piedmont's relationship to the Bay Area region for residents seeking greater choices and housing mobility, meaning greater opportunities to improve housing types, sizes, locations, and access to opportunities and amenities.
Policy 1.3: Promoting Residential Use	Continue to allow residential uses in all of Piedmont's zoning districts.
Policy 1.4: Context-Appropriate Programs	Participate in those State and federal housing assistance programs that are most appropriate to Piedmont and that recognize the limited affordable housing opportunities in the City.
Policy 1.5: Accessory Dwelling Units	Continue to allow accessory dwelling units and junior accessory dwelling units "by right" in all residential zones within the City, subject to dimensional and size requirements, parking standards, and an owner occupancy requirement for junior accessory dwelling units, as appropriate.
Policy 1.6: Accessory Dwelling Units in New or Expanded Homes	Consider amendments to the zoning ordinance to require the inclusion of accessory dwelling units when new homes are built and when existing homes are expanded.
Policy 1.7: Housing in Commercial Districts	Ensure that local zoning regulations, through density limitations and use allowances, accommodate multi-family residential uses on commercial properties in the City, including the addition of apartments to existing commercial buildings.
Policy 1.8: Mobile and Manufactured Housing	As required by State law, allow mobile and manufactured housing on all residential areas in the City, subject to the same standards as other homes in that Zone.
Policy 1.9: Maintaining Buildable Lots	Outside of Zones C and D, discourage lot mergers, lot line adjustments, and other changes to legally conforming parcels which would reduce the number of buildable lots in the City, except when consolidating lots for multi-family housing production and encourage lot splits where feasible.
Policy 1.10: Lot Mergers	Create incentives to merge lots for new multi-family and mixed-use housing in Zone D and multi-family in Zone C.

Topic	Goals and Supportive Policies
Policy 1.11: Intergovernmental Coordination	Coordinate local housing efforts with the California Department of Housing and Community Development, the County of Alameda, and adjacent cities. Where City-sponsored housing programs are infeasible due to limited local resources, explore the feasibility of participating in programs initiated by other jurisdictions.
Policy 1.12: Multi-family Housing City Service Fee	Require developers of multi-family housing, including mixed-use multi-family housing, to contribute to meeting the costs of City services and infrastructure.
Policy 1.13: Remediation Grants	Pursue grants to support remediation and the study feasibility of redevelopment of non-vacant sites, including brownfields, gas stations, and other sites with re-use opportunities.
Goal 2: Housing Conservation	
Policy 2.1: Encouraging Private Reinvestment	Strongly encourage private property owner reinvestment in the City's housing stock.
Policy 2.2: Public Funds for Housing Maintenance	Support housing stock maintenance and repair through government funding such as Community Development Block Grants when private funding is not available.
Policy 2.3: Availability of Small, More Affordable Homes	Encourage the creation of small homes within Piedmont's existing stock of homes and historic houses. Promote the affordability of smaller-sized homes.
Policy 2.4: Code Enforcement	Enforce local building codes to ensure that housing is safe and sanitary and to protect the character of Piedmont neighborhoods. Promptly investigate all reports of nuisances and require the abatement of such situations, as needed.
Policy 2.5: Use of Original Materials	Allow the use of original materials and methods of construction when alterations to homes are proposed unless a health or safety hazard would occur.
Policy 2.6: Preservation of Multi-Family Housing	Preserve existing multi-family rental housing, including non-conforming multi-family units in the single-family zone. Require the review of permits that would demolish a housing unit, including non-conforming units in the single-family zone.
Policy 2.7: Home Occupations	Continue to encourage Piedmont residents to maintain home offices as a means of making housing more affordable for persons who would otherwise need to rent office space outside the home.
Policy 2.8: Conservation of Rental Housing Opportunities	Conserve rental housing opportunities by monitoring and limiting the use of existing or potential rental properties, such as apartments, accessory dwelling units and rooms in shared homes, for short-term stays.
Goal 3: Affordable Housing Opportunities	
Policy 3.1: Rent-Restricted Accessory Dwelling Units	Encourage the creation of rent restricted accessory dwelling units for low and very low-income households through incentive-based programs such as increased height limits, additional number of ADUs, pre-approved plans, and more lenient lot coverage and floor area standards.
Policy 3.2: Occupancy of Permitted Accessory Dwelling Units	Encourage property owners with registered accessory dwelling units to actively use these units as rental housing rather than leaving them vacant or using them for other purposes.
Policy 3.3: Legalization of ADUs	Allow for and offer incentives for owners of unintended and/or illegal accessory dwelling units to apply for permits to convert into a permitted unit.
Policy 3.4: Accessory Dwelling Unit Building Regulations	Maintain building code regulations which ensure the health and safety of accessory dwelling unit occupants and the occupants of the adjacent primary residence. Implement Building Code regulations intended to facilitate "tiny home" construction.
Policy 3.5: Density Bonuses	Consistent with State law, allow density bonuses (such as allowances for additional square footage or lot coverage) for housing projects which incorporate affordable or special needs housing units.

Topic	Goals and Supportive Policies
Policy 3.7: Room Rentals	Continue to allow the renting of rooms in private homes to provide housing opportunities for single people. Recognize the potential for rented rooms to meet the housing needs of single low income, very low income, and extremely low-income Piedmont residents.
Policy 3.8: Inclusionary Housing	Encourage the provision of affordable housing as part of market rate multi-family housing projects.
Goal 4: Elimination of Housing Constraints	
Policy 4.1: Communicating Planning and Building Information	Encourage public understanding of the planning and building processes in Piedmont to facilitate permit processing and reduce project costs and delays.
Policy 4.2: Planning and Building Standards	Ensure that planning and building standards, development review procedures, and fees do not form a constraint to the development, conservation, and rehabilitation of housing, or add unnecessarily to the cost of building or improving housing.
Policy 4.3: Expeditious Permitting	Promote the expeditious processing and approval of residential projects that are consistent with the General Plan, the Zoning Ordinance, and Objective Design Standards and Design Guidelines (for projects that do not add a new housing unit).
Policy 4.4: Updating Standards and Codes	Maintain updated codes and standards for residential development to reflect changes in State and federal law, new technology, and market trends.
Policy 4.5: Code Flexibility	Allow certain development standards to be relaxed to accommodate affordable housing, where there is no threat to the health, safety, and welfare of the City or potential for adverse impacts on the surrounding neighborhood.
Policy 4.6: Housing Coordinator	Designate the Planning & Building Director as the City's Housing Coordinator.
Policy 4.7: Infrastructure Maintenance	Support the regular maintenance of infrastructure, including water, sewer, drainage, streets, and sidewalks, so that these facilities are available when new housing is proposed.
Policy 4.8: Infrastructure Prioritization for Lower Income Housing.	Consistent with Government Code §65589.7, prioritize water and sewer services to lower income housing developments to help meet Piedmont's share of the regional share of lower-income housing units. Work with East Bay Municipal Utility District (EBMUD) water service.
Policy 4.9: Housing Finance Programs	Participate in appropriate County programs which address financial constraints for first time homebuyers, including down payment assistance, silent second mortgages, Mortgage Credit Certificates, and Mortgage Revenue Bonds.
Goal 5: Special Needs Populations	
Policy 5.1: Retrofits for Diminished Mobility of Piedmont Residents	Ensure that planning and building regulations accommodate the retrofitting of homes to meet the needs of aging or disabled residents.
Policy 5.2: Accessory Dwelling Units, Shared Housing, and Seniors	Encourage accessory dwelling units and shared housing as strategies to help seniors age in place. Accessory dwelling units and shared housing can provide sources of additional income for senior homeowners, housing for seniors wishing to move to Piedmont, and housing resources for seniors seeking to downsize but remain in Piedmont.
Policy 5.3: Reasonable Accommodation	Continue to provide reasonable accommodation for people with disabilities, including developmental disabilities, in the City's rules, policies, practices and procedures related to zoning, permit processing and building codes.
Policy 5.4: Extremely Low-Income Residents	Strive to meet the needs of extremely low income Piedmont community members, especially single parents, seniors on fixed incomes, and persons in financial crisis or at risk of losing their homes.
Policy 5.5: Regional Approaches to Homelessness	Actively cooperate with and participate in regional discussions and programs addressing homelessness and the need for emergency shelter and supportive housing in the East Bay.

Topic	Goals and Supportive Policies
Policy 5.6: Foreclosure	Support State, regional, and countywide initiatives to reduce the risk of foreclosure and to assist those facing foreclosure.
Policy 5.7: Persons with Disabilities	Address the unique housing needs of Piedmont community members with disabilities, including those with developmental disabilities.
Goal 6: Sustainability and Energy	
Policy 6.1: Energy-Efficient Design	Require all new housing to be designed to encourage energy efficiency. Building design and construction methods should promote and support energy conservation.
Policy 6.2: Energy-Efficient Materials	Encourage major additions and remodeling projects to use windows, building materials, ventilation systems, and appliances which reduce home heating and cooling costs and conserve energy resources.
Policy 6.3: Weatherization	Encourage weatherization of existing homes to reduce heating and cooling costs and lower home energy bills.
Policy 6.4: Renewable Energy	Maintain development regulations which accommodate the installation of solar panels and other devices which result in lower energy costs for homeowners and renters.
Policy 6.5: Energy Retrofits	Support the use of federal, State, county, and utility-sponsored programs which provide financial assistance or incentives for energy retrofits.
Policy 6.6: Housing and Climate Change	Recognize the link between housing and climate change in the City's decision-making process. Specifically, the City should strive to create additional local housing opportunities for persons employed within Piedmont in order to reduce commuting and associated greenhouse gas emissions. A particular emphasis should be placed on housing for municipal and school district employees, since these are the largest employers in the City.
Policy 6.7: Water Conservation	Encourage drought-tolerant and Bay-friendly landscaping as a way to conserve water, reduce greenhouse gas emissions associated with water transportation, and reduce homeowner water bills, thereby freeing up more income for other purposes.
Goal 7: Equal Access to Housing	
Policy 7.1: Housing Choice	Promote the development of housing for all persons regardless of race, religion, ethnic background or other arbitrary factor.
Policy 7.2: County Fair Housing Programs	Support and participate in Alameda County programs which ensure that all persons have equal access to housing.
Policy 7.3: Fair Housing Enforcement	Implement and enforce relevant State of California and federal fair housing laws.
Policy 7.4: Fair Housing Education	Promote public education and awareness of fair housing requirements, and reduce public misconceptions about low-income housing.

Source: City of Piedmont. Piedmont Adopted 2023-2031 Housing Element.

2.5.2 Meeting the RHNA

To meet the RHNA and provide sufficient capacity for housing development, the Housing Element specified sites for residential development, identified sites on which to increase permitted residential densities to meet affordability requirements, and included other goals, policies, and programs to encourage housing.

The City did not identify enough units through RHNA credits (projected Accessory Dwelling Unit [ADU] development and approved or entitled projects) to meet its 6th Cycle RHNA for the four income

categories and for total units. The Housing Element guides the City of Piedmont to meet the City's RHNA through the following means:

- Vacant and non-vacant sites identified in the Housing Element Sites Inventory; and
- Other Housing Element implementation programs to facilitate housing development, such as ADU incentive programs, inclusionary zoning, religious affiliated housing, zoning district permitted residential density increases, and the Moraga Canyon Specific Plan.

These are further discussed in subsequent sections. Table 2-3 in Section 2.5.2.3 shows the existing allowed densities, proposed allowed density and potential number units that could be accommodated by the proposed project at the Housing Element inventory sites.

2.5.2.1 Vacant and Underutilized Sites

The Housing Element identifies vacant and underutilized parcels suitable to meet the RHNA allocation during the 2023-2031 period. Parcels were determined to be vacant based on City GIS data, which classified vacant parcels from a previous vacant land inventory. Then City staff reviewed each parcel by APN and address to confirm vacant status of all parcels.

Since land in Piedmont is generally developed, City staff also identified nonvacant sites to analyze in the sites inventory. Parcels that were considered during this phase included:

- Parking lots and open space owned by religious institutions (Assembly Bill [AB] 1851 and AB 2244)
- City-owned land (subject to replacement or relocation of facilities for city operations)
- Multiple sites under the same ownership
- Parking lots on commercial and City-owned property
- Public land (e.g., EBMUD properties)
- Underutilized commercial and mixed-use sites

Nonvacant sites are relied on to accommodate more than 50 percent of Piedmont's lower income RHNA. Nonvacant parcels primarily include relatively large properties (over 0.5 acres) irrespective of current use, underutilized sites with surface parking and commercial buildings where the existing uses are of marginal economic viability, or the structures are at or near the end of their useful life. To count toward the RHNA allocation, sites must be in a land use category that meets a minimum residential density standard, have a minimum lot size, be either vacant or not been developed to the maximum capacity allowed by the zoning category, and can provide the potential for more residences on a site. Minimum residential density includes proposed increases to zoning parameters, including a possible 50 percent density bonus, as discussed below. Table 2-3 in Section 2.5.2.3 includes underutilized and vacant sites identified to meet the RHNA, as well as sites that may have increased development potential due to proposed Land Use Element and PCC amendments.

2.5.2.2 Implementation Programs and Actions

The City has determined based on the Housing Element sites inventory and new fair housing programs that amendments to the General Plan and PCC are needed to meet the RHNA. This section summarizes the proposed amendments that the City is considering as part of the Housing Element Implementation project, which will encourage production of housing including affordable housing.

Increased Allowed Residential Density in Zones A, B, C, and D

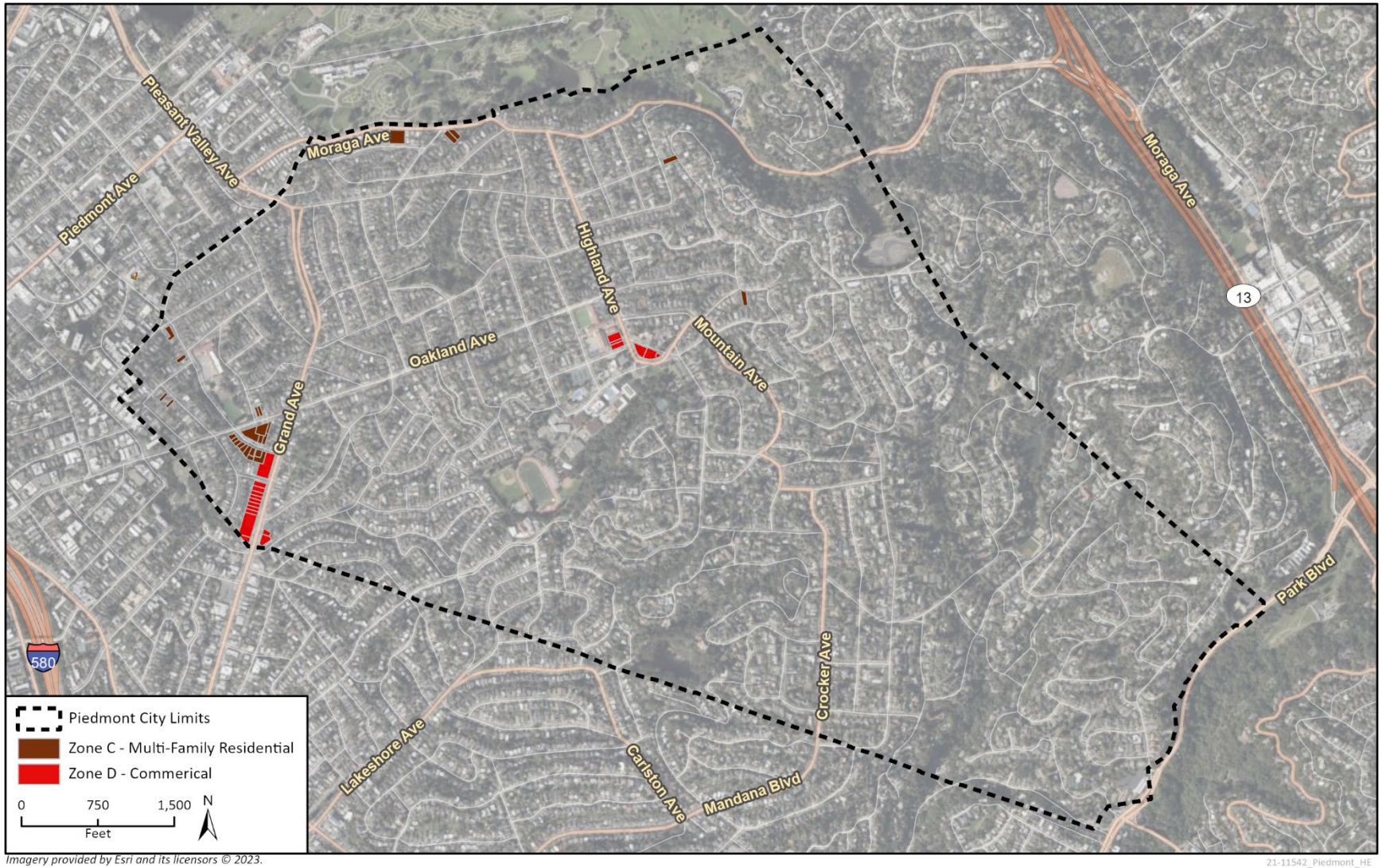
Under State law, when a local jurisdiction cannot demonstrate that there are sufficient vacant or underutilized sites to adequately meet their RHNA allocation, zoning amendments must be put into place. Zoning amendments would ensure that there are enough sites with sufficient densities to address the housing need identified through the RHNA.

The following Zoning Ordinance revisions do not involve rezoning, as the underlying zoning designations are not changing, but would involve increasing allowances for housing in Zones A, B, C, and D to facilitate the construction of new housing. This includes:

- **Allow Religious Affiliated Housing Development in Zone A (Single-Family Zone):** In order to implement Program 1.D, in coordination with Programs 4.V, 5.G, and 5.H, proposed Zoning Ordinance amendments would amend Zone A to permit housing development affiliated with religious institutions at a density of 21 dwellings per acre. On sites with religious uses, the proposed Zoning Ordinance amendments increase the permitted density in Zone A from approximately 5 dwelling per acre to 21 per acre. This growth projection is reflected in the sites inventory shown in Table 2-3 in Section 2.5.2.3. See page 2-10 for a discussion about this program.
- **Increasing Allowed Density in Zone B (Public Facilities Zone):** In order to implement Program 1.F, a Zoning Ordinance amendment would increase the allowed density in Zone B from 5 dwelling units per acre to 60 dwelling units per acre maximum. This change would affect publicly owned land, including the Moraga Canyon Specific Plan Area (Program 1.L), which is described further below.
- **Increasing Allowed Density in Zone C (Multi-Family Residential):** In order to implement Programs 1.G and 4.L, proposed Piedmont Zoning Ordinance amendments would increase the permitted density in Zone C from 21 dwelling units an acre to 60 dwelling units per acre, increase the height limit from 3 to 4 stories, and relax parking requirements for multi-family and affordable housing development. These revisions could result in 15 new housing units. This growth projection is reflected in the sites inventory shown in Table 2-3 at the end of this section. A map describing the location of Zone C is included as Figure 2-3.
- **Increasing Allowed Density in Zone D (Commercial Zone).** In order to implement Programs 1.H and 4.L, proposed Zoning Ordinance amendments would increase the permitted density in Zone D from 20 dwelling units per acre to 81 dwelling units per acre, increase the height limit from 3 stories to 4 stories, remove Conditional Use Permit requirements for multi-family development, remove ground floor commercial requirement, and relax parking, setback, and lot coverage requirements. These revisions could result in 191 housing units. This growth projection is reflected in the EIR sites inventory shown in Table 2-3 in Section 2.5.2.3. A map describing the location of Zone D is included as Figure 2-3.

Table 2-3 in Section 2.5.2.3 includes growth associated with these increases in allowed density.

Figure 2-3 Map of Zone C and Zone D in Piedmont



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Additional data provided by the City of Piedmont, 2023.

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Fig X Zones C and D

Accessory Dwelling Unit (ADU) Incentive Programs and Technical Assistance

ADUs, also referred to as granny flats or secondary units, provide an affordable housing option and are an important tool to help meet the housing needs in communities. The Housing Element includes several implementation programs for the City to adopt to incentivize and promote ADUs, such as by new incentives for rent-restricted ADUs that are affordable to low and very low income households and by requiring the construction of an ADU or Junior ADU with the construction of a new residence, whether on vacant property or on a property of a certain size that is proposed to be redeveloped. These include: Program 3.B (Increase Number of Legal Accessory Dwelling Units), Program 3.D (Monitoring Additional Accessory Dwelling Unit Development Opportunities), Program 3.E (Affordable Housing Fund), Program 3.F (Incentives for Rent-Restricted ADUs), and Program 5.C (Assistance to Nonprofit Developers). To implement these programs, the proposed project involves General Plan amendments and PCC changes to provide new incentives and technical assistance to create new ADUs or legalize unpermitted ADUs. The Housing Element anticipates that these new fair housing programs would result in the creation of 81 new ADUs affordable to lower income households. In addition, PCC changes, the popularity of ADUs in Piedmont, and the City's compliance with State laws for ADUs, could result in an additional 111 market-rate ADUs. The Housing Element anticipates that 192 ADUs, and likely more, could result from the implementation of the new fair housing programs.

Inclusionary Zoning

The proposed project includes amendments to the Land Use Element and other General Plan Elements, along with the proposed changes to the PCC, to implement Program 1.E Require ADUs for New Single-Family Residence Construction and Program 3.G Inclusionary Housing. Table IV-1 of the Housing Element anticipates that inclusionary housing programs would result in 10 new housing units.

Program 4.M, Program 5.H, and Program 5.K

The proposed project includes amendments to the Land Use Element and other General Plan Elements, along with the proposed changes to the PCC, to implement the following Housing Element Implementation Programs: Program 4.M (Facilitate Multi-Family and Residential Mixed-Use Projects by Right Subject to Objective Standards), Program 5.H (Housing for Extremely Low-Income Individuals and Households), and Program 5.K (Transitional and Supportive Housing for Extremely Low-Income Residents). The Housing Element anticipates that these programs would result in 66 new housing units.

Senate Bill (SB) 9 Implementation and Technical Assistance

The proposed project includes amendments to the Land Use Element and other General Plan Elements, along with the proposed changes to the PCC, to implement Housing Element Implementation Program 1.J (SB 9 Facilitation Amendments). SB 9 is a State law which requires that California cities permit up to four housing units on an existing lot in the single-family zoning district. The City of Piedmont's SB 9 implementation program would allow development that increases the permitted unit sizes and housing types allowed under State law. The City anticipates that SB 9 implementation would result in 40 new housing units.

Religious Affiliated Housing

The proposed project includes amendments to the Land Use Element and other General Plan Elements, along with the proposed changes to the PCC, to implement Housing Element Implementation Program 1.D (Allow Religious Institution Affiliated Housing Development in Zone A) along with Program 4.V (Allow Emergency Shelters As Accessory Uses to Religious Facilities in Zone A), Program 5.G (Faith Community Participation), and Program 5.H (Housing for Extremely Low-Income Individuals and Households). These amendments allow religious organizations to build housing on property developed with religious uses and offers the City's commitment to facilitate housing for low-income individuals and families. State of California laws, including AB 1851 and AB 2244, relax parking requirements for housing built on land with religious uses. The City anticipates that new PCC regulations and Land Use Element policies and actions for religious affiliated housing would result in 85 housing units. This growth projection is reflected in the sites inventory in Table 2-3 in Section 2.5.2.3.

Moraga Canyon Specific Plan

Implementation Program 1.L of the Housing Element calls for development of a Specific Plan for four City-owned parcels in Moraga Canyon located in the northeastern portion of Piedmont as shown on Figure 2-4. One approximately 12-acre site is currently utilized for a combination of uses such as City corporation yard and vehicle storage, Coaches Field (soccer/softball fields), a skate park, recreational parking, and temporary sales including a holiday tree lot. Nearly 7 acres of this site is undeveloped, with a significant portion with steep grades extending north to the city limits. The site is accessed off of Moraga Avenue at Red Rock Road. Directly to the east, along Moraga Avenue is another City-owned 1.5-acre site which is currently vacant and partially developed with a small parking lot. On the south side of Moraga Avenue are two City-owned parcels that together total just under 5 acres that comprise an open space area known as Blair Park. In conjunction with on-going, on-site City facilities and services, these four sites provide a viable development opportunity for mixed-income residential uses in a variety of house forms, including single-family, duplex, and multi-family types.

The Housing Element directs City officials and staff to prepare a specific plan (pursuant to Government Code Section 5450 et. seq) for the area to accommodate housing, incorporate existing amenities, modernize current city functions for efficiency, and minimize potential impacts. Density in the plan area could range from 40 to 60 dwelling units per acre, including housing for seniors, disabled persons, single-parents, low-income families, and/or people requiring supportive services. Implementation of Housing Element Program 1.L requires amendments to the General Plan and the preparation of a specific plan to accommodate the density and create development standards for the unique site conditions to produce at least 60 units of low and very low-income housing and 72 units of above moderate-income housing. Portions of the site would remain as recreational uses and function as an integral amenity for the specific plan study area, with the parking to be reconfigured as needed as part of the specific plan. The specific plan would also be designed to accommodate the City corporation yard and vehicle storage as efficiently as possible, with the potential for some of the storage uses to be relocated off site, if needed, to ensure adequate space for intended residential development.

Figure 2-4 Moraga Canyon Specifc Plan Area

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Fig 2-3 Moraga Canyon Specific Plan Area

The two largest subareas, located and accessed from Moraga Avenue, have areas that are relatively flat and provide the greatest potential for affordable multi-family development. Utilization of the State Density Bonus Ordinance can increase yield, reduce development constraints, and contribute to greater affordability options. Piedmont will also be developing a local density bonus program (Program 1.Q). The development expected north of Coaches Field with steeper topography is anticipated to be lower density and at above moderate-income prices. Grading and access would be addressed during the specific plan process.

This EIR analyzes impacts associated with adoption of the MCSP and development of 132 units in the MCSP Area. With possible increases due to SB 9, ADUs, or Density Bonus provisions in State law, an additional 67 units are assumed for a total of 199 units in the MCSP Area. This growth projection is reflected in the sites inventory in Table 2-3 in Section 2.5.2.3.

State Density Bonus and Local Density Bonus

The proposed project involves amendments to the Land Use Element and changes to the PCC to implement Housing Element Implementation Program 1.Q (Density Bonus Ordinance). Residential projects proposed under the new General Plan and PCC amendments may be eligible to utilize provisions of a new City of Piedmont Density Bonus, as well as the existing State Density Bonus (California Government Code Sections 65915 – 65918). The State Density Bonus encourages the development of affordable and senior housing, including up to a 50 percent increase in project densities for most projects, depending on the amount of affordable housing provided, and up to an 80 percent increase in density for certain projects which are 100 percent affordable.

The State Density Bonus also includes a package of incentives intended to help make the development of affordable and senior housing more economically feasible. These include waivers and concessions, such as reduced setback, increased height or modified open space, and other requirements. Under new City regulations to implement Housing Element Program 1.Q, the City would develop a Piedmont Density Bonus to achieve local goals for affordable housing and other community benefits above the minimum requirements of State Density Bonus law.

Whether an individual project will utilize the State Density Bonus, or which aspects of State Density Bonus law an individual project would utilize, is difficult to predict. However, based on recent trends in other jurisdictions, multi-family residential projects in higher density residential and commercial zoning districts are most likely to utilize the State Density Bonus. As explained above, this EIR assesses a development potential greater than the projected housing need (RHNA) of 587 housing units, including units that could be built using a Piedmont Density Bonus and the State Density Bonus.

Using a conservative estimate that all forecasted development in the Mixed-Use Multi-Family and Commercial District Zone D would request a 50 percent density bonus, this EIR studies an additional 98 units that could result from implementation of Program 1.Q distributed in Piedmont according to the relative residential densities of the surrounding development.

2.5.2.3 Projected Buildout

This EIR studies the future buildout of the implementation of the 2023-2031 Housing Element, including particular sites identified for growth in the Housing Element, sites within zoning districts identified for zoning amendments, and actions and programs intended to increase housing production in all areas of Piedmont. Table 2-3 shows the allowable densities, land use changes, and number of realistic potential units that could be accommodated by the proposed project at the inventory sites. Figure 2-5 shows the locations of the sites identified in Table 2-3.

Table 2-3 Housing Element Sites: Land Use Changes and Development Assumptions

Assessor Parcel Number	Existing Land Use	Address	Acreage	Existing Zone	Existing Allowed Density	Proposed Allowed Density	Potential Buildout (# of Units)
050 457100101	Residential - vacant	Moraga Ave at Pala	0.21	A	1 unit per lot	1 unit per lot	1
050 457902001	Residential – vacant	Moraga Ave	0.15	A	1 unit per lot	1 unit per lot	1
050 457904300	Residential – vacant	14 Nellie Ave	0.27	A	1 unit per lot	1 unit per lot	1
050 457903300	Residential – vacant	1 Maxwelton Road	0.26	A	1 unit per lot	1 unit per lot	1
050 460104400	Residential – vacant	279 Scenic Ave	0.29	A	1 unit per lot	1 unit per lot	1
050 460102003	Residential – vacant	162 Scenic Ave	0.16	A	1 unit per lot	1 unit per lot	1
050 460101802	Residential – vacant	156 Scenic Ave	0.09	A	1 unit per lot	1 unit per lot	1
050 462104601	Residential – vacant	538 Blair Ave	0.13	A	1 unit per lot	1 unit per lot	1
051 470000500	Residential – vacant	415 Pacific Ave	0.6	A	1 unit per lot	1 unit per lot	1
051 469900902	Residential – vacant	551 Mountain Ave	0.17	A	1 unit per lot	1 unit per lot	1
051 471302300	Residential – vacant	14 Littlewood Dr	0.83	A	1 unit per lot	1 unit per lot	1
050 455104100	Residential – vacant	Nace Ave	0.21	A	1 unit per lot	1 unit per lot	1
050 455001500	Residential – vacant	Howard Ave	0.11	A	1 unit per lot	1 unit per lot	1
050 092801301	Residential – vacant	Kingston Ave	0.12	A	1 unit per lot	1 unit per lot	1
051 470104603	Residential – vacant	43 Bellevue Ave	0.26	E	1 unit per lot	1 unit per lot	1
050 092800400	Residential – vacant	770 Kingston Ave	0.19	A	1 unit per lot	1 unit per lot	1
051 480300101	Residential – vacant	70 Sotelo Ave	1.06	E	1 unit per lot	1 unit per lot	1
051 469301000	Residential – vacant	780 Highland Ave	0.11	A	1 unit per lot	1 unit per lot	1
051 480201300	Residential – vacant	17 Glen Alpine Rd	0.47	E	1 unit per lot	1 unit per lot	1
051 472800104	Residential – vacant	26 Sea View Ave	0.39	E	1 unit per lot	1 unit per lot	1
051 467603400	Residential – vacant	148 Hazel Ln	0.21	A	1 unit per lot	1 unit per lot	1

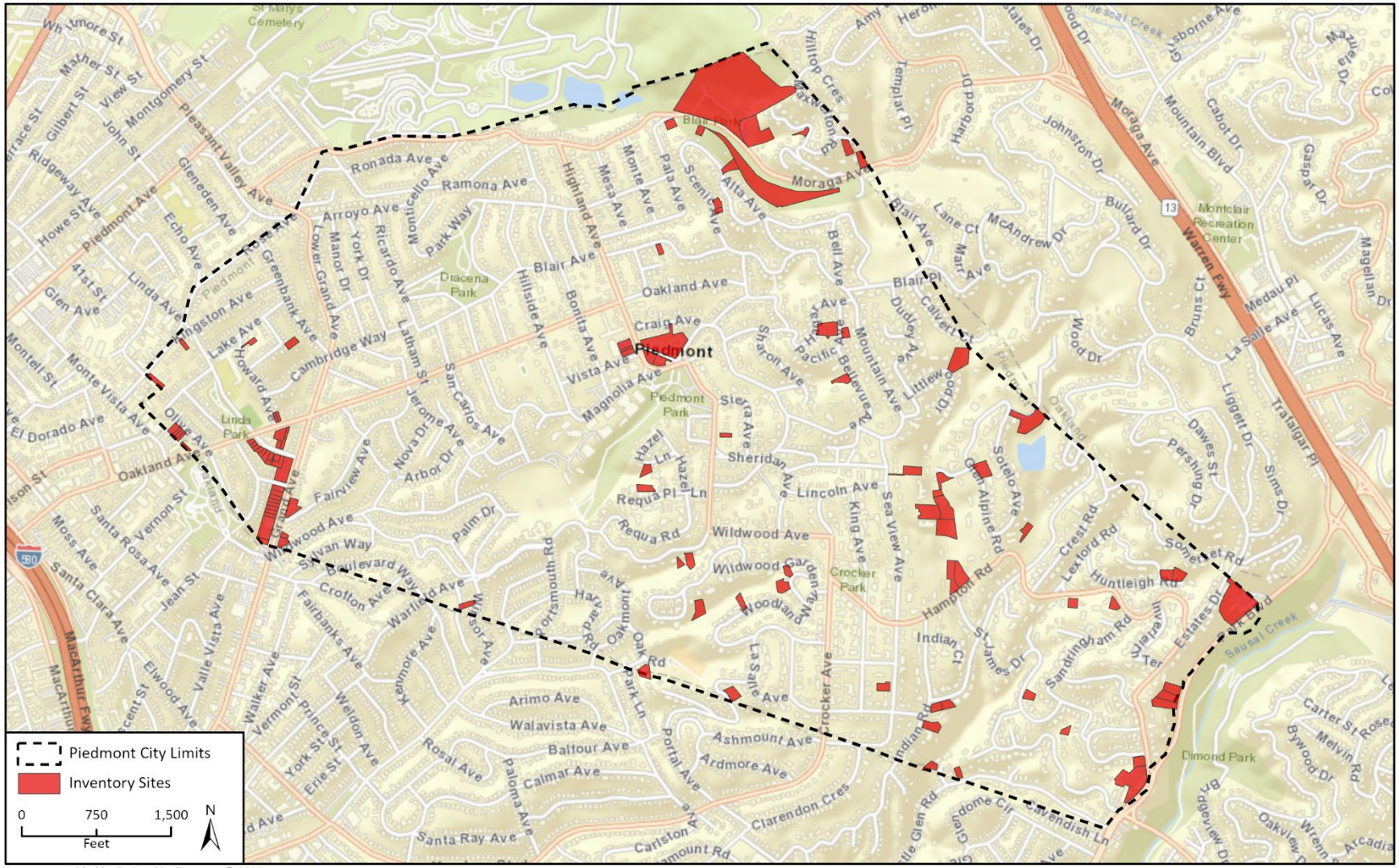
Assessor Parcel Number	Existing Land Use	Address	Acreage	Existing Zone	Existing Allowed Density	Proposed Allowed Density	Potential Buildout (# of Units)
051 480201600	Residential – vacant	Indian Gulch Rd	0.26	E	1 unit per lot	1 unit per lot	1
051 472800503	Residential – vacant	Glen Alpine Rd	0.13	E	1 unit per lot	1 unit per lot	1
051 466801934	Residential – vacant	Requa Pl	0.26	A	1 unit per lot	1 unit per lot	1
051 472800502	Residential – vacant	Glen Alpine Rd	0.71	E	1 unit per lot	1 unit per lot	1
051 472800401	Residential – vacant	26 Sea View Ave	0.71	E	1 unit per lot	1 unit per lot	1
051 472800604	Residential – vacant	74 Sea View Ave	0.75	E	1 unit per lot	1 unit per lot	1
051 473602307	Residential – vacant	Wildwood Ave	0.27	A	1 unit per lot	1 unit per lot	1
051 472802100	Residential – vacant	5 Hampton Rd	0.53	E	1 unit per lot	1 unit per lot	1
051 472802000	Residential – vacant	5 Hampton Rd	0.55	E	1 unit per lot	1 unit per lot	1
051 482600600	Residential – vacant	Huntleigh Rd	0.32	A	1 unit per lot	1 unit per lot	1
051 473602301	Residential – vacant	370 Wildwood Ave	0.11	A	1 unit per lot	1 unit per lot	1
051 482600700	Residential – vacant	145 Lexford Rd	0.3	A	1 unit per lot	1 unit per lot	1
051 473300702	Residential – vacant	Wildwood Gardens	0.17	A	1 unit per lot	1 unit per lot	1
051 473301800	Residential – vacant	Wistaria Way	0.32	A	1 unit per lot	1 unit per lot	1
051 481900100	Residential – vacant	490 Hampton Rd	0.2	A	1 unit per lot	1 unit per lot	1
051 481902000	Residential – vacant	440 Hampton Rd	0.2	A	1 unit per lot	1 unit per lot	1
051 473200400	Residential – vacant	117 Woodland Way	0.2	A	1 unit per lot	1 unit per lot	1
051 473600202	Residential – vacant	85 Wildwood Gardens	0.37	A	1 unit per lot	1 unit per lot	1
050 086000400	Residential – vacant	1069 Winsor Ave	0.19	A	1 unit per lot	1 unit per lot	1
051 473902100	Residential – vacant	Oak Rd	0.31	A	1 unit per lot	1 unit per lot	1
051 482003300	Residential – vacant	Park Blvd	0.37	A	1 unit per lot	1 unit per lot	1
051 482003500	Residential – vacant	Park Blvd	0.37	A	1 unit per lot	1 unit per lot	1

Assessor Parcel Number	Existing Land Use	Address	Acreage	Existing Zone	Existing Allowed Density	Proposed Allowed Density	Potential Buildout (# of Units)
051 481801600	Residential – vacant	111 Sandringham Rd	0.21	A	1 unit per lot	1 unit per lot	1
051 474502907	Residential – vacant	Portal Ave	0.31	A	1 unit per lot	1 unit per lot	1
051 482003700	Residential – vacant	Park Blvd	0.46	A	1 unit per lot	1 unit per lot	1
051 481302200	Residential – vacant	St James Dr	0.14	A	1 unit per lot	1 unit per lot	1
051 480901900	Residential – vacant	22 Valant Pl	0.19	A	1 unit per lot	1 unit per lot	1
051 480901002	Residential – vacant	50 St James Pl	0.14	A	1 unit per lot	1 unit per lot	1
048A700200303	Corporation Yard	898 Red Rock Rd	11.9	B	n/a	Specific Plan	50
050 457906100	Corporation Yard	Moraga Ave at Red Rock Rd	1.5	B	5 du/ac	Specific Plan	32
050 457901900	Blair Park	Moraga Ave	3.55	B	5 du/ac	Specific Plan	50
050 457908000	Blair Park	Moraga Ave	1.3	B		Specific Plan	0
051 482800703	Residential – vacant	280 Indian Rd	0.36	A	1 unit per lot	1 unit per lot	1
051 482801003	Residential – vacant	280 Indian Rd	0.23	A	1 unit per lot	1 unit per lot	1
051 482800904	Residential – vacant	280 Indian Rd	0.23	A	1 unit per lot	1 unit per lot	1
051 478600800	Residential – vacant	62 Farragut Ave	0.24	A	1 unit per lot	1 unit per lot	1
051 480303700	Residential – vacant	403 Hampton Rd	0.23	A	1 unit per lot	1 unit per lot	1
050 462300601	Gas station	340 Highland Ave	0.24	D	20 du/ac	81 du/ac	19
050 456001900	Residential	1021 Oakland Ave	0.07	C	20 du/ac	60 du/ac	3
050 456002000	Residential	344 Howard Ave	0.06	C	20 du/ac	60 du/ac	3
050 455900200	Residential	1020 Oakland Ave	0.07	C	20 du/ac	60 du/ac	4
050 455900100	Residential	1016 Oakland Ave	0.25	C	20 du/ac	60 du/ac	12
050 455901101	Residential	422 Linda Ave	0.08	C	20 du/ac	60 du/ac	4
050 455800200	Residential	405 Linda Ave	0.07	C	20 du/ac	60 du/ac	3

Assessor Parcel Number	Existing Land Use	Address	Acreage	Existing Zone	Existing Allowed Density	Proposed Allowed Density	Potential Buildout (# of Units)
050 455901200	Residential	420 Linda Ave	0.08	C	20 du/ac	60 du/ac	4
050 455800300	Residential	407 Linda Ave	0.06	C	20 du/ac	60 du/ac	3
050 455800400	Residential	409 Linda Ave	0.07	C	20 du/ac	60 du/ac	3
050 455800500	Residential	415 Linda Ave	0.07	C	20 du/ac	60 du/ac	4
050 455800600	Residential	423 Linda Ave	0.09	C	20 du/ac	60 du/ac	4
050 455800700	Residential	425 Linda Ave	0.13	C	20 du/ac	60 du/ac	7
050 455800800	Residential	427 Linda Ave	0.09	C	20 du/ac	60 du/ac	4
050 455800900	Residential	429 Linda Ave	0.08	C	20 du/ac	60 du/ac	3
050 455801000	Residential	433 Linda Ave	0.1	C	20 du/ac	60 du/ac	5
050 455801100	Residential	431 Linda Ave	0.19	C	20 du/ac	60 du/ac	9
050 455700200	Mixed Use	1333 Grand Ave	0.15	D	20 du/ac	81 du/ac	12
050 455700401	Mixed Use	1331 Grand Ave	0.14	D	20 du/ac	81 du/ac	11
050 455700500	Mixed Use	1327 Grand Ave	0.11	D	20 du/ac	81 du/ac	8
050 455700600	Mixed Use	1321 Grand Ave	0.1	D	20 du/ac	81 du/ac	8
050 455700700	Mixed Use	1311 Grand Ave	0.11	D	20 du/ac	81 du/ac	8
050 455700800	Mixed Use	1243 Grand Ave	0.11	D	20 du/ac	81 du/ac	8
050 455700900	Mixed Use	1239 Grand Ave	0.11	D	20 du/ac	81 du/ac	8
050 455701000	Mixed Use	1235 Grand Ave	0.11	D	20 du/ac	81 du/ac	8
051 463801501	Mixed Use	1246 Grand Ave	0.09	D	20 du/ac	81 du/ac	7
051 463801400	Gas station	29 Wildwood Ave	0.18	D	20 du/ac	81 du/ac	14
050 455701600	Mixed Use	1201 Grand Ave	0.11	D	20 du/ac	81 du/ac	8
050 462401200	Mixed Use	345 Highland Ave	0.15	D	20 du/ac	81 du/ac	12

Assessor Parcel Number	Existing Land Use	Address	Acreage	Existing Zone	Existing Allowed Density	Proposed Allowed Density	Potential Buildout (# of Units)
050 462300602	Mixed Use	356 Highland Ave	0.28	D	20 du/ac	81 du/ac	22
050 455801502	Mixed Use	1337 - 1375 Grand Ave	0.63	D	20 du/ac	81 du/ac	51
050 455701501	Mixed Use	1221 Grand Ave	0.65	D	20 du/ac	81 du/ac	52
051 482001118	House of Worship	5201 Park Blvd	1.99	A	1 unit per lot	21 du/ac	41
050 457905601	Residential – vacant	Abbott Way	0.13	A	1 unit per lot	1 unit per lot	1
050 462401000	Mixed Use	333 Highland Ave	0.22	D	20 du/ac	81 du/ac	17
050 462401100	Mixed Use	333 Highland Ave	0.07	D	20 du/ac	81 du/ac	5
050 092700403	Owned by House of Worship – vacant	Olive Ave	0.16	A	1 unit per lot	21 du/ac	3
050 092700500	Owned by House of Worship – vacant	Olive Ave	0.08	A	1 unit per lot	21 du/ac	2
050 092700600	Owned by House of Worship – vacant	Olive Ave	0.08	A	1 unit per lot	21 du/ac	2
050 092700700	Owned by House of Worship – vacant	Olive Ave	0.08	A	1 unit per lot	21 du/ac	2
050 092701300	Owned by House of Worship – vacant	Oakland Ave	0.08	A	1 unit per lot	21 du/ac	1
051 481201700	PG&E transmission tower	Sandringham Rd	0.27	A	1 unit per lot	1 unit per lot	1
051 481201110	House of Worship	Corpus Christi School, 4925 Park Blvd/1 Estates Dr	1.57	A	1 unit per lot	21 du/ac	31
051 463603500	House of Worship	1300 Grand Ave	0.4	A	1 unit per lot	21 du/ac	8
050 4623-004-00	House of Worship	400 Highland Ave	1.49	B	1 unit per lot	21 du/ac	31
050 4623-005-00	Commercial	370 Highland Ave	0.05	D	1 unit per lot	81 du/ac	4
Total							**652**

Figure 2-5 Housing Element Update Sites Inventory Locations



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The net increase presented in Table 2-3 is the upper end of the permitted density range, up to 652 additional units by 2031. Table 2-3 also includes sites, such as possible redevelopment of gas stations in Zone D and development that may occur under Senate Bill 9 (SB9), which were excluded from the Housing Element sites inventory due to HCD eligibility restrictions. Although excluded by HCD for consideration in the Housing Element sites inventory, these sites may still develop under the changes envisioned by the Housing Element under the proposed project and are therefore included in the analysis in this EIR.

Table 2-4 summarizes the projected buildout utilized for the analysis in this EIR. It consists of a projection based on the sites inventory in this EIR of 652 units (including one pipeline project currently under construction) and 394 units associated with the other Housing Element implementation programs. This includes an additional 192 units as ADUs, a projection of an additional 96 units as State and local density bonuses, and 106 housing units from implementation of the other housing programs, described above. Overall, this EIR assumes 1,048 housing units associated with the proposed project. Of the 1,048 units, up to 199 units could be within the MCSP Area (132 units plus 67 additional units from possible SB 9, ADU, and/or density bonus development in the area).

Development of the 652 units associated with the sites inventory would occur at the locations shown on Figure 2-5, while development of the 394 units associated with growth under the other implementation programs would occur throughout Piedmont as shown on Figure 2-6.

Table 2-4 EIR Project Buildout

Implementation Program	Units
Sites Inventory[1]	
Likely Sites[2]	651
Pipeline Sites	1
Moraga Canyon Specific Plan	132
Subtotal	*652*
Implementation Programs[3]	
ADU Incentive Programs and Technical Assistance	192
Program 4.M, Program 5.H, and Program 5.K	66
SB9 Implementation and Technical Assistance	40
State Density Bonus and Local Density Bonus	98
Subtotal	*394*
Total	**1,048**

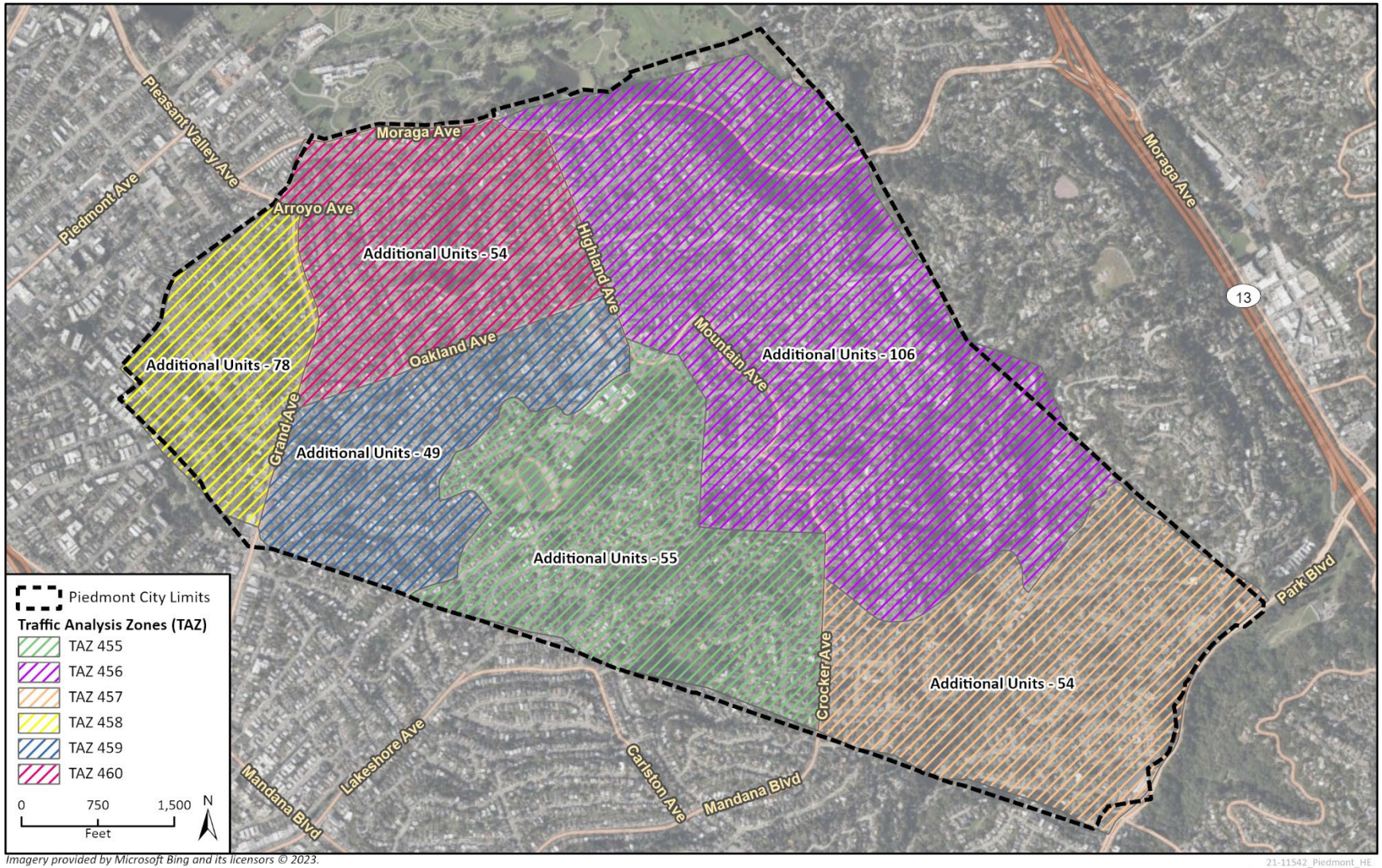
[1] The sites associated with the sites inventory are listed in Table 2-2 and shown on Figure 2-3

[2] Likely sites includes estimated buildout associated religious affiliated housing (70 units) implementation programs.

[3] Units associated with growth under the implementation programs would mostly be distributed throughout Piedmont, though it is assumed 67 of these units could be developed in the MCSP Area from possible SB 9, ADU, and/or density bonus development in that area.

Future development proposals would be reviewed to determine whether their impacts fall within the scope of this EIR, or if additional site-specific environmental review would be required. Subsequent environmental documents, when required, could "tier" from this Housing Element Implementation Project EIR and focus their analysis on any new significant impacts per *CEQA Guidelines* Sections 15152 and 15385.

Figure 2-6 Distribution of Units Associated with Other Housing Element Implementation Programs



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Additional data provided by Fehr & Peers, 2023.

21-11542_Piedmont_HE
Fig 2-5 Additional Units in TAZ

2.5.3 General Plan Amendments

To implement the Housing Element policies and programs listed in Section 2.5.1 and 2.5.2, reflect recent changes in State law, and maintain the General Plan's internal consistency, the proposed project involves General Plan amendments which are summarized below.

2.5.3.1 Land Use Element Update

The Land Use Element is a guide for Piedmont's future development. It designates the distribution and general location of land uses, such as residential, services, retail, open space, recreation, and public uses. The Land Use Element also addresses the permitted density and intensity of the various land use designations as reflected on the General Plan Land Use Diagram.

The proposed project involves amendments to the Land Use Element to include new policies and actions to modify land use classifications and changes to the Land Use Diagram (map) to maintain consistency with the policies and zoning amendments described in programs in the Housing Element.

2.5.3.2 Transportation Element

The Transportation Element addresses mobility, accessibility, safety, and other issues related to travel in and around Piedmont. Goals, policies, and actions in this element address the following major topics: mobility and transportation choice, traffic flow, public transit and carpooling, walking and bicycling, parking, and traffic safety.

The proposed project involves amendments to the Transportation Element to include a new policy related to vehicle miles traveled (VMT) analyses and transportation demand management (TDM).

2.5.3.3 Natural Resources and Sustainability Element Update

The Natural Resources and Sustainability Element is also a required component of a city's General Plan and addresses the protection and management of the earth's climate and City's soil, water, air, and biological resources. It includes policies on creek protection, hillside grading, air and water quality, and management of the urban forest, which are essential not only to protect the health of the City's natural environment but also to protect the health and well-being of its residents.

The Natural Resource and Sustainability Element would be updated to include additional policies focused on natural features, urban forest, air quality, water quality, sustainable development, resource conservation, and the protection of special-status species.

2.5.3.4 Environmental Hazards Element Update

The Safety Element is a required component of a city's General Plan that serves to reduce the potential short and long-term risk of injuries, death, property damage, and economic and social dislocation associated with potential hazards. The Environmental Hazards Element serves as the City's Safety Element and Noise Element, and it was last updated in 2019. The proposed Environmental Hazards Element update addresses the requirements of new State legislation and incorporates new policies based on updated local and regional data. The proposed updates to the Environmental Hazards Element address the following legislative requirements:

- Approved in 2019, Senate Bill (SB) 99 requires jurisdictions, upon the next revision of the Housing Element on or after January 1, 2020, to review and update the Safety Element to include information identifying residential developments in hazard areas that do not have at least two emergency evacuation routes. The Environmental Hazards Element update includes an assessment of residential emergency evacuation routes consistent with SB 99.
- Senate Bill 379 requires Safety Elements to include a climate change vulnerability assessment, measures to address vulnerabilities, and a comprehensive hazard mitigation and emergency response strategy. In addition, Senate Bill 1035 requires cities and counties to update their Safety Element during a Housing Element or local hazard mitigation plan update cycle, but not less than once every eight years, if new information on flood hazards, fire hazards, or climate adaptation or resilience is available that was not available during the previous revision of the Safety Element. The Environmental Hazards Element update identifies populations vulnerable to climate change, updates the climate change projection information documented in the Piedmont Climate Action Plan 2.0, and includes new goals, policies and implementation actions addressing climate change.
- Senate Bill 1241 requires review and update of the Safety Element, upon the next revision of the housing element on or after January 1, 2014, as necessary to address the risk of fire in state responsibility areas and very high fire hazard severity zones. The Environmental Hazards Element Update includes new goals, policies and actions related to fire hazard planning and preparedness consistent with CAL FIRE requirements.

Sections of the Environmental Hazards Element that are to be updated include Geologic Hazards, Flooding, Wildfire, Climate Change, Emergency Preparedness, and Goals, Policies, and Actions.

In addition, the proposed project would involve adding new noise and vibration policies related to construction noise reduction and vibration control plans.

2.5.3.5 Parks, Recreation, and Open Space Element

The Parks, Recreation, and Open Space Element addresses the following topics: park planning and management, park operations and maintenance, recreational programming, and joint use of City and School District recreational facilities.

The proposed project would involve amendments to this element to include: new policies and actions to support relocation of City services, facilities, and open space located on City owned land in Moraga Canyon, including the City corporation yard and vehicle storage area, Coaches Field, Kennelly Skate Park, and Blair Park, to facilitate development of 132 housing units and continue existing uses in potentially new locations. Amendments include a new action to study City owned land for possible new uses and declaration of surplus land by the City Council.

2.5.3.6 Design and Preservation Element

The Design and Preservation Element addresses Piedmont's character, appearance, and historic resources. The goals, policies, and actions in this element address the following key topics: city identity and aesthetics, residential architecture, yards and landscapes, archaeological resources, historic preservation, preservation advocacy, and awareness.

The proposed project would involve amendments to this element to add policies related to historic resources assessment and treatment, archaeological resources assessment and treatment, and the treatment of tribal cultural resources.

2.5.3.7 Community Services and Facilities Element

The Community Services and Facilities Element addresses Piedmont's municipal buildings, public safety services, educational facilities, and social services. It also covers infrastructure, including water, sewer, storm drainage, energy, and telecommunication facilities. The Community Services and Facilities Element addresses the following topics: city facilities, public safety (Police and Fire), educational services (schools and libraries), social services (child care and senior care), infrastructure (water, sewer, storm drainage, and energy).

The Community Services and Facilities Element would be amended to add Action 34.D to prepare for increased demand for public safety services. Amendments would support housing for senior, special needs, and lower income residents.

2.5.4 Zoning Ordinance Amendments

The project would include amendments to the Piedmont City Code (PCC) as discussed above. PCC Chapters that would be amended include:

- Chapter 17, Division 17.20, Zone A Residential Districts, to reflect changes in allowable development capacity, such as changes to building heights, setbacks, and floor area, for religious affiliated housing, including emergency shelters, in Zone A;
- Chapter 17, Division 17.22, Zone B Public Facilities Zone, to reflect changes in allowable development capacity in Zone B, such as changes to building heights, setbacks, and floor area, and increase allowed residential density;
- Chapter 17, Division 17.24, Zone C Multi-Family Zone Commercial Districts, to reflect changes in allowable development capacity Zone C, such as changes to building heights, setbacks, and floor area, facilitate lot mergers, and increase allowed residential density;
- Chapter 17, Division 17.26, Zone D Mixed-Use Residential and Commercial Zone, to reflect changes in allowable development capacity Zone D, such as changes to building heights, setbacks, and floor area, facilitate lot mergers, and increase allowed residential density; and
- Chapter 17, Division 17.68, Conditional Use Permits, to amend the findings required for approval.
- Chapter 17, Division 17.90, Definitions & Measurements, to reflect revised development capacity consistent with the changes in the zoning districts above and to add and amend the definitions of terms in conformance with State law.
- Chapter 17, Division 17.38, Accessory Dwelling Units, to reflect new incentives for affordable ADUs including additional allowances for number of ADUs, structure coverage, floor area ratio (FAR), height, and unit size.
- Chapter 17, Division 17.30, Parking, to afford additional allowances for parking exceptions for multifamily and affordable housing development.
- Chapter 19, Subdivisions, and other Code Chapters as needed to make conforming changes with the amendments to Chapter 17, described above, including lot mergers in Zone C and Zone D and development allowed pursuant to SB 9.

2.6 Project Objectives

The purpose of the project is to implement the policies and programs included in Piedmont's adopted 2023-2031 Housing Element and to update other elements of the 2009 City of Piedmont General Plan as needed for consistency with the Housing Element and State law. The proposed project includes the following goals and objectives:

1. Amend the General Plan for consistency with the adopted 6th Cycle 2023-2031 Housing Element and to accommodate the growth required by the State-mandated RHNA of 587 housing units, including amendments to the following elements: Land Use Element; Transportation Element; Environmental Hazards Element (Safety and Noise Elements); Parks, Recreation, and Open Space Element; Design & Preservation Element; Community Services and Facilities Element; and Natural Resources and Sustainability Element.
2. Revise the City's Zoning Ordinance as outlined in the programs of the adopted 6th Cycle 2023-2031 Housing Element. Under a maximum build-out scenario the revised Zoning Ordinance would allow for an estimated 1,048 new housing units, disbursed throughout the City, for occupants of all income levels.
3. Prepare a specific plan for the City-owned parcels in the Moraga Canyon area and the Moraga Avenue roadway that intersects them, located near Piedmont's northern border with the City of Oakland. The specific plan is expected to improve pedestrian, bicycle and vehicular safety in the Moraga Avenue roadway and to facilitate the development of below-market-rate housing and the accommodation of at least 132 housing units at all income levels while continuing existing recreational and Public Works Department uses and services.
4. Meet State-mandated RHNA for 6th Cycle Housing Element planning period of 2023-2031;
5. Enact new and amended General Plan goals, policies, and actions, and new and amended City Code regulations which affirmatively further fair housing in Piedmont; and
6. Bring the General Plan into conformance with recently enacted State laws.

2.7 Required Approvals

With recommendations from the Planning Commission, the City Council would need to take the following discretionary actions:

- Certification of the EIR and adoption of CEQA findings and a Statement of Overriding Considerations
- Adoption of amendments to the Land Use Element of the General Plan
- Adoption of amendments to the General Plan elements, including: Environmental Hazards; Transportation; Parks, Recreation, and Open Space; Community Services and Facilities; Design & Preservation; and Natural Resources and Sustainability.
- Adoption of changes to the Piedmont City Code

Required approvals include subsequent City Council adoption of changes to the Piedmont City Code found in Housing Element policies and programs during the lifetime of the EIR. No approvals from other public agencies are required.

2.8 California Native American Tribal Consultation

On December 9, 2021, the City of Piedmont contacted California Native American Tribal governments by sending an Assembly Bill (AB) 52 and Senate Bill (SB) 18 notification letter via email to tribes with an affiliation with the project area based on a list provided by the Native American Heritage Commission (NAHC). Under AB 52, Native American tribes have 30 days to respond and request further project information and request formal consultation. Under SB 18, Native American tribes have 90 days to respond to request consultation. The City did not receive a request for formal consultation under AB 52 or SB 18. Therefore, no California Native American Tribes traditionally or culturally affiliated with the project area have requested consultation pursuant to Public Resources Code Section 21080.3.1.

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3 Environmental Setting

This section provides a general overview of the environmental setting for the proposed project. More detailed descriptions of the environmental setting for each environmental issue area can be found in Section 4, *Environmental Impact Analysis*.

3.1 Regional Setting

The City of Piedmont is located in northern Alameda County in the East Bay region of the greater San Francisco Bay Area. It is regionally accessible via Interstate 580/880, State Route 24 (SR 24), and State Route 13 (SR 13). The city is approximately 1.7 square miles and straddles a low ridge located west of the ridgeline of the Berkley-Oakland Hills. Piedmont was built on rolling hills interspersed by numerous canyons, sloping southwesterly towards San Francisco Bay. Its elevation ranges from 40 feet above sea level along Grand Avenue to approximately 700 feet above sea level behind the City's Corporation Yard (City of Piedmont 2009). The regional location of Piedmont is shown in Figure 2-1 in Section 2, *Project Description.*

3.2 City of Piedmont Setting

In January of 1907 Piedmont residents voted to become a city and Piedmont was officially recognized by the State of California as a charter city on January 31, 1907. Piedmont is primarily comprised of residential uses which make up 86 percent of the city's land area and includes predominantly single-family residential uses. Fourteen percent of Piedmont's land area consists of schools, civic buildings, and open space, and less than one-third of one percent is comprised of commercial uses. There are no industrial uses in Piedmont (City of Piedmont 2009). Currently Piedmont has an estimated 2023 population of 10,793 people and 3,979 housing units, with an average household size of 2.80 people (California Department of Finance 2023). The Piedmont city limits are shown on Figure 2-2 in Section 2, *Project Description.*

Piedmont is located on the western slope of the Berkeley-Oakland Hills above a plain that extends to the San Francisco Bay. The City of Piedmont's terrain rises gently from west to east, with the steepest slopes located along canyons and ravines. The form of Piedmont is defined by its varying terrain and elevation. Dimond and Moraga canyons provide edges on two sides of the city. The western part of Piedmont includes older residences and a traditional street grid, and, in the eastern parts, city streets follow natural contours. The combination of knolls, low ridges, and valleys creates scenic vistas throughout the city.

The Mediterranean climate of the region and coastal influence produce moderate temperatures year-round, with rainfall concentrated in the winter months. Air quality in the Bay Area Air Quality Management District (BAAQMD) is in nonattainment for ozone, particulate matter equal to or less than 10 micrometers in diameter or less (PM_{10}), and particulate matter equal to or less than 2.5 micrometers in diameter or less ($PM_{2.5}$) (BAAQMD 2017).

Piedmont's visual image is largely defined by relatively large single-family residences constructed during the early Twentieth Century. This image is characterized by spacious front and rear yards, pedestrian-oriented streets with sidewalks, large street trees, and a traditional single-family development scale. Between 1907 and 1940, some 2,500 residences were built in Piedmont - nearly 70 percent of the City's existing housing stock.

3.3 Moraga Canyon Specific Plan Area Setting

The Moraga Canyon Specific Plan (MCSP) Area includes four City-owned parcels and is shown on Figure 2-3 in Section 2, *Project Description.* The MCSP Area is located in the northeastern portion of Piedmont situated north and south of Moraga Avenue in Moraga Canyon. The portion of the site north of Moraga Avenue is accessed off of Moraga Avenue at Red Rock Road. Part of the area (north of Moraga Avenue) was historically used as a quarry, and then filled in with artificial, non-engineered fill partially deposited in the 1950s during the grading for the Warren Freeway. These activities resulted in an area generally characterized by relatively flat areas comprised of fill situated directly adjacent to steep, sometimes almost vertical, slopes.

The linear-shaped portion of the MCSP Area on the south side of Moraga Avenue, Blair Park, is undeveloped and currently used as an informal city park and designated as an off-leash dog walking area. This area also received fill deposited in the 1950s during the grading for the Warren Freeway.

The portion of the MCSP Area on the north side of Moraga Avenue is currently utilized for a combination of uses such as city vehicle storage (Piedmont Corporation Yard), Coaches Field (soccer/softball fields), a skate park (Kennelly Skatepark), recreational parking, and temporary sales by local nonprofit organizations including a holiday tree lot. These areas are situated in relatively flat areas comprised largely of fill but are directly adjacent to the sides of the canyon that slope steeply downward to the west and upward to the north and east. The Piedmont Corporation Yard includes a collection of buildings that were constructed at various dates beginning in the 1910s through the 1990s. Landcover within the MCSP Area includes oak woodland, paved/developed and landscaped areas, and annual and perennial grasslands.

3.4 Cumulative Development

In addition to the specific impacts of individual projects or programs, the California Environmental Quality Act (CEQA) requires EIRs to consider potential cumulative impacts of the proposed project. CEQA defines "cumulative impacts" as two or more individual impacts that, when considered together, are substantial or will compound other environmental impacts. Cumulative impacts are the combined changes in the environment that result from the incremental impact of development of the proposed project and other nearby projects. For example, transportation impacts of two nearby projects may be less than significant when analyzed separately but could have a significant impact when analyzed together. Cumulative impact analysis allows the EIR to provide a reasonable forecast of future environmental conditions and can more accurately gauge the effects of a series of projects.

CEQA Guidelines Section 15130 requires cumulative impact analysis in EIRs to consider either a list of planned and pending projects that may contribute to cumulative effects or a summary of projections contained in an adopted planning document such as a general plan.

Some analyses including air quality, energy, greenhouse gas emissions, transportation, and population and housing, rely on much larger geographic areas such as the Bay Area region. For issues that may have regional cumulative implications, the cumulative impact analysis for this EIR is based on Plan Bay Area 2050, the Bay Area's most recent Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). Based on the forecasts in Plan Bay Area 2050, which are by areas entitled growth geographies and not by city, the North Alameda County, which includes the cities of Piedmont, Alameda, and Oakland, is estimated to have 287,000 housing units by 2050 compared to the baseline population for this area of 181,000 (a 58.6 percent increase) (ABAG and MTC 2021). Development under the proposed Housing Element Implementation project in conjunction with development forecasted in Plan Bay Area 2050 is accounted for in the cumulative impacts analysis.

Because the proposed project implements 2023-2031 Housing Element goals and policies to enable future projects that could occur within the timeframe of the Housing Element, and because the proposed Housing Element Implementation project looks at a reasonable maximum development scenario with buildout under the project compared to existing conditions, the proposed project itself represents the cumulative development scenario for the reasonably foreseeable future in the city. Therefore, for analyses that may have more localized or neighborhood implications (biological resources, cultural resources, noise, public services, utilities, wildfire), the cumulative impact analysis includes development proposed pursuant to the proposed Housing Element Implementation project, which takes into account development that could occur with implementation of the city's Housing Element in coordination with development under the Piedmont General Plan. The analysis presented in this EIR generally represents a cumulative analysis of development in the city and the surrounding region over the Housing Element planning horizon of 2031.

The analysis included in each cumulative impact section analyzes whether, after implementation of mitigation that minimize environmental effects, the residual impacts of the proposed project would cause a cumulatively significant impact or would contribute considerably to existing or anticipated cumulatively significant effects. Where the proposed project would so contribute, additional mitigation is recommended where feasible.

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4 Environmental Impact Analysis

This section discusses the possible environmental effects of the 2023-2031 Housing Element Implementation project for the specific issue areas that were identified through the scoping process as having the potential to experience significant effects. A "significant effect" as defined by the *CEQA Guidelines* Section 15382 as:

> a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. An economic or social change by itself shall not be considered a significant effect on the environment. A social or economic change related to a physical change may be considered in determining whether the physical change is significant.

The following issue areas are evaluated in this section:

- Aesthetics
- Air Quality
- Biological Resources
- Cultural Resources
- Energy
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Noise
- Population and Housing
- Public Services and Recreation
- Transportation
- Tribal Cultural Resources
- Utilities and Service Systems
- Wildfire

The issues areas of Agricultural and Forestry Resources and Mineral Resources were found to have no impact and are discussed in Section 1, *Introduction,* of this EIR.

The assessment of each issue area begins with a discussion of the environmental setting related to the issue, which is followed by the impact analysis. In the impact analysis, the first subsection identifies the methodologies used and the "significance thresholds," which are those criteria adopted by the City of Piedmont and other agencies, universally recognized, or developed specifically for this analysis to determine whether potential effects are significant. The next subsection describes each impact of the proposed project, mitigation measures for significant impacts, and the level of significance after mitigation.

Each impact analysis is divided into two analyses sections. First, there is an analysis of the implementation of the proposed project throughout the city, titled "Citywide Housing Element Implementation." These sections will address all actions under the proposed project, including the General Plan amendments, Zoning Ordinance amendments, and adoption and implementation of the Moraga Canyon Specific Plan (MCSP). However, as there are potential site-specific issues with respect to the MCSP Area, a second section is also included, titled "Moraga Canyon Specific Plan," which discusses impacts only associated with the MCSP Area.

Each effect under consideration for an issue area is separately listed in bold text with the discussion of the effect and its significance. Each bolded impact statement also contains a statement of the significance determination for the environmental impact as follows:

- **Significant and Unavoidable.** An impact that cannot be reduced to below the threshold level given reasonably available and feasible mitigation measures. Such an impact requires a Statement of Overriding Considerations to be issued if the project is approved pursuant to *CEQA Guidelines* Section 15093.
- **Less than Significant with Mitigation Incorporated.** An impact that can be reduced to below the threshold level given reasonably available and feasible mitigation measures. Such an impact requires findings under *CEQA Guidelines* Section 15091.
- **Less than Significant.** An impact that may be adverse but does not exceed the threshold levels and does not require mitigation measures. However, mitigation measures that could further lessen the environmental effect may be suggested if readily available and easily achievable.
- **No Impact.** The proposed project would have no effect on environmental conditions or would reduce existing environmental problems or hazards.

Following each environmental impact discussion is a list of mitigation measures (if required) and the residual effects or level of significance remaining after implementation of the measure(s). In cases where the mitigation measure for an impact could have a significant environmental impact in another issue area, this impact is discussed and evaluated as a secondary impact. The impact analysis concludes with a discussion of cumulative effects, which evaluates the impacts associated with the proposed project in conjunction with other planned and pending developments in the area listed in Section 3, *Environmental Setting*.

The Executive Summary of this EIR summarizes all impacts and mitigation measures that apply to the proposed project.

4.1 Aesthetics

This section analyzes the potential impacts of development facilitated by the proposed Housing Element Implementation project, including development pursuant to the proposed Moraga Canyon Specific Plan (MCSP) under Housing Element Program 1.L, to aesthetics, including scenic resources, visual character and quality, and light and glare.

4.1.1 Setting

Visual Character and Scenic Vistas

Scenic views generally refer to visual access to, or the visibility of, a particular natural or man-made visual resource from a given vantage point or corridor. Focal views focus on a particular object, scene, setting, or feature of visual interest. Panoramic views, or vistas, provide visual access to a large geographic area, for which the field of view can be wide and extend into the distance. Panoramic views are usually associated with vantage points looking out over urban or natural areas that provide a geographic orientation and view not commonly available. Examples of panoramic views might include an urban skyline, a valley, a mountain range, the ocean, or other water bodies. The City of Piedmont's terrain rises gently from west to east, with the steepest slopes located along canyons and ravines. The combination of knolls, low ridges, and valleys creates scenic vistas throughout the city (City of Piedmont 2009).

Piedmont is located on the western slope of the Oakland Hills above a plain that extends to the San Francisco Bay. Views of the Berkeley-Oakland Hills distinguish Piedmont from the other parts of the Bay Area, as well as areas where views of San Francisco Bay can be observed. The topography of Piedmont varies, with gently sloping terrain in the western and southern parts to steeper hillsides and ridges in the northern and eastern parts of the city.

According to the Design and Preservation Element of Piedmont's General Plan, Piedmont's setting is shaped by its landscapes and its views and vistas, and protecting and enhancing the public realm is a top priority. Piedmont's visual image is largely defined by relatively large single-family residences constructed during the early Twentieth Century. This image is characterized by spacious front and rear yards, pedestrian-oriented streets with sidewalks, large street trees, and a traditional single-family development scale. Five neighborhood typologies with different architectural styles are commonly found in the city: bungalow and cottage neighborhoods, streetcar suburbs, estate neighborhoods, hillside neighborhoods, and mid-century neighborhoods.

The form of Piedmont is defined by its varying terrain and elevation. Dimond and Moraga canyons provide edges on two sides of the city. The western part of Piedmont includes older residences and a traditional street grid and, in the eastern parts, city streets follow natural contours.

Also, according to the General Plan, important landmarks in Piedmont include the Oakland Avenue Bridge, the Civic Center complex, the Exedra at Piedmont Park, Piedmont Community Hall, the allee of trees along Oakland Avenue, and the city's religious institutions and schools. More distant landmarks that shape Piedmont's identity are the Oakland and San Francisco skylines, the Golden Gate and Bay Bridges, Lake Merritt and San Francisco Bay, and the Berkeley-Oakland Hills.

Scenic Highways

There are no designated or eligible State scenic highways in Piedmont. The closest designated State scenic highway is Interstate 580 (I-580) located 0.3 mile west of Piedmont, and the second closest eligible State scenic highway is State Route 13 (SR 13), located 0.5 miles east of Piedmont (California Department of Transportation [Caltrans] 2018).

Light and Glare

Major sources of light in Piedmont include street lighting along major streets and highways and nighttime lighting of residences, commercial buildings, and public facilities. Typically, light from residences is screened by trees or other structures. Brighter sources of light include locations where nighttime events occur and large amounts of lighting is needed such as at sports fields, though this lighting is temporary and only when events occur.

Moraga Canyon Specific Plan Area Setting

The MCSP Area includes open space and recreational facilities including Blair Park, Coaches Field, and the Kennelly Skate Park. Moraga Avenue bisects the MCSP Area. Views of the MCSP Area are mostly from Moraga Avenue and from some residences along ridgelines adjacent to the MCSP Area. From Moraga Avenue, the most prominent visual resources are the dense landscaping and mature trees, as well as the steep, vegetated or rocky slopes surrounding the MCSP Area. The visual character of Coaches Field is consistent with a playfield and associated facilities with natural turf, a backstop, restrooms, and bleachers. A retaining wall providing slope stability is visible along the northern perimeter of Coaches Field. The visual character of Blair Park is of an unimproved vegetated site with grass, plants, and trees. An unimproved pedestrian trail travels through Blair Park. The City of Piedmont Corporation Yard is also located within the MCSP Area. A chain-link fence and gate and some of the buildings associated with the Corporation Yard are also visible from Moraga Avenue. Most views of the Corporation Yard structures and vehicles are not available from areas outside the Corporation Yard. Two small, paved surface parking lots located off Red Rock Road provide for parking for Coaches Field and the Corporation Yard. Dense landscaping, including mature trees, surrounds Coaches Field and Blair Park and dense landscaping is located throughout the MCSP Area. Photographs of the MCSP Area are shown on Figure 4.1-1.

There are no eligible designated or State scenic highways in the MCSP Area or with views of the MCSP Area. SR 13, which is an eligible State scenic highway, is approximately 0.5 miles from the eastern edge of the MCSP Area and no views of the MCSP Area are visible from SR 13.

Sources of light in the MCSP study area include parking lot light and light associated with the Corporation Yard buildings. Kennelly Skate Park, Blair Park, and Coaches Field do not have outdoor lighting that would be a source of nighttime light. There is limited parking in these areas that could be a source of glare from parked cars, although this parking area is largely screened by trees in the area.

Figure 4.1-1 Moraga Canyon Specific Plan Area Photographs, Photographs 1 and 2

Photograph 1. View from Red Rock Road adjacent to Moraga Avenue looking north at the Piedmont Corporation Yard buildings and steep slopes on the northern boundary of the MCSP Area.

Photograph 2. View of Coaches Field looking west.

Figure 4.1-2 Moraga Canyon Specific Plan Area Photographs, Photographs 3 and 4

Photograph 3. View from intersection of Moraga Avenue and Red Rock Road looking southeast up Moraga Avenue towards Blair Park.

Photograph 4. View from intersection of Moraga Avenue and Red Rock Road looking northeast towards parking lot of Coaches Field.

4.1.2 Regulatory Setting

a. State Regulations

California Scenic Highway Program

The California Department of Transportation manages the State Scenic Highway Program. The program was created in 1963 with the goal of protecting the aesthetic significance of scenic highways throughout the State. According to the State Streets and Highways Code (Sections 260 through 263), a highway may be designated as scenic based on its scenic quality, how much of the natural landscape can be seen by travelers, and the extent to which development intrudes on the traveler's enjoyment of the view. The California Scenic Highway Program's Scenic Highway System List identifies scenic highways that are either eligible for designation or have already been designated as such. There are no designated or eligible State scenic highways in the City. The closest designated State scenic highway is Interstate 580 (I-580) located 0.3 mile west of the City, and the second closest eligible State scenic highway is State Route 13 (SR 13), located 0.6 mile east of the City (Caltrans 2018).

Senate Bill 743

Senate Bill 743 (California Public Resources Code Section 21099) passed in 2013, made changes to the CEQA for projects located in transit-oriented development areas. Among these changes are that a project's aesthetics impacts are no longer considered significant impacts on the environment if the project is a residential, mixed-use residential, or employment center project and if the project is located on an infill site within a transit priority area (TPA). Pursuant to Section 21099 of the California Public Resources Code, a "transit priority area" is defined as an area within 0.5 mile of an existing or planned major transit stop. A "major transit stop" is defined in Section 21064.3 of the California Public Resources Code as a rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods.

Piedmont does not include any areas that are within a TPA.

b. Local Regulations

City of Piedmont General Plan

Piedmont's Design and Preservation Element addresses the city's setting, appearance, and historic resources. Goals and policies related to scenic views and visual character include:

> **Policy 27.3: View Preservation.** Recognize and protect significant views in the city, particularly Piedmont's characteristic views of the San Francisco and Oakland skylines, Lake Merritt and San Francisco Bay, the Bay and Golden Gate Bridges, and surrounding hills, canyons, and geological features. Discourage the obstruction of such views by upper level additions, tall structures, and devices such as communication towers. Similarly, tree planting should avoid species or locations that will lead to the obstruction of desirable views.
>
> **Policy 27.5: Beautification Efforts.** Support local beautification and median planting efforts by neighborhood and community groups.

Policy 27.7: Street Lighting. Provide street lighting that improves public safety and assists travelers while also enhancing neighborhood character. Street lights should complement the city's architecture, avoid light and glare conflicts, and be consistent with the energy conservation goals laid out elsewhere in the General Plan.

Policy 27.9: Signs. Require quality, balance, consistency, and high quality materials in the design of signs, including commercial business signs, municipal signs, street signs, and traffic signs. Signs should be compatible with buildings and streetscapes, and should be minimally obtrusive to surrounding uses.

Policy 27.10: Design Continuity. Apply consistent standards for pavement, signage, street furniture (benches, planters, trash receptacles, bus shelters, etc.), and other elements of public space to help unify the city and strengthen Piedmont's identity.

Policy 28.1: Scale, Height, and Bulk Compatibility. Strengthen the defining qualities of Piedmont neighborhoods by relating the scale of new construction, additions, and alterations to existing homes and neighborhood context. Overpowering contrasts in scale and height on adjacent lots should be avoided.

Policy 28.2: Style Compatibility. On blocks where one architectural style or design theme is predominant, require new construction and alterations that respect and are compatible with the prevailing style. On blocks where no particular style is predominant, new construction and alterations should be compatible with the style of homes nearby. This applies not only to the house as a whole but to building elements such as foundations, porches, exterior stairs, doors, exterior materials, ornamentation, roofs, and doors.

Policy 28.8: Acoustical and Visual Privacy. Encourage the siting of windows, vents, exhaust ports, skylights, and other appurtenances in a way that respects the acoustical and visual privacy of adjacent residences and yards.

Policy 28.9: Eyes on the Street. Locate and design windows and doors in a manner which discourages views into the house by persons driving or walking by, but allows for views of the street by the occupants themselves.

Policy 28.10: Multi-family Design. Require any new development in Piedmont's multi-family and mixed use areas to be compatible with the single family architectural styles of Piedmont. Avoid "motel style" apartment buildings which face the side yard rather than the street, and "podium" (or soft-story) units built over street facing parking bays. Where feasible, multi-family buildings should be broken into clusters to reduce perceived size and bulk.

Policy 28.11: Design Review. Implement General Plan residential design policies through zoning and design review. Design guidelines, requirements, policies, and procedures should be stated clearly and applied consistently.

Policy 29.2: Landscape Design. Use landscaping to soften the appearance of buildings, frame desirable views, screen undesirable views, buffer potentially incompatible uses, and maintain an attractive streetscape. Landscape design should fit the surrounding context and complement the city's natural landscape

Policy 29.8: Exterior Lighting. Discourage excessive or overly bright exterior lighting and lighting which could interfere with motorist safety. Exterior yard lighting should be designed to avoid spillover on to adjacent properties.

Policy 29.9: Sight Obstructions. Avoid landscape designs that create safety hazards, impair driver visibility, or create the potential for conflicts between pedestrians and motorists, especially on driveways and at intersections.

The Land Use Element of the General Plan also contains the following policy related to aesthetics.

Policy 1.3: Harmonious Development. Maintain planning and development review procedures which ensure that new development is harmonious with its surroundings and will not conflict with adjacent properties. New development and home alterations should be consistent with established standards for setbacks, height, and bulk, thereby conserving the low-density, pedestrian-friendly character of the city's neighborhoods.

Piedmont City Code

Chapter 17, Planning and Land Use, of the Piedmont City Code (PCC) includes the City's zoning ordinance and regulates height, setbacks, and lot coverage for each of the City's zoning districts. The intent of this chapter is to preserve the architectural heritage, mature vegetation, and privacy of the City's existing housing stock and significant views.

PCC Section 3.22, Viewshed, includes provisions for the protection of private views. PCC Section 3.22.4 states "A person owning property in Piedmont shall have the right to establish a view claim and obtain restorative action according to the terms of this Section." This section provides procedures for Piedmont residents to make claims to remove, prune, or trim certain trees that obstruct views.

4.1.3 Impact Analysis

a. Methodology and Significance Thresholds

The following thresholds of significance are based on *CEQA Guidelines* Appendix G. For purposes of this EIR, implementation of the proposed project may have a significant adverse impact if it would do any of the following:

1. Have a substantial adverse effect on a scenic vista;
2. Substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway;
3. In non-urbanized areas, substantially degrade existing visual character or quality of public views of the site and its surroundings? If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality; or,
4. Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area.

Aesthetics impact assessments involve qualitative analysis that is subjective but informed by the basic guidelines provided above. Reactions to the same aesthetic conditions vary according to viewer taste and interests. The proposed Housing Element Implementation project is a programmatic, and not a specific development, project proposal. This analysis focuses, therefore, on a general discussion of the aesthetic impacts in Piedmont, in terms of the arrangement of built space to open space, the density and intensity of development, and how new development visually fits with the existing landscape characteristic of the area.

b. Project Impacts and Mitigation

As discussed in Section 2, *Project Description*, the proposed project involves implementation of the 2023-2031 Housing Element (including revisions to the Piedmont General Plan Land Use Element, revisions to the PCC, and the proposed MCSP) as well as updates to the General Plan Transportation Element, Environmental Hazards Element, Natural Resources and Sustainability Element, Design and Preservation Element, Community Services and Facilities Element, and Parks, Recreation and Open Space Element. The updates to the General Plan elements themselves would not result in physical changes to the environment such that substantial impacts related to aesthetics quality could occur. Therefore, this analysis focuses on impacts associated with future development facilitated by the implementation of the Housing Element throughout Piedmont.

Threshold 1:	Would the project have a substantial adverse effect on a scenic vista?

Impact AES-1 IMPLEMENTATION OF THE PROPOSED PROJECT WOULD ALLOW INCREASED DENSITY AND HEIGHT FOR NEW RESIDENTIAL DEVELOPMENT ON INDIVIDUAL SITES THROUGHOUT THE CITY SUCH THAT SCENIC VIEWS FROM PUBLIC VIEWPOINTS COULD BE ADVERSELY AFFECTED FROM LIMITED LOCATIONS. HOWEVER, THIS WOULD OCCUR ON INDIVIDUAL SITES AND WOULD BE MINIMIZED THROUGH REQUIRED ADHERENCE TO GENERAL PLAN POLICIES AND DESIGN STANDARDS. THIS IMPACT WOULD BE LESS THAN SIGNIFICANT.

Citywide Housing Element Implementation

A scenic vista is a view from a public place (roadway, designated scenic viewing spot, etc.) that is expansive and considered important by a jurisdiction or a community. It can be obtained from an elevated position (such as from the top of a hillside) or it can be seen from a roadway with a longer-range view of the landscape. An adverse effect would occur if a proposed development pursuant to the Housing Element Implementation project would alter, block, or otherwise damage a scenic vista upon implementation. While the varying topography of Piedmont can block surrounding views, some long-range scenic views are visible from public places throughout Piedmont, primarily from streets, sidewalks, and limited areas of parks.

The proposed project would facilitate increased density and building height to implement the policies and programs of the 2023-2031 Housing Element. Under the proposed project, height allowances under the PCC would increase from 35 feet to 45 feet (four stories). With an allowed concession for increased height under State Density Bonus law, potential future development could be as much as 5 stories and 60 feet in height. The Piedmont General Plan indicates that views of the San Francisco and Oakland skylines, Lake Merritt and San Francisco Bay, the Bay and Golden Gate Bridges, and surrounding hills, canyons, and geological features are available in Piedmont. However, many of these views from public viewpoints, such as from roadways or parks, are already fully or intermittently impeded by mature trees, buildings, or Piedmont's varying topography. On an individual basis, some future projects that are designed up to 5 stories could impede views from public viewpoints. However, generally, most development that would occur under the proposed project would be infill development on and near already developed sites where views are already partially or wholly obstructed. Further, many of the inventory sites listed in Table 2-2 in Section 2, *Project Description,* which are the sites identified as most likely to develop in Piedmont, are located in lower elevation areas (such as within canyons and quarries) where there are no scenic views of areas outside the city.

While the proposed project would increase allowed heights up to five stories in some areas with concessions afforded by State Density Bonus law, the difference in view obstruction from a five-story building compared to a three-story building would generally be minimal from public viewpoints as

three-story buildings, which are currently allowed and exist on and near many of the housing inventory sites, already obstruct most views. In addition, individual projects would only block views from individual and limited sites and wouldn't substantially block views or otherwise damage or alter a scenic vista.

Further, development facilitated by the proposed project would be required to comply with the City's development standards and design guidelines, which include limits on building height included in Piedmont City Code (PCC) Chapter 17.

Overall, development facilitated by the proposed Housing Element Implementation project would not substantially alter or block scenic vistas. This impact would be less than significant.

Moraga Canyon Specific Plan

The proposed Housing Element Implementation Project includes adopting a Specific Plan to facilitate development in the MCSP Area. Because the area is within a canyon, views from the site are limited to the immediate hills and hillsides in the area, as well as Blair Park. Further, views of the MCSP Area are limited and are mostly from Moraga Avenue, a public roadway through the MCSP Area, from residences on the hillsides in the immediate surroundings, and from points within the MCSP area, such as Coaches Field and Blair Park. There are no designated scenic views or vistas available through the site. Development facilitated by the proposed project in this area would not substantially alter or block scenic vistas. Further, future development would be subject to General Plan policies and Piedmont Design Standards and Guidelines and development standards. Therefore, impacts to scenic resources from development pursuant to an adopted MCSP in the MCSP Area would be less than significant.

Mitigation Measures

This impact from development facilitated by the proposed Housing Element Implementation project, including development pursuant to an adopted MCSP, would be less than significant. No mitigation measures are required.

Threshold 2:	Would the project substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

Impact AES-2 THERE ARE NO DESIGNATED OR ELIGIBLE SCENIC HIGHWAYS IN PIEDMONT OR WITH SUBSTANTIAL VIEWS OF PIEDMONT. IMPLEMENTATION OF THE PROPOSED PROJECT WOULD NOT DAMAGE SCENIC RESOURCES VISIBLE FROM A SCENIC HIGHWAY. NO IMPACT WOULD OCCUR.

Citywide Housing Element Implementation

There are no designated or eligible scenic highways in Piedmont or with substantial views of Piedmont. The closest designated State scenic highway to Piedmont is I-580 located 0.3 mile west of the city, and the second closest eligible State scenic highway is SR 13, located 0.6 mile east of Piedmont (Caltrans 2018). No parts of the city are clearly or fully visible from these locations. Future development under the proposed Housing Element Implementation project would not damage scenic resources in or within clear view of either of these State-designated Scenic Highways. No impact would occur.

Moraga Canyon Specific Plan

There are no designated or eligible scenic highways in the MCSP Area or with substantial views of the MCSP Area. The nearest eligible scenic highway is Route 13 which is approximately 0.48 mile east of the MCSP Area (Caltrans 2018). Due to surrounding development and landscaping, the MCSP Area is not visible from SR 13. Future development pursuant to an adopted MCSP would not damage scenic resources in or within clear view of this State-designated Scenic Highway. No impact would occur.

Mitigation Measures

No impact would occur from development facilitated by the proposed Housing Element Implementation project, including development pursuant to an adopted MCSP, and no mitigation measures are required.

Threshold 3:	Would the project, in non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

Impact AES-3 PIEDMONT IS URBANIZED AND FUTURE DEVELOPMENT UNDER THE PROPOSED PROJECT WOULD NOT CONFLICT WITH APPLICABLE ZONING AND OTHER REGULATIONS GOVERNING SCENIC QUALITY SUCH THAT A SIGNIFICANT IMPACT WOULD OCCUR. THIS IMPACT WOULD BE LESS THAN SIGNIFICANT.

Citywide Housing Element Implementation

Piedmont is a largely built-out, developed, and urbanized area that meets the definition of an "urbanized area" pursuant to CEQA Statute Section 21071. The proposed Housing Element Implementation project includes programs for introducing new housing at all levels of affordability that is within access to transit, jobs, services, amenities, and open spaces. The proposed project includes an increase in density allowances for housing in zones A, B, C, D, and E to facilitate the construction of new housing. Under the proposed project, height allowances regulated by the PCC would increase from 35 feet to 45 feet (4 stories). With an allowed concession for increased height under State Density Bonus law, potential future development could be up to 5 stories and 60 feet in height. The development associated with this increase in density would still be required to adhere to development standards and design standards included in PCC Chapter 17 which would ensure that development would comply with existing zoning provisions regulating scenic quality, such as height, lot coverage and setback requirements, as well as applicable Building Code design standards in effect at the time of construction.

The proposed project would facilitate infill development primarily on vacant and underutilized sites in order to increase density to accommodate a higher number of residential units. Development facilitated by the proposed project would be infill development on and near developed sites within the city. Further, future development that is subject to discretionary approval would be subject to design review as part of the project approval process. Individual future projects would be subject to the City of Piedmont's existing general building and construction standards and the City of Piedmont's planning and land use standards (PCC Chapters 8 and 17) to ensure that buildings are compatible with neighboring land uses and architectural design and scale.

Additionally, development facilitated by the proposed Housing Element Implementation project would be required to comply with the policies in the General Plan, as discussed in the Regulatory Setting section above, concerning scenic quality.

Overall, the development facilitated by the proposed project would not conflict with regulations governing scenic quality. The impact would be less than significant.

Moraga Canyon Specific Plan

As discussed above, the MCSP Area is within Piedmont which is considered an "urbanized area." The proposed project would result in increased development within the MCSP Area and would change the characteristics of the area from primarily open space, municipal uses, and recreational uses to primarily residential development. The exact configuration of future development within the MCSP Area is not known at this time. Future development projects would still be subject to development and planning review and must, therefore, conform to General Plan policies regarding protection of aesthetic qualities, as listed above in the Regulatory Setting. Additionally, future development projects pursuant to an adopted MCSP would be required to comply with applicable design guidelines. Furthermore, the MCSP itself will include location parameters and design guidelines for future development to further preserve scenic quality in the MSCP Area.

Overall, development pursuant to an adopted MCSP would not conflict with regulations governing scenic quality. The impact would be less than significant.

Mitigation Measures

The impact from development facilitated by the proposed Housing Element Implementation project, including development pursuant to an adopted, would be less than significant. No mitigation measures are required.

Threshold:	Would the project create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area?

Impact AES-4 **DEVELOPMENT FACILITATED BY THE PROPOSED PROJECT WOULD CREATE NEW SOURCES OF LIGHT OR GLARE THAT COULD ADVERSELY AFFECT DAYTIME OR NIGHTTIME VIEWS IN THE AREA. HOWEVER, THERE ARE ALREADY SOURCES OF LIGHT AND GLARE THROUGHOUT THE CITY, AND DEVELOPMENT WOULD NOT SUBSTANTIALLY ADD TO EXISTING LIGHT AND GLARE THAT WOULD ADVERSELY AFFECT DAYTIME OR NIGHTTIME VIEWS. WITH COMPLIANCE WITH EXISTING CITY GUIDELINES INCLUDING GENERAL PLAN POLICIES AND THE PCC, THIS IMPACT WOULD BE LESS THAN SIGNIFICANT.**

Citywide Housing Element Implementation

Piedmont is mostly developed with commensurate levels of light and glare. New lighting associated with future development under the proposed project could occur on buildings for safety, residential decks, and in pedestrian walkways, and light could be emitted from interior sources through windows, doors, and skylights of residential buildings. The main source of glare would likely be from the sun shining on reflective or light-colored building materials and glazing.

Development facilitated by the project would, in large part, occur as infill on already developed parcels or on vacant or underutilized sites within existing neighborhoods. Development of underutilized or vacant parcels may result in new light sources, but they would likely be congruous with nearby light sources (e.g., lighting from residential windows). Furthermore, as the development

facilitated by the proposed project would be residential units, light from interior sources, such as windows, would be mostly filtered or obscured by window coverings, furniture, shades and other furnishings. Light spillover from exterior residential lighting is typically blocked by adjacent structures or trees. Piedmont's Design Standards and Guidelines include standards intended to ensure that a development project's design has little or no effect on neighboring properties' existing views, privacy and access to direct or indirect light, as well as standards for exterior lighting, including the requirement to use "dark sky compliant" lighting fixtures on the exterior of development. Future development facilitated by the proposed project would be required to comply with these design standards and guidelines as part of the city's review process.

Overall, new residential development would be in existing residential neighborhoods or along commercial corridors where sources of light and glare already exist. Development facilitated by the proposed project would not create new sources of substantial light or glare that would adversely affect daytime or nighttime views in the area, and the impact therefore is less than significant.

Moraga Canyon Specific Plan

The analysis for the citywide Housing Element Implementation above applies to the MCSP. New residential development facilitated by an adopted MCSP would add new sources of light and glare to the area. However, some sources of light and glare already exist to a limited extent within the MCSP Area and in adjacent residential neighborhoods due to lighting of buildings in residential neighborhoods and in the Corporation Yard, streetlights, and cars traveling through and parked in the area. Development in the MCSP area would create new sources of light and glare; however, future development would be subject to the Piedmont Design Standards and Guidelines to reduce excessive light and glare, as noted above. This impact would be less than significant.

Mitigation Measures

This impact from development facilitated by the proposed Housing Element Implementation project, including development pursuant to an adopted MCSP, would be less than significant. No mitigation measures are required.

c. Cumulative Impacts

Development in Piedmont facilitated by the proposed Housing Element Implementation project in conjunction with buildout under the General Plan could result in impacts to visual resources and aesthetic quality, although visual quality could improve with redevelopment of aging buildings and vacant and underutilized sites. Implementation of the project would encourage increased housing development citywide, mainly in areas already developed with other uses. Future development may undergo project-specific analysis for impacts to aesthetics and visual resources. Potential impacts could be addressed by design guidelines, regulations, policies, and project-specific measures, thereby limiting impacts on existing visual resources and enhancing the visual quality of areas where development occurs. Consequently, development facilitated by the proposed Housing Element Implementation project, including development facilitated by the MCSP, would not result in significant cumulative environmental impacts in conflict with requirements for preserving scenic vistas, scenic resources in State- or locally designated highways or drives, visual quality, and for limiting the effects of light and glare. Therefore, Housing Element Implementation would not result in a cumulatively considerable contribution to impact on aesthetics.

4.2 Air Quality

This section analyzes the potential air quality impacts associated with the development facilitated by the proposed Housing Element Implementation project, including from conflicts with applicable air quality plans, exceedance of air quality standards from criteria pollutant emissions, exposure of sensitive receptors to substantial pollutant concentrations, and odor emissions. Impacts related to greenhouse gas (GHG) emissions and climate change are discussed in Section 4.7, *Greenhouse Gas Emissions.*

4.2.1 Setting

a. Local Climate and Meteorology

The City of Piedmont is located in the San Francisco Bay Area Air Basin (SFBAAB), which is under the jurisdiction of the Bay Area Air Quality Management District (BAAQMD). Air quality in these basins is affected by the region's emission sources and by natural factors. Topography, wind speed and direction, and air temperature gradient all influence air quality. The SFBAAB has a Mediterranean climate, with warm, dry summers and cool, damp winters.

Stationary and mobile sources generate air pollutant emissions in the basins. Stationary sources can be divided into two major subcategories: point and area sources. Point sources occur at a specific location and are often identified by an exhaust vent or stack. Examples include boilers or combustion equipment that produce electricity or generate heat. Area sources are widely distributed and are generated by residential and commercial water heaters, painting operations, lawn mowers, agricultural fields, landfills, and some consumer products, among other things. Mobile sources refer to emissions from motor vehicles, including tailpipe and evaporative emissions, and are classified as either on-road or off-road. On-road sources may be legally operated on roadways and highways. Off-road sources include aircraft, ships, trains, and construction equipment. Air pollutants can also be generated by the natural environment, such as when high winds suspend fine dust particles.

The SFBAAB typically has high concentrations of pollutants due to its high population density and because it includes the Bay Area's major metropolitan areas. Air pollution potential is highest along the southeastern portion of the San Francisco Peninsula because that area is most protected from the winds and fog of the marine layer. Pollutants are also transported there from upwind sites.

b. Air Quality Standards

The federal and state governments have established ambient air quality standards for the protection of public health. The United States Environmental Protection Agency (U.S. EPA) is the federal agency designated to administer air quality regulation, while the California Air Resources Board (CARB) is the state equivalent in the California Environmental Protection Agency (CalEPA). The BAAQMD provides local management of air quality in the City of Piedmont. CARB has established air quality standards and is responsible for the control of mobile emission sources, while the BAAQMD is responsible for enforcing standards and regulating stationary sources.

The USEPA has set primary National Ambient Air Quality Standards (NAAQS) for ozone, carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulate matter with an aerodynamic diameter equal to or less than 10 microns (PM_{10}), fine particulate matter with an aerodynamic diameter equal to or less than 2.5 microns ($PM_{2.5}$), and lead. Primary standards are those levels of air quality deemed necessary, with an adequate margin of safety, to protect public health. In addition,

the State of California (State) has established health-based ambient air quality standards (CAAQS) for these and other pollutants, some of which are more stringent than the federal standards. Table 4.2-1 lists the current federal and State standards for regulated pollutants.

Table 4.2-1 Federal and State Ambient Air Quality Standards

		California Standards		National Standards	
Pollutant	Averaging Time	Concentration	Attainment Status	Concentration	Attainment Status
Ozone	8 Hour	0.070 ppm	N	0.070 ppm	N
	1 Hour	0.09 ppm	N		
Carbon Monoxide	8 Hour	9.0 ppm	A	9 ppm	A
	1 Hour	20 ppm	A	35 ppm	A
Nitrogen Dioxide	1 Hour	0.18 ppm	A	0.100 ppm	U
	Annual Arithmetic Mean	0.030 ppm		0.053 ppm	A
Sulfur Dioxide	24 Hour	0.04 ppm	A	0.14 ppm	A
	1 Hour	0.25 ppm	A	0.075 ppm	A
	Annual Arithmetic Mean			0.030 ppm	A
Particulate Matter (PM_{10})	Annual Arithmetic Mean	20 µg/m^3	N		
	24 Hour	50 µg/m^3	N	150 µg/m^3	U
Particulate Matter - Fine ($PM_{2.5}$)	Annual Arithmetic Mean	12 µg/m^3	N	12 µg/m^3	U/A
	24 Hour			35 µg/m^3	N
Sulfates	24 Hour	25 µg/m^3	A		
Lead	Calendar Quarter			1.5 µg/m^3	A
	Rolling 3 Month Average			0.15 µg/m^3	
	30 Day Average	1.5 µg/m^3			A
Hydrogen Sulfide	1 Hour	0.03 ppm	U		
Vinyl Chloride (chloroethene)	24 Hour	0.010 ppm	No information available		
Visibility Reducing particles	8 Hour (10:00 to 18:00 PST)		U		

A=Attainment N=Nonattainment U=Unclassified; mg/m^3=milligrams per cubic meter ppm=parts per million µg/m^3=micrograms per cubic meter

Source: BAAQMD 2023a, http://www.baaqmd.gov/research-and-data/air-quality-standards-and-attainment-status

As a local air quality management agency, the BAAQMD must monitor air pollutant levels to ensure that State and federal air quality standards are met and, if they are not met, to develop strategies to meet them. Depending on whether standards are met or exceeded, a local air basin is classified as in "attainment" or "non-attainment." The SFBAAB is designated non-attainment for the federal standards for ozone and $PM_{2.5}$ and in non-attainment for the State standard for ozone, $PM_{2.5}$, and PM_{10}.

c. Air Quality Pollutants of Primary Concern

The federal and State Clean Air acts mandate the control and reduction of certain air pollutants. Under these laws, U.S. EPA and CARB have established ambient air quality standards for certain criteria pollutants. Ambient air pollutant concentrations are affected by the rates and distributions of corresponding air pollutant emissions, and by the climate and topographic influences discussed above. Proximity to major sources is the primary determinant of concentrations of non-reactive

pollutants, such as CO and suspended particulate matter. Ambient CO levels usually follow the spatial and temporal distributions of vehicular traffic. A discussion of each primary criterion pollutant is provided below.

Ozone

Ozone is produced by a photochemical reaction (i.e., triggered by sunlight) between nitrogen oxides (NO_X) and reactive organic gases (ROG).[1] NO_X is formed during the combustion of fuels, while ROG is formed during combustion and evaporation of organic solvents. Because ozone requires sunlight to form, it mostly occurs in substantial concentrations between the months of April and October. Ozone is a pungent, colorless, toxic gas with direct health effects on humans including respiratory and eye irritation and possible changes in lung functions. Groups most sensitive to ozone include children, the elderly, people with respiratory disorders, and people who exercise strenuously outdoors (U.S. EPA 2023).

Carbon Monoxide

Carbon monoxide (CO) is a localized pollutant found in high concentrations only near its source. The primary source of CO, a colorless, odorless, poisonous gas, is automobile traffic's incomplete combustion of petroleum fuels. Therefore, elevated concentrations are usually only found near areas of high traffic volumes. Other sources of CO include the incomplete combustion of petroleum fuels at power plants, and fuel combustion from wood stoves and fireplaces during the winter. When CO levels are elevated outdoors, they can be of particular concern for people with some types of heart disease. These people already have a reduced ability to get oxygenated blood to their hearts in situations where they need more oxygen than usual. As a result, they are especially vulnerable to the effects of CO when exercising or under increased stress. In these situations, short-term exposure to elevated CO may result in reduced oxygen to the heart accompanied by chest pain, also known as angina (U.S. EPA 2023).

Nitrogen Dioxide

NO_2 is a by-product of fuel combustion, with the primary source being motor vehicles and industrial boilers and furnaces. Nitric oxide is the principal form of nitrogen oxide produced by combustion, but nitric oxide reacts rapidly to form NO_2, creating the mixture of NO and NO_2 commonly called NO_X. Nitrogen dioxide is an acute irritant. A relationship between NO_2 and chronic pulmonary fibrosis may exist, and an increase in bronchitis may occur in young children at concentrations below 0.3 ppm. Nitrogen dioxide absorbs blue light and causes a reddish-brown cast to the atmosphere and reduced visibility. It can also contribute to the formation of PM_{10} and acid rain (U.S. EPA 2023).

Suspended Particulate Matter

Particulate matter with a diameter of 10 micrometers or less (PM_{10}) and particulate matter with a diameter of 2.5 micrometers or less in diameter ($PM_{2.5}$) are comprised of finely divided solids and liquids such as dust, soot, aerosols, fumes, and mists. Both PM_{10} and $PM_{2.5}$ are emitted into the

[1] CARB defines VOC and ROG similarly as, "any compound of carbon excluding CO, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate," with the exception that VOC are compounds that participate in atmospheric photochemical reactions (CARB 2009). For the purposes of this analysis, ROG and VOC are considered comparable in terms of mass emissions and the term ROG is used in this report.[1] CARB defines VOC and ROG similarly as, "any compound of carbon excluding CO, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate," with the exception that VOC are compounds that participate in atmospheric photochemical reactions (CARB 2009). For the purposes of this analysis, ROG and VOC are considered comparable in terms of mass emissions and the term ROG is used in this report.

atmosphere as by-products of fuel combustion, including smoke from wildfires, and wind erosion of soil and unpaved roads. The atmosphere, through chemical reactions, can form particulate matter. The characteristics, sources, and potential health effects of PM_{10} and $PM_{2.5}$ can be very different. PM_{10} is generally associated with dust mobilized by wind and vehicles. In contrast, $PM_{2.5}$ is generally associated with combustion processes and formation in the atmosphere as a secondary pollutant through chemical reactions. PM_{10} can cause increased respiratory disease, lung damage, cancer, premature death, reduced visibility, and surface soiling. For $PM_{2.5}$, short-term exposures (up to 24 hours duration) have been associated with premature mortality, increased hospital admissions for heart or lung causes, acute and chronic bronchitis, asthma attacks, emergency room visits, respiratory symptoms, and restricted activity days. These adverse health effects have been reported primarily in infants, children, and older adults with preexisting heart or lung diseases (CARB 2023a).

Lead

Lead (Pb) is a metal found naturally in the environment, as well as in manufacturing products. The major sources of lead emissions historically have been mobile and industrial. However, due to the U.S. EPA's regulatory efforts to remove lead from gasoline, atmospheric lead concentrations have declined substantially over the past several decades. The most dramatic reductions in lead emissions occurred before 1990 due to the removal of lead from gasoline sold for most highway vehicles. Lead emissions were further reduced substantially between 1990 and 2008, with reductions occurring in the metals industries at least partly due to national emissions standards for hazardous air pollutants (U.S. EPA 2013). As a result of phasing out leaded gasoline, metal processing is currently the primary source of lead emissions. The highest lead level in the air is generally found near lead smelters. Other stationary sources include waste incinerators, utilities, and lead-acid battery manufacturers. Lead can adversely affect the nervous system, kidney function, immune system, reproductive and developmental systems, mental functioning, and cardiovascular system, depending on exposure. Lead exposure also affects the oxygen-carrying capacity of blood. The lead effects most likely encountered in current populations are neurological in children. Infants and young children are susceptible to lead exposures, contributing to behavioral problems, learning deficits, and lowered intelligence quotient (U.S. EPA 2022).

d. Toxic Air Contaminants

The California Health and Safety Code defines a toxic air contaminant (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." Most of the estimated health risks from TACs can be attributed to relatively few compounds, the most important being diesel particulate matter (DPM) from diesel-fueled engines. According to CARB, diesel engine emissions are believed to be responsible for about 70 percent of California's estimated known cancer risk attributable to TACs and they make up about 8 percent of outdoor $PM_{2.5}$ (CARB 2023a).

e. Current Air Quality

CARB and the U.S. EPA established ambient air quality standards for major pollutants, including ozone, CO, NO_2, SO_2, Pb, and PM_{10} and $PM_{2.5}$. Standards have been set at levels intended to be protective of public health. California standards are more restrictive than federal standards for each of these pollutants except for lead and the eight-hour average for CO. The local Air Pollution Control Districts are required to monitor air pollutant levels to ensure that air quality standards are met and, if they are not met, to develop strategies to meet the standards.

The City of Piedmont is located within the SFBAAB under the jurisdiction of BAAQMD. As the local air quality management agency, the BAAQMD is required to monitor air pollutant levels to ensure that State and federal air quality standards are met and, if they are not met, to develop strategies to meet the standards.

The closest air quality monitoring station to Piedmont is the Oakland-West station at 1100 21st Street. The Oakland-West station monitors ozone, CO, NO_2, and $PM_{2.5}$. For PM_{10} measurements, the San Francisco-Arkansas station at 10 Arkansas Street was used. Table 4.2-2 indicates the number of days that each of the air quality standards have been exceeded at the stations during the monitoring period from 2018 through 2020. Levels of 8-hour ozone exceeded both State and federal thresholds once in 2019. Levels of 1-hour ozone exceeded State thresholds once in 2019. $PM_{2.5}$ exceeded federal thresholds 14 times in 2018 and 8 times in 2020. PM_{10} exceeded State thresholds twice in 2020. No other thresholds were exceeded in the years 2018 through 2020.

Table 4.2-2 Ambient Air Quality at Nearest Monitoring Stations

Pollutant	2019	2020	2021
Oakland-West Station			
8-Hour Ozone (ppm), maximum	0.072	0.056	0.047
Number of days of state exceedances (>0.070 ppm)	1	0	0
Number of days of federal exceedances (>0.070 ppm)	1	0	0
1-hour Ozone (ppm), maximum	0.101	0.84	0.067
Number of days of state exceedances (>0.09 ppm)	1	0	0
Number of days of federal exceedances (>0.112 ppm)	0	0	0
Nitrogen dioxide (ppb), 1-hour maximum	50.0	48.0	49.5
Number of days of state exceedances (>180 ppb)	0	0	0
Number of days of federal exceedances (>100 ppb)	0	0	0
Particulate matter <2.5 microns, μg/m³, 24-hour maximum	29.3	159.7	25.4
Number of days above federal standard (>35 μg/m³)	0	8	0
San Francisco-Arkansas Street Station			
Particulate matter <10 microns, μg/m³, 24-hour maximum	42.1	102.3	–
Number of days of state exceedances (>50 μg/m³)	0	2	–
Number of days of federal exceedances (>150 μg/m³)	0	0	–

ppm = parts per million
μg/m³ = micrograms per cubic meter
Source: CARB 2023b

f. Sensitive Receptors

Ambient air quality standards have been established to represent the levels of air quality considered sufficient to protect public health and welfare, with a margin of safety. They are designed to protect that segment of the public most susceptible to the effects of air pollutants and subsequent respiratory distress, such as children under 14, the elderly over 65, persons engaged in strenuous work or exercise, and people with cardiovascular and chronic respiratory diseases. According to the Piedmont General Plan Environmental Hazards Element, sensitive receptors include hospitals, convalescent homes, schools, churches, sensitive wildlife habitat, and residential areas. Using this definition, virtually all of Piedmont would be considered sensitive receptors. Therefore, it can be assumed that

all development under the proposed project, including within the Moraga Canyon Specific Plan (MCSP) Area, would be located in proximity to sensitive receptors.

4.2.2 Regulatory Setting

a. Federal Regulations

Federal Clean Air Act

The U.S. EPA is charged with implementing national air quality programs. U.S. EPA's air quality mandates are drawn primarily from the federal Clean Air Act (CAA), passed in 1963 by the U.S. Congress and amended several times. The 1970 federal CAA 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 non-attainment requirements for areas not meeting NAAQS and the Prevention of Significant Deterioration program. The 1990 federal CAA amendments represent the latest in a series of federal efforts to regulate air quality in the United States.

National Ambient Air Quality Standards

The federal CAA requires U.S. EPA to establish primary and secondary NAAQS for several criteria air pollutants. The air pollutants for which standards have been established are considered the most prevalent air pollutants known to be hazardous to human health. NAAQS have been established for ozone, CO, NO_2, SO_2, PM_{10}, $PM_{2.5}$, and Pb.

b. State Regulations

California Clean Air Act

The California CAA, signed into law in 1988, requires all areas of the State to achieve and maintain the CAAQS by the earliest practical date. CARB is the State air pollution control agency and is a part of CalEPA. CARB is the agency responsible for coordination and oversight of State and local air pollution control programs in California, and for implementing the requirements of the California CAA. CARB overseas local district compliance with federal and California laws, approves local air quality plans, submits the State implementation plans to the U.S. EPA, monitors air quality, determines and updates area designations and maps, and sets emissions standards for new mobile sources, consumer products, small utility engines, off-road vehicles, and fuels.

California Ambient Air Quality Standards

The California CAA requires CARB to establish ambient air quality standards for California, known as CAAQS. Similar to the NAAQS, CAAQS have been established for criteria pollutants and standards are established for vinyl chloride, hydrogen sulfide, sulfates, and visibility-reducing particulates. In general, the CAAQS are more stringent than the NAAQS on criteria pollutants. The California CAA requires all local air districts to endeavor to achieve and maintain the CAAQS by the earliest practical date. The California CAA specifies that local air districts focus attention on reducing the emissions from transportation and area-wide emission sources and provides districts with the authority to regulate indirect sources.

CARB released a technical advisory on reducing air pollution near high-volume roadways to clarify the 500-foot recommendation from 2005 due to the increased focus on and benefits from infill development, which can often occur within 500 feet of a major roadway (CARB 2017). As described in the technical advisory, California has implemented various measures to improve air quality and reduce exposure to traffic emissions. These include the Diesel Risk Reduction Plan, which aims to reduce particulate matter emissions from diesel vehicles. The continued electrification of California's vehicle fleet would also reduce $PM_{2.5}$ levels, and ongoing efforts to reduce emissions from cars and trucks and to move vehicles towards "zero emission" alternatives will continue to drive down traffic pollution (CARB 2017).

As shown in Table 4.2-2, the nearest monitoring stations to Piedmont have shown the area to have relatively clean air, with one exceedance both 8-hour ozone and 1-hour ozone, two exceedances of PM_{10}, and a handful of exceedances of $PM_{2.5}$.

c. Regional and Local Regulations

Bay Area Air Quality Management District

The BAAQMD is the agency primarily responsible for assuring national and State ambient air quality standards are attained and maintained in the SFBAAB. The BAAQMD is also 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, and conducting public education campaigns, as well as many other activities. The BAAQMD has jurisdiction over much of the nine-county Bay Area, including the City of Piedmont.

The BAAQMD adopted the 2017 Clean Air Plan as an update to the 2010 Clean Air Plan. The 2017 Clean Air Plan provides a regional strategy to protect public health and protect the climate, which would apply to proposed projects in the SFBAAB. To fulfill State ozone planning requirements, the 2017 control strategy includes all feasible measures to reduce emissions of ozone precursors—ROG and NO_X—and reduce transport of ozone and its precursors to neighboring air basins, such as: stationary-source control measures to be implemented through the BAAQMD regulations; mobile-source control measures to be implemented through incentive programs and other activities; and transportation control measures to be implemented through transportation programs in cooperation with the Metropolitan Transportation Commission (MTC), local governments, transit agencies, and others. In addition, the 2017 Clean Air Plan builds upon and enhances the BAAQMD's efforts to reduce emissions of fine particulate matter and toxic air contaminants. The 2017 Clean Air Plan also represents the Bay Area's most recent triennial assessment of the Region's strategy to attain the State 1-hour ozone standard (BAAQMD 2017).

City of Piedmont General Plan

The City's General Plan, adopted in April 2009 and amended in 2019, lists several air quality goals, policies, and actions as part of the Natural Resources and Sustainability Element that support the goals of BAAQMD. The following goals, policies, and actions are applicable to the proposed project (City of Piedmont 2009):

Goal 15 Actively participate in efforts to improve air and water quality in the San Francisco Bay Area.

Policy 15.1: Transportation Control Measures. Implement transportation control measures (TCMs) to reduce air pollution emissions at the local level. This should include measures to promote walking and bicycling, continue casual carpooling, sustain or increase public transit service to Piedmont, and coordinate with other jurisdictions to create a more balanced and integrated transportation system.

Policy 15.2: Alternative Fuel Vehicles. Encourage the use of cleaner-burning fuels and low-emission vehicles. This could include providing infrastructure for "plug-in" vehicles; hydrogen fuel pumps at the city's gas stations; and a gradual switch to hybrid, electric, or alternative fuel vehicles for the city fleet.

Policy 15.5: Integrated Pest Management. To the extent feasible and appropriate, use integrated pest management techniques when maintaining City parks, medians, and public facilities. These techniques minimize the use of pesticides, herbicides, and other toxic materials that could potentially pollute surface water and groundwater.

Action 15B: Construction Dust Controls. Require local construction activities, including remodeling and landscaping, as well as new construction, to minimize airborne dust and particulate matter. This should include requirements to cover stockpiled soil, avoid earthmoving on windy days, and cover trucks that are hauling dirt and debris.

Action 15C: Wood-burning Fireplaces and Stoves. Ensure compliance with EPA standards for wood-burning fireplaces and stoves, and consider incentive-based programs to replace or retrofit existing fireplaces and stoves with lower emission alternatives.

Action 15D: Gas-Powered Electric Leaf Blowers. Enforce the existing ban on gasoline-powered blowers by private parties. Adopt a policy for municipal use of gas-powered blowers.

Goal 16 Encourage building and construction practices that minimize environmental impacts and natural resource consumption.

Policy 16.1: Linking Land Use and Transportation Choices. Consistent with the Land Use and Transportation Elements of this plan, retain walkable neighborhoods, reliable public transportation, safe cycling, carpooling, convenient access to shops and services, and other measures which reduce the need for driving and fuel consumption in Piedmont.

4.2.3 Impact Analysis

a. Methodology and Thresholds of Significance

Significance Thresholds

To determine whether a project would result in a significant impact to air quality, Appendix G of the *CEQA Guidelines* requires consideration of whether a project would:

1. Conflict with or obstruct implementation of the applicable air quality plan;
2. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or State ambient air quality standard;

3. Expose sensitive receptors to substantial pollutant concentrations; or,
4. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

BAAQMD Significance Thresholds

This analysis uses the BAAQMD's 2022 *CEQA Air Quality Guidelines* to evaluate air quality. The plan-level thresholds specified in the 2022 BAAQMD *CEQA Air Quality Guidelines* were used to determine whether the proposed project impacts exceed the thresholds identified in *CEQA Guidelines* Appendix G.

CONSISTENCY WITH AIR QUALITY PLAN

Under BAAQMD's methodology, a determination of consistency with *CEQA Guidelines* thresholds should demonstrate that a project:

1. Supports the primary goals of the 2017 Clean Air Plan.
2. Includes applicable control measures from the 2017 Clean Air Plan.
3. Does not disrupt or hinder implementation of any 2017 Clean Air Plan control measures.

CRITERIA AIR POLLUTANTS - CONSTRUCTION

The BAAQMD's 2022 *CEQA Air Quality Guidelines* have no plan-level significance thresholds for construction air pollutants emissions. However, they do include project-level screening and emissions thresholds for temporary construction-related emissions of air pollutants. These thresholds represent the levels at which a project's individual emissions of criteria air pollutants or precursors would result in a cumulatively considerable contribution to the SFBAAB's existing air quality conditions and are discussed in detail below (BAAQMD 2023b). Construction emissions associated with plan implementation are discussed qualitatively to evaluate potential air quality impacts.

The BAAQMD developed screening criteria in the 2022 CEQA Air Quality Guidelines to provide lead agencies and project applicants with a conservative indication of whether a project could result in potentially significant air quality impacts. The screening criteria for residential land uses are shown in Table 4.2-3.

Table 4.2-3 BAAQMD Criteria Air Pollutant Screening Levels

Land Use Type	Operational Criteria Pollutant Screening Size (du)	Construction Criteria Pollutant Screening Size (du)
Single Family Housing	421	254
Apartments	638	416
Condo-Townhouse	637	416
Mobile Home Park	721	377
Congregate Care/Retirement Community	1,008	416

du = dwelling unit; NOX = oxides of nitrogen; ROG = reactive organic gases

Source: BAAQMD 2022

In addition to the screening levels above, several additional factors are outlined in the 2022 CEQA Air Quality Guidelines that construction activities must satisfy for a project to meet the construction screening criteria:

- All best management practices from the 2017 *CEQA Guidelines* must be included in project design and implemented during construction,
- Construction-related activities would not overlap with operational activities,
- Construction-related activities would not include any of the following:
  - Demolition
  - Simultaneous occurrence of more than two construction phases (e.g., paving and building construction occurring simultaneously)
  - Extensive site preparation (e.g., grading, cut and fill, or earth movement),
  - Extensive material transport (e.g., soil import and export requiring a considerable amount of haul truck activity), or
  - Stationary sources (e.g., backup generators) subject to Air District rules and regulations.
  - If a project meets the screening criteria, then the lead agency or applicant would not need to perform a detailed air quality assessment of their project's air pollutant emissions. These screening levels are generally representative of new development on greenfield sites without any form of mitigation measures taken into consideration (BAAQMD 2023b).

For projects that do not meet the screening criteria above, the BAAQMD construction significance thresholds for criteria air pollutants, shown in Table 4.2-4, are used to evaluate a project's potential air quality impacts.

Table 4.2-4 BAAQMD Criteria Air Pollutant Significance Thresholds

Pollutant	Construction Thresholds Average Daily Emissions (lbs/day)	Operational Threshold Average Daily Emissions (lbs/day)	Operational Threshold Maximum Annual Emissions (tons/year)
ROG	54	54	10
NO_X	54	54	10
PM_{10}	82 (exhaust)	82	15
$PM_{2.5}$	54 (exhaust)	54	10
Fugitive Dust	Best Management Practices	Not Applicable	Not Applicable

lbs = pounds; NO_X = oxides of nitrogen; ROG = reactive organic gases; $PM_{2.5}$ = particulate matter with an aerodynamic diameter equal to or less than 2.5 microns

Source: BAAQMD 2023b

For all projects in the SFBAAB, the BAAQMD 2022 CEQA Air Quality Guidelines recommends implementation of the Basic Best Management Practices for Construction-Related Fugitive Dust Emissions listed in Table 8-2 of the Guidelines (BAAQMD 2023b). For projects that exceed the thresholds in Table 4.2-4, the BAAQMD 2022 CEQA Air Quality Guidelines recommends implementation of the Additional Construction Mitigation Measures listed in Table 8-3 of the Guidelines (BAAQMD 2023b).

CRITERIA AIR POLLUTANTS – OPERATION

The BAAQMD's 2022 CEQA Air Quality Guidelines contain specific operational plan-level significance thresholds for criteria air pollutants. Plans must show the following over the planning period:

- Consistency with current air quality plan control measures, and
- Vehicle miles traveled (VMT) or vehicle trips increase is less than or equal to the plan's projected population increase.

If a plan can demonstrate consistency with both criteria, then impacts would be less than significant. The current air quality plan is the 2017 Clean Air Plan.

For project-level thresholds, the screening criteria for operational emissions are shown in Table 4.2-3. For projects that do not meet the screening criteria, the BAAQMD operational significance thresholds for criteria air pollutants, shown in Table 4.2-4, are used to evaluate a project's potential air quality impacts.

CARBON MONOXIDE HOTSPOTS

BAAQMD provides a preliminary screening methodology to conservatively determine whether a proposed project would exceed CO thresholds. If the following criteria are met, the individual project would result in a less than significant impact related to local CO concentrations:

1. The project is consistent with an applicable congestion management program established by the county congestion management agency for designated roads or highways, regional transportation plan, and local congestion management agency plans;
2. Project traffic would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour; and
3. Project traffic would not increase traffic volumes at affected intersections 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).

TOXIC AIR CONTAMINANTS

For health risks associated with TAC and $PM_{2.5}$ emissions, the BAAQMD 2022 CEQA Air Quality Guidelines state a project would result in a significant impact if the any of the following thresholds are exceeded (BAAQMD 2023b):

- Non-compliance with Qualified Community Risk Reduction Plan;
- Increased cancer risk of > 10.0 in a million;
- Increased non-cancer risk of > 1.0 Hazard Index (Chronic or Acute); or
- Ambient $PM_{2.5}$ increase of > 0.3 $\mu g/m^3$ annual average

LEAD

Projects would be required to comply with BAAQMD Regulation 11, Rule 1 (Lead), which is intended to control the emission of lead to the atmosphere. This rule sets standards and limits for emissions of lead and provides procedures for monitoring emissions.

ASBESTOS

Demolition of buildings would be subject to BAAQMD Regulation 11, Rule 2 (Asbestos Demolition, Renovation, and Manufacturing). BAAQMD Regulation 11, Rule 2 is intended to limit asbestos emissions from demolition and the associated disturbance of asbestos-containing waste material generated or handled during these activities. This rule requires notification of BAAQMD of any regulated demolition activity, and contains specific requirements for surveying, notification, removal, and disposal of material containing asbestos. Impacts related to asbestos emissions from projects that comply with Regulation 11, Rule 2 are considered to be less than significant since the regulation would ensure the proper and safe disposal of asbestos containing material.

ODORS

The BAAQMD provides minimum distances for siting of new odor sources, shown in Table 4.2-5. A significant impact would occur if the project would result in other emissions (such as odors) affecting substantial numbers of people or would site a new odor source as shown in Table 4.2-5 within the specified distances of existing receptors.

Table 4.2-5 BAAQMD Odor Source Thresholds

Odor Source	Minimum Distance for Less than Significant Odor Impacts (in miles)
Wastewater Treatment Plant	2
Wastewater Pumping Facilities	1
Sanitary Landfill	2
Transfer Station	1
Composting Facility	1
Petroleum Refinery	2
Asphalt Batch Plant	2
Chemical Manufacturing	2
Fiberglass Manufacturing	1
Painting/Coating Operations	1
Rendering Plant	2
Coffee Roaster	1
Food Processing Facility	1
Confined Animal Facility/Feed Lot/Dairy	1
Green Waste and Recycling Operations	1
Metal Smelting Plants	2

Source: BAAQMD 2023b

Methodology

Construction Emissions

Construction-related emissions are temporary but may still cause adverse air quality impacts. Construction of development associated with the proposed project would generate temporary emissions from three primary sources: the operation of construction vehicles (e.g., scrapers, loaders, dump trucks, concrete mixers, delivery trucks, etc.); ground disturbance during site preparation and

grading, which creates fugitive dust; and the application of asphalt, paint, or other oil-based substances.

At this time, there is not sufficient detail to allow project-level analysis and thus it would be speculative to analyze project-level impacts. Rather, construction impacts for the proposed project are discussed qualitatively and emissions are not compared to the project-level thresholds.

Operation Emissions

Based on plan-level guidance from the BAAQMD 2022 CEQA Air Quality Guidelines, long-term operational emissions associated with implementation of the proposed project are discussed qualitatively by comparing the proposed project to the 2017 Clean Air Plan goals, policies, and control measures. In addition, comparing the rate of increase of plan VMT and population is recommended by BAAQMD for determining significance of criteria pollutants. If the proposed project does not meet either criterion, then impacts would be potentially significant.

b. Project Impacts and Mitigation

The proposed project involves implementation of the 2023-2021 Housing Element, including revisions to the General Plan Land Use Element, revisions to the PCC, and the MCSP, as well as updates to the General Plan Environmental Hazards Element, Transportation Element, Natural Resources and Sustainability Element, Design and Preservation Element, Community Services and Facilities Element, and Parks, Recreation and Open Space Element. The updates to the General Plan elements themselves would not result in physical changes to the environment such that impacts related to air quality would occur. Therefore, this analysis focuses on impacts associated with implementation of the Housing Element, revisions to the PCC and the MCSP, which would facilitate housing development throughout Piedmont.

Threshold 1:	Would the project conflict with or obstruct implementation of the applicable air quality plan?

Impact AQ-1 THE PROPOSED PROJECT WOULD NOT CONFLICT WITH THE CONTROL MEASURES WITHIN THE 2017 CLEAN AIR PLAN, AND THE VEHICLE MILES TRAVELED (VMT) INCREASE FROM THE PROPOSED PROJECT WOULD BE LESS THAN THE PROJECT'S PROJECTED POPULATION INCREASE. THEREFORE, THIS IMPACT WOULD BE LESS THAN SIGNIFICANT.

Project Consistency with the Current Air Quality Plan

Citywide Housing Element Implementation

A project that would not support the goals within the 2017 Clean Air Plan would not be consistent with the 2017 Clean Air Plan. On an individual project basis, consistency with BAAQMD quantitative thresholds is interpreted as demonstrating support for the 2017 Clean Air Plan goals. Consistent with the project's objective to increase allowances for housing, as well as Policy 6.6 of the Housing Element which aims to connect housing to local jobs, the project would encourage denser housing on housing sites near corridors served by bus stops, such as those at Oakland Avenue, Park Boulevard, and Highland Avenue, at various levels of affordability. By allowing for the easier use of alternative modes of transportation through proximity to services, job centers, bus stops, and bike routes, development facilitated by the project could reduce the use of personal vehicles and subsequent mobile emissions than if housing sites were placed farther from corridors served by bus stops. In addition, development

facilitated by the project would be required to comply with the latest Title 24 regulations, including requirements for residential indoor air quality. The analysis is based on compliance with 2022 Title 24 requirements although individual projects developed under the plan would be required to comply with the most current version of Title 24 at the time of project construction. These requirements currently mandate Minimum Efficiency Reporting Value (MERV) 13 (or equivalent) filters for heating/cooling systems and ventilation systems in residences (Section 150.0[m]) or implementation of future standards that would be anticipated to be equal to or more stringent than current standards. Therefore, the project would improve air quality compared to development farther from transit and services through reducing VMT and would protect public health through stringent requirements for MERV-13 filters or equivalent indoor air quality measures, which would be consistent with the primary goals of the 2017 Clean Air Plan.

The 2017 Clean Air Plan includes 85 control measures under the following sectors: stationary sources, transportation, energy, buildings, agriculture, natural and working lands, waste management, water, and super-GHG pollutants. Many of these measures are industry-specific and would not be applicable to development facilitated by the project (e.g., stationary sources, agriculture, and natural and working lands). Measures from transportation, energy, building, water, waste, and super-GHG pollutants sectors are focused on larger-scale planning efforts (e.g., transit funding, utility energy procurement, regional energy plans) and would not directly apply to development facilitated by the project. Table 4.2-6 shows project consistency with applicable control measures from the 2017 Plan.

Table 4.2-6 Project Consistency with Applicable 2017 Plan Control Measures

Control Measures	Consistency
Transportation	
TR9: Bicycle and Pedestrian Access and Facilities. Encourage planning for bicycle and pedestrian facilities in local plans, e.g., general and specific plans, fund bike lanes, routes, paths and bicycle parking facilities.	**Consistent**: The proposed project itself does not include bicycle or pedestrian improvements but also would not include project components that would conflict with bicycle or pedestrian access or facilities. The proposed project facilitates housing development on infill sites and on sites in proximity to corridors served by Class II and Class III bicycle lanes and bus stops, such as Oakland Avenue, Highland Avenue, Hampton Road, Park Boulevard, and Moraga Avenue. The sites identified in the Housing Element as having the most potential and feasibility to be developed (as shown on Figure 2-4 in Section 2, *Project Description)* are located within a one-mile walk to a bus station, with the exception of development in the northern most corner of the city in MCSP Area which is located approximately 1.2 miles from the nearest bus station. Nonetheless, the proposed project would place housing in areas served by pedestrian and bicycle facilities and within walking and biking distance to stations to facilitate the use of alternative modes of transportation. The City's pedestrian and bicycle master plan, the Piedmont Safer Streets Plan, would facilitate the development of a 10-mile designated bikeway network, which future residents from the proposed project would be able to utilize (City of Piedmont 2014).

Control Measures	Consistency
Energy	
EN2: Decrease Electricity Demand. Work with local governments to adopt additional energy-efficiency policies and programs. Support local government energy efficiency program via best practices, model ordinances, and technical support. Work with partners to develop messaging to decrease electricity demand during peak times.	**Consistent**: Future development would be required to comply with PCC Chapter 8, which includes requirements for the use of energy-efficient design and technologies as well as provisions for incorporating renewable energy resources into building design, which would reduce pressure on the electrical grid. Furthermore, Part 6 of Title 24 requires all new low-rise buildings to install photovoltaic (PV) panels that can generate an output greater or equal to the amount of electricity that is annually consumed, which would be beneficial in further reducing pressure on the electrical grid. Future development would also be served by Ava Community Energy (formerly known as East Bay Community Energy) which would place residents in the Renewable 100 Plan (100 percent renewable) unless they opt out. Future development would be required to comply with Goal 6 (Sustainability and Energy) and associated policies and programs of the Housing Element, which would encourage energy-efficient design and the use of energy-efficient materials and renewable energy in new development.
Buildings	
BL1: Green Buildings. Collaborate with partners such as KyotoUSA to identify energy-related improvements and opportunities for on-site renewable energy systems in school districts; investigate funding strategies to implement upgrades. Identify barriers to effective local implementation of the CALGreen (Title 24) statewide building energy code; develop solutions to improve implementation/enforcement. Work with ABAG's BayREN program to make additional funding available for energy-related projects in the buildings sector. Engage with additional partners to target reducing emissions from specific types of buildings.	**Consistent**: Future development facilitated by the proposed project would be required to comply with the energy and sustainability standards of Title 24 (including the California Energy Code and CALGreen) and the City's associated amendments that are in effect at that time. The Title 24 standards are updated every three years and become increasingly more stringent over time. The City has adopted a Reach Code[2] (PCC Section 8.02.070) for the purpose of encouraging the incorporation of energy efficient measures in new development. Part 6 of Title 24 requires all new low-rise buildings to install photovoltaic (PV) panels that can generate an output greater or equal to the amount of electricity that is annually consumed, which would be beneficial in reducing pressure on the electrical grid. Future development would be required to comply with Program 6.B of the Housing Element, which would encourage implementation of tools such as the City's Build it Green checklist to promote greener housing construction.
Water	
WR2: Support Water Conservation. Develop a list of best practices that reduce water consumption and increase on-site water recycling in new and existing buildings; incorporate into local planning guidance.	**Consistent**: Future development requiring new or expanded water service would be required to comply with East Bay Municipal Utility District's (EBMUD) Section 31 water efficiency regulations, which include best practice requirements that are more stringent than CALGreen and the State's Model Water Efficiency Landscape Ordinance to reduce indoor and outdoor water use. Additionally, future development would be required to comply with Policy 14.5 of the City's General Plan Natural Resources and Sustainability Element which encourages the use of native drought-tolerant species.

Source: BAAQMD 2017b

[2] A "reach code" is an ordinance adopted by a local government that requires something in addition to the requirements of the state's building code.

As shown in Table 4.2-6, the project would be consistent with the applicable measures as development facilitated by the project would be required to comply with the latest Title 24 regulations. Development facilitated by the project would not contain elements that would disrupt or hinder implementation of 2017 Clean Air Plan control measures. Therefore, the project would be generally consistent with the 2017 Clean Air Plan.

Moraga Canyon Specific Plan

Development in the MCSP Area would be generally consistent with the 2017 Clean Air Plan Control Measures listed above since they would be required to comply with the same State and local regulations, such as the most current version of Title 24 at the time of project construction; 2022 CALGreen standards which require a minimum 65 percent diversion of construction/demolition waste; EBMUD's Section 31 water efficiency regulations; and the State's Model Water Efficiency Landscape Ordinance. Although the northern-most corner of the MCSP Area would be located a 1.2-mile walk from the nearest bus stop, other parts of the MCSP Area would be within a one-mile walk to the nearest bus stop and therefore would be within walking and bicycling distance to transit. Additionally, Moraga Avenue is a designated Class III bicycle lane, which connects to Highland Avenue, another Class III bicycle lane. Highland Avenue leads directly to schools, parks, and services in the city center which would encourage future residents to utilize bicycles instead of single-occupancy vehicles. The City's Pedestrian and Bicycle Master Plan also envisions the development of a 10-mile designated bikeway network which would further connect future residents in Moraga Canyon to other areas of Piedmont. Therefore, impacts for the MCSP Area would be less than significant.

Project VMT and Population

Citywide Housing Element Implementation

As discussed above under "Project Consistency with the Current Air Quality Plan," on an individual project basis, consistency with BAAQMD quantitative thresholds is interpreted as demonstrating support for the 2017 Clean Air Plan goals. According to the BAAQMD 2022 CEQA Air Quality Guidelines, the threshold for criteria air pollutants and precursors includes an assessment of the rate of increase of plan VMT versus population growth. As discussed below under Impact AQ-3, VMT associated with project buildout would increase by approximately 14 percent, which would not exceed the rate of increase from the forecast population of approximately 20 percent. Therefore, the project's VMT increase would not conflict with the BAAQMD's 2022 CEQA Air Quality Guidelines operational plan-level significance thresholds for criteria air pollutants and would be consistent with the 2017 Clean Air Plan. Accordingly, the impacts would be less than significant.

Moraga Canyon Specific Plan

As discussed above under "Project Consistency with the Current Air Quality Plan," on an individual project basis, consistency with BAAQMD quantitative thresholds is interpreted as demonstrating support for the 2017 Clean Air Plan goals. As discussed below under Impact AQ-3, VMT and population estimates associated with future development in the MCSP Area are factored into the VMT modeling performed by Fehr & Peers. Therefore, since VMT associated with project buildout would increase by approximately 14 percent, it would not exceed the rate of increase from the forecast population of approximately 20 percent and would not conflict with the BAAQMD's 2022 CEQA Air Quality Guidelines operational plan-level significance thresholds for criteria air pollutants. As outlined above under Project Consistency with the Current Air Quality Plan, although the northern-most corner of the MCSP Area would be located a 1.2-mile walk from the nearest bus stop, other parts of the MCSP

Area would be within a one-mile walk to the nearest bus stop and therefore the area is within walking and bicycling distance to transit. Additionally, Moraga Avenue is a designated Class III bicycle lane, which connects to Highland Avenue, another Class III bicycle lane. Highland Avenue leads directly to schools, parks, and services in the city center which would encourage future residents to utilize bicycles instead of single-occupancy vehicles, thereby reducing VMT. The City's Pedestrian and Bicycle Master Plan also envisions the development of a 10-mile designated bikeway network which would further connect future residents in Moraga Canyon to other areas of Piedmont. Therefore, development in the MCSP Area would generally be consistent with the 2017 Clean Air Plan, and impacts would be less than significant.

Mitigation Measures

This impact would be less than significant without mitigation. Mitigation would not be required.

Threshold 2:	Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

Impact AQ-2 CONSTRUCTION FACILITATED BY THE PROPOSED PROJECT WOULD TEMPORARILY INCREASE AIR POLLUTANT EMISSIONS, WHICH WOULD AFFECT LOCAL AIR QUALITY. HOWEVER, THE PROPOSED PROJECT INCLUDES NEW PIEDMONT GENERAL PLAN POLICIES TO ADDRESS CONSTRUCTION EMISSIONS. COMPLIANCE WITH THE PROPOSED NEW POLICIES WOULD REDUCE THIS IMPACT TO A LESS THAN SIGNIFICANT LEVEL.

Construction

Citywide Housing Element Implementation

Future development facilitated by the proposed Housing Element Implementation project may involve activities that result in air pollutant emissions. Construction activities such as demolition, grading, construction worker travel, delivery and hauling of construction supplies and debris, and fuel combustion by on-site construction equipment would generate pollutant emissions. These construction activities would temporarily create emissions of dust, fumes, equipment exhaust, and other air contaminants. The extent of daily emissions, particularly ROGs and NO_X emissions, generated by construction equipment, would depend on the quantity of equipment used and the hours of operation for each project. The extent of $PM_{2.5}$ and PM_{10} emissions would depend upon the following factors: 1) the amount of disturbed soils; 2) the length of disturbance time; 3) whether existing structures are demolished; 4) whether excavation is involved; and 5) whether transporting excavated materials offsite is necessary. Dust emissions can lead to both nuisance and health impacts. According to the BAAQMD 2022 *CEQA Air Quality Guidelines,* PM_{10} is the greatest pollutant of concern during construction (BAAQMD 2023b).

As discussed above, BAAQMD's 2022 CEQA Air Quality Guidelines have no plan-level significance thresholds for construction air pollutant emissions that would apply to the project. However, the guidelines include project-level thresholds for construction emissions. If an individual project's construction emissions fall below the project-level thresholds, the project's impacts on regional air quality would be individually and cumulatively less than significant. The BAAQMD has also identified feasible fugitive dust control measures for construction activities. These Basic Best Management Practices for Construction-Related Fugitive Dust Emissions are recommended for all projects (BAAQMD 2023b). In addition, the BAAQMD and CARB have regulations that address the handling of hazardous air pollutants such as lead and asbestos, which could be aerially disbursed during

demolition activities. BAAQMD rules and regulations address both the handling and transport of these contaminants. Construction of development envisioned under the project would temporarily increase air pollutant emissions, possibly creating localized areas of unhealthy air pollution concentrations or air quality nuisances. However, the proposed project involves amendments to the General Plan Natural Resources and Sustainability Element which include adding the following new policy:

> **Construction Emissions Screening.** For individual projects subject to CEQA that do not meet the Bay Area Air Quality Management District (BAAQMD) construction and/or operational screening criteria under as provided in the 2022 BAAQMD CEQA Guidelines (or the guidelines in place at the time of development), individual air quality analysis shall be conducted to determine project significance. Where individual projects exceed BAAQMD significance thresholds, mitigation measures shall be incorporated to reduce emissions to below thresholds. Construction mitigation measures may include, but are not limited to, incorporation of Tier 4 and/or alternative fueled equipment, use of onsite power sources instead of generators, and use of low/no-VOC content architectural coatings. Operational mitigation measures may include, but are not limited to, increased incorporation of photovoltaic systems (PV) beyond regulatory requirements, increased incorporation of EV charging stations and/or infrastructure beyond regulatory requirements, incorporation of a development-wide ride-share system, or elimination of natural gas usage within residential developments. Individual project analysis and accompanying emission-reduction measures shall be approved by the City prior to issuance of a permit to construct or permit to operate.

Future development would be required to adhere to this policy which would require individual air quality analyses which would reduce temporary construction impacts.

Furthermore, site preparation and grading during construction activities facilitated by development under the proposed project may cause wind-blown dust that could contribute particulate matter into the local atmosphere. The BAAQMD has not established a quantitative threshold for fugitive dust emissions but rather states that projects that incorporate best management practices (BMPs) for fugitive dust control during construction would have a less-than-significant impact related to fugitive dust emissions. The proposed project involves amendments to the General Plan Natural Resources and Sustainability Element which include adding the following new policy:

> **Construction Emissions Control Measures.** 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 (BAAQMD) basic control measures for reducing construction emissions of PM_{10} (Table 5-2, Basic Best Management Practices for Construction-Related Fugitive Dust Emissions Recommended for All Proposed Projects, of the 2022 BAAQMD CEQA Guidelines, or applicable best management practices in BAAQMD's guidelines in place at the time of development), outlined below.
>
> 1. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times a day.
> 2. All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
> 3. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
> 4. All vehicle speeds on unpaved roads shall be limited to 15 miles per hour.

5. All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
6. All excavation, grading, and/or demolition activities shall be suspended when average wind speeds exceed 20 mph.
7. All trucks and equipment, including their tires, shall be washed off prior to leaving the site.
8. Unpaved roads providing access to sites located 100 feet or further from a paved road shall be treated with a 6- to 12-inch layer of compacted layer of wood chips, mulch, or gravel.
9. Publicly visible signs shall be posted with the telephone number and name of the person to contact at the lead agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's General Air Pollution Complaints number shall also be visible to ensure compliance with applicable regulations.

Adherence to this General Polan policy would require incorporation of BAAQMD Basic Best Management Practices for Construction-Related Fugitive Dust Emissions which would reduce temporary construction impacts and fugitive dust emissions to a less than significant level.

Future development facilitated by the proposed project would also be required to comply with Action 15B (Construction Dust Controls) of the Natural Resources and Sustainability Element of the Piedmont General Plan, which includes requirements to minimize airborne dust and particulate matter from construction activities, consistent with the BAAQMD CEQA Air Quality Guidelines, such as covering stockpiles and trucks that are hauling dirt and debris and avoiding earthmoving on windy days (City of Piedmont 2009). Therefore, construction activities from development facilitated under the proposed project would not result in a cumulatively considerable net increase of a criteria pollutant with adherence to added General Plan policies under the proposed project. This impact would be less than significant.

Moraga Canyon Specific Plan

Development facilitated by the MCSP would be subject to the same requirements discussed above regarding construction criteria pollutants, including added policies to the General Plan Natural Resources and Sustainability Element to require a construction emission screening analysis and incorporation of BAAQMD construction BMPs. Future development would also be required to comply with Action 15B (Construction Dust Controls) of the Natural Resources and Sustainability Element of the Piedmont General Plan. Adherence to existing and proposed General Plan policies would reduce impacts from construction and fugitive dust emissions. This impact would less than significant.

Mitigation Measures

This impact would be less than significant with implementation of proposed new policies to the General Plan Natural Resources and Sustainability Element which are proposed as part of the project. Mitigation measures would not be required.

Impact AQ-3 VEHICLE MILES TRAVELED (VMT) ASSOCIATED WITH DEVELOPMENT FACILITATED BY THE PROPOSED PROJECT WOULD INCREASE AT A LOWER RATE THAN POPULATION GROWTH FACILITATED BY THE PROJECT. THEREFORE, OPERATIONAL IMPACTS ON CRITERIA POLLUTANTS WOULD BE LESS THAN SIGNIFICANT.

Operation

Citywide Housing Element Implementation

According to the BAAQMD 2022 CEQA Air Quality Guidelines, the threshold for criteria air pollutants and precursors requires an assessment of the rate of increase of plan VMT and population. Table 4.2-7 summarizes the net increase in population versus VMT based on VMT modeling performed by Fehr & Peers. Because the VMT associated with project buildout would increase by approximately 14 percent, it would not exceed the rate of increase from the forecast population of approximately 20 percent. VMT per capita would be less than the regional average for Piedmont residents living in urban infill and multifamily housing due to the characteristics of these housing types (convenient access, fewer cars, more reliance on alternative forms of transportation). VMT increases at a lower percentage because the proposed project would change land uses to concentrate growth and residences to jobs and services to reduce singular vehicle trips and encourage alternative models of travel. Therefore, impacts concerning criteria pollutants generated from operation of the project would be less than significant.

Table 4.2-7 Increase in Population Compared to VMT Under Project

Scenario	2020 Without Project	2031 With Project	Net Increase	Percent Change
Population	10,648	12,800	2,152	20%
Vehicle Miles Traveled	200,082	228,329	28,247	14%

Source: Data provided by Fehr & Peers 2023

Moraga Canyon Specific Plan

VMT and population estimates for future development in the MCSP Area under an adopted MCSP are factored into the VMT modeling performed by Fehr & Peers. As discussed above, since VMT associated with project buildout would increase by approximately 14 percent, it would not exceed the rate of increase from the forecast population of approximately 20 percent. As discussed above under Impact AQ-1, although the northern-most corner of the MCSP Area would be located a 1.2-mile walk from the nearest bus stop, other parts of the MCSP Area would be within a one-mile walk to the nearest bus stop which would encourage walking and bicycling and the use of alternative modes of transportation. Additionally, Moraga Avenue is a designated Class III bicycle lane, which connects to Highland Avenue, another Class III bicycle lane. Highland Avenue leads directly to schools, parks, and services in the city center which would encourage future residents to utilize bicycles instead of single-occupancy vehicles. The City's Pedestrian and Bicycle Master Plan also envisions the development of a 10-mile designated bikeway network which would further connect future residents in Moraga Canyon to other areas of Piedmont. Therefore, impacts would be less than significant.

Mitigation Measure

This impact would be less than significant. No mitigation measures are required.

Threshold 3: Would the project expose sensitive receptors to substantial pollutant concentrations?

Impact AQ-4 CONSTRUCTION ACTIVITIES FOR INDIVIDUAL PROJECTS FACILITATED BY THE PROPOSED PROJECT LASTING LONGER THAN TWO MONTHS OR LOCATED WITHIN 1,000 FEET OF SENSITIVE RECEPTORS COULD EXPOSE SENSITIVE RECEPTORS TO SUBSTANTIAL POLLUTANT CONCENTRATIONS. ADDITIONALLY, DEVELOPMENT FACILITATED BY THE PROPOSED PROJECT COULD SITE NEW SENSITIVE LAND USES NEAR INTERSTATE 580/80, WHICH MAY EXPOSE THEM TO SUBSTANTIAL POLLUTANT CONCENTRATIONS. HOWEVER, THE PROPOSED PROJECT INCLUDES ADDING POLICIES TO THE PIEDMONT GENERAL PLAN TO ADDRESS THESE POLLUTANTS. WITH COMPLIANCE WITH PROPOSED NEW POLICIES, THIS IMPACT WOULD BE LESS THAN SIGNIFICANT.

Carbon Monoxide Hotspots

A CO hotspot is a localized concentration of CO that is above a CO ambient air quality standard. The entire Basin is in conformance with state and federal CO standards, as indicated by the recent air quality monitoring. There are no current exceedances of CO standards within the air district and have not had a CO exceedance in the Bay Area since before 1994.[3] For 2019 the Bay Area's reported maximum 1-hour and average daily concentrations of CO were 5.6 ppm and 1.7 ppm respectively (BAAQMD 2019).[4] These are well below the respective 1-hour and 8-hour standards of 20 ppm and 9 ppm. Given the ambient concentrations, which includes mobile as well as stationary sources, a project in Bay Area would need to emit concentrations three times the hourly maximum ambient emissions for all sources before project emissions would exceed the 1-hour standard. Additionally, the project would need to emit seven times the daily average for ambient concentrations to exceed the 8-hour standards. Typical development projects, even plan level growth, would not emit the levels of CO necessary to result in a localized hot spot. Therefore, impacts to CO hotspots from implementation of the Housing Element and the MCSP would be less than significant.

Toxic Air Contaminants

Citywide Housing Element Implementation

The following section analyzes potential impacts from TACs associated with construction, operation, asbestos, and project siting for citywide Housing Element implementation.

CONSTRUCTION

Construction-related activities would result in short-term emissions of diesel particulate matter (DPM) exhaust emissions from off-road, heavy-duty diesel equipment for site preparation (e.g., excavation, grading, and clearing), building construction, and other miscellaneous activities. DPM was identified as a TAC by CARB in 1998. The potential cancer risk from the inhalation of DPM, as discussed below, outweighs the potential non-cancer[5] health impacts (CARB 2021a).

Generation of DPM from construction typically occurs in a single area for a short period. Construction of development facilitated by the project would occur over approximately a decade but use of diesel-powered construction equipment in any one area would likely occur for no more than a few years for an individual project and would cease when construction is completed in that area. It is impossible to quantify risk without identified specific project details and locations.

[3] BAAQMD only has records for annual air quality summaries dating back to 1994.
[4] Data for 2019 was used as the data for 2020 and 2021 are not currently available.
[5] Non-cancer risks include premature death, hospitalizations and emergency department visits for exacerbated chronic heart and lung disease, including asthma, increased respiratory symptoms, and decreased lung function (CARB 2021a).

The dose to which the receptors are exposed is the primary factor used to determine health risk. Dose is a function of the concentration of a substance or substances in the environment and the extent of exposure that person has with the substance. Dose is positively correlated with time, meaning that a longer exposure period would result in a higher exposure level for the Maximally Exposed Individual. The risks estimated for a Maximally Exposed Individual are higher if a fixed exposure occurs over a longer period. According to the California Office of Environmental Health Hazard Assessment (OEHHA), health risk assessments, which determine the exposure of sensitive receptors to toxic emissions, should be based on a 70-year exposure period; however, such assessments should be limited to the period/duration of activities associated with the development (OEHHA 2015). BAAQMD use an exposure period of 30 years (BAAQMD 2016).

The maximum PM_{10} and $PM_{2.5}$ emissions would occur during demolition, site preparation and grading activities, which would only occur for a portion of the overall estimated timeframe of one to eight years for construction of housing units facilitated by the proposed project. These activities would typically last for approximately two weeks to two years, depending on the extent of grading and excavation required (e.g., projects with subterranean parking structures or geological constraints require additional grading as compared to those without). PM_{10} and $PM_{2.5}$ emissions would decrease for the remaining construction period because construction activities such as building construction and architectural coating would require less intensive construction equipment. While the maximum DPM emissions associated with demolition, site preparation, and grading activities would only occur for a portion of the overall construction period, these activities represent the worst-case condition for the total construction period. This would represent between 0.1 to 7 percent of the total 30-year exposure period for health risk calculation.

Each project developed under the proposed project would be required to be consistent with the applicable 2017 Clean Air Plan, BAAQMD regulatory requirements and control strategies, and the CARB In-Use Off-Road Diesel Vehicle Regulation, which are intended to reduce emissions from construction equipment and activities. According to the OEHHA, construction of individual projects lasting longer than two months or placed within 1,000 feet of sensitive receptors could potentially expose nearby sensitive receptors to substantial pollutant concentrations and therefore could result in potentially significant risk impacts (OEHHA 2015). These projects could exceed BAAQMD's thresholds of an increased cancer risk of greater than 10.0 in a million and an increased non-cancer risk of greater than 1.0 Hazard Index (Chronic or Acute).

The proposed project includes updates to the General Plan Natural Resources and Sustainability Element which would involve adding the following new policy:

> **Construction Health Risk Assessments.** Development projects (excluding small structures exempt under CEQA) where construction activities would occur within 1,000 feet of sensitive receptors, would last longer than two months, and would not utilize Tier 4 and/or alternative fuel construction equipment, shall perform a construction health risk assessment (HRA). If an HRA is to be performed, the HRA shall determine potential risk and compare the risk to the following BAAQMD thresholds:
>
> - Non-compliance with Qualified Community Risk Reduction Plan;
> - Increased cancer risk of > 10.0 in a million;
> - Increased non-cancer risk of > 1.0 Hazard Index (Chronic or Acute); or
> - Ambient $PM_{2.5}$ increase of > 0.3 $\mu g/m^3$ annual average

> If risk exceeds the thresholds, measures such as conditions of approval limiting use of diesel equipment to a maximum of two months, and requiring the use of Tier 4 and/or alternative fuel construction equipment for construction lasting longer than 2 months shall be incorporated to reduce the risk to appropriate levels.

This policy would require future development with construction timelines greater than two months and within 1,000 feet of sensitive receptors to prepare a construction HRA in order to reduce potential risk exposure to nearby sensitive receptors to a less than significant level. With adherence to this policy, this impact would be less than significant.

OPERATION

In the Bay Area, there are several urban or industrialized communities where the exposure to TACs is relatively high in comparison to others. Piedmont is not located in an impacted community according to BAAQMD *CEQA Guidelines* (Figure 5-1). Sources of TACs include, but are not limited to, land uses such as freeways and high-volume roadways, truck distribution centers, ports, rail yards, refineries, chrome plating facilities, dry cleaners using perchloroethylene, and gasoline dispensing facilities (BAAQMD 2023b). Operation of development facilitated by the project would not involve these uses; therefore, it is not considered a source of TACs. In addition, residences do not typically include new stationary sources onsite, such as emergency diesel generators. However, if residences did include a new stationary source onsite, they would be subject to BAAQMD Regulation 2, Rule 2 (New Source Review) and require permitting. This process would ensure that the stationary source does not exceed applicable BAAQMD health risk thresholds. Additionally, BAAQMD employs the Community Air Risk Evaluation (CARE) Program, which applies strategies to reduce health impacts in impacted communities (BAAQMD 2014). CARE is currently not activated in Piedmont since it is not an impacted community. This impact would be less than significant.

ASBESTOS

BAAQMD Regulation 11, Rule 2 is intended to limit asbestos emissions from demolition or renovation of structures and the associated disturbance of asbestos-containing waste material generated or handled during these activities (BAAQMD 2023b). The rule addresses the national emissions standards for asbestos along with some additional requirements. The rule requires the Lead Agency and its contractors to notify BAAQMD of any regulated renovation or demolition activity. This notification includes a description of structures and methods utilized to determine whether asbestos-containing materials are potentially present. All asbestos-containing material found on the site must be removed prior to demolition or renovation activity in accordance with BAAQMD Regulation 11, Rule 2, including specific requirements for surveying, notification, removal, and disposal of material containing asbestos. Therefore, individual projects that comply with Regulation 11, Rule 2 would ensure that asbestos-containing materials would be disposed of appropriately and safely. By complying with BAAQMD Regulation 11, Rule 2, thereby minimizing the release of airborne asbestos emissions, demolition activity would not result in a significant impact to air quality. Pursuant to the BAAQMD Guidelines, because BAAQMD Regulation 11, Rule 2 is in place, no further analysis about the demolition of asbestos-containing materials is needed in a CEQA document (BAAQMD 2023b).

PROJECT SITING

Development facilitated by the project would occur under the jurisdictions of BAAQMD. CARB screening methodology for project siting is used in this analysis. In 2005, CARB issued recommendations to avoid siting new residences within 500 feet of a freeway, urban roads with

100,000 vehicles/day, or rural roads with 50,000 vehicles/day or close to known stationary TAC sources (CARB 2005). BAAQMD's average daily traffic (ADT) threshold is lower, at 10,000 vehicles per day (BAAQMD 2012).

Development facilitated by the project would not place sensitive receptors living in housing within 500 to 1,000 feet of Interstate 580 (I-580), State Route 24 (SR 24), or SR 13. However, the project would facilitate development within 500 feet of a roadway that has 10,000 vehicles per day or more such as Park Boulevard and Oakland Avenue (Caltrans 2020). Although future development facilitated by the project would be required to comply with the residential indoor air quality requirements in the Title 24 Building Energy Efficiency Standards, which currently require Minimum Efficiency Reporting Value 13 (or equivalent) filters for heating/cooling systems and ventilation systems in residences (Section 150.0[m]), development of sites within 500 feet of a roadway that has 10,000 vehicles per day or more could result in a potentially significant impact. However, the proposed project involves updates to the General Plan Natural Resources and Sustainability Element which includes adding the following new policy:

> **Roadway Health Risk Assessments**. Residential development projects (excluding small structures exempt under CEQA) that would be sited within 500 feet of a roadway with 10,000 vehicles per day or more such as Park Boulevard and Oakland Avenue, the Bay Area Air Quality Management District (BAAQMD) shall be consulted to determine if a health risk assessment (HRA) is necessary. The roadway HRAs shall demonstrate that roadway impacts are below the BAAQMD's single-source risk and hazard thresholds. If risks and hazards exceed the applicable BAAQMD thresholds, then feasible project design features such as high-efficiency particulate air (HEPA) filtration shall be incorporated into the project. Screening tools may be used to assess health risks in lieu of a roadway HRA if said tools are the most current published BAAQMD tools.

Adherence to this policy would require consultation with BAAQMD to determine if an HRA for development in proximity to a high-volume roadway is necessary in order to ensure roadway impacts are below the BAAQMD's single-source risk and hazard thresholds. With adherence to this policy, this impact would be less than significant.

Moraga Canyon Specific Plan

The following section analyzes potential TAC impacts associated with construction, operation, asbestos, and project siting for the MCSP Area.

CONSTRUCTION

Construction of developments facilitated by the MCSP would be subject to the same requirements as discussed above. Future construction in the MCSP Area in proximity to sensitive receptors could still exceed BAAQMD's thresholds of an increased cancer risk of greater than 10.0 in a million and an increased non-cancer risk of greater than 1.0 Hazard Index (Chronic or Acute) and potentially expose nearby sensitive receptors to substantial pollutant concentrations. Nonetheless, as discussed above under "Citywide Housing Element Implementation," the proposed project would require future development, including development in the MCSP Area, with construction timelines greater than two months and within 1,000 feet of sensitive receptors to prepare a construction HRA in order to reduce potential risk exposure to nearby sensitive receptors to a less than significant level. With adherence to this policy, this impact would be less than significant.

OPERATION

Operational impacts to existing and new residents would be the same as the impact identified above. Development facilitated by the MCSP would not include substantial sources of TAC emissions; therefore, operations would not expose existing residents to an increase of TAC emissions, and impacts would be less than significant.

ASBESTOS

Refer to the Asbestos section above for asbestos emissions from demolition or renovation of structures and the disposal of asbestos-containing materials. With adherence to BAAQMD Regulation 11, Rule 2, asbestos-related TAC impacts would be less than significant.

PROJECT SITING

Development facilitated by the Moraga Canyon Specific Plan would not place sensitive receptors living in housing within 500 to 1,000 feet of I-580, SR 24, or SR 13, or within 500 feet of a roadway that has 10,000 vehicles per day or more such as Park Boulevard and Oakland Avenue (Caltrans 2020). Future development would be required to comply with the same residential indoor air quality requirements in the Title 24 Building Energy Efficiency Standards as discussed above. Therefore, impacts would be less than significant.

Mitigation Measures

This impact would be less than significant with implementation of proposed new policies to the General Plan Natural Resources and Sustainability Element which are proposed as part of the project. Mitigation measures would not be required.

Threshold 4:	Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Impact AQ-5 DEVELOPMENT FACILITATED BY THE PROPOSED PROJECT WOULD NOT CREATE OBJECTIONABLE ODORS THAT COULD AFFECT A SUBSTANTIAL NUMBER OF PEOPLE. THIS IMPACT WOULD BE LESS THAN SIGNIFICANT.

Citywide Housing Element Implementation

During construction activities, heavy equipment and vehicles would emit odors associated with vehicle and engine exhaust both during normal use and when idling. However, these odors would be temporary and transitory and would cease upon completion. Therefore, development facilitated by the project would not generate objectionable odors affecting a substantial number of people.

Table 4.2-5 provides BAAQMD odor screening distances for land uses with the potential to generate substantial odor complaints. Those uses include wastewater treatment plants, landfills or transfer stations, refineries, composting facilities, confined animal facilities, food manufacturing, smelting plants, and chemical plants. As development facilitated by the project would be residential, none of the uses identified in the table would occur on the sites. Therefore, development facilitated by the project would not generate objectionable odors affecting a substantial number of people during operation. This impact would be less than significant.

Moraga Canyon Specific Plan

Development facilitated by the Moraga Canyon Specific Plan would emit temporary odors during construction activity using construction equipment and vehicles. Odors would cease upon completion of the proposed development; therefore, construction impacts would be less than significant. As discussed above, development near odor producing facilities identified in BAAQMD CEQA Guidelines could potentially be significant impact to sensitive receivers. Development in Moraga Canyon Specific Plan would not be located near typical odor producing facilities stated in BAAQMD CEQA Guidelines. In addition, the residential development envisioned in the MCSP Area is not considered an odor producing source. For the same reasons identified above, odor impacts would be less than significant.

Mitigation Measures

The impact from development facilitated by the proposed Housing Element Implementation project, including development pursuant to an adopted MCSP, would be less than significant. No mitigation measures are required.

c. Cumulative Impacts

The cumulative context for air quality is regional. The SFBAAB is in non-attainment for federal standards of ozone and $PM_{2.5}$ and in non-attainment for the State standard for ozone, $PM_{2.5}$, and PM_{10}. The SFBAAB is in attainment of all other federal and State standards. Development facilitated by the project would generate particulate matter and the ozone precursors (ROG and NO_X) in the area during construction and operation.

As described under Impact AQ-1, the project would be consistent with the 2017 Clean Air Plan control measures as development facilitated by the project would comply with the latest Title 24 regulations and would increase density in areas in proximity to transit, allowing for greater use of alternative modes of transportation. Additionally, the increase in VMT would not exceed the projected population increase per the BAAQMD *CEQA Air Quality Guidelines* for operational emissions from plans. Discussion of these impacts considers the cumulative nature of criteria pollutants in the region. Therefore, the project would not result in a cumulatively considerable contribution to a conflict with or obstruction of implementation of the applicable air quality plan.

As described under Impact AQ-2, construction associated with future development facilitate by the proposed project would temporarily increase air pollutant emissions, possibly creating localized areas of unhealthy air pollution levels or air quality nuisances. Future development would be required to adhere to proposed new policy that would be added to the General Plan Natural Resources and Sustainability Element as part of the proposed project which would require individual air quality analysis. BAAQMD has identified feasible fugitive dust control measures for construction activities because fugitive PM_{10} and $PM_{2.5}$ is of concern. These temporary impacts would be reduced with adherence to a proposed new policy that would be added to the General Plan Natural Resources and Sustainability Element as part of the proposed project that would require incorporation of BAAQMD construction BMPs for future development facilitated by the proposed project. Discussion of these impacts considers the cumulative nature of criteria pollutants in the region; therefore, with mitigation the project would not result in a cumulatively considerable net increase of a criteria pollutant from construction emissions.

As identified under Impact AQ-3, development facilitated by the project would not have a significant impact from CO hotspots or TACs with adherence to proposed new policies that would be added to the General Plan Natural Resources and Sustainability Element as part of the proposed project. Discussion of these impacts considers the cumulative nature of the pollutants in the region, e.g., the cancer risk and non-cancer risk thresholds have been set per existing cancer risks in the area and exceeding those thresholds would be considered a cumulative impact. As development facilitated by the project does not exceed those thresholds, it would not expose sensitive receptors to a cumulatively considerable amount of substantial pollutant concentrations from CO hotspots or TACs.

As identified under Impact AQ-4, development facilitated by the project would not have a significant impact from odor emissions. The consideration of cumulative odor impacts is limited to cases when projects constructed simultaneously are within a few hundred yards of each other because of the short range of odor dispersion. It is unlikely that construction of housing sites would occur within a few hundred yards of major off-site construction. Therefore, development facilitated by the project would not result in a cumulatively considerable odor impact.

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4.3 Biological Resources

This section evaluates the potential environmental effects related to biological resources associated with development facilitated by the proposed Housing Element Implementation project, including development facilitated by the proposed Moraga Canyon Specific Plan (MCSP).

4.3.1 Existing Setting

The following sections present the methods and results for determining the existing conditions for the proposed Housing Element Implementation project regarding biological resources.

a. Land Cover

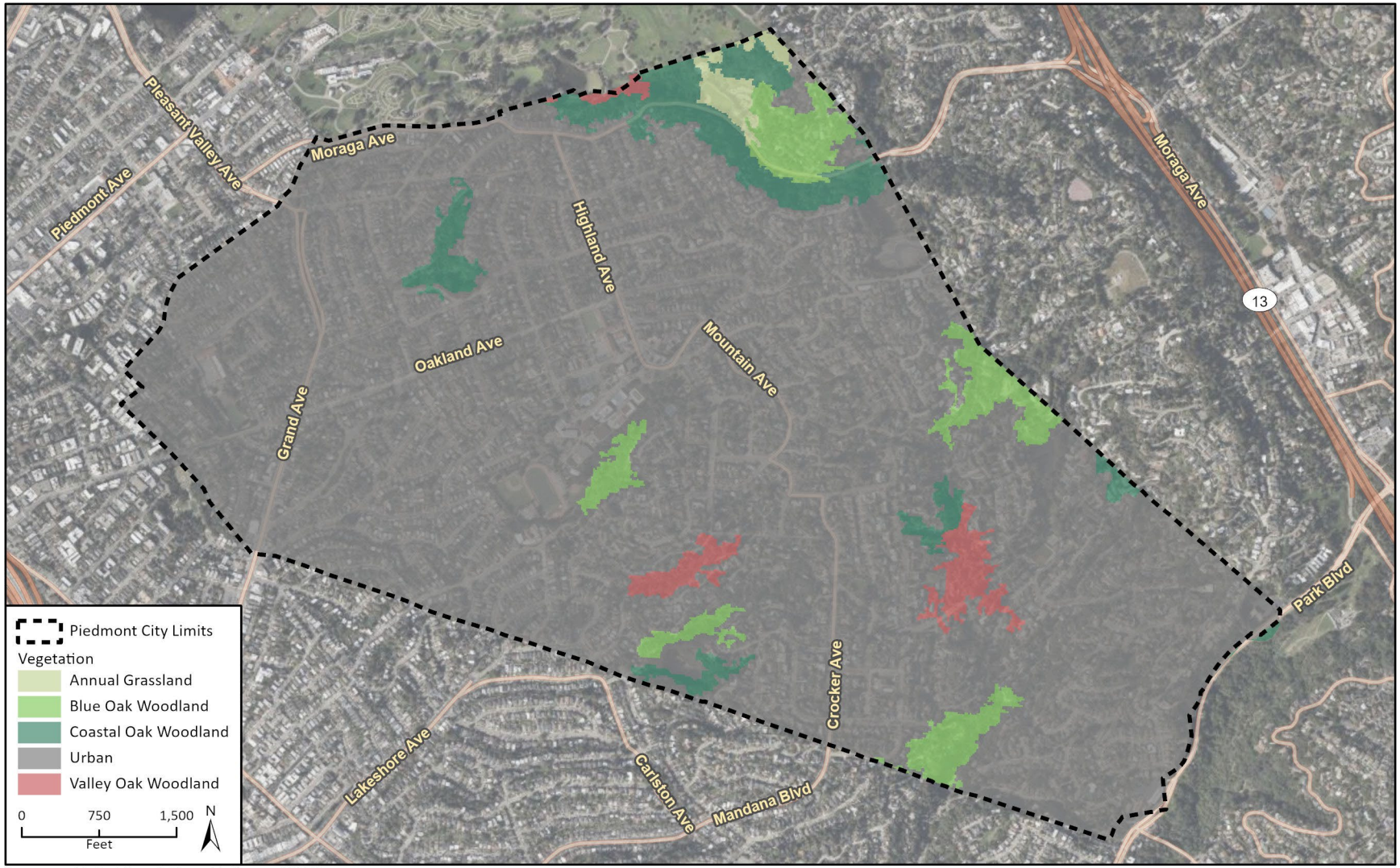
Based on a desktop review of the California Department of Fish and Wildlife (CDFW) *California Wildlife Habitat Relationships* habitat classification system (California Department of Fish and Wildlife [CDFW] 2021), five land cover types were mapped within city boundaries. A description of each of the vegetation communities and land cover types adapted from *A Guide to Wildlife Habitats of California* (Mayer and Laudenslayer 1988) is presented below. The land cover types are mapped on Figure 4.3-1. These vegetation communities and land cover types are broadly mapped, and site specific fine-scale variation in vegetation communities is likely to be present. For example, some residences have been constructed in areas that CDFW maps as a native woodland in Piedmont, indicating that the CDFW mapping is not designed to be used on a fine scale but more broadly.

Urban

The City of Piedmont is generally urbanized, developed, and surrounded by developed land within the City of Oakland. The majority of the areas of the city that would be affected by the project generally do not include substantial areas of open space or undeveloped, unpaved land with the exception of portions of the MCSP Area. Developed areas correspond with the "urban" land cover type described in the *California Wildlife Habitat Relationships* (CDFW 2021; Mayer and Laudenslayer 1988). As such, vegetation in the urban land cover is largely limited to ornamental landscaping in commercial areas, residential neighborhoods, and along park strips and street medians. Plant species in urban areas are highly variable, and vegetation structure includes shade/street trees, lawns, and shrub cover.

The extent of urban land cover type shown on Figure 4.3-1 is from the *CDFW California Wildlife Habitat Relationships* habitat classification system (CDFW 2021), and it is broadly mapped. In reality, urban land cover type likely occurs in differing or other areas of the city besides what is shown on Figure 4.3-1. Likewise, where this land cover type does occur in the city, it likely does not exhibit the exact characteristics of the cover type as described by CDFW, due to Piedmont's generally urbanized and developed setting.

Figure 4.3-1 Landcover Types in Piedmont



Imagery provided by Microsoft Bing and its licensors © 2023.
CalVeg Classification Layer provided by USDA Forest Service Region 5. Source Imagery for this classification ranges from 2008-2015.

21-11542_Piedmont_HE
Fig X Vegetation in Piedmont

Annual and Perennial Grasslands

Annual and perennial grasslands are herbaceous communities composed primarily of annual and perennial grass and forb species. These vegetation communities primarily exist in two portions of the MCSP Area, where introduced annual grasses are the dominant plant species. These include wild oats (*Avena* sp.), soft chess brome (*Bromus hordeaceus*), ripgut brome (*B. diandrus*), red brome (*B. madritensis*), wild barley (*Hordeum murinum*), and foxtail fescue (*Festuca myuros*). Common forbs include broadleaf filaree (*Erodium botrys*), redstem filaree (*E. cicutarium*), turkey mullein (*Croton setiger*), true clovers (*Trifolium* spp.), bur clover (*Medicago polymorpha*), popcorn flowers (*Plagiobothrys* spp.), California poppy (*Eschscholzia californica*), and many others. Native perennial grasses, found in moist, lightly grazed, or relic prairie areas, are dominated by California oatgrass (*Danthonia californica*), Pacific hairgrass (*Deschampsia cespitosa holciformis*), and sweet vernal grass (*Anthoxanthum odoratum*).

Annual grassland communities and relic perennial grasslands within them occur in patches of various sizes throughout the State of California. Annual grassland occurs mostly on flat plains to gently rolling foothills. Annual grasslands provide habitat for many wildlife species, including western fence lizard (*Sceloporus occidentalis*), common garter snake (*Thamnophis sirtalis*), western rattlesnake (*Crotalus oreganus oreganus*), black-tailed jackrabbit (*Lepus californicus*), California ground squirrel (*Otospermophilus beecheyi*), and Botta's pocket gopher (*Thomomys bottae*).

The extent of annual and perennial land cover type shown on Figure 4.3-1 is from the CDFW *California Wildlife Habitat Relationships* habitat classification system (CDFW 2021), and it is broadly mapped. In reality, this land cover type likely occurs in differing or other areas of the city besides what is shown on Figure 4.3-1. Likewise, where this land cover type does occur in the city, it likely does not exhibit the exact characteristics of the cover type as described by CDFW, due to Piedmont's generally urbanized and developed setting.

Blue Oak Woodland

Blue oak woodlands occur in Piedmont and vary in species composition. These woodlands have an overstory of scattered trees, although the canopy can be nearly closed. The canopy is dominated by broad-leaved trees 5 to 15 meters (16 to 50 feet) tall, commonly forming open savanna-like stands on dry ridges and gentle slopes. Blue oaks may reach 25 meters (82 feet) in height. Shrubs are often present but rarely extensive, often occurring on rock outcrops. Typical understory is composed of an extension of Annual Grassland vegetation. Blue oak woodlands provide habitat for a variety of wildlife species, including western gray squirrel (*Sciurus griseus*), eastern gray squirrel (*Sciurus carolinensis*), California scrub jays (*Aphelocoma californica*).

The extent of blue oak woodland land cover type shown on Figure 4.3-1 is from the CDFW California *Wildlife Habitat Relationships* habitat classification system (CDFW 2021), and it is broadly mapped. In reality, this land cover type likely occurs in differing or other areas of the city besides what is shown on Figure 4.3-1. Likewise, where this land cover type does occur in the city it likely does not exhibit the exact characteristics of the cover type as described by CDFW, due to Piedmont's generally urbanized and developed setting.

Coastal Oak Woodland

Coastal oak woodlands occur in Piedmont and vary in species composition. The overstory consists of deciduous and evergreen hardwoods, mostly oaks (*Quercus* spp.) (15 to 70 feet tall) sometimes mixed with scattered conifers. In mesic sites, the trees are dense and form a closed canopy. In drier sites,

the trees are widely spaced, forming an open woodland or savannah. The understory is equally variable. In some instances, it is composed of shrubs from adjacent chaparral or coastal scrub which forms a dense, almost impenetrable understory. More commonly, shrubs are scattered under and between trees. The soils and parent material on which coastal oak woodlands occur are extremely variable (CDFW 2021). Coastal oak woodlands provide habitat for a variety of wildlife species, including California quail (*Callipepla californica*), turkey (*Meleagris gallopavo*), western gray squirrel (*Sciurus griseus*), eastern gray squirrel (*Sciurus carolinensis*), and Columbian black-tailed deer (*Odocoileus hemionus columbianus*).

The extent of coastal oak woodland land cover type shown on Figure 4.3-1 is from the CDFW *California Wildlife Habitat Relationships* habitat classification system (CDFW 2021), and it is broadly mapped. In reality, this land cover type likely occurs in differing or other areas of the city besides what is shown on Figure 4.3-1. Likewise, where this land cover type does occur in the city it likely does not exhibit the exact characteristics of the cover type as described by CDFW, due to Piedmont's generally urbanized and developed setting.

b. Wetlands and Waterways

A query of the U.S. Fish and Wildlife Service's (USFWS) *National Wetland Inventory* (NWI) (USFWS 2023c) was conducted. Aerial imagery and the U.S. Geological Service's (USGS) *National Hydrology Dataset* (2023) was also reviewed to determine if aquatic resources (i.e., jurisdictional waters) potentially regulated by the U.S. Army Corps of Engineers (USACE) pursuant to Section 404 of the Clean Water Act (CWA), by the Regional Water Quality Control Board (RWQCB) pursuant to Section 401 of the CWA and the California Porter-Cologne Water Quality Control Act (Porter-Cologne), or by CDFW pursuant to Section 1600 *et seq.* of California Fish and Game Code (CFGC), including federally and State-protected wetlands, occur in Piedmont. Figure 4.9-1 in Section 4.9, *Hydrology and Water Quality,* shows surface water bodies within and in the vicinity of Piedmont based on the *National Hydrology Dataset*. Figure 4.9-2 in Section 4.9 shows the locations of creeks in Piedmont based on mapping in the City of Piedmont General Plan.

Many of the creeks shown on Figure 4.9-2 are fed by urban runoff and act as catchments draining the surrounding landscape while also conveying water to Lake Merritt and the San Francisco Bay. There are some remnant daylighted portions of creeks and drainages with natural vegetation not mapped by USGS or CDFW, as shown on Figure 4.9-2. However, the streams and drainages have mostly been funneled into underground storm drains and in these cases native or riparian vegetation surrounding the streams may not be present. Only some portions of the creeks shown on Figure 4.9-2 are daylighted at the surface and therefore they are unlikely to contain substantial native or riparian vegetation.

The extent of wetlands and waterways land cover type shown on Figure 4.3-1 is from the CDFW *California Wildlife Habitat Relationships* habitat classification system (CDFW 2021), and it is broadly mapped. In reality, this land cover type likely occurs in differing or other areas of the city besides what is shown on Figure 4.3-1. Likewise, where this land cover type does occur in the city it likely does not exhibit the exact characteristics of the cover type as described by CDFW, due to Piedmont's generally urbanized and developed setting.

c. Special-Status Biological Resources

For the purposes of this report, special-status species include:

- Species listed as threatened or endangered under the Federal Endangered Species Act (FESA); including proposed and candidate species
- Species listed as candidate, threatened, or endangered under the California Endangered Species Act (CESA)
- Species designated as fully protected by the CFGC, and species of special concern or watch list by the California Department of Fish and Wildlife (CDFW)
- Plant species protected by the Native Plant Protection Act (NPPA) (State Rare Plants)
- California Native Plant Society (CNPS) California Rare Plant ranks (CRPR) 1A, 1B, 2A and 2B
- Species designated as locally important by the local agency and/or otherwise protected through ordinance, local policy, or HCPs/NCCPs

Queries of the USFWS Information, Planning, and Conservation System (IPaC) (USFWS 2023a), California Natural Diversity Database (CNDDB) (CDFW 2023a), and California Native Plant Society (CNPS) online *Inventory of Rare and Endangered Plants of California* (CNPS 2022) were conducted to obtain comprehensive information regarding special-status species and sensitive vegetation communities known or having potential to occur in Piedmont. Query of the CNPS inventory and CNDDB included the *Oakland East* California USGS 7.5-minute topographic quadrangle and surrounding eight quadrangles (*Richmond, Briones Valley, Walnut Creek*, *Las Trampas Ridge, Hayward, San Leandro, Oakland West,* and *Hunters Point*).

The results of these scientific database queries – a list of the special-status species and sensitive vegetation communities known to occur or having potential to occur in the City of Piedmont – were compiled into Table B-1 and Table B-2 included in Appendix B. A total of 35 special-status plants were identified within the nine quadrangles queried (CNPS 2023), and 33 special-status animals were identified within five miles of Piedmont (CDFW 2023a). Many of these species have sensitivity ratings below the threshold for significant impacts from development in urban settings under CEQA, or there are no recent records of the species occurring within Piedmont in the past ten years. However, Piedmont may support habitat for special-status wildlife species, including roosting bats and San Francisco dusky-footed woodrat.

d. Sensitive Vegetation Communities and Critical Habitat

A query of the USFWS' Critical Habitat Portal (USFWS 2023b) was conducted to determine if any USFWS-designated critical habitat occurs in Piedmont.

The research and analysis conducted for this EIR concluded that no natural vegetation communities considered sensitive by the CDFW or designated critical habitats occur within the City of Piedmont.

e. Nesting Birds

Suitable substrates for avian species protected by the federal Migratory Bird Treaty Act (MBTA) and California Fish and Game Code (CFGC), including shrubs, trees, man-made structures, and the ground surface, occur throughout Piedmont. Some species prefer vegetation, including ornamental vegetation, and some species can be found nesting in man-made structures, such as power poles or the eaves of buildings. Nesting birds may occur during the breeding season (generally February 1 through August 31; beginning January 1 for some raptor species).

f. Wildlife Movement Corridors

Wildlife movement corridors, or habitat linkages, are generally defined as connections between habitat patches that allow for physical and genetic exchange between otherwise isolated animal populations. Such linkages may serve a local purpose, such as providing a linkage between foraging and denning areas, or they may be regional in nature. Some habitat linkages may serve as migration corridors, wherein animals periodically move away from an area and then subsequently return. Others may be important as dispersal corridors for young animals. A group of habitat linkages in an area can form a wildlife corridor network.

The habitats within the link do not necessarily need to be the same as the habitats that are being linked. Rather, the link merely needs to contain sufficient cover and forage to allow temporary inhabitation by ground-dwelling species. Typically, habitat linkages are contiguous strips of natural areas, though dense plantings of landscape vegetation can be used by certain disturbance-tolerant species. Depending upon the species using a corridor, specific physical resources (such as rock outcroppings, vernal pools, or oak trees) may need to be located within the habitat link at certain intervals to allow slower-moving species to traverse the link. For highly mobile or aerial species, habitat linkages may be discontinuous patches of suitable resources spaced sufficiently close together to permit travel along a route in a short period of time.

Wildlife movement corridors can be both large and small scale. One essential connectivity area (ECA) is mapped by the Biogeographic Information and Observation System (BIOS), hosted by CDFW and other organizations, east of Piedmont (CDFW 2023b), outside of city limits. The corridor connects several natural landscape blocks in the east San Francisco Bay Area. From the foothills southeast of San Pablo Bay it extends southeast, parallel with the San Francisco Bay, and connects with the Diablo Range east of Fremont. This ECA, as a part of the bay area hills, may serve as a movement corridor for the State provisionally protected Southern California/Central Coast ESU of mountain lion (*Puma concolor*). CDFW characterizes the value of ECAs based on permeability to wildlife movements. As mapped in BIOS, the edges of the nearest connectivity area become increasingly less permeable as they extend toward Piedmont and developed areas of Alameda County.

g. Moraga Canyon Specific Plan Area Setting

The MCSP Area encompasses an area immediately north of Moraga Avenue and a strip of open space land south of Moraga Avenue. A wildlife biologist from Rincon Consultants, Inc. conducted a reconnaissance-level pedestrian field survey of the MCSP Area on June 2, 2023. During the pedestrian survey, the biologist field-verified approximate boundaries of vegetation communities and other land-cover types mapped in the MCSP Area by CDFW (2021), looked for evidence of potentially jurisdictional aquatic features, assessed habitats for the potential to support special-status species, and developed a list of observed plants and wildlife. Definitive surveys to confirm the presence or absence of special status species were not performed.

Land cover observed within the area during the pedestrian survey include oak woodland, paved/developed, landscaped, and annual and perennial grasslands. The MCSP Area, while surrounded by urban development, provides an island of habitat for nesting birds. The oak woodland land cover contained a mix of deciduous oak trees, such as Coast live oak (*Quercus agrifolia*), and conifer trees, such as Monterey cypress (*Hesperocyparis macrocarpa*). Generally, the slopes forming the sides of Moraga Canyon contain the oak woodland and the bottom of the canyon, adjacent to Moraga Avenue is characterized by landscaped areas and grasslands, though some trees are also present.

However, the development surrounding the MCSP Area precludes it from providing a functional movement corridor for wildlife. There are no sensitive vegetation communities which naturally occur within the MCSP Area, and there is no USFWS-designated critical habitat. Habitat for special-status plants also does not occur with the MCSP Area, based on observed conditions versus the special-status plant species known to occur in the East Bay and their habitat preferences. Surface water has been observed west of the retaining wall on the west side of Coaches Field at the base of the slope near the MCSP Area boundary. However, it has not been determined if this is a daylighted portion of Glen Echo (Cemetery) Creek or pooled groundwater. Nonetheless, it is unlikely that there are aquatic features present that could serve as a functional movement corridor for wildfire.

Although habitat for special-status plants does not occur, the MCSP Area may support nesting birds, protected by the Migratory Bird Treaty Act, and special-status wildlife species, including roosting bats and San Francisco dusky-footed woodrat.

4.3.2 Regulatory Setting

a. Federal Regulations

Federal Endangered Species Act

The Federal Endangered Species Act of 1973 (FESA) and subsequent amendments provide for the conservation of endangered and threatened species, and the ecosystems upon which they depend.

FESA is intended to prevent the unlawful "take" of listed fish, wildlife, and plant species. Section 9(a)(1)(B) specifically states take of species listed as threatened or endangered is unlawful. Take is defined as any action that would harass, harm, pursue, hunt, wound, shoot, kill, trap, capture, or collect any threatened or endangered species.

Section 10 of the FESA allows the United States Fish and Wildlife Service (USFWS) to issue incidental take permits if take of a listed species may occur during otherwise lawful activities. Section 10(a)(1)(B) requires a Habitat Conservation Plan for an incidental take permit on non-federal lands. Section 7 of the FESA requires federal agencies to aid in the conservation of listed species, and to ensure that the activities of federal agencies will not jeopardize the continued existence of listed species or adversely modify designated critical habitat. The USFWS and the National Oceanic and Atmospheric Administration (NOAA) are responsible for administration of the FESA and have regulatory authority over federally listed species.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act of 1918 (16 U.S.C. 703-712) implements four international conservation treaties that the U.S. entered into with Canada in 1916, Mexico in 1936, Japan in 1972, and Russia in 1976. It is intended to ensure the sustainability of populations of all protected migratory bird species. The law has been amended with the signing of each treaty, as well as when any of the treaties were amended, such as with Mexico in 1976 and Canada in 1995 (U.S. Fish & Wildlife). The Migratory Bird Treaty Act (MBTA) makes it unlawful at any time, by any means or in any manner, to pursue, hunt, take, capture, or kill migratory birds, and prohibits the removal of nests occupied by migratory birds. The USFWS has regulatory authority for the MBTA.

Clean Water Act

Congress enacted the Clean Water Act (CWA) "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters." Section 404 of the CWA authorizes the Secretary of the Army, acting through the USACE, to issue permits regulating the discharge of dredged or fill materials into the "navigable waters at specified disposal sites."

Section 502 of the CWA further defines "navigable waters" as "waters of the United States, including the territorial seas." "Waters of the United States" are broadly defined at 33 CFR Part 328.3 to include navigable, tidal, and interstate waters and certain impoundments, tributaries, and wetlands. The agencies' most recent regulatory definition of the term was promulgated in January 2023, following failed attempts in prior years that had been frustrated by legal challenges. However, in May 2023 the U.S. Supreme Court issued its ruling in *Sackett v. Environmental Protection Agency,* which invalidated portions of the updated regulations. To address this ruling, in September 2023 the agencies issued a "conforming rule" (88 FR 61964-61969) modifying their definition of "waters of the United States" to comport with the Court's ruling. This definition is described in detail below.

Waters of the U.S.

Current USACE and U.S. EPA regulations, reflecting of the January 2023 definition as modified by the September 2023 Conforming Rule, define "waters of the United States" as follows (33 CFR 328.3; see also 88 FR 61964-61969):

(1) Waters which are:
   (i) Currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
   (ii) The territorial seas; or
   (iii) Interstate waters;

(2) Impoundments of waters otherwise defined as waters of the United States under this definition, other than impoundments of waters identified under paragraph (a)(5) of this section;

(3) Tributaries of waters identified in paragraph (a)(1) or (2) of this section that are relatively permanent, standing or continuously flowing bodies of water;

(4) Wetlands adjacent to the following waters:
   (i) Waters identified in paragraph (a)(1) of this section; or
   (ii) Relatively permanent, standing or continuously flowing bodies of water identified in paragraph (a)(2) or (a)(3) of this section and with a continuous surface connection to those waters;

(5) Intrastate lakes and ponds, not identified in paragraphs (a)(1) through (4) of this section that are relatively permanent, standing or continuously flowing bodies of water with a continuous surface connection to the waters identified in paragraph (a)(1) or (a)(3) of this section.

The definition specifies that the following features are not "waters of the United States" even where they otherwise meet the terms of provisions (2) through (5) above:

(1) Waste treatment systems, including treatment ponds or lagoons, designed to meet the requirements of the Clean Water Act;

(2) Prior converted cropland designated by the Secretary of Agriculture. The exclusion would cease upon a change of use, which means that the area is no longer available for the production of agricultural commodities. Notwithstanding the determination of an area's status as prior converted cropland by any other Federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with EPA;

(3) Ditches (including roadside ditches) excavated wholly in and draining only dry land and that do not carry a relatively permanent flow of water;

(4) Artificially irrigated areas that would revert to dry land if the irrigation ceased;

(5) Artificial lakes or ponds created by excavating or diking dry land to collect and retain water and which are used exclusively for such purposes as stock watering, irrigation, settling basins, or rice growing;

(6) Artificial reflecting or swimming pools or other small ornamental bodies of water created by excavating or diking dry land to retain water for primarily aesthetic reasons;

(7) Waterfilled depressions created in dry land incidental to construction activity and pits excavated in dry land for the purpose of obtaining fill, sand, or gravel unless and until the construction or excavation operation is abandoned and the resulting body of water meets the definition of waters of the United States; and

(8) Swales and erosional features (e.g., gullies, small washes) characterized by low volume, infrequent, or short duration flow.

The lateral limits of USACE jurisdiction in non-tidal waters is defined by the "ordinary high-water mark" (OHWM) unless adjacent wetlands are present. The OHWM is a line on the shore or edge of a channel established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed upon the bank, shelving, changes in the character of soil, destruction of vegetation, or the presence of debris (33 CFR 328.3(c)(1)). As such, waters are recognized in the field by the presence of a defined watercourse with appropriate physical and topographic features. If wetlands occur within, or adjacent to, waters of the United States, the lateral limits of USACE jurisdiction extend beyond the OHWM to the outer edge of the wetlands (33 CFR 328.4 (c)). The upstream limit of jurisdiction in the absence of adjacent wetlands is the point beyond which the OHWM is no longer perceptible (33 CFR 328.4; see also 51 FR 41217).

Wetlands

The USACE defines wetlands as “those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions” (33 CFR 328.3(c)(1)). The USACE’s delineation procedures identify wetlands in the field based on indicators of three wetland parameters: hydrophytic vegetation, hydric soils, and wetland hydrology. The following is a discussion of each of these parameters.

b. State Regulations

California Endangered Species Act

The CDFW is responsible for administration of CESA. For projects that may affect both a State and federal listed species, compliance with the FESA will satisfy the CESA, provided the CDFW determines that the federal incidental take authorization is consistent with the CESA.

Take is defined in CFGC Section 86 as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." The CESA allows for take incidental to otherwise lawful activities under CFGC Section 2081. Project proponents wishing to obtain incidental take permits are able to do so through a permitting process outlined in California Code of Regulations (CCR) Section 783. Additionally, some sensitive mammals and birds are protected by the State as Fully Protected Mammals or Fully Protected Birds, as described in the CFGC, Sections 4700 and 3511, respectively.

Projects that may result in a take of a California listed species require a take permit under the CESA. The federal and State acts lend protection to species considered rare enough by the scientific community and trustee agencies to warrant special consideration, particularly with regard to protection of isolated populations, nesting or den locations, communal roosts, and other essential habitat. Unlike the FESA, the CESA prohibits the take of not just listed endangered or threatened species, but also candidate species (species petitioned for listing).

The CESA defines an endangered species as:

> …a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant which is in serious danger of becoming extinct throughout all, or a significant portion, of its range due to one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, or disease.

A threatened species is defined as:

> …a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that, although not presently threatened with extinction, is likely to become an endangered species in the foreseeable future in the absence of the special protection and management efforts required by this chapter. Any animal determined by the commission as rare on or before January 1, 1985 is a threatened species.

Candidate species are defined as:

> …a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that the commission has formally noticed as being under review by the department for addition to either the list of endangered species or the list of threatened species, or a species for which the commission has published a notice of proposed regulation to add the species to either list.

Candidate species may be afforded temporary protection as though the species were already listed as threatened or endangered at the discretion of the Fish and Game Commission. Unlike the FESA, CESA does not include listing provisions for invertebrate species. Article 3, Sections 2080 through 2085, of the CESA addresses the taking of threatened or endangered species by stating:

> …no person shall import into this State, export out of this State, or take, possess, purchase, or sell within this State, any species, or any part or product thereof, that the commission determines to be an endangered species or a threatened species, or attempt any of those acts, except as otherwise provided.

California Fish and Game Code - Nesting Bird Protection

According to CFGC Section 3503 it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird [except English sparrows (*Passer domesticus*) and European starlings (*Sturnus vulgaris*)]. Sections 3503 and 3513 prohibit the taking of specific birds, their nests, eggs, or any portion thereof during the nesting season. Section 3503.5 specifically protects birds in the orders Falconiformes and

Strigiformes (birds-of-prey). Section 3513 essentially overlaps with the federal MBTA, prohibiting the take or possession of any migratory nongame bird.

California Native Plant Protection Act

The California Native Plant Protection Act (NPPA) was enacted in 1977 and allows the California Fish and Wildlife Commission to designate plants as rare or endangered. Currently, 64 species, subspecies, and varieties of plants are protected as rare under the NPPA. The NPPA prohibits take of endangered or rare native plants but includes some exceptions for agricultural and nursery operations; emergencies; and after properly notifying CDFW for vegetation removal from canals, roads, and other sites, changes in land use, and in certain other situations. Effective in 2015, CDFW promulgated regulations (14 CCR 786.9) under the authority of the NPPA, establishing that the CESA permitting procedures (CFG Code Section 2081) would be applied to plants listed under the NPPA as "Rare." With this change, there is little practical difference between regulations and protocols for plants listed under CESA and those listed under the NPPA.

Clean Water Act Section 401, Porter-Cologne Water Quality Control Act

The State Water Resources Control Board (SWRCB) and nine Regional Water Quality Control Boards (RWQCBs) have jurisdiction over “waters of the State,” which are defined as any surface water or groundwater, including saline waters, within the boundaries of the State (California Water Code sec. 13050(e)). These agencies also have responsibilities for administering Section 401 of the CWA. In addition, where Federal jurisdiction is not asserted (for example, due to a lack of connectivity to a Relatively Permanent Waters [RPW] and Traditional Navigable Waters [TNW]), RWQCB assert jurisdiction over “waters of the State” pursuant to Section 13263 of the Porter-Cologne Water Quality Control Act, which are also defined as any surface water or groundwater, including saline waters, within the boundaries of the State. In this event, the SWRCB may issue general Waste Discharge Requirements (WDRs) regarding discharges to “isolated” waters of the State if limiting criteria are not exceeded (Water Quality Order No. 2004-0004-DWQ, Statewide General Waste Discharge Requirements for Dredged or Fill Discharges to Waters Deemed by the USACE to be Outside of Federal Jurisdiction) or project-specific WDRs.

The SWRCB and RWQCBs have not established regulations for field determinations of waters of the State except for wetlands currently. In many cases the RWQCBs interpret the limits of waters of the State to be bounded by the OHWM unless isolated conditions or ephemeral waters are present. However, in the absence of statewide guidance each RWQCB may interpret jurisdictional boundaries within their region, and the SWRCB has encouraged applicants to confirm jurisdictional limits with their RWQCB before submitting applications. As determined by the RWQCB, waters of the State may include riparian areas or other locations outside the OHWM, leading to a larger jurisdictional area over a given water body compared to the USACE.

Procedures for defining wetland waters of the State pursuant to the SWRCB’s *State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State* went into effect May 28, 2020. The SWRCB defines an area as wetland if, under normal circumstances:

(i) the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both;

(ii) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and

(iii) the area’s vegetation is dominated by hydrophytes or the area lacks vegetation.

The SWRCB's Implementation Guidance for the Wetland Definition and Procedures for Discharges of Dredge and Fill Material to Waters of the State (2020), states that waters of the U.S. and waters of the State should be delineated using the standard USACE delineation procedures, taking into consideration that the methods shall be modified only to allow for the fact that a lack of vegetation does not preclude an area from meeting the definition of a wetland.

California Fish and Game Code Section 1600 *et seq.*

Pursuant to CFGC Section 1600, CDFW has authority over all perennial, intermittent, and ephemeral rivers, streams, and lakes in the State, and requires any person, state or local governmental agency, or public utility to notify the CDFW before beginning any activity that would "substantially divert or obstruct the natural flow of, or substantially change or use any material from 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" that supports fish or wildlife resources.

A stream is defined as a "body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having a surface or subsurface flow that supports or has supported riparian vegetation" (California Code of Regulations, Title 14 Section 1.72). A Lake or Streambed Alteration Agreement may be required for any proposed project that would result in an adverse impact to a river, stream, or lake. CDFW jurisdiction typically extends to the top of the bank and out to the outer edge of adjacent riparian vegetation if present. However, CDFW can take jurisdiction over a body of flowing water and the landform that conveys it, including water sources and adjoining landscape elements that are byproducts of and affected by interactions with flowing water without regard to size, duration, or the timing of flow (Brady and Vyverberg 2013).

CDFW Special Animals List

Special-status wildlife species are those species included on the CDFW "Special Animals" list (CDFW 2023). "Special Animal" is a general term that refers to all of the taxa the CNDDB is interested in tracking, regardless of their legal or protection status. The CDFW considers the taxa on this list to be those of greatest conservation need. The species on this list generally fall into one or more of the following categories:

- Officially listed or proposed for listing under the CESA and/or FESA
- State or federal candidate for possible listing
- Taxa that meet the criteria for listing, even if not currently included on any list, as described in
- CEQA Guidelines Section 15380
- Taxa considered by the Department to be a Species of Special Concern
- Taxa that are biologically rare, very restricted in distribution, declining throughout their range, or have a critical vulnerable stage in their life cycle that warrants monitoring
- Populations in California that may be on the periphery of a taxon's range but are threatened with extirpation in California

c. Local

City of Piedmont General Plan

The Natural Resources and Sustainability Element of the Piedmont General Plan includes goals and policies for the protection and enhancement of Piedmont's natural resources. Several policies are intended to facilitate environmental protection and conservation by protecting, maintaining, and enhancing the urban forest (including street and park trees) and natural habitat features. These goals, policies, and actions are shown below:

Goal 13: Natural Features - Protect and enhance Piedmont's natural features, including its hillsides, creeks, and woodlands.

Policy 13.1: Respecting Natural Terrain. Maintain the natural topography of Piedmont by avoiding lot splits and subdivisions that would lead to large-scale grading and alteration of hillsides. Planning and building regulations should ensure that any construction on steep slopes is sensitively designed and includes measures to stabilize slopes, reduce view blockage, and mitigate adverse environmental impacts.

Policy 13.2: Erosion Control. Reduce soil loss and erosion by following proper construction and grading practices, using retaining walls and other soil containment structures, and development control measures on very steep hillsides.

Policy 13.3: Creek Protection. Retain creeks in their natural condition rather than diverting them into manmade channels or otherwise altering their flow. Riparian vegetation and habitat along the city's creeks should be protected by requiring setbacks for any development near creek banks. These setbacks should be consistent with state and federal laws governing stream alteration. Figure 5.2 should be used as a general guide for identifying creeks subject to this policy, but it is not intended to be a comprehensive inventory of all watercourses in the city.

Policy 13.4: Conserving Native Vegetation. Require new development (including expansion of existing residences and major landscaping projects) to protect native vegetation, particularly woodland areas that support birds and other wildlife.

Policy 13.5: Protection of Special-Status Species. Ensure that local planning and development decisions do not damage the habitat of rare, endangered or threatened species, and other species of special concern in Piedmont and nearby areas.

Action 13.A: Biological Assessment Requirements. Require a biological assessment (wildlife or botanical surveys) for any project which could alter or damage the habitat of special-status species, as defined by the California Department of Fish and Game or the U.S. Fish and Wildlife Service

Action 13.D: Enforcement of Watercourse Protection Standards. Enforce the watercourse protection provisions of the City's Stormwater Management Ordinance to protect and enhance Piedmont's creeks and drainage ways. The Ordinance requires a permit to modify the natural flow of a watercourse, carry out development within a watercourse setback, discharge into a watercourse, or add or remove any unconsolidated material in a watercourse. Federal regulations also apply to any project which would obstruct the flow of water in a creek.

Goal 14: Urban Forest - Conserve and expand Piedmont's tree canopy to create visual beauty, provide shade, prevent erosion and absorb runoff, reduce noise and air pollution, and provide habitat for birds and other wildlife.

Policy 14.2: Tree Removal and Replacement. Where appropriate and feasible, require replacement trees when trees on public property are removed. When non-native trees such as eucalyptus and acacia are removed, they should be replaced with native species or other species that are more appropriate to Piedmont's vegetation management and infrastructure maintenance goals.

Policy 14.3: Selecting Appropriate Street Trees. Where appropriate and feasible, require replacement trees when trees on public property are removed. When non-native trees such as eucalyptus and acacia are removed, they should be replaced with native species or other species that are more appropriate to Piedmont's vegetation management and infrastructure maintenance goals.

Policy 14.4: Retention of Healthy Native Trees. Encourage the retention of healthy native trees as new construction takes place, including home additions and landscaping projects. Existing significant trees should be conserved where feasible when development takes place.

Policy 14.5: Landscaping. Encourage the use of landscaping to beautify the city, enhance streets and public spaces, reduce stormwater runoff, and enhance community character. To the extent possible, landscaping practices should minimize the use of pesticides and herbicides, reduce the need for pruning, and incorporate native, drought-tolerant species rather than exotic or invasive species. Landscaping and tree planting should also reinforce Piedmont's fire prevention and vegetation management goals.

Policy 14.6: Trees and Views. Encourage property owners, the Park Commission, and the Planning Commissions to find amicable solutions that balance tree preservation and view preservation goals.

Action 14.A: Street Tree Standards. Review existing City standards for street tree planting to ensure that they address public concerns about sidewalk breakage, leaf litter, view blockage, and maintenance. Periodically consult the Piedmont Park Commission to review practices and procedures for tree management.

Action 14.B: Replacement of Hazardous Trees. Continue the ongoing City program to replace liquidambars and other potentially hazardous trees with alternative species that are less likely to damage sidewalks and pavement.

Action 14.C: Tree Planting Initiatives. Support the efforts of non-profit organizations such as the Piedmont Beautification Foundation to plant trees and undertake landscaping projects on public space.

Piedmont City Code

Piedmont City Code (PCC) Section 30.11, Watercourse Protection, states the following:

> Every person owning property through which a watercourse passes, or such person's lessee or tenant, shall keep and maintain that part of the watercourse within the property reasonably free of trash, debris, excessive vegetation, and other obstacles which would pollute, contaminate, or significantly retard the flow of water through the watercourse; shall maintain existing privately owned structures within or adjacent to a watercourse, so that such structures will not become a

hazard to the use, function, or physical integrity of the watercourse; and shall not remove healthy bank vegetation beyond that actually necessary for said maintenance, nor remove said vegetation in such a manner as to increase the vulnerability of the watercourse to erosion. No person shall commit or cause to be committed any of the following acts, unless a written permit has first been obtained from the Director of Public Works:

30.11.1 Discharge into or connect any pipe or channel to a watercourse;

30.11.2 Modify the natural flow of water in a watercourse;

30.11.3 Carry out development within a setback;

30.11.4 Deposit in, plant in, or remove any material from a watercourse including its banks, except as required for necessary maintenance;

30.11.5 Construct, alter, enlarge, connect to, change, or remove any structure in a watercourse;

30.11.6 Place any loose or unconsolidated material along the side of or within a watercourse or so close to the side as to cause a diversion of the flow, or to cause a probability of such material being carried away by storm waters passing through such watercourses.

Piedmont Heritage Tree Program

The Piedmont Heritage Tree Program recognizes and identifies special distinctive trees that are noteworthy by their size, unique species, prominent location or historical context in parks or open spaces.

4.3.3 Impact Analysis

a. Methodology and Significance Thresholds

Significance Thresholds

The following thresholds are based on Appendix G of the *CEQA Guidelines*. Impacts would be significant if the proposed project would result in any of the following:

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 U.S. 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 U.S. Fish and Wildlife Service;
3. Have a substantial adverse effect on State or federally protected wetlands (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; or,

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.

b. Project Impacts and Mitigation Measures

The proposed project does not identify specific development projects occurring at a specific location or time, and the design and scope-of-work for such future projects is unknown. The proposed project involves policy changes that will facilitate greater development. Specifically, the proposed project involves updates to elements of the General Plan and implementation of the 2023-2031 Housing Element. Under these circumstances, it is not possible to determine the specific impacts of future development projects that may occur as a result of the proposed project. The following impact analysis serves to analyze the potential impacts of these legislative changes assuming the existing policies and actions in the General Plan (with some proposed text modifications to accommodate future development) and applicable federal, State, and local laws, regulations, and management policies are part of the existing conditions will apply to future development proposals. In addition, the impact analysis assumes the proposed amendments to the environmental elements of the General Plan will be part of the proposed project and, therefore, applies to future development projects. Future development proposals would be reviewed to determine whether their impacts fall within the scope of this EIR, or if additional site-specific environmental review is required. Subsequent environmental documents, when required, could "tier" from this EIR and focus its analysis on any new significant impacts pursuant to *CEQA Guidelines* Section15152 and 15385.

As an area of primarily open space, the MCSP Area was reviewed independently. Land cover types and existing conditions were confirmed and refined with observations following a reconnaissance site visit conducted on June 2, 2022. Potential development of the MCSP includes the development residential uses and improvements to city buildings and facilities on city-owned land. A specific development project is not currently identified for this location or time; however, a separate analysis was conducted for the MCSP Area in order to identify potential impacts that may be unique to the site.

Threshold 1:	Would the project 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 U.S. Fish and Wildlife Service?

Impact BIO-1 DEVELOPMENT FACILITATED BY THE PROPOSED PROJECT MAY RESULT IN DIRECT OR INDIRECT IMPACTS TO SPECIAL-STATUS SPECIES OR THEIR ASSOCIATED HABITATS, AS WELL AS IMPACTS TO NESTING BIRDS. HOWEVER, THE PROPOSED PROJECT INCLUDES ADDING POLICIES TO THE PIEDMONT GENERAL PLAN TO ADDRESS POTENTIAL IMPACTS. WITH COMPLIANCE WITH PROPOSED NEW GENERAL PLAN POLICIES, AS WELL AS EXISTING GENERAL PLAN POLICIES AND OTHER REGULATIONS, THIS IMPACT WOULD BE LESS THAN SIGNIFICANT.

Citywide Housing Element Implementation

A total of 35 special-status plants were identified within the 9 quadrangles including and surrounding the City of Piedmont (CNPS 2023), and 33 special-status animals were identified within five miles of the City of Piedmont (CDFW 2023a) (Appendix B). The developed and urbanized core of Piedmont generally lacks suitable habitats to support special-status plants and special-status animals. Many of the special-status species within the region have sensitivity ratings below the threshold for significant impacts from development in urban settings under CEQA, or there are no records of the species occurring within Piedmont in the past ten years. However, depending on the location and timing of

future development projects, the potential occurrence of some special-status species cannot be ruled out. For example, the grassland and oak woodland habitats on the northeastern boundary of Piedmont may support special-status species such as San Francisco dusky-footed woodrat. In addition, the eastern boundaries of Piedmont include native habitats for species such as the peregrine falcon along with many bat species that are known to occur in urban settings. Therefore, depending on the location and timing of future development projects, impacts to special-status species may occur.

Direct impacts from future development projects may include direct mortality of special-status species struck by construction equipment or vehicles during construction; crushing of burrows or habitat features providing shelter for special-status species; habitat impacts including trimming and removal of native vegetation and grading; noise, vibration, and other disturbances that alter foraging and mating behaviors; and increased predation due to human presence, pets, rodents, and availability of human food. Habitat impacts may be permanent or temporary. Indirect impacts may include introduction and spread of nonnative species, fire, and fugitive dust, which alter habitat values; noise, lighting, and human presence which may alter migratory corridors, mating, and foraging behavior; and other "edge effects" at the urban-wildland interfaces.

The General Plan includes policies and actions serving to minimize impacts to native vegetation and habitats for special-status species when development projects occur. Future development proposals would be subject to Action 13.A: Biological Assessment Requirements of the Piedmont General Plan Natural Resources and Sustainability Element, requiring a biological assessment (wildlife or botanical surveys) for a project which could alter or damage the habitat of special-status species, as defined by the CDFW or the USFWS. Policy 13.1-5 and Action 13.D of the General Plan Natural Resources and Sustainability Element collectively serve to protect suitable habitats for special-status species.

Further, the proposed project involves amendments to the General Plan Natural Resources and Sustainability Element which include adding the following new policies:

> **San Francisco Dusky Footed Woodrat Protection**. For development projects where construction would take place within 50 feet of woodland or riparian habitat (excluding remodels of existing structures), a qualified biologist shall conduct a pre-construction survey for woodrats no more than 14 days prior to construction. Middens (woodrat or other packrat nest structure) within 50 feet of project activity that would not be directly impacted by project activity should be demarcated with a 10-foot avoidance buffer and left intact. If a midden(s) that cannot be avoided is found during the pre-construction survey, an approved biologist should monitor the dismantling of the midden by a construction contractor to assist with the goal of ensuring the individuals are allowed to leave the work areas unharmed before on site activities begin.
>
> **Roosting Bat Protection**. For development projects that involve the removal of on-site trees or demolition of vacant structures, a qualified biologist shall conduct a focused survey of trees and structures to be removed to determine whether active roosts of special-status bats are present. Trees and/or structures containing suitable potential bat roost habitat features shall be clearly marked or identified. If active roosts are present, the biologist shall prepare a site-specific roosting bat protection plan to be implemented by the contractor following the City's approval.

Adherence to these policies would reduce the potential for future development under the proposed project to affect sensitive wildlife species that could be present in Piedmont including the San Francisco Dusky Footed Woodrat and roosting bats.

Future development under the proposed project would also be subject to State and federal laws, regulations, and management policies addressing biological resources such as those associated with watercourses. For example, as discussed in Section 4.3.2, Regulatory Setting, Section 401 of the Clean Water Act would prevent a net loss of Waters of the United States and other wetlands when development occurs on sites containing these biological features. Section 401 requires a permit or coverage under a permit from the U.S. Army Corps of Engineers, and typically the permit requires replacements of the wetlands which would be disturbed or lost as a result of a project. In addition, PCC Section 30.11, Watercourse Protection, prohibits modification the natural flow of a watercourse, development within a watercourse setback, or removal of material from a watercourse including its banks, except as required for necessary maintenance.

Trees, shrubs, man-made structures, and the ground surface provide suitable nesting substrates for birds protected under the MBTA and CFGC. If construction of specific development projects implemented under the proposed project occurs during the breeding season, impacts to nesting birds may occur. Impacts may include direct impacts to active nests, including eggs or young, if nesting substrates are removed as part of the project. Indirect impacts may result if noise, vibration, artificial lighting, and human presence cause adult birds to abandon the nests for prolonged periods of time, preventing them from incubating eggs, brooding chicks, and defending the nest from predators. The increase in building development in Piedmont could also increase the potential for and rate of bird strikes which may affect birds protected under the Migratory Bird Treaty Act. Songbird populations have decreased due to increased human development worldwide.

However, the proposed project involves amendments to the General Plan Natural Resources and Sustainability Element which include adding the following new policy to protect nesting birds:

> **Nesting Bird Protection**. Development projects that involve tree removal or significant tree trimming shall take steps to avoid impacts to nesting birds. Initial site disturbance activities for construction, including vegetation and concrete removal, shall be avoided during the general avian nesting season (February 1 to August 30). If nesting season avoidance is not feasible, the applicant shall retain a qualified biologist to conduct a preconstruction nesting bird survey to determine the presence/absence, location, and activity status of any active nests on or adjacent to the project site. In the event that active nests are discovered, a suitable buffer (typically a minimum buffer of 50 feet for passerines and a minimum buffer of 250 feet for raptors) shall be established around such active nests and no construction shall be allowed inside the buffer areas until a qualified biologist has determined that the nest is no longer active (e.g., the nestlings have fledged and are no longer reliant on the nest). No ground-disturbing activities shall occur within this buffer until the qualified biologist has confirmed that breeding/nesting is completed and the young have fledged the nest.
>
> **Bird Safe Design**. Development projects (excluding small structures exempt under CEQA) shall incorporate bird-friendly building materials and design features to prevent bird strikes and collisions. Strategies for bird safe designs include but are not limited to: prohibiting glass walls around planted atria or windows installed perpendicularly on building corners; directing external lighting downward or shielding light fixtures to prevent light from spilling upward; designing building and landscaping without features known to cause collisions such as clear glass terrace, deck, or porch railings; using bird glazing treatments such as fritting, netting, permanent stencils, frosted glass, exterior screens, or physical grids placed on windows.

Adherence to these policies would ensure future development would not impact nesting birds and would reduce impacts associated with potential bird strikes. Therefore, impacts would be less than significant.

Moraga Canyon Specific Plan

The MCSP Area consists of several land cover types as described in Section 4.3.1. The MCSP Area is an island of habitat surrounded by urban development. It is likely to support nesting birds and may support special-status species such as roosting bats and San Francisco dusky-footed woodrat. The development envisioned under the MCSP would require grading and excavation, and construction activities that may involve removal of trees and other vegetation cover. Accordingly, future development pursuant to an adopted MCSP may result in impacts to habitat for special-status species. Construction would also have the potential to directly impact special-status species, including both wildlife and plant species, through actions such as crushing under construction equipment. Likewise, following construction, operation of the development envisioned in the goals of the MCSP would require artificial light and mechanical equipment, which would generate noise that could interfere with special-status wildlife species behavior and nesting habits. Increased human activity would also have potential to impact wildlife, similar to that described for implementation of the Housing Element citywide. However, for the same reasons as discussed above under "Citywide Housing Element Implementation," with adherence to existing and proposed General Plan policies and other applicable regulations, impacts would be less than significant.

Mitigation Measures

This impact would be less than significant with implementation of proposed new policies to the General Plan Natural Resources and Sustainability Element which are proposed as part of the project. Mitigation measures would not be required.

Threshold 2:	Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Impact BIO-2 **DEVELOPMENT FACILITATED BY THE PROPOSED PROJECT MAY DIRECTLY OR INDIRECTLY IMPACT RIPARIAN HABITAT, SENSITIVE NATURAL COMMUNITIES, OR PROTECTED WETLANDS IN PIEDMONT. IMPLEMENTATION OF EXISTING PIEDMONT GENERAL PLAN POLICIES AND FEDERAL, STATE, AND LOCAL REGULATIONS WOULD ENSURE RIPARIAN HABITAT AND WETLANDS WOULD NOT BE SIGNIFICANTLY IMPACTED. THIS IMPACT WOULD BE LESS THAN SIGNIFICANT.**

Citywide Housing Element Implementation

The City of Piedmont is generally urbanized and developed with the exception of the MCSP Area discussed below. The dominant vegetation types include ornamental vegetation and ruderal areas. While natural vegetation communities, such as Blue Oak Woodland occur in the city, the natural vegetation communities in the city are not considered sensitive by the CDFW. Three sensitive natural community types occur within a five-mile radius of Piedmont. Northern Coastal Salt Marsh is located within 2.6 miles to the west and 4.5 miles south of the City of Piedmont; Northern Maritime Chaparral is located approximately 1.8 miles to the east of the City of Piedmont; and serpentine bunchgrass is located approximately 1.7 miles to the southeast of the City of Piedmont. These sensitive natural vegetation communities would not be affected by development projects resulting from the proposed

project due to their respective distances from future development projects and intervening urban development.

As described above in Section 4.3.1, Existing Conditions, there are streams and potential wetlands within Piedmont. These streams and wetlands may support riparian zones. Future development envisioned in and facilitated by the proposed Housing Element Implementation Project would require construction activities with the potential to remove riparian vegetation, such as grading or installing stormwater outfalls along streams. If impacts to riparian areas are identified during the planning process for specific development projects based on site-specific conditions and the design associated with the proposed project, projects would be required to adhere to the City of Piedmont's General Plan Action 13.D and Watercourse Protection Ordinance (30.11) and be subject to permitting pursuant to the CWA and CFGC. Requirements commonly required under the CWA and CFGC include measures to protect streams and bodies of water along with riparian habitats. An example protective measures include providing a buffer along the stream in which construction activities are prohibited. Therefore, this impact would be less than significant.

Moraga *Canyon* Specific Plan

There are no sensitive natural communities identified within the MCSP Area. Natural communities exist within the MCSP Area, but these communities are not considered sensitive by CDFW or other regulatory agencies, such as USFWS. If impacts to riparian areas are identified, development in the MCSP Area would be required to adhere to the City of Piedmont's General Plan Action 13.D and Watercourse Protection Ordinance (30.11) and be subject to permitting pursuant to the CWA and CFGC. No impact would occur from specific subsequent development to implement an adopted MCSP.

Mitigation Measures

The impact from development facilitated by the proposed Housing Element Implementation project, including development pursuant to an adopted MCSP, would be less than significant. No mitigation measures are required.

Threshold 3:	Would the project have a substantial adverse effect on state or federally protected wetlands (including but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

Impact BIO-3 DEVELOPMENT FACILITATED BY THE PROPOSED PROJECT MAY RESULT IN IMPACTS TO STATE OR FEDERALLY PROTECTED WETLANDS; HOWEVER, THESE POTENTIAL IMPACTS WOULD BE ADDRESSED BY EXISTING REGULATIONS THAT PROTECT WETLANDS. THIS IMPACT WOULD BE LESS THAN SIGNIFICANT.

Citywide Housing Element Implementation

As described above in Section 4.3.1, Existing Conditions, several streams exist in the city. Likewise, the USFWS has mapped wetlands in the city, and there is potential for unmapped wetlands to also exist. Generally, areas where wetlands could occur in Piedmont are undeveloped areas, such as open space areas separating developed areas. Most of the development envisioned in the proposed Housing Element Implementation project would occur as infill development and be unlikely to impact streams or wetlands. However, there is the potential for future development to occur in existing open space or undeveloped areas, which could impact streams or wetlands. For example, specific development projects may require extensions of utilities across streams, requiring trenching or boring through the stream channel for installation of the utility. If impacts to federal or State wetlands are

identified during the planning process for specific development projects associated with the proposed project, the project applicant would be required to adhere to the City of Piedmont's General Plan Action 13.D and Watercourse Protection Ordinance (30.11) and be subject to permitting pursuant to the CWA and CFGC. Permitting pursuant to the CWA typically requires no net loss of jurisdictional wetlands. For example, if a project were to impact 0.5 acre of jurisdictional wetlands, CWA permitting requirements typically require the replacement or creation of at least 0.5 acre of wetlands. Accordingly, this impact would be less than significant.

Moraga Canyon Specific Plan

There are no protected wetlands or waters identified within the MCSP Area. If impacts to wetlands are identified during the planning process for future development in the MCSP Area based on site-specific conditions and the design associated with the proposed project, development would be required to adhere to the City of Piedmont's General Plan Action 13.D and Watercourse Protection Ordinance (30.11) and be subject to permitting pursuant to the CWA and CFGC. Impacts related to development in the MCSP Area would be less than significant.

Mitigation Measures

The impact from development facilitated by the proposed Housing Element Implementation project, including development pursuant to an adopted MCSP, would be less than significant. No mitigation measures are required.

Threshold 4:	Would the project 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?

Impact BIO-4 **IMPLEMENTATION OF THE PROPOSED PROJECT MAY IMPACT THE MOVEMENT OF NATIVE RESIDENT OR MIGRATORY FISH OR WILDLIFE SPECIES OR WITH ESTABLISHED NATIVE RESIDENT OR MIGRATORY WILDLIFE CORRIDORS. HOWEVER, WITH COMPLIANCE WITH PROPOSED NEW PIEDMONT GENERAL PLAN POLICIES, THIS IMPACT WOULD BE LESS THAN SIGNIFICANT.**

Citywide Housing Element Implementation

The City of Piedmont is adjacent to a designated ECA, but the City of Piedmont is not within, and does not function as, a significant regional or local wildlife movement corridor. Even though there are multiple streams, ravines, and drainages in the City of Piedmont, the corridors associated with these streams and drainages are not utilized for movement of native resident or migratory fish as they are channelized at some point in their course and the majority of them drain to Lake Merritt which does not contain breeding populations of schools of migratory fish due to absence of a floodplain, presence of urbanized development at its edges, and very limited appropriate habitat within the Lake.

While the proposed project would not result in a direct impact, specific development projects facilitated by the proposed Housing Element Implementation project may have the potential to alter areas used by native wildlife species, such as resident and migratory birds, and small mammals during construction or operation. Foraging and mating behaviors may be temporarily or indirectly disrupted, and roosting and shelter sites may be unavailable during construction. Vegetation throughout much of the urban environment of Piedmont consists of primarily non-native landscaped trees and shrubs. Native bird species will often use landscaped vegetation in lower numbers compared to more natural areas due to the increased human activity that is typically proximate to landscaped areas, such as

lawns or urban parks. However, some species of migratory birds prefer to nest in urban settings or otherwise seem unconcerned with human activity proximate to their nesting locations. Accordingly, specific development projects would have potential to impact nesting migratory birds. Many of the impacts would be localized and temporary, and would not substantially impact the species. In addition, General Plan policies 13.4 and 14.2-3 along with the proposed new Nesting Bird Protection and Bird Safe Design policies listed under Impact BIO-1 that would be added to the Natural Resources and Sustainability Element as part of the proposed project would serve to minimize adverse effects. This impact would be less than significant.

Moraga Canyon Specific Plan

The MCSP Area is surrounded by urban development on all sides. Wildlife may move locally within the Moraga Canyon area of Piedmont; however, there is no natural connectivity between the MCSP Area and movement corridors east of Piedmont along the Diablo Range. The urban nature of Piedmont and surrounding City of Oakland precludes the MCSP Area as a wildlife movement corridor. In other words, the MCSP Area is separated from other wildlife movement corridors by expansive amounts of urban development, such as the City of Oakland, City of Berkeley, Highway 13, and developed parts of the City of Piedmont. Future development in the MCSP Area could have potential to impact nesting migratory birds. Many of the impacts would be localized and temporary and would not substantially impact the species. In addition, General Plan policies 13.4 and 14.2-3 along with the proposed new Nesting Bird Protection and Bird Safe Design policies listed under Impact BIO-1 that would be added to the Natural Resources and Sustainability Element as part of the proposed project would serve to minimize adverse effects. Therefore, this impact would be less than significant.

Mitigation Measures

This impact would be less than significant with implementation of proposed new policies to the General Plan Natural Resources and Sustainability Element which are proposed as part of the project. Mitigation measures would not be required.

Threshold 5:	Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Impact BIO-5 **IMPLEMENTATION OF THE PROPOSED PROJECT WOULD NOT CONFLICT WITH LOCAL POLICIES OR ORDINANCES PROTECTING BIOLOGICAL RESOURCES, SUCH AS A TREE PRESERVATION POLICY OR ORDINANCE. THIS IMPACT WOULD BE LESS THAN SIGNIFICANT.**

Citywide Housing Element Implementation

Future development projects facilitated by and implemented as a result of the proposed Housing Element Implementation project would be subject to the existing regulations, policies, and actions in the General Plan and PCC. For example, Action 13.A: Biological Assessment Requirements and Action 13.D: Enforcement of Watercourse Protection Standards and PCC Section 30.11 are measures prescribed by the City of Piedmont to protect natural environments and watercourses. Goals 13 and 14 require the City of Piedmont to maintain and enhance street and park trees to improve the environment and provide habitat, along with Policy 14.6 which encourages private citizens and the parks department to protect trees. On-going implementation of these policies would reduce potential impacts to locally significant trees and trees recognized under the Piedmont Heritage Tree Program to a less than significant level. While future development projects may present opportunities for potential impacts to biological resources, as discussed throughout this section, the proposed project

does not include specific policies or programs that would conflict with or hinder implementation of the environmental policies or ordinances for protecting biological resources, including the City's policies on trees. This impact would be less than significant.

Moraga Canyon Specific Plan

The MCSP Area contains trees and other vegetation cover. Future development within the MCSP Area would require significant tree removal, including potential removal of one or more designated Heritage Tree(s). Tree removal would be subject to the existing regulations, policies, and actions in the General Plan and PCC and the Piedmont Heritage Tree Program. For example, Policy 14.4 in the General Plan encourages the retention of healthy native trees during new construction. Development within the MCSP Area would not conflict with Piedmont policies or ordinances protecting biological resources. No impact from future development to implement an adopted MCSP would occur.

Mitigation Measures

This impact from development facilitated by the proposed Housing Element Implementation project, including development pursuant to an adopted MCSP, would be less than significant. No mitigation measures are required.

Threshold 6:	Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan?

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. NO IMPACT WOULD OCCUR.

Citywide Housing Element Implementation

There are no habitat conservation plans or natural community conservation plans adopted in Piedmont. Therefore, the proposed Housing Element Implementation project and any associated specific subsequent development project would not conflict with any such plans. No impact would occur.

Moraga Canyon Specific Plan

As noted above, there are no habitat conservation plans or natural community conservation plans adopted in Piedmont, including the MCSP Area. Therefore, future development in the MCSP Area would not conflict with any such plans. No impact would occur.

Mitigation Measures

No impact would occur, and no mitigation measures are required.

c. Cumulative Impacts

The geographic scope for cumulative biological resources impacts is the City of Piedmont. This geographic scope is appropriate for biological resources because it encompasses the mosaic of representative land cover and habitat types (and associated biological resources) affected or

potentially affected by the proposed Housing Element Implementation project, including primarily urban, residential, and commercial development with areas of natural habitats.

Cumulative development in Piedmont may contribute to the loss of foraging and breeding habitat for special-status species; contribute to the decline of special-status species, fragmentation of habitat, and isolation of populations; and decrease movement opportunities. Full implementation of the proposed Housing Element Implementation project in combination with cumulative development described in Section 3, *Environmental Setting*, would increase density and intensity of existing land uses. However, the City of Piedmont is largely developed and is surrounded by developed land uses which limits the habitat value and potential for presence of sensitive biological resources. In addition, existing and proposed General Plan policies and actions, are intended to minimize these impacts during construction and continued operation. Therefore, the proposed project's initial and then incremental contribution to cumulative impacts to biological resources through implementation of future development projects would not be cumulatively considerable, and cumulative impacts would be less than significant.

4.4 Cultural Resources

This section analyzes impacts to cultural resources within Piedmont that would result from implementation of the Housing Element, updated Piedmont General Plan elements, and amendments to the PCC resulting from the General Plan amendments. Cultural resources include sites, buildings, landmarks, and other physical markers important to our understanding of indigenous peoples, and the history of Piedmont and the region since colonization. Impacts associated with the pre-historic formation of life on earth (paleontological resources) are discussed in Section 4.6, *Geology and Soils.*

4.4.1 Regulatory Setting

This section includes a discussion of the applicable federal, State of California (State), and local laws, ordinances, regulations, and standards governing cultural resources, which must be adhered to before and during implementation of the proposed project.

a. State Regulations

California Environmental Quality Act (CEQA)

California Public Resources Code (PRC) Section 21804.1 requires lead agencies to determine if a project could have a significant impact on historical or unique archaeological resources. As defined in PRC Section 21084.1, a historical resource is a resource listed in, or determined eligible for listing in, the California Register of Historical Resources (CRHR), a resource included in a local register of historical resources or identified in a historical resources survey pursuant to PRC Section 5024.1(g), or any object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be historically significant. PRC Section 21084.1 also states resources meeting the above criteria are presumed to be historically or culturally significant unless the preponderance of evidence demonstrates otherwise. Resources listed in the National Register of Historic Places (NRHP) are automatically listed in the CRHR and are, therefore, historical resources under CEQA. Historical resources may include eligible built environment resources and archaeological resources of the precontact or historic periods.

CEQA Guidelines Section 15064.5(c) provides further guidance on the consideration of archaeological resources. If an archaeological resource does not qualify as a historical resource, it may meet the definition of a "unique archaeological resource" as identified in PRC Section 21083.2. PRC Section 21083.2(g) defines a unique archaeological resource as an artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria: 1) it contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information, 2) has a special and particular quality such as being the oldest of its type or the best available example of its type, or 3) is directly associated with a scientifically recognized important prehistoric or historic event or person.

If an archaeological resource does not qualify as a historical or unique archaeological resource, the impacts of a project on those resources will be less than significant and need not be considered further (CEQA Guidelines Section 15064.5[c][4]). CEQA Guidelines Section 15064.5 also provides guidance for addressing the potential presence of human remains, including those discovered during the implementation of a project.

According to CEQA, an impact that results in a substantial adverse change in the significance of a historical resource is considered a significant impact on the environment. A substantial adverse change could result from physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of the historical resource would be materially impaired (CEQA Guidelines Section 15064.5 [b][1]). Material impairment is defined as demolition or alteration in an adverse manner [of] those characteristics of a historical resource that convey its historical significance and that justify its inclusion in, or eligibility for inclusion in, the CRHR or a local register (CEQA Guidelines Section 15064.5[b][2][A]).

If it can be demonstrated that a project will cause damage to a unique archaeological resource, the lead agency may require reasonable efforts be made to permit any or all of these resources to be preserved in place or left in an undisturbed state. To the extent that resources cannot be left undisturbed, mitigation measures are required (PRC Section 21083.2[a][b]).

CEQA Guidelines Section 15126.4 stipulates an EIR shall describe feasible measures to minimize significant adverse impacts. In addition to being fully enforceable, mitigation measures must be completed within a defined time period and be roughly proportional to the impacts of the project. Generally, a project which is found to comply with the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings (the Standards) is considered to be mitigated below a level of significance (CEQA Guidelines Section 15126.4 [b][1]). For cultural resources of an archaeological nature, lead agencies should also seek to avoid damaging effects where feasible. Preservation in place is the preferred manner to mitigate impacts to archaeological sites; however, data recovery through excavation may be the only option in certain instances (CEQA Guidelines Section 15126.4[b][3]).

National Register of Historic Places

Although the project does not have a federal nexus, properties which are listed in or have been formally determined eligible for listing in the NRHP are automatically listed in the CRHR. The following is therefore presented to provide applicable regulatory context. The NRHP was authorized by Section 101 of the National Historic Preservation Act and is the nation's official list of cultural resources identified for preservation. The NRHP recognizes the quality of significance in American, state, and local history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects. Per 36 CFR Part 60.4, a property is eligible for listing in the NRHP if it meets one or more of the following criteria:

Criterion A: Is associated with events that have made a significant contribution to the broad patterns of our history

Criterion B: Is associated with the lives of persons significant in our past

Criterion C: Embodies the distinctive characteristics of a type, period, or method of installation, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction

Criterion D: Has yielded, or may be likely to yield, information important in prehistory or history

In addition to meeting at least one of the above designation criteria, resources must also retain integrity. The National Park Service recognizes seven aspects or qualities that, considered together, define historic integrity. To retain integrity, a property must possess several, if not all, of these seven qualities, defined as follows:

Location: The place where the historic property was constructed or the place where the historic event occurred

Design: The combination of elements that create the form, plan, space, structure, and style of a property

Setting: The physical environment of a historic property

Materials: The physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property

Workmanship: The physical evidence of the crafts of a particular culture or people during any given period in history or prehistory

Feeling: A property's expression of the aesthetic or historic sense of a particular period of time

Association: The direct link between an important historic event or person and a historic property

Certain properties are generally considered ineligible for listing in the NRHP, including cemeteries, birthplaces, graves of historical figures, properties owned by religious institutions, relocated structures, or commemorative properties. Additionally, a property must be at least 50 years of age to be eligible for listing in the NRHP. The National Park Service states that 50 years is the general estimate of the time needed to develop the necessary historical perspective to evaluate significance (National Park Service [NPS] 1997:41). Properties which are less than 50 years must be determined to have "exceptional importance" to be considered eligible for NRHP listing.

California Register of Historical Resources

The CRHR was established in 1992 and codified by PRC Sections 5024.1 and 4852. The CRHR is an authoritative listing and guide to be used by State and local agencies, private groups, and citizens in identifying the existing historical resources of the State and to indicate which resources deserve to be protected, to the extent prudent and feasible, from substantial adverse change (Public Resources Code, 5024.1(a)). The criteria for eligibility for the CRHR are consistent with the NRHP criteria but have been modified for State use to include a range of historical resources that better reflect the history of California (Public Resources Code, 5024.1(b)). Unlike the NRHP however, the CRHR does not have a defined age threshold for eligibility; rather, a resource may be eligible for the CRHR if it can be demonstrated sufficient time has passed to understand its historical or architectural significance (California Office of Historic Preservation 2006). Furthermore, resources may still be eligible for listing in the CRHR even if they do not retain sufficient integrity for NRHP eligibility (California Office of Historic Preservation 2006). Generally, the California Office of Historic Preservation recommends resources over 45 years of age be recorded and evaluated for historical resources eligibility (California Office of Historic Preservation 1995:2).

A property is eligible for listing in the CRHR if it meets one of more of the following criteria:

Criterion 1: Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage

Criterion 2: Is associated with the lives of persons important to our past

Criterion 3: Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values

Criterion 4: Has yielded, or may be likely to yield, information important in prehistory or history

California Health and Safety Code

California Health and Safety Code Section 7050.5 states that in the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the remains are discovered has determined if the remains are subject to the Coroner's authority. If the human remains are of Native American origin, the coroner must notify the Native American Heritage Commission (NAHC) within 24 hours of this identification.

California Public Resources Code Section 5097.98

California Public Resources Code Section 5097.98 states that the NAHC, upon notification of the discovery of Native American human remains pursuant to Health and Safety Code Section 7050.5, shall immediately notify those persons (i.e., the Most Likely Descendant [MLD]) that it believes to be descended from the deceased. With permission of the landowner or a designated representative, the MLD may inspect the remains and any associated cultural materials and make recommendations for treatment or disposition of the remains and associated grave goods. The MLD shall provide recommendations or preferences for treatment of the remains and associated cultural materials within 48 hours of being granted access to the site.

b. Local

City of Piedmont General Plan

The Design and Preservation Element (Chapter 8) of the Piedmont General Plan contains two goals (Goals 30 and 31), each with associated policies and actions, pertaining to historical resources regulations:

Goal 30: Archaeological Resources - Protect Piedmont's archaeological resources.

Policy 30.1: Archaeological Resource Protection. Ensure that future construction and/or earth movement does not result in the loss of important archaeological resources.

Action 30.A: Procedures for Managing Archaeological Resources. Implement the following procedure in the event that archaeological deposits or features are discovered and/or disturbed:

1. Work within 50 feet of the discovery should cease until the find is flagged, secured, and assessed by a qualified archaeologist.

2. If the find is determined to be isolated or recent, then construction may resume. If it is potentially significant, appropriate mitigation measures should be developed and the City and property owner should be notified. Movement of significant materials by personnel other than a qualified archaeologist should be prohibited.
3. Following resolution, a report documenting the methods, findings, and recommendations of the archaeologist should be prepared.

Action 30.B: Procedures for Managing Native American Remains. Follow accepted protocol in the event that human remains from the period of pre-European settlement are encountered during construction. This includes halting work in the immediate area until the Alameda County Coroner and California Native American Heritage Commission have been contacted. As appropriate, it may also include contact with the Most Likely Descendant to make recommendations for the respectful treatment of remains and related burial goods, and accompanying documentation.

Goal 31: Historic Preservation – Identify, preserve, and maintain Piedmont's cultural and historic resources and recognize these resources as an essential part of the city's character and heritage.

Policy 31.1: Comprehensive Approach to Preservation. Take a comprehensive approach to historic preservation in Piedmont, considering cultural history as well as architectural history, neighborhoods as well as individual buildings, the natural landscape as well as the built environment, and archaeological resources as well as living history.

Policy 31.2: Preserving Historic Resources. Ensure that planning and building decisions, including zoning and design review approvals, are sensitive to historic resources and promote the conservation of Piedmont's historic neighborhoods. The demolition of historically important structures shall be strongly discouraged.

Policy 31.3: Context-Sensitive Design. Ensure that the repair, maintenance, and expansion of Piedmont's historically important structures uses appropriate materials and architectural details and respects historic context.

Policy 31.4: Restoration. Promote the restoration of original period details to older Piedmont homes and where feasible, the modification of exterior alterations that were unsympathetic to the original design of the home.

Policy 31.5: Older Public Buildings. Sustain exemplary standards of stewardship for historic buildings owned by the city, including Piedmont City Hall and the Community Hall. Ensure that the rehabilitation of older public buildings adheres to generally accepted preservation standards.

Policy 31.6: Historic Landscapes. Preserve important historic landscape features, including parks, landscaped traffic islands, and neighborhood entry pillars dating back to Piedmont's early subdivisions. Ensure that new public works such as street lights, street furniture, and sidewalks are compatible with the historic context of Piedmont's neighborhoods.

Policy 31.7: Adaptive Reuse. Where it is no longer feasible to continue using an older building for its originally intended use, encourage adaptive reuse of the structure rather than demolition and replacement.

Policy 31.8: Replacement of Historic Structures. In the event that a historically important structure is destroyed by fire or earthquake, or is deemed unsafe and in need of replacement, encourage the new structure to respect the historic architectural context.

Policy 31.9: Recent Past. Anticipate the need to recognize and preserve structures from the "recent past", that is, the "California modern" era between 1945 and 1960.

Action 31.A: State Historic Building Code. Allow the use of the State Historic Building Code in appropriate circumstances to achieve the preservation of important historic structures, provided that public health and safety are assured.

Action 31.B: Historic Preservation Ordinance. Consider adopting a historic preservation ordinance that establishes a program of designating local landmarks and establishes a process for review of alterations to these landmarks.

Action 31.C: Financial Incentives to Preservation. Consider financial incentives to preservation, including state and federal historic preservation tax credits and tax relief programs, grants and funds for preservation, and Mills Act preservation contracts.

Single-Family, Multi-Family, Commercial and Mixed-Use Standards and Guidelines

The City of Piedmont does not have a historic preservation ordinance; however, as detailed in the General Plan Design and Preservation Element, regulation pertinent to historic preservation is typically affected through certain provisions of the city's Single-Family, Multi-Family, Commercial and Mixed-Use Design Standards and Guidelines, in coordination with the city's zoning ordinance, as follows:

> "Most of the preservation activity in Piedmont occurs through the design review program. Although Piedmont does not have designated historic districts, the entire city is effectively treated as a neighborhood conservation district through the application of design guidelines that reflect prevailing architectural styles and context. These guidelines are reinforced by zoning standards that maintain single family uses, limit excessive height and bulk, and discourage replacement of older homes with substantially larger homes. The combination of zoning and design review has effectively protected the older building stock and in many cases led to the restoration of original architectural features.
>
> [To the extent permitted by State law, N]o addition, alteration, or new construction may be approved in Piedmont unless it is found to be harmonious with existing and proposed development in the neighborhood. In addition to looking at height and bulk, the Planning Commission examines details such as the line and pitch of the roof, exterior materials, and the treatment of windows and doors. Staff also considers these features in administrative and staff-level design review applications. Adherence to these standards over the past few decades has helped sustain property values and substantially reduced the threat of demolition" (City of Piedmont 2008).

Piedmont's Design Standards and Guidelines consider the aesthetic design, compatibility, and safety for each feature. These attributes are evaluated within relation to the neighborhood, adjacent parcels, and the site itself. According to the Design and Preservation Element, the Piedmont Design Standards and Guidelines "incorporate many of the same principles as the Secretary of the Interior's Standards, including guidelines for the treatment of windows, doors, roofs, and porches" (City of Piedmont 2008).

4.4.2 Cultural Setting

The following is a brief overview of the cultural setting of Piedmont, including the indigenous history and post-contact history, followed by a discussion of the existing conditions. An ethnographic background is provided in Section 4.15, *Tribal Cultural Resources.*

a. Indigenous History

Before the arrival of European settlers, Alameda County, including the City of Piedmont, was the ancestral homeland of the Chochenyo people, one of the many tribal groupings which constitute the indigenous Ohlone people of Northern California. The Chochenyo inhabited the East Bay for thousands of years; evidence of their long presence includes shell mounds along the Bay and arrowheads, tools, funeral burials, and ornaments occasionally unearthed in settlement sites. Most villages were located along the shoreline and creeks, the nearest to Piedmont being Huichin from Temescal Creek in North Oakland to present-day Richmond. (Sogorea Te' Land Trust, "Lisjan (Ohlone) History & Territory," https://sogoreate-landtrust.org/lisjan-history-and-territory/)

The City of Piedmont lies in the San Francisco Bay Area archaeological region (Milliken et al. 2007, Moratto 1984). Milliken et al. (2007) generally divided the prehistoric chronology of the Bay Area into five periods: The Early Holocene (8,000-3,500 BCE), Early Period (3,500-500 BCE), Lower Middle Period (500 BCE to CE 430 CE), the Upper Middle Period (430-1050 CE), and the Late Period (1050 CE-contact).

It is presumed that early Paleoindian groups lived in the area prior to 8,000 BCE; however, no evidence for that period has been discovered in the Bay Area to date (Milliken et al. 2007). Sites dating to this period may be submerged or deeply buried as a result of rising sea levels and widespread sediment deposition that has occurred since the Terminal Pleistocene (Byrd et al. 2017). For this reason, the Terminal Pleistocene Period (ca. 11,700-8,000 BCE) is not discussed here.

The earliest intensive study of archaeology of the San Francisco Bay Area began with N. C. Nelson of the University of California, Berkeley, between 1906 and 1908. He documented over 400 shell mounds throughout the area. Nelson was the first to identify the Bay Area as a discrete archaeological region (Moratto 1984).

Early Holocene (8000-3500 BCE)

Archaeological evidence from the early Holocene is limited as many sites dating to this period are likely buried under Holocene alluvial deposits (Moratto 1984; Ragir 1972). The available data suggest that the Early Holocene in the San Francisco Bay Area is characterized by a mobile forager pattern and the presence of millingslabs, handstones, and a variety of leaf-shaped projectile points. Two archaeological sites (CA-CCO-696 and CA-CCO-637) that date to this period have been identified in Contra Costa County at the Los Vaqueros Reservoir. The earliest date for the Early Holocene comes from the CA-CCO-696, approximately 7000 BCE (Milliken et al. 2007).

Early Period (3500-600 BCE)

The Early Period saw increased sedentism with the introduction of new ground stone technologies (i.e., mortar and pestle), an increase in regional trade, and the first cut shell beads. The earliest evidence for the use of the mortar and pestle dates to 3800 BCE and comes from CA-CCO-637. By 1500 BCE, mortars and pestles had almost completely replaced millingslabs and handstones. The advent of the mortar and pestle indicates a greater reliance on processing nuts, especially acorns.

Faunal evidence from various sites indicates a diverse faunal exploitation pattern based on mussel and other shellfish, marine mammals, terrestrial mammals, and birds (D'Oro 2009).

The earliest cut bead horizon is also associated with this period. Rectangular *Haliotis* spp. (abalone) and Olivella *(Callianax biplicata,* snail*)* beads have been identified at several Early Period sites, including CA-CCO-637, CA-SCL-832 in Sunnyvale, and CA-ALA-307 in Berkeley (Milliken et al. 2007). These early examples of cut beads were recovered from mortuary contexts.

Lower Middle Period (500 BCE-430 CE)

The Lower Middle Period saw numerous changes from the previous period. The presence of chipped stone points and bone tools became typical. Rectangular shell beads, common during the Early Period, disappear completely and are replaced by split-beveled and saucer Olivella beads. In addition to the changes in beads, *Haliotis* spp. ornaments, bone tools and ornaments, and basketry awls also became typical, indicating the development of coiled basketry technology. Mortars and pestles continued to be the dominant grinding tool (Luby and Gruber 1999; Milliken et al. 2007).

Evidence for the Lower Middle Period in the Bay Area comes from sites such as the Emeryville shell mound (CA-ALA-309) and Ellis Landing (CA-CCO-295). CA-ALA-309 is one of the largest shell mounds in the Bay Area and contains multiple cultural sequences. The lower levels of the site, which date to the Middle Period, contain flexed burials with bone implements, chert bifaces, charmstones, and oyster shells (Moratto 1984).

Upper Middle Period (430-1050 CE)

Around 430 CE, Olivella saucer bead trade networks that had been established during earlier periods collapsed and over half of known sites occupied during the Lower Middle Period were abandoned. Olivella saucer beads were replaced with Olivella saddle beads. New types of material culture appear within these sites, including elaborate, decorative blades, fishtail charmstones, new Haliotis ornament forms, and mica ornaments. Sea otter bones became more abundant, while salmon and other fish became less abundant, suggesting changes in faunal exploitation patterns from earlier periods (Milliken et al. 2007; Simons and Carpenter 2009). Excavations at CA-ALA-309 indicate that a shift from mussels to oysters to clams may have occurred (Gifford 1916), and isotopic analysis confirms that San Francisco Bay individuals shifted from hunting higher-trophic-level foods in the Early Period to gathering foods like plants and shellfish in the Middle and Upper Periods (Burns et al. 2012). Subsistence analyses at various sites dating to this period indicate a diverse diet that included numerous species of fish, mammals, birds, shellfish, and plant resources that varied by location in the Bay Area (Hylkema 2002).

Late Period (1050 CE-contact)

The Late Period saw an increase in social complexity, indicated by differences in burials and an increased level of sedentism relative to preceding periods, as evidenced by mortars weighing up to 90.7 kg (Lentz 2012:198). An increase in imported Napa Valley obsidian occurred during this time for the production of smaller points, preforms and simple flake tools. Small, finely worked projectile points of the Stockton Serrated series associated with bow and arrow technology appear around 1250 CE. Olivella shell beads disappeared and were replaced with Olivella lipped and spire -lopped beads in the south bay and clamshell disk beads in the north bay, where thicker and larger beads indicated higher affluence. The toggle harpoon, hopper mortar, and magnesite tube beads also appeared during this period (Milliken et al. 2007; Lentz 2012; Von Der Porten et al. 2014). This period saw an increase in the intensity of resource exploitation that correlates with an increase in

population (Moratto 1984). Many of the well-known sites of earlier periods, such as the Emeryville shell mound (CA-ALA-309) and the West Berkeley site (CA-ALA-307), were abandoned, as indicated by the lack of Late Period elements. Researchers have suggested that the abandonment of these sites may have resulted from fluctuating climates and drought that occurred throughout the Late Period (Lightfoot and Luby 2002).

b. Post-Contact History

Post-Contact history for the State of California is generally divided into three periods: the Spanish Period (1769–1822), Mexican Period (1822–1848), and American Period (1848–present). Although Spanish, Russian, and British explorers visited the area for brief periods between 1529 and 1769, the Spanish Period in California begins with the establishment in 1769 of a settlement at San Diego and the founding of Mission San Diego de Alcalá, the first of 21 missions constructed between 1769 and 1823. Independence from Spain in 1821 marks the beginning of the Mexican Period, and the signing of the Treaty of Guadalupe Hidalgo in 1848, ending the Mexican-American War, signals the beginning of the American Period when California became a territory of the United States.

Spanish Period (1769–1822)

Spanish exploration of California began when Juan Rodriguez Cabrillo led the first European expedition into the region in 1542. For more than 200 years after his initial expedition, Spanish, Portuguese, British, and Russian explorers sailed the California coast and made limited inland expeditions, but they did not establish permanent settlements (Kyle 2003).

By the 18th century, Spain developed a three-pronged approach to secure its hold on the territory and counter against other foreign explorers. The Spanish established military forts known as presidios, as well as missions and pueblos (towns) throughout Alta California. The 1769 overland expedition by Captain Gaspár de Portolá marks the beginning of California's Historic period, occurring just after the King of Spain installed the Franciscan Order to direct religious and colonization matters in assigned territories of the Americas. Portolá established the Presidio of San Diego as the first Spanish settlement in Alta California in 1769. Franciscan Father Junípero Serra also founded Mission San Diego de Alcalá that same year, the first of the 21 missions that would be established in Alta California by the Spanish and the Franciscan Order between 1769 and 1823. In 1776, the Spanish had founded Mission San Francisco de Asís, thereby establishing a foothold in what is now the San Francisco Bay Area. The mission and presidio relied on Indian labor (Cole 1999). Construction of missions and associated presidios was a major emphasis during the Spanish Period in California to strengthen Spanish colonial power and integrate the Native American population into Christianity and communal enterprise. Incentives were also provided to bring settlers to pueblos or towns; just three pueblos were established during the Spanish Period, only two of which were successful and remain as California cities (San José and Los Angeles).

Spain began making land grants in 1784, typically to retiring soldiers, although the grantees were only permitted to inhabit and work the land. The land titles technically remained property of the Spanish king (Livingston 1914). In 1820 Rancho San Antonio was transferred to Luís María Peralta by Pablo Vicente de Solá, the last Spanish governor of Alta California. Spanish control resulted in the subjugation of indigenous peoples and disruption of their traditional ways of life. The rancho encompassed modern-day Piedmont, in addition to parts of what is now Oakland and Berkeley (Kyle 2002).

Mexican Period (1822–1848)

Several factors kept population growth within Alta California to a minimum, including the threat of foreign invasion, political dissatisfaction, and resistance among the indigenous population. After more than a decade of intermittent rebellion and warfare, New Spain won independence from Spain in 1821. In 1822, the Mexican legislative body in California ended isolationist policies designed to protect the Spanish monopoly on trade, and decreed California ports open to foreign merchants (Gutierrez and Orsi 1998).

Extensive land grants were established in the interior during the Mexican Period, in part to increase the population inland from the more settled coastal areas where the Spanish had first concentrated their colonization efforts. The secularization of the missions following Mexico's independence from Spain resulted in the subdivision of former mission lands and establishment of many additional ranchos. Commonly, former soldiers and well-connected Mexican families were the recipients of these land grants, which now included the title to the land (Graffy 2010).

During the supremacy of the ranchos (1834–1848), landowners largely focused on the cattle industry and devoted large tracts to grazing. Cattle hides became a primary southern California export, providing a commodity to trade for goods from the east and other areas in the United States and Mexico. The number of nonnative inhabitants increased during this period because of the influx of explorers, trappers, and ranchers associated with the land grants. The rising California population contributed to the introduction and rise of diseases foreign to the Native American population, who had no associated immunities.

American Period (1848–Present)

The United States went to war with Mexico in 1846. The war ended in 1848 with the Treaty of Guadalupe Hidalgo, ushering California into its American Period.

California's first Constitutional Convention met for thirty-seven days in Monterey, from September 1 to October 13, 1849. The constitution, written in both English and Spanish, was approved by the delegates on October 10 to 11, 1849 and ratified by the electorate one month later. California officially became a state with the Compromise of 1850, which also designated Utah and New Mexico (with present-day Arizona) as U.S. territories (Waugh 2003). Horticulture and livestock, based primarily on cattle as the currency and staple of the rancho system, continued to dominate the southern California economy through 1850s. The discovery of gold in the northern part of the State led to the Gold Rush beginning in 1848, and with the influx of people seeking gold, cattle were no longer desired mainly for their hides but also as a source of meat and other goods. During the 1850s cattle boom, rancho vaqueros drove large herds from southern to northern California to feed that region's burgeoning mining and commercial boom.

A severe drought in the 1860s decimated cattle herds and drastically affected rancheros' source of income. In addition, property boundaries that were loosely established during the Mexican era led to disputes with new incoming settlers, problems with squatters, and lawsuits. Rancheros often were encumbered by debt and the cost of legal fees to defend their property. As a result, much of the rancho lands were sold or otherwise acquired by Americans. Most of these ranchos were subdivided into agricultural parcels or towns (Dumke 1944). Native American people continued to be displaced from their homes on land in growing urban centers, rural areas used for cattle farming, and mining areas.

c. City of Piedmont

In 1852, settler Walter Blair acquired a 600-acre tract of former Rancho San Antonio land from the Peralta family, on which he developed a dairy, quarry, and Blair Park, an early amusement park developed to encourage people to travel on his cable car system, which expanded into the Key Route System, that ended in the park. He also constructed the Piedmont Hotel and Claremont Hotel, also as a tool to attract visitors via his cable car line. In the latter half of the nineteenth century, the park was an attraction frequented by residents of nearby Oakland. In 1877 James Gamble, the president of Western Union Telegraph, acquired a 350-acre portion of Blair's land and constructed his home on Hillside Avenue. Gamble established the Piedmont Land Company to subdivide and sell the remainder of the property for residential development. Growth in the area was slow, however and, through the 1880s, there were only seven houses in what is now the boundaries of Piedmont (City of Piedmont 2022).

Following the completion of the Transcontinental Railroad in 1869, waves of migration and immigration caused the population of the Bay Area to boom. Following the 1906 San Francisco Earthquake and Fire, many displaced people settled in the East Bay, with the City of Oakland expanding rapidly through annexation of the smaller communities which surrounded it. Residents of then-unincorporated Piedmont, concerned about the impact that annexation into a much larger municipality would have on taxes and public services, voted to incorporate as a charter city in 1907.

In the months leading up to incorporation, following the 1906 earthquake and fire, Piedmont's population grew tenfold. The community's explosive expansion led community leaders to file for incorporation, a proposition that was submitted to voters twice before securing a majority in September of that same year. Several institutional properties were constructed in the years immediately following incorporation, including City Hall (1908), at least two schools (1911 and 1912), Piedmont Community Church (1916), and Piedmont High School (1921). Between 1907 and 1940, approximately 2,500 homes were built in Piedmont - nearly 70 percent of the City's existing housing stock. The form of Piedmont's growth was influenced by the City Beautiful urban planning movement, which promoted the idea that city planning and design could not be separated from social issues and should encourage civic pride and engagement. The Piedmont community attracted noted architects, writers, poets, and artists. However, this ideology is now recognized as having failed to take into account the needs of poor or working-class people.

Milestones in Piedmont's post-World War II-era history include the development of several new institutional facilities. The Veteran's Memorial Building was constructed next to City Hall in 1950, while the City completed a new junior high school in 1976. Three new parks were built in the 1980s and 1990s, including Linda Park, Dracena Park, and Coaches Playfield (City of Piedmont 2022).

d. Known and Potential Cultural Resources

To identify cultural resources which could be impacted by the project, a review of the NRHP, California Office of Historic Preservation (OHP) website, the OHP Built Environment Resource Directory (BERD), the Piedmont General Plan, and a search of the Native American Heritage Commission's (NAHC) Sacred Lands File (SLF) was conducted. Other sources consulted included materials prepared by the Piedmont Historical Society, as well as the publication *Cottages & Castles: The Centennial Houses of Piedmont*, a list of properties determined to be potential historical resources by the Design and Preservation Element, as defined by CEQA *Guidelines* Section 15064.5 (a)(3).

In addition, a site-specific historical resources evaluation was prepared of the property at 898 Red Rock Road in order to support the identification of historical resources within the Moraga Canyon Specific Plan (MCSP) Area. The site-specific historical resources evaluation consisted of a site survey, archival research, and preparation of a technical memorandum summarizing the results, which is included in Appendix C.

Known Historical Resources Citywide (Except for the MCSP Area)

Known historical resources are properties that have been listed, determined, or previously recommended eligible for listing in the NRHP or the CRHR or local inventory of historic resources. The review of the NRHP, California OHP website, the BERD, and *The Centennial Houses of Piedmont* identified three known historical resources located in the City of Piedmont on properties included in the sites inventory listed in Table 2-2 in Section 2, *Project Description*, outside the MCSP Area. Of those only one, the Piedmont Community Church at 400 Highland Avenue (APN 050 462300400), is located on a site listed in the Housing Element Site Inventory. Piedmont Community Church, formally determined eligible for listing in the NRHP and, as a result, automatically listed in the CRHR, is a 1916 Mission Revival style church designed by San Francisco-based architect and Piedmont resident Albert Farr. Available documentation may not represent a complete inventory of known historical resources, and other qualifying historical resources may exist pending future project-specific analyses.

Known Historical Resources in the MCSP Area

Review of the NRHP, California OHP website, the BERD, and *The Centennial Houses of Piedmont* identified no known historical resources located within the MCSP Area. However, the site-specific historical resources evaluation conducted for this EIR resulted in the recordation and evaluation of one historic-age property, 898 Red Rock Road, commonly known as the Piedmont Corporation Yard, located within the MCSP Area. This property contains a collection of buildings that were constructed at various dates beginning in the 1910s through the 1990s. The property and the property to the south of Moraga Avenue were historically part of Blair Park, a local amusement park built for early resident William Blair to entice people to use his nascent cable car service before becoming a portion of a quarry and finally a municipal corporation yard for the City by the 1920s. Its development was typical of the expansion of municipal services that followed Piedmont's 1907 incorporation and revenue generated by the expansion of county property taxes in 1926. Research did not indicate that the property is significant within this trend or associated with any important events in the history of the city, region, State, or nation. Research through newspapers and ancestry databases did not yield information on any significant individuals associated with the property. Though originally part of Walter Blair's property, it was first developed and subsequently expanded for the corporation yard several decades after his death, and Blair was not historically associated with its use as the corporation yard. Comprised of a series of utilitarian buildings constructed between the 1910s through the 1990s, the corporation yard buildings do not embody distinctive characteristics of any architectural style. They do not have distinctive characteristics of a type, period, or method of construction. Therefore, the property is not eligible for listing in the NRHP or CRHR due to lack of historical or architectural significance and does not qualify as a historical resource pursuant to CEQA. The complete historical resources evaluation is included in Appendix C.

Potential Historical Resources

Potential historical resources include any property 45 years or more of age that has not been previously identified as eligible for listing in the NRHP or CRHR. 45 years is the age threshold generally triggering the need for historical resources evaluation pursuant to OHP guidance. As discussed in Section 2, *Project Description,* implementation of the policies and programs in the 2023-2031 Housing Element would facilitate development throughout the city. However, to inform the analysis, this section examines the s inventory sites listed in Table 2-2 in Section 2, which includes the known potential development sites that were included in the Housing Element inventory sites and other sites that could be redeveloped under implementation of the Housing Element.

A review of historical aerial photographs and topographical maps and construction date information provided by the City of Piedmont shows that, excluding known historical resources, 45 of the Housing Element inventory sites listed in Table 2-2 in Section 2, *Project Description,* contain buildings or structures that are presently 45 years or more of age. An additional four Housing Element inventory sites contain buildings or structures that will become 45 years of age over the eight-year life of the Housing Element. As such, these properties have the potential to qualify as historical resources pursuant to CEQA pending further investigation. Table 4.4-1 below contains an inventory of the Housing Element inventory sites and identified the year built of any on-site buildings. The inventory presented below may not be exhaustive, however, and additional potential historical resources may be located on project sites. Sites identified as "vacant" are either wholly or predominantly vacant. Accessory buildings over 45 years in age may be present.

Table 4.4-1 Inventory Sites with Year Built

APN	Location	Year Built
050 457100101	Moraga Ave at Pala Ave	Vacant
050 457902001	Moraga Ave	Vacant
050 457904300	14 Nellie Ave	Vacant
050 457903300	1 Maxwelton Rd	2019
050 460104400	279 Scenic Ave	Vacant
050 460102003	162 Scenic Ave	Vacant
050 460101802	156 Scenic Ave	Vacant
050 462104601	538 Blair Ave	Vacant
051 470000500	415 Pacific Ave	Circa 1946
051 469900902	551 Mountain Ave	Vacant
051 471302300	14 Littlewood Dr	Unknown
050 455104100	Immediately south of 22 Nace Ave	Unknown
050 455001500	Howard Ave	Vacant
050 092801301	Kingston Ave	Vacant
051 470104603	43 Bellevue Ave	Vacant
050 092800400	770 Kingston Ave	Vacant
051 480300101	70 Sotelo Ave	Vacant
051 469301000	780 Highland Ave	Vacant
051 480201300	17 Glen Alpine Rd	Circa 1968
051 472800104	26 Sea View Ave	Circa 1982
051 467603400	148 Hazel Ln	Vacant

APN	Location	Year Built
051 480201600	Indian Gulch Rd	Vacant
051 472800503	Glen Alpine Rd	Vacant
051 466801934	Requa Pl	Vacant
051 472800502	Glen Alpine Rd	Vacant
051 472800401	26 Sea View Ave	Circa 1968
051 472800604	74 Sea View Ave	Vacant
051 473602307	Wildwood Ave	Vacant
051 472802100	5 Hampton Rd	Vacant
051 472802000	5 Hampton Rd	Vacant
051 482600600	Huntleigh Rd	Vacant
051 473602301	370 Wildwood Ave	Circa 1959
051 482600700	145 Lexford Rd	1971
051 473300702	Wildwood Gardens	Unknown
051 473301800	Wistaria Way	Unknown
051 481900100	490 Hampton Rd	Circa 1959
051 481902000	440 Hampton Rd	Vacant
051 473200400	117 Woodland Way	Vacant
051 473600202	85 Wildwood Gardens	1950
050 086000400	1069 Winsor Ave	Vacant
051 473902100	Oak Rd	Vacant
051 482003300	Park Blvd	Vacant
051 482003500	Park Blvd	Vacant
051 481801600	111 Sandringham Rd	Vacant
051 474502907	Portal Ave	Vacant
051 482003700	Park Blvd	Vacant
051 481302200	St James Dr	Vacant
051 480901900	22 Valant Pl	Vacant
051 480901002	50 St James Pl	Vacant
048A700200303	898 Red Rock Rd	1950
051 482800703	280 Indian Rd	Vacant
051 482801003	280 Indian Rd	Vacant
051 482800904	280 Indian Rd	Vacant
051 478600800	62 Farragut Ave	Vacant
051 480303700	403 Hampton Rd	Vacant
050 457901900	Blair Park, Moraga Ave	Vacant
050 457908000	Blair Park, Moraga Ave	Vacant
050 462300601	Gas Station, 340 Highland Ave	1971
050 456001900	1021 Oakland Ave	1906
050 456002000	344 Howard Ave	1937
050 455900200	1020 Oakland Ave	1953
050 455900100	1016 Oakland Ave	1959
050 455901101	422 Linda Ave	1910
050 455800200	405 Linda Ave	1920

APN	Location	Year Built
050 455901200	420 Linda Ave	1905
050 455800300	407 Linda Ave	1920
050 455800400	409 Linda Ave	1895
050 455800500	415 Linda Ave	1925
050 455800600	423 Linda Ave	1925
050 455800700	425 Linda Ave	1895
050 455800800	427 Linda Ave	1910
050 455800900	429 Linda Ave	1920
050 455801000	433 Linda Ave	1940
050 455801100	431 Linda Ave	1940
050 455700200	1333 Grand Ave	1961
050 455700401	1331 Grand Ave	Circa 1968
050 455700500	1327 Grand Ave	1924
050 455700600	1321 Grand Ave	1914
050 455700700	1311 Grand Ave	1914
050 455700800	1243 Grand Ave	1923
050 455700900	1239 Grand Ave	1923
050 455701000	1235 Grand Ave	1923
051 463801501	1246 Grand Ave	Circa 1980
051 463801400	29 Wildwood Ave	1959
050 455701600	1201 Grand Ave	1960
050 462401200	345 Highland Ave	Circa 1980
050 462300602	356 Highland Ave	1972
050 455801502	1337 Grand Ave	1989
050 455701501	1221 Grand Ave	1960
051 482001118	Zion Church, 5201 Park Blvd	1955
050 457905601	Abbott Way	Vacant
050 462401000	333 Highland Ave	1940
050 462401100	333 Highland Ave	Parking lot
050 092700403	Olive Ave	Vacant
050 092700500	Olive Ave	Vacant
050 092700600	Olive Ave	Vacant
050 092700700	Olive Ave	Vacant
050 092701300	Oakland Ave	Vacant
051 481201700	Sandringham Rd & Estates Drive	Transmission tower circa 1949
051 481201110	Corpus Christi School, 4925 Park Blvd	1951
051 463603500	Kehilla Synagogue, 1300 Grand Ave	1952
050 462300400 [1]	Piedmont Community Church, 400 Highland Ave	1916/1949
050 462300500	356 Highland Ave Terrace	Vacant

[1] Properties determined eligible for the NRHP and listed on the CRHR.

Sources: City of Piedmont 2023; NETROnline 2023

e. Archaeological Resources in Piedmont

To identify archaeological resources that may be located in the city, the following research was conducted: a review of the NRHP and the OHP California Historical Landmarks website, a Sacred Lands File (SLF) search, review of Piedmont Historical Society information and the *Centennial Houses of Piedmont*, a review of city documents such as the General Plan Design and Preservation Element, Tribal consultation, and additional background and archival research. The City of Piedmont received a response from the NAHC on November 19, 2021, indicating that the results of the SLF search were negative for Sacred Lands. Though the SLF results were negative and background research did not identify specific archaeological resources, the indigenous history and ethnographic data, as described above and in Section 4.15 Tribal Cultural Resources, indicate the Ohlone people inhabited the area by 8000 BCE, if not earlier, and the Bay Area in general has been identified as a highly sensitive discrete archaeological region due to the density and sheer number of archaeological sites that have been discovered over the last century. Additional analysis of potential Native American cultural resources in the City of Piedmont is provided in Section 4.15, *Tribal Cultural Resources*.

4.4.3 Impact Analysis

a. Methodology and Significance Thresholds

If a project may cause a substantial adverse change in the characteristics of a resource that convey its significance or justify its eligibility for inclusion in the CRHR, either through demolition, destruction, relocation, alteration, or other means, then the project would have a significant effect on the environment (CEQA Guidelines Section 15064.5[b]). Impacts would be significant if the project would:

1. Cause a substantial adverse change in the significance of a historic resource pursuant to Section 15064.5;
2. Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5; or,
3. Disturb any human remains, including those interred outside of formal cemeteries.

Threshold 1 broadly refers to historical resources. To more clearly differentiate between archaeological and built environment resources, analysis under Threshold 1 has been limited to built environment resources. Archaeological resources, including those that may be considered historical resources pursuant to CEQA Guidelines Section 15064.5 and those that may be considered unique archaeological resources pursuant to *CEQA Guidelines* Section 21083.2, are considered under Threshold 2.

Direct impacts can be assessed by identifying the types and locations of proposed development, determining the exact locations of cultural resources within the project area, assessing the significance of the resources that may be affected, and determining the appropriate mitigation. Removal, demolition, or alteration of historical resources can permanently impact the historic fabric of an archaeological site, structure, or historic district.

The State Legislature, in enacting the CRHR, amended CEQA to clarify which properties are significant, as well as which project impacts are considered to be significantly adverse. A project with an effect that may cause a substantial adverse change in the significance of a historical resource is a project that may have significant effects on the environment (*CEQA Guidelines* Section 150645[b]). A substantial adverse change in the significance of a historical resource means

demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of a historical resource would be materially impaired (*CEQA Guidelines* Section 150645[b][1]).

The *CEQA Guidelines* further state that "[t]he significance of an historical resource is materially impaired when a project… [d]emolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in the California Register … local register of historic resources… or its identification in an historic resources survey." As such, the test for determining whether or not the project will have a significant impact on identified historic resources is whether it will materially impair physical integrity of the historic resource such that it could no longer be listed in the CRHR.

b. Project Impacts and Mitigation

The proposed project involves implementation of the 2023-2031 Housing Element (including revisions to the General Plan Land Use Element, revisions to the PCC, and the Moraga Canyon Specific Plan) as well as updates to the General Plan Transportation Element, Environmental Hazards Element, Natural Resources and Sustainability Element, Design and Preservation Element, Community Services and Facilities Element, and Parks, Recreation and Open Space Element. This analysis focuses on impacts associated with implementation of the Housing Element, General Plan amendments and revisions to the PCC, which would facilitate housing development throughout Piedmont. Impacts associated with implementation of the Moraga Canyon Specific Plan are addressed separately.

Threshold 1:	Would the project cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?

Impact CUL-1 **DEVELOPMENT FACILITATED BY THE PROPOSED PROJECT COULD ADVERSELY AFFECT KNOWN AND UNIDENTIFIED HISTORICAL RESOURCES. IMPACTS TO HISTORICAL RESOURCES WOULD BE SIGNIFICANT AND UNAVOIDABLE.**

Citywide Housing Element Implementation

One Housing Element inventory site contains a known historical resource, Piedmont Community Church (APN 050 462300400), which has been determined eligible for the NRHP and, as a result, is automatically listed in the CRHR. As identified in Table 4.4-1 above, there are also 45 Housing Element inventory sites that have not been subject to previous historical resources evaluation, but which currently meet the 45-year age threshold generally triggering the need for evaluation. Three additional Housing Element inventory sites contain properties that will become 45 years of age during the eight-year planning period of the 2023-2031 Housing Element. Pending further analysis there is potential for these unevaluated properties to qualify as historical resources pursuant to CEQA. For the purposes of this study, these properties are considered potential historical resources.

Development facilitated by the proposed project could result in impacts to historical resources through demolition, construction, and reconstruction activities associated with the project. The City of Piedmont has adopted policies to minimize impacts to historical resources, which would apply to future development facilitated by the project. As outlined above in Section 4.2.3, *Regulatory Setting*, General Plan policies 31.1, 31.3, 31.4, 31.5, 31.6, and 31.8 promote the preservation of historically significant buildings. In addition, measures included in the Design Guidelines require new construction to be compatible with the historical architectural styles and patterns of development of the development site and its vicinity. Although adherence to the relevant General Plan and

Design Guidelines policies could reduce impacts to historical resources, these measures do not specifically require the retention of historical resources, adherence to Standards, or other actions to prevent the substantial adverse change of historical resources as defined in Section 15064.5(b) of the CEQA Guidelines. However, the proposed project involves changes to the General Plan Design and Preservation Element to add the following proposed new policy:

> **Historical Resources Assessment and Treatment.** A historic resources assessment including State of California Department of Parks and Recreation (DPR) 523 forms shall be prepared prior to the approval of development projects involving the demolition or substantial alteration (alteration of 30 percent or more of the building exterior) of buildings 45 years or older. DPR forms shall include a Primary Record (523A), Location Map (523J), and appropriate detailed recording forms (e.g., BSO Record (523B), Archaeological Site Record (523C), or District Record (523D)). The forms shall be prepared by a qualified architectural historian or historian who meets the Secretary of the Interior's Professional Qualifications Standards (PQS) in architectural history or history (as defined in Code of Federal Regulations, Title 36, Part 61). If the property is already listed in the NRHP or CRHR or if DPR forms or an historical resources evaluation (HRE) has been prepared for the property in the past five years, preparation of new DPR forms shall not be required.
>
> If a building to be demolished or substantially altered is identified as a historical resource, efforts shall be made to the greatest extent possible to ensure that the alteration of the identified historical resources is consistent with the Secretary of the Interior's Standards for the Treatment of Historic Properties.
>
> Where compliance with the Standards and/or avoidance is not possible, documentation of the historical resource in the form of a Historic American Building Survey (HABS)-like report shall be prepared. The documentation shall be completed by a qualified architectural historian or historian who meets the PQS.

This policy would ensure that a historical resource evaluation is conducted for future development facilitated by the proposed project and would require measures to reduce impacts to historical resources to the extent feasible. However, measures to reduce impacts would not in all cases avoid material impairment to historical resources. Therefore, this impact is potentially significant.

Moraga Canyon Specific Plan

One approximately 12-acre site in the MCSP Area is currently utilized for a combination of uses such as Coaches Field (soccer/softball fields), a skate park, recreational parking, and temporary sales including a holiday tree lot as well as the Piedmont Corporation Yard. As detailed in the "Known Historical Resources in the MCSP Area" section, the property, inclusive of the Piedmont Corporation Yard was evaluated as part of a site-specific historical resources evaluation and determined to be ineligible for listing in the NRHP or CRHR for lack of historical or architectural significance and is therefore not a historical resource pursuant to CEQA. Further, development would be subject to the proposed General Plan policy cited above. As a result, development facilitated by the proposed project in the MCSP Area, including demolition and construction on the Piedmont Corporation Yard, would have a less than significant impact to historical resources.

Mitigation Measures

No feasible mitigation measures are available to mitigate the impacts resulting from the Citywide Housing Element Implementation. As noted, the impacts are less than significant as to the Moraga Canyon Specific Plan.

Significance After Mitigation

The proposed new Historical Resources Assessment and Treatment General Plan policy that would be added to the Design and Preservation Element as part of the proposed project would ensure that a historical resource evaluation is conducted for sites developed under the proposed project and would require measures to reduce impacts to historical resources to the extent feasible. However, measures to reduce impacts would not in all cases avoid material impairment to historical resources. Therefore, impacts to historical resources as a result of the proposed project as a whole would be significant and unavoidable*.*

Threshold 2: Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?

Impact CUL-2 DEVELOPMENT FACILITATED BY THE PROPOSED PROJECT COULD ADVERSELY AFFECT IDENTIFIED AND UNIDENTIFIED ARCHAEOLOGICAL RESOURCES. THIS IMPACT WOULD BE LESS THAN SIGNIFICANT WITH PROPOSED GENERAL PLAN POLICIES AND PROGRAMS.

Citywide Housing Element Implementation

Although the City does not maintain an inventory of archaeological sites and the California Historical Resources Information System was not consulted for this analysis, it is assumed that archaeological sites may be present in Piedmont and the surrounding areas. Effects on archaeological resources are only known once a specific development has been proposed because the effects are highly dependent on both the individual development site conditions and the characteristics of the proposed ground-disturbing activity. Ground-disturbing activities associated with development facilitated by citywide Housing Element implementation, particularly in areas that have not been studied through a cultural resources investigation, or when excavation depths exceed those previously attained, have the potential to damage or destroy previously-unknown historic or Native American archaeological resources that may be present on or below the ground surface. Undeveloped properties in the city have a higher probability of containing previously unidentified archaeological resources given the probable lack of previous ground-disturbing activities on those properties. In order to ensure that development does not have a detrimental effect on archaeological resources, each project would need to be assessed as it is proposed.

The proposed project mostly prioritizes the development of new housing within areas that have previously been developed and disturbed. Therefore, it is likely that future development under the proposed project prior grading, construction, and modern use of the sites would have either removed or destroyed archaeological resources within surficial soils. Nonetheless, there is the potential for archaeological resources to exist below the ground surface throughout the city, which could be disturbed by grading and excavation activities associated with new housing development. Therefore, individual development projects under the proposed project that would involve ground disturbance activities would have the potential to damage or destroy buried cultural resources, especially if they occur in less disturbed sediments.

Future development in Piedmont would be required to adhere to the goals and policies listed in the Piedmont General Plan. Specifically, General Plan Policy 30.1, Action 30.A provides procedures for managing archaeological resources or deposits that are disturbed during construction. While General Plan Policy 30.1, Action 30.A addresses the potential for unanticipated discoveries, the policy does not provide a process for assessing the project-specific effects on archaeological resources. However, the proposed project involves changes to the General Plan Design and Preservation Element to add the following proposed new policy:

> **Archaeological Resources Assessment and Treatment**. Prior to approval of development projects (excluding small structures exempt under CEQA) that have the potential to impact an archaeological resource(s), such as through grading, excavation for foundations or basements, or new swimming pools, an Archaeological Resources Assessment shall be conducted under the supervision of an archaeologist that meets the Secretary of the Interior's Professional Qualifications Standards in either prehistoric or historic archaeology. Assessments shall be completed in accordance with the California Office of Historic Preservation guidance and will follow the Archaeological Resource Management Reports (ARMR): Recommended Contents and Format guidelines.
>
> If the Archaeological Resource Assessment identifies resources that may be affected by the project, Phase II testing and evaluation will be required. If resources are determined significant or unique through Phase II testing and site avoidance is not possible, appropriate site-specific mitigation measures shall be identified in the Phase II evaluation. These measures may include, but would not be limited to, a Phase III data recovery program, avoidance, or other appropriate actions to be determined by a qualified archaeologist.
>
> If significant archaeological resources cannot be avoided, impacts may be reduced to less than significant by filling on top of the sites rather than cutting into the cultural deposits. Alternatively, and/or in addition, a data collection program may be warranted, including mapping the location of artifacts, surface collection of artifacts, or excavation of the cultural deposit to characterize the nature of the buried portions of sites.

This policy would reduce potential impacts by providing steps for assessment of project-specific effects on archaeological resources, as well as the evaluation and treatment of archaeological resources. With implementation of this policy, this impact would be less than significant.

Moraga Canyon Specific Plan

As described above, there is a potential to encounter previously unidentified resources within the city, including the MCSP Area, during ground disturbing activities associated with construction of housing, particularly on previously undeveloped properties. The MCSP Area has been heavily disturbed due to the development of the Coaches Field (soccer/softball fields), a skate park, recreational parking, a holiday tree lot and the Piedmont Corporation Yard, imported fill from the grading for the Warren Freeway, as well as the historic use as a quarry. The historic and existing levels of disturbance in the proposed MCSP Area suggests there is a low potential for encountering intact subsurface archaeological deposits. Although there is artificial fill in this location, the depths of that fill are unknown and possibility of encountering subsurface resources may vary based on location/proposed depth of disturbance. Therefore, individual development projects under the MCSP that would involve ground disturbance activities have the potential to result in significant impacts to archaeological resources. General Plan Policy 30.1 provides procedures for managing archaeological resources or deposits that are disturbed during construction. In addition, the proposed new Archaeological Resource Assessment and Treatment policy discussed above would

reduce potential impacts by providing steps for assessment of project-specific effects on archaeological resources as well as the evaluation and treatment of archaeological resources. Therefore, with implementation of this policy, impacts from future development facilitated by an adopted MCSP would be less than significant.

Mitigation Measures

This impact would be less than significant with existing General Polan policies and implementation of the proposed new General Plan Design and Preservation Element policy, which is proposed as part of the project. Mitigation measures would not be required.

Threshold 3:	Would the project disturb any human remains, including those interred outside of formal cemeteries?

Impact CUL-3 GROUND-DISTURBING ACTIVITIES ASSOCIATED WITH DEVELOPMENT UNDER THE PROPOSED PROJECT COULD RESULT IN DAMAGE TO OR DESTRUCTION OF HUMAN BURIALS. IMPACTS WOULD BE LESS THAN SIGNIFICANT THROUGH ADHERENCE TO STATE HEALTH AND SAFETY CODE SECTION 7050.5 AND PUBLIC RESOURCES CODE SECTION 5097.98, AS WELL AS GENERAL PLAN ACTION 30.B.

Citywide Housing Element Implementation

Human burials outside of formal cemeteries can occur in prehistoric archaeological contexts. While no known burial sites have been identified in the city, excavations during construction activities could have the potential to disturb these important cultural resources, which could include Native American burial sites. Although it is unlikely that human remains are present, future development in Piedmont has at least the possibility of containing previously unidentified human burials.

Human burials, in addition to being potential archaeological resources, have specific provisions for treatment in PRC Section 5097. The California Health and Safety Code (Section 7050.5, 7051, and 7054) has specific provisions for the protection of human burial remains. Existing regulations address the illegality of interfering with human burial remains, and protect them from disturbance, vandalism, or destruction. They also include established procedures to be implemented if Native American skeletal remains are discovered. PRC Section 5097.98 also addresses the disposition of Native American burials, protects such remains, and established the NAHC to resolve any related disputes.

Future development under the proposed project would adhere to the goals and policies listed in the Piedmont General Plan. Specifically, General Plan Policy 30.1, Action 30.b provides procedures for managing human remains that are disturbed during construction. Additionally, future development projects are subject to State of California Health and Safety Code Section 7050.5 which states that, if human remains are unearthed, no further disturbance can occur until the county coroner has made the necessary findings as to the origin and disposition of the remains pursuant to the PRC Section 5097.98. If the remains are determined to be of Native American descent, the coroner has 24 hours to notify the Native American Heritage Commission which will determine and notify a most likely descendant (MLD). The MLD shall complete the inspection of the site and make recommendations to the landowner within 48 hours of being granted access. With adherence to these existing regulations, impacts to human remains from development facilitated by the proposed Housing Element Implementation project would be less than significant.

Moraga Canyon Specific Plan

The historic and existing levels of disturbance in the proposed MCSP Area suggests there is a low potential for encountering intact burial deposits. However, it is still possible that human remains could be encountered and damaged during the ground-disturbing activities associated with construction, especially if those activities occur in less-disturbed buried sediments. Future development pursuant to an adopted MCSP in the MCSP Area would be subject to the requirements listed above. With adherence to these existing policies and regulations, impacts to human remains would be less than significant.

Mitigation Measures

This impact would be less than significant without mitigation. Therefore, no mitigation is required.

c. Cumulative Impacts

Cumulative development could potentially disturb areas that may contain archaeological resources. While there is the potential for significant cumulative impacts to cultural resources, it is anticipated that potential impacts associated with individual development projects would be addressed on a case-by-case basis and would be subject to city policies and local and State regulations regarding the protection of such resources. With compliance with existing policies and regulations, as well as proposed new Archaeological Resource Assessment and Treatment General Plan Design and Preservation Element policy, future development in the city and region would be required to avoid or mitigate the loss of these resources. The proposed Housing Element Implementation project's impacts can be reduced to below a level of significance with City policies and local and State regulations described above. Therefore, significant cumulative resource impacts would not occur.

The potential for impacts to built environment historical resources from individual developments is site-specific and depends on the location and nature of each individual development proposal. Future development projects would continue to be subject to existing federal, State, and local requirements and discretionary projects may be subject to project-specific mitigation requirements as outlined herein. It is anticipated that cumulative impacts to historical resources in Piedmont can be avoided or minimized through implementation of the proposed new General Plan Design and Preservation Element Historical Resources Assessment and Treatment policy, described above, on a project-by-project basis, but alteration or demolition of built environment historical resources remains a possibility citywide. Therefore, the incremental effect of the project on built environment historical resources would be cumulatively considerable.

4.5 Energy

This section evaluates impacts to energy, including the potential wasteful, inefficient, or unnecessary consumption of energy, associated with implementation of the proposed Housing Element Implementation project. For impacts related to air quality, see Section 4.2, *Air Quality*, and for impacts related to greenhouse gas emissions and climate change, see Section 4.7, *Greenhouse Gas Emissions.*

4.5.1 Setting

Energy relates directly to environmental quality because energy use can adversely affect air quality and other natural resources. Fossil fuels are burned to create electricity to power homes and vehicles, which creates heat. Transportation energy consumption relates to the fuel efficiency of cars and trucks, and the availability and use of public transportation, the choice of different travel modes (auto, carpool, and public transit), and the miles traveled by these modes. Construction and routine operation and maintenance of infrastructure also consume energy, as do residential land uses, typically in the form of natural gas and electricity.

Energy Supply

Impacts to energy resources are directly related to petroleum, natural gas, coal, nuclear, thermal, solar, hydroelectric, biodiesel, ethanol and other sources of energy that could be consumed resulting from the proposed project. Nationally, natural gas-fired generation has dominated electricity production in the United States for many years. In 2021, the two largest sources of energy production were from natural gas and crude oil. The United States produced 35.4 quadrillion British thermal units (Btu) of natural gas and 23.2 quadrillion Btu of crude oil (Energy Information Administration [EIA] 2022). The City of Piedmont contains no oil/gas fields. The nearest one is located in Orinda, approximately 3.5 miles northeast of Piedmont, but it has no active wells (California Department of Conservation, Division of Oil, Gas & Geothermal Resources 2021).

Energy Consumption and Sources

Total energy consumption in the United States in 2021 was approximately 97.33 quadrillion Btu (EIA 2022). In 2021, petroleum provided approximately 36 percent of that energy, with other sources of energy coming from natural gas (approximately 32 percent), coal (approximately 11 percent), total renewable sources (approximately 12 percent), and nuclear power (approximately 8 percent). On a per capita basis in 2021, California was ranked the fourth lowest (i.e., most energy efficient) state in terms of total energy consumption (188.7 million Btu [MMBtu] per person), or about 36 percent less than the U.S. average per capita consumption of 294.6 MMBtu per person (EIA 2023a).

Electricity

Most of the electricity generated in California is from natural gas-fired power plants, which provided approximately 50 percent of total electricity generated in 2021. In 2021, California used 277,764 gigawatt hours (GWh) of electricity and produced 70 percent of the electricity it used and imported the rest from outside the state (California Energy Commission [CEC] 2023a). Alameda County consumed approximately 10,237 GWh of electricity in 2021 from residential and non-residential uses (CEC 2023b).

Table 4.5-1 illustrates the County's 2021 electricity consumption in comparison to statewide consumption and displays the County's equivalent per capita energy consumption from its electricity demand. With a population of 1,636,194 in 2021 (California Department of Finance [DOF] 2023), Alameda County's 2021 per capita electricity consumption was approximately 6,263 kWh, or approximately 21 million Btu (167.7 million Btu less than the State per capita average).

Table 4.5-1 2021 Annual Electricity Consumption

Energy Type	Alameda County (GWh)	California (GWh)	Proportion of Statewide Consumption	County per Capita Consumption (kWh)	County per Capita Consumption (MMBtu)
Electricity	10,247	277,764	3.7%	6,263	21

Source: CEC 2023a and 2023b, DOF 2023

Two electricity providers serve the City of Piedmont: Ava Community Energy (Ava, formerly known as East Bay Community Energy) and Pacific Gas and Electric (PG&E). PG&E is responsible for the distribution of electricity and is also the natural gas provider for the City. As of 2021, Ava provided 50 percent of clean energy mostly sourced from renewable energy and large hydropower, and aims to purchase 100 percent clean power by 2030 (Ava 2021). Ava offers 100 percent renewable energy services to member cities, and residential customers in Piedmont would be placed in the Renewable 100 Plan (100 percent renewable) while commercial customers would be placed in the Bright Choice Plan (40 percent renewable) (Ava 2023). However, residential customers have the option to opt out of the Renewable 100 program and enroll in the Bright Choice Program which would be supplied by 40 percent renewable energy. In 2021, PG&E's default power mix offered 50 percent renewable energy, and PG&E also offered customers an option for power mix of 100 percent solar energy (PG&E 2022a). In conjunction with the utility companies, the California Public Utilities Commission (CPUC) is involved in energy conservation programs.

CPUC and the California Energy Commission (CEC) are constantly assessing population growth, electricity demand, and reliability. The CEC is tasked with conducting assessments and forecasts of all aspects of energy industry supply, production, transportation, delivery and distribution, demand, and prices (CEC 2023c). The CEC uses these assessments and forecasts to develop energy policies that conserve resources, protect the environment, ensure energy reliability, enhance the State's economy, and protect public health and safety (Public Resources Code Section 25301[a]).

Power plants that provide electricity for PG&E are required to go through individual environmental review processes, which may be through the CEC's certified regulatory program under CEQA, or through the CPUC's CEQA processes. The CEC is continuously tracking potential projects 50 MW and larger (CEC 2023d). Similarly, the CPUC conducts and manages environmental review of infrastructure projects, including electric, gas, water, and telecommunications (CPUC 2022).

Natural Gas

California relies on out-of-state natural gas imports for nearly 90 percent of its natural gas supply (CEC 2023d). Alameda County as a whole consumed approximately 377 million therms of natural gas in 2021 in both residential and non-residential uses (CEC 2023e). Table 4.5-2 illustrates the County's 2021 natural gas consumption in comparison to statewide consumption and displays the County's equivalent per capita energy consumption from its natural gas demand. With a population of 1,636,194 in 2021 (DOF 2023), Alameda County's 2021 per capita natural gas consumption was approximately 230 therms, or approximately 21 million Btu.

Table 4.5-2 2021 Annual Natural Gas Consumption

Energy Type	Alameda County (Millions of U.S. therms)	California (Millions of U.S. therms)	Proportion of Statewide Consumption	County per Capita Consumption (U.S. therms)	County per Capita Consumption (MMBtu)
Natural Gas	377	23,340	1.6%	230	21

Source: CEC 2023e, EIA 2023b, DOF 2023

The City of Piedmont is located within PG&E's natural gas service area, which spans central and northern California (PG&E 2022b). In 2021, PG&E customers consumed a total of 4.5 billion therms of natural gas. Residential users accounted for approximately 42 percent of PG&E's natural gas consumption. Industrial and commercials users accounted for another 32 percent and 20 percent, respectively. The remainder was used for mining, construction, agricultural, and water pump accounts (CEC 2023f). In 2021, Alameda County users accounted for approximately 8 percent of PG&E's total natural gas consumption across the entire service area. PG&E's service area is equipped with approximately 6,700 miles of gas transmission pipelines as 42,000 miles of gas distribution pipelines (PG&E 2022c).

The 2022 California Gas Report presents a comprehensive outlook for natural gas requirements and supplies for California through the year 2035. The report is prepared in even-numbered years, followed by a supplemental report in odd-numbered years, in compliance with CPUC Decision D.95-01-039. The projections contained in the California Gas Report are for long-term planning and do not necessarily reflect the day-to-day operational plans of the utilities (California Gas and Electric Utilities [CGEU] 2022).

California natural gas demand, statewide and utility-driven, is expected to decrease at a rate of 1.5 percent per year from 2022 to 2035. The forecast decline is due to a combination of moderate growth in the natural gas vehicle market and across-the-board declines in all other market segments: residential, commercial, electric generation, and industrial markets (CGEU 2020). Residential gas demand is expected to decrease at an annual average rate of 2.4 percent. Demand in the commercial and industrial markets are expected to decrease at an annual rate of 1.8 percent and 0.2 percent, respectively. Stricter codes and standards coupled with more aggressive energy efficiency programs discussed in Section 4.5.2 *Regulatory Setting*, are making a significant impact on the forecasted load for the residential, commercial, and industrial markets (CGEU 2022).

For the purposes of load-following as well as backstopping intermittent renewable resource generation, gas-fired generation will continue to be the primary technology to meet the ever-growing demand for electric power. However, overall gas demand for electric generation is expected to decline at 1.1 percent per year for the next 13 years due to more efficient power plants, statewide efforts to minimize greenhouse gas (GHG) emissions through aggressive programs pursuing demand-side reductions, and the acquisition of preferred power generation resources that produce little or no carbon emissions (CGEU 2022). Additional information on PG&E's gas supplies and capacity can be viewed in the 2022 California Gas Report (CGEU 2022).

Petroleum

Energy consumed by the transportation sector of 71.2 million BTU accounts for roughly 37.7 percent of California's energy demand, which amounted to approximately 188.7 million Btu in 2021 (EIA 2023c). Petroleum-based fuels are used for approximately 98.4 percent of the State's transportation activity (EIA 2019). Most gasoline and diesel fuel sold in California for motor vehicles is refined in

California to meet state-specific formulations required by the California Air Resources Board (CARB). In 2022, California supplied 136,052 thousands of barrels of crude oil to California refineries; Alaska supplied 80,257 thousands of barrels; and foreign supply sources supplied 311,530 thousands of barrels; for a total of 527,839 thousands of barrels (CEC 2023g). California's transportation sector, including on-road and rail transportation, consumed approximately 605 million barrels of petroleum fuels in 2021 (EIA 2023d).

As shown in Table 4.5-3, approximately 443 million gallons of fuel were consumed in Alameda County in 2021, of which approximately 393 million gallons were gasoline and approximately 50 million gallons were diesel fuel (CEC 2023h). Based on a 2021 population of 1,636,194 (DOF 2023), the County's annual per capita fuel consumption in 2021 consisted of 240 gallons of gasoline and 26 gallons of diesel fuel per person.

According to the CEC, 1 gallon of gasoline is equivalent to approximately 109,786 Btu, while 1 gallon of diesel is equivalent to approximately 127,460 Btu (Schremp 2017). Based on this formula, and as shown in Table 4.5-3, each person in Alameda County consumed approximately 31 MMBtu of gasoline and 4 MMBtu of diesel in 2020.

Table 4.5-3 2020 Annual Gasoline and Diesel Consumption

Fuel Type	Alameda County (million gallons)	California (million gallons)	Proportion of Statewide Consumption	County per Capita Consumption (gallons)	County per Capita Consumption (MMBtu)
Gasoline	393	11,618	3.4%	240	26
Diesel	50	1,611	3.1%	31	4
Total	**443**	**14,316**	**–**	**271**	**30**

Source: CEC 2023h and 2023i

Alternative Fuels

A variety of alternative fuels are used to reduce petroleum-based fuel demand. The use of these fuels is encouraged through various statewide regulations and plans (e.g., Low Carbon Fuel Standard and Health and Safety Code Section 38566 [Senate Bill (SB) 32]). Conventional gasoline and diesel may be replaced, depending on the capability of the vehicle, with many alternative fuels including the following:

- **Hydrogen.** Hydrogen is being explored for use in combustion engines and fuel cell electric vehicles. The interest in hydrogen as an alternative transportation fuel stems from its clean-burning qualities, its potential for domestic production, and the fuel cell vehicle's potential for high efficiency (two to three times more efficient than gasoline vehicles). Currently, 58 open hydrogen refueling stations are in California, with 7 currently in construction. None are in Piedmont, but there is one in the City of Oakland at 350 Grand Avenue, approximately 0.9 miles southwest from Piedmont (California Fuel Cell Partnership 2023).
- **Biodiesel.** Biodiesel is a renewable alternative fuel that can be manufactured from vegetable oils, animal fats, or recycled restaurant greases. Biodiesel is biodegradable and cleaner-burning than petroleum-based diesel fuel. Biodiesel can run in any diesel engine generally without alterations but fueling stations have been slow to make it available. There are 33 biodiesel-only refueling stations in California, two of which are in the San Francisco Bay Area (U.S. Department of Energy 2023). The nearest biodiesel fueling station is in Berkeley at 1441 Ashby Avenue, approximately 4 miles from the center of Piedmont.

- **Electricity.** Electricity can be used to power electric and plug-in hybrid electric vehicles directly from the power grid. The electricity grid usually provides electricity used to power vehicles, which store it in the vehicle's batteries. One of Ava's power mix services offered (Renewable 100) is 100 percent carbon free. Fuel cells are being explored to use electricity generated on board the vehicle to power electric motors. Electrical charging stations are available throughout Alameda County. The nearest EV charging station is in Oakland at 519 Lake Park Avenue, approximately 1.6 miles from the center of Piedmont.

Energy and Fuel Efficiency

Though the demand for gasoline and diesel fuel is rising because of population growth and limited mass transit, the increase in demand can be offset partially by efficiency improvements and standards. Land use policies that encourage infill and growth near transit centers (e.g., following SB 375, the Sustainable Communities and Climate Protection Act of 2008), as well as improvements to fuel efficiency, and gradual replacement of the vehicle fleet with new, more fuel-efficient and alternative fuel as well as electric cars, will all reduce petroleum fuel use.

4.5.2 Regulatory Setting

Programs and policies at the state and national levels have emerged to bolster the previous trend towards energy efficiency, as discussed below.

a. Federal Regulations

Energy Independence and Security Act of 2007

The Energy Independence and Security Act is designed to improve vehicle fuel economy and help reduce U.S. dependence on oil. The goals of the Act are to expand the production of renewable fuels, reduce dependence on oil, and confront global climate change. Specifically, it does the following:

1. Increases the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard that requires fuel producers to use at least 36 billion gallons of biofuel in 2022, which represents a nearly five-fold increase over current levels.
2. Reduces U.S. demand for oil by setting a national vehicle fuel economy standard of 35 miles per gallon by 2020 – an increase in fuel economy standards of 40 percent over those in 2007

Safer Affordable Fuel-Efficient Vehicles Rule

The Safer Affordable Fuel-Efficient Vehicles Rule, issued March 31, 2020, sets fuel economy and carbon dioxide standards that increase 1.5 percent in stringency each year from model years 2021 through 2026. These standards apply to both passenger cars and light trucks and are a reduction in stringency from the 2012 standards which would have required increases of about 5.0 percent per year. This rule is anticipated to result in a 40.4 mile per gallon efficiency industry average for 2026.

Energy Policy and Conservation Act

Enacted in 1975, the Energy Policy and Conservation Act established fuel economy standards for new light-duty vehicles sold in the United States. The law placed responsibility on the National Highway Traffic and Safety Administration for establishing and regularly updating vehicle standards. The United States Environmental Protection Agency (U.S. EPA) is responsible for administering the Corporate Average Fuel Economy program, which determines vehicle manufacturers' compliance with existing

fuel economy standards. In 2012, the U.S. EPA and National Highway Traffic and Safety Administration established final passenger car and light-duty truck Corporate Average Fuel Economy standards for model years 2017 to 2021, which require a combined average fleet-wide fuel economy of 40.3 to 41.0 miles per gallon in model year 2021 (United States Department of Transportation 2014).

Energy Star Program

Energy Star is a voluntary labeling program introduced by U.S. EPA to identify and promote energy-efficient products to reduce GHG emissions. The program applies to major household appliances, lighting, computers, and building components, such as windows, doors, roofs, and heating and cooling systems. Under this program, appliances that meet specifications for maximum energy use established under the program are certified to display the Energy Star label. In 1996, the U.S. EPA joined with the Energy Department to expand the program, which now also includes certifying commercial and industrial buildings, as well as homes (U.S. EPA 2021).

Construction Equipment Fuel Efficiency Standard

The U.S. EPA sets emission standards for construction equipment. The current iteration of emissions standards for construction equipment are the Tier 4 efficiency requirements contained in Title 40 of the Code of Federal Regulations (CFR) Parts 1039, 1065, and 1068. Emissions requirements for new off-road Tier 4 vehicles were completely phased in by the end of 2015.

b. State Regulations

Warren-Alquist Act

The 1975 Warren-Alquist Act established the California Energy Resources Conservation and Development Commission, now known as the CEC. The Act established a State policy to reduce wasteful, uneconomical, and unnecessary uses of energy by employing a range of measures. The CPUC regulates privately owned utilities in the energy, rail, telecommunications, and water fields, and sets rules for local energy regulations that cities must follow.

Assembly Bill 2076: Reducing Dependence on Petroleum

Pursuant to Assembly Bill (AB) 2076 (Chapter 936, Statutes of 2000; codified as Public Resources Code Sections 25720-25721), the CEC and CARB prepared and adopted in 2003 a joint agency report, entitled Reducing California's Petroleum Dependence. Included in this report are recommendations to increase the use of alternative fuels to 20 percent of on-road transportation fuel use by 2020 and 30 percent by 2030; significantly increase the efficiency of motor vehicles; and reduce per capita vehicle miles traveled (VMT). One of the performance-based goals of AB 2076 is to reduce petroleum demand to 15 percent below 2003 demand. Furthermore, in response to the CEC's 2003 and 2005 Integrated Energy Policy reports, the Governor directed the CEC to take the lead in developing a long-term plan to increase alternative fuel use.

Integrated Energy Policy Report

SB 1389 (Chapter 568, Statutes of 2002) requires the CEC to conduct assessments and forecasts of all aspects of energy industry supply, production, transportation, delivery and distribution, demand, and price to develop energy policies that conserve resources, protect the environment, ensure energy reliability, enhance the State's economy, and protect public health and safety.

California Renewables Portfolio Standard Program

In 2018, the California Renewables Portfolio Standard (SB 100) was signed into law, which increased the renewable portfolio standard (RPS) to 60 percent by 2030 (i.e., that 60 percent of electricity retail sales must be served by renewable sources by 2030) and requires all the state's electricity to come from carbon-free resources by 2045.

Senate Bill 350: Clean Energy and Pollution Reduction Act of 2015

The Clean Energy and Pollution Reduction Act of 2015 (SB 350) requires the amount of electricity generated and sold to retail customers per year from eligible renewable energy resources to be increased to 50 percent by December 31, 2030. The Act also requires doubled energy efficiency savings in electricity and natural gas for retail customers through increased efficiency and conservation by December 31, 2030.

Assembly Bill 1493: Reduction of Greenhouse Gas Emissions

AB 1493 (Chapter 200, Statutes of 2002), known as the "Pavley bill," amended Health and Safety Code sections 42823 and 43018.5 and requires CARB to develop and adopt regulations that achieve maximum feasible and cost-effective reduction of greenhouse gas (GHG) emissions from passenger vehicles, light-duty trucks, and other vehicles used for noncommercial personal transportation in California.

Implementation of new regulations prescribed by AB 1493 required the State of California to apply for a waiver under the federal Clean Air Act. Although the U.S. Environmental Protection Agency (U.S. EPA) initially denied the waiver in 2008, U.S. EPA approved a waiver in June 2009, and in September 2009, CARB approved amendments to its initially adopted regulations to apply the Pavley standards that reduce GHG emissions to new passenger vehicles in model years 2009 through 2016. According to CARB, implementation of the Pavley regulations is expected to reduce fuel consumption while also reducing GHG emissions (CARB 2020).

Energy Action Plan

In the October 2005 *Energy Action Plan (EAP) II*, the CEC and CPUC updated their energy policy vision by adding some important dimensions to the policy areas included in the original EAP, such as the emerging importance of climate change, transportation-related energy issues and research, and development activities. The CEC adopted an update to the EAP II in February 2008 that supplements the earlier EAPs and examines the State's ongoing actions in the context of global climate change.

Assembly Bill 1007: State Alternative Fuels Plan

AB 1007 (Chapter 371, Statutes of 2005) required the CEC to prepare a State plan to increase the use of alternative fuels in California. The CEC prepared the State Alternative Fuels Plan (SAF Plan) in partnership with CARB and in consultation with other State, federal, and local agencies. The SAF Plan presents strategies and actions California must take to increase the use of alternative, nonpetroleum fuels in a manner that minimizes costs to California and maximizes the economic benefits of in-state production. The SAF Plan assessed various alternative fuels and developed fuel portfolios to meet California's goals to reduce petroleum consumption, increase alternative fuel use, reduce GHG emissions, and increase in-state production of biofuels without causing a significant degradation of public health and environmental quality.

Bioenergy Action Plan, Executive Order S-06-06

Executive Order (EO) S-06-06, April 25, 2006, establishes targets for the use and production of biofuels and biopower, and directs State agencies to work together to advance biomass programs in California while providing environmental protection and mitigation. The EO establishes the following target to increase the production and use of bioenergy, including ethanol and biodiesel fuels made from renewable resources: produce a minimum of 20 percent of its biofuels in California by 2010, 40 percent by 2020, and 75 percent by 2050. EO S-06-06 also calls for the State to meet a target for use of biomass electricity. The 2011 Bioenergy Action Plan identifies those barriers and recommends actions to address them so that the State can meet its clean energy, waste reduction, and climate protection goals. The 2012 Bioenergy Action Plan updates the 2011 Plan and provides a more detailed action plan to achieve the following goals:

1. Increase environmentally and economically sustainable energy production from organic waste
2. Encourage development of diverse bioenergy technologies that increase local electricity generation, combined heat and power facilities, renewable natural gas, and renewable liquid fuels for transportation and fuel cell applications
3. Create jobs and stimulate economic development, especially in rural regions of the State
4. Reduce fire danger, improve air and water quality, and reduce waste

Title 24, California Code of Regulations (CCR)

CCR, Title 24, Part 6, is California's Energy Efficiency Standards for Residential and Non-Residential Buildings. The CEC established Title 24 in 1978 in response to a legislative mandate to create uniform building codes to reduce California's energy consumption and provide energy efficiency standards for residential and nonresidential buildings. The standards are updated on an approximately three-year cycle to allow consideration and possible incorporation of new efficient technologies and methods. In 2022, the CEC updated Title 24 standards with more stringent requirements effective January 1, 2023. All buildings for which an application for a building permit is submitted on or after January 1, 2023 must follow the 2022 standards. The next update is expected in 2025 and will become effective January 1, 2026. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases GHG emissions. The building efficiency standards are enforced through the local plan check and building permit process. Local government agencies may adopt and enforce additional energy standards for new buildings as reasonably necessary due to local climatologic, geologic, or topographic conditions, provided that these standards exceed those provided in Title 24.

Part 6 (Building Energy Efficiency Standards)

Part 6 of Title 24 contains the 2016 Building Energy Efficiency Standards for new residential and CCR Title 24, Part 6 is the Building Energy Efficiency Standards or California Energy Code. This code, originally enacted in 1978, establishes energy-efficiency standards for residential and non-residential buildings in order to reduce California's energy demand. New construction and major renovations must demonstrate their compliance with the current Energy Code through submittal and approval of a Title 24 Compliance Report to the local building permit review authority and the California Energy Commission (CEC). The most current standards are the 2022 Title 24 standards. The 2022 Standards focus on four key areas: 1) encourage electric heat pump technology and use; 2) establish electric-

ready requirements when natural gas is installed; 3) expand solar photovoltaic (PV) system and battery storage standards; 4) and strengthen ventilation standards to improve air quality (CEC 2021).

The City of Piedmont has adopted Ordinance 766 N.S. which amends Chapter 8 of the PCC to adopt 2022 Title 24 Building Standards. Ordinance 766 N.S. requires more stringent energy measures including:

- Alterations or additions to single family buildings with a project value of $30,000 or more are required to include one energy efficiency measure from a list of eight that include envelope, lighting, space heating, and water heating improvements.
- Alterations or additions to single family buildings with a project value of $115,000 or more are required to include two energy efficiency measure from a list of eight that include envelope, lighting, space heating, and water heating improvements.
- Additions to single family homes that add an additional upper level or increase the building's roof area by 30 percent are required to install photovoltaic systems.
- All-electric design for newly built single-family homes, including new detached ADUs (City of Piedmont 2022).

California Green Building Standards Code (2019), CCR Title 24, Part 11

California's green building code, referred to as CALGreen, was developed to provide a consistent approach to green building within the State. CALGreen lays out the minimum requirements for newly constructed residential and nonresidential buildings to reduce GHG emissions through improved efficiency and process improvements. The requirements pertain to energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and reductions to internal air contaminants. It also includes voluntary tiers to further encourage building practices that improve public health, safety, and general welfare by promoting a more sustainable design.

c. Regional and Local Regulations

Plan Bay Area 2050

Plan Bay Area 2050 is a state-mandated, integrated long-range transportation, land-use, and housing plan, known as a Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), that would support a growing economy, provide more housing and transportation choices, and reduce transportation-related pollution in the nine-county San Francisco Bay Area (Metropolitan Transportation Commission/Association of Bay Area Governments [MTC/ABAG] 2021). Plan Bay Area 2050 builds on earlier efforts to develop an efficient transportation network and grow in a financially and environmentally responsible way. Plan Bay Area 2050 focuses on advancing equity and improving resiliency in the Bay Area by creating strategies in the following four elements: Housing, Economy, Transportation, and Environment. The Plan discusses how the future of the region is uncertain due to anticipated employment growth, lack of housing options, and outside forces, such as climate change and economic turbulence. These uncertainties will impact growth in the Bay Area and exacerbate issues for all residents including those who are historically and systemically marginalized, underserved, and excluded. Thus, Plan Bay Area 2050 has created strategies and considered investments that will serve those systemically underserved communities and provide equitable opportunities. The Plan presents a total of 35 strategies to outline how the $1.4 trillion dollar investment would be utilized. The strategies include, but are not limited to, the following: providing affordable housing, allowing higher-density in proximity to transit-corridors, optimizing the existing

roadway network, creating complete streets, providing subsides for public transit, reducing climate emissions, and expanding open space areas. To bring these strategies to fruition, it will require participation by agencies, policymakers, and the public. An implementation plan is also included as part of the Plan to assess the requirements needed to carry out the strategies, identify the roles of pertinent entities, create an appropriate method to implement the strategies, and create a timeline for implementation.

City of Piedmont General Plan

The Piedmont General Plan, adopted in April 2009, includes the following applicable energy efficiency policies and actions as part of the existing Natural Resources and Sustainability Element that support the goal of promoting energy conservation (City of Piedmont 2009):

Policy 15.1: Transportation Control Measures. Implement transportation control measures (TCMs) to reduce air pollution emissions at the local level. This should include measures to promote walking and bicycling, continue casual carpooling, sustain or increase public transit service to Piedmont, and coordinate with other jurisdictions to create a more balanced and integrated transportation system.

Policy 15.2: Alternative Fuel Vehicles. Encourage the use of cleaner-burning fuels and low-emission vehicles. This could include providing infrastructure for "plug-in" vehicles; hydrogen fuel pumps at the city's gas stations; and a gradual switch to hybrid, electric, or alternative fuel vehicles for the City fleet.

Policy 16.1: Linking Land Use and Transportation Choices. Consistent with the Land Use and Transportation Elements of this plan, retain walkable neighborhoods, reliable public transportation, safe cycling, carpooling, convenient access to shops and services, and other measures which reduce the need for driving and fuel consumption in Piedmont.

Policy 16.2: Green Building. Support the use of green building methods in new construction and rehabilitation projects, including both public agency projects and private projects undertaken by homeowners.

Action 16A: Title 24. Implement Title 24 of the California Code of Regulations (energy efficiency standards).

Action 16.B: Building Code Amendments. Regularly evaluate any obstacles to green building construction in Piedmont. Periodically amend the building code to incorporate green building principles, respond to changes in state law which promote green building, and match the steps being taken by nearby Alameda County cities to encourage green construction.

Action 16.C: LEED Requirements for Public Buildings. Periodically evaluate the City's recently adopted LEED certification requirements for public buildings to determine whether they are achieving the desired outcomes. Encourage the Piedmont Unified School District to adopt similar standards.

Policy 17.2: Energy Conservation. Strongly advocate for increased energy conservation by Piedmont residents, businesses, and other public agencies such as the Piedmont Unified School District. Support PG&E in their education and outreach efforts and encourage Piedmont residents to participate in PG&E weatherization and appliance rebate programs.

Policy 17.3: Alternative Energy Sources. Encourage the use of alternative energy sources, such as solar power and wind energy, by Piedmont residents.

Policy 17.4: Greening the Government. Ensure that the City of Piedmont follows conservation practices in its day-today operations and is a role model for residents and local businesses in the arena of conservation. The City should encourage the use of recyclable or reusable goods in its purchasing policies and implement other conservation measures that can be emulated by Piedmont residents.

Action 17.E: Solar Panel Study. Undertake a "best practices" study of design and permitting issues related to solar panels, wind turbines, and other alternative energy sources. The intent is to accommodate and encourage alternative energy sources in Piedmont without compromising public safety or the design integrity of the city's architecture and landscapes.

City of Piedmont Climate Action Plan

The City of Piedmont first adopted its Climate Action Plan (CAP) in March 2010 and updated it in March 2018 (CAP 2.0). The CAP 2.0 contains measures and action items in seven different areas (transportation, buildings and energy, adaptation, municipal, solid waste, water, and consumption) in order to direct the City's reduction efforts and provide guidance for residents and businesses in how to reduce their individual GHG emissions (City of Piedmont 2018). The CAP 2.0 goals were amended by City Council resolution on July 17, 2023, with goals for Piedmont to reduce GHG emissions by 50 percent below 2005 levels by 2032, and be carbon neutral by 2045. The Buildings and Energy Use section of the CAP 2.0 contains the following objectives and measures that aim to reduce energy use and increase energy efficiency, and actions are included within each measure in the CAP 2.0 which explains the process of achieving the specific measure:

- **Objective BE-1:** Reduce residential building energy use
  - **Measure BE-1.1:** Disclose building energy consumption
  - **Measure BE-1.2:** Reduce electricity and natural gas consumption
  - **Measure BE-1.3:** Switch from natural gas to electric appliances, coupled with renewable energy
- **Objective BE-3:** Increase renewable energy to 100% by 2030
  - **Measure BE-3.1:** Commit to being a renewable energy city
  - **Measure BE-3.2:** Install on-site renewable energy
  - **Measure BE-3.3:** Increase the amount of renewable energy delivered through the grid
- **Objective BE-5:** Reduce local air pollution and high global warming potential gases
  - **Measure BE-5.1:** Decrease the impact of Piedmont's building stock on pollution and GHG emissions
- **Objective BE-6:** Investigate infrastructure upgrades and new technology
  - **Measure BE-6.1:** Explore deep decarbonization infrastructure

4.5.3 Impact Analysis

a. Methodology and Significance Thresholds

Significance Thresholds

In accordance with Appendix G of the *CEQA Guidelines,* a significant energy impact would occur if new development facilitated by the proposed project would:

1. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation; or
2. Conflict with or obstruct a State or local plan for renewable energy or energy efficiency.

Methodology

Public Resources Code Section 21100(b)(3) states that an EIR shall include "mitigation measures proposed to minimize significant effects on the environment, including, but not limited to, measures to reduce the wasteful, inefficient, and unnecessary consumption of energy." The physical environmental impacts associated with the use of energy, including the generation of electricity and burning of fuels, are discussed in Section 4.2, *Air Quality*, and Section 4.7, *Greenhouse Gas Emissions*. Energy consumption is analyzed herein in terms of construction and operational energy.

Construction energy demand for the proposed Housing Element Implementation project is evaluated qualitatively because project-specific information regarding construction is unavailable for individual development projects facilitated by the proposed project. Construction energy demand accounts for anticipated energy consumption during construction of development facilitated by the proposed project, such as fuel consumed by construction equipment and construction workers' vehicles traveling to and from the construction site. These construction activities would temporarily create a higher demand for energy supplies. The extent of energy use generated by construction equipment would depend on the quantity of equipment used and the hours of operation for each project.

Operational natural gas and electricity consumption from development facilitated by the proposed project were approximated using the California Emissions Estimator Model (CalEEMod) version 2022.1. This analysis then determined whether energy consumed during operation for full buildout of the project would be wasteful, inefficient, or unnecessary. Operational energy demand accounts for the anticipated energy consumption from development facilitated by the project, such as fuel consumed by cars, trucks, and public transit; natural gas consumed for on-site power generation and heating building spaces; and electricity consumed for building power needs, including, but not limited to, lighting, water conveyance, and air conditioning. The estimate of total daily VMT associated with the proposed project is based on VMT data provided in Section 4.16, *Transportation*.

b. Project Impacts and Mitigation

The proposed project involves implementation of the 2023-2031 Housing Element (including revisions to the General Plan Land Use Element, revisions to the PCC, and the Moraga Canyon Specific Plan) as well as an updates to the General Plan Environmental Hazards Element, Transportation Element, Natural Resources and Sustainability Element, Design and Preservation Element, Community Services and Facilities Element, and Open Space, Parks and Recreation Element. The updates to the General Plan elements themselves would not result in physical changes to the environment such that impacts related to energy would occur. Therefore, analysis focuses on impacts associated with

implementation of the Housing Element, revisions to the PCC and implementation of the Moraga Canyon Specific Plan, which would facilitate housing development throughout Piedmont.

Threshold 1:	Would the project result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Impact E-1 DEVELOPMENT FACILITATED BY THE PROPOSED PROJECT WOULD NOT RESULT IN A SIGNIFICANT ENVIRONMENTAL IMPACT DUE TO THE WASTEFUL, INEFFICIENT, OR UNNECESSARY CONSUMPTION OF ENERGY RESOURCES DURING CONSTRUCTION OR OPERATION. THIS IMPACT WOULD BE LESS THAN SIGNIFICANT.

Citywide Housing Element Implementation

CONSTRUCTION

Construction and demolition activities associated with future development under the proposed Housing Element Implementation project would require energy resources primarily in the form of fuel consumption to operate heavy equipment, light-duty vehicles, machinery, and generators. Temporary power may also be provided for construction trailers and electric construction equipment. Construction resulting from increased development facilitated by the proposed project would also use building materials that would require energy use during the manufacturing and/or procurement of that material. However, as noted in the California Natural Resources Agency's Final Statement of Reasons, "a full 'lifecycle' analysis that would account for energy used in building materials and consumer products will generally not be required" (California Natural Resources Agency 2018). Therefore, this analysis does not provide a full lifecycle assessment of energy impacts for project construction but considers impacts only of construction itself. It is reasonable to assume that manufacturers of building materials such as concrete, steel, lumber, or other building materials would employ energy conservation practices in the interest of minimizing the cost of doing business. It also is reasonable to assume that traditional building materials, such as drywall and standard-shaped structural elements, would have been manufactured regardless of the proposed project and, if not used for implementation, would be used in a different project. Therefore, the consumption of energy required for the manufacturing of building and construction material is not considered wasteful, inefficient, or unnecessary in relation to the proposed project.

Energy use during demolition and construction would be temporary in nature, and construction equipment used would be typical of construction projects in the region. In addition, the contractors that would typically be employed for development facilitated by the proposed project would be expected to comply with applicable CARB regulations that restrict the idling of heavy-duty diesel motor vehicles and govern the accelerated retrofitting, repowering, or replacement of heavy-duty diesel on- and off-road equipment. Construction contractors would be required to comply with the provisions of 13 California Code of Regulations Sections 2449 and 2485, which prohibit diesel-fueled commercial motor vehicles and off-road diesel vehicles from idling for more than five minutes, which would minimize unnecessary fuel consumption. Construction equipment would be subject to the U.S. EPA Construction Equipment Fuel Efficiency which would minimize inefficient fuel consumption. These construction equipment standards (i.e., Tier 4 efficiency requirements) are contained in Title 40 of the CFR, Parts 1039, 1065, and 1068. Electrical power would be consumed during demolition and construction activities, and the demand, to the extent required, would be supplied from existing electrical infrastructure in the region because the proposed project is located within an urban infill area, surrounded on all side by existing development.

Overall, demolition and construction activities would not have a substantial adverse impact on available electricity supplies or infrastructure. Demolition and construction activities would be expected to use fuel-efficient equipment consistent with State and federal regulations and comply with State measures to reduce the inefficient, wasteful, or unnecessary consumption of energy. In addition, pursuant to applicable regulatory requirements such as 2022 or later CALGreen, the project would comply with construction waste management practices to divert a minimum of 65 percent of construction and demolition debris. These practices would result in efficient use of energy necessary to implement the proposed project.

With required adherence to regional and local regulations, demolition and construction activities associated with future development under the proposed project would not result in potentially significant environmental effects due to the wasteful, inefficient, or unnecessary consumption of energy, and impacts would be less than significant.

OPERATION

Energy consumption during operation of future development facilitated by the proposed project would consist of transportation fuels for vehicle trips by future residents, employees, and visitors, and electricity and natural gas usage for exterior and interior lighting, appliances, and space and water heating. Future development facilitated by the proposed project that involves demolition and replacement of existing uses may involve a reduced amount of natural gas compared to existing development because the City has adopted a Reach Code (PCC Section 8.02.070) for the purpose of encouraging the incorporation of energy efficient measures in new development. Nonetheless, this analysis conservatively assumes gasoline and diesel consumption would continue to be associated with vehicle trips generated by future residents resulting from the Housing Element Implementation project. The project aims to provide housing sites along transit corridors and bicycle lanes, limiting the increase in travel required by new residents. This would limit the number and length of typical residential vehicle trips, and thus lower energy use.

As shown in Table 4.5-4, vehicle trips related to the project would require approximately 849,175 gallons of gasoline (approximately 93,228 MMBtu) and 162,442 gallons of diesel fuel (approximately 20,705 MMBtu) annually. This equates to an annual transportation energy use of 113,933 MMBtu, or an average daily per capita transportation energy use of 0.1 MMBtu for the project.[1] Although this would be slightly higher than the County per capita transportation energy use of 0.08 MMBtu[2], gasoline and diesel fuel demands would be met by existing gas stations in the vicinity of the housing sites in Piedmont and in Oakland. Vehicles driven by future residents of development facilitated by the project would be subject to increasingly stringent State fuel efficiency standards, thereby minimizing the potential for the inefficient consumption of vehicle fuels. Furthermore, the project would facilitate development along arterial roadways with bus stops such as Grand Avenue, Oakland Avenue, and Highland Avenue, which would encourage walking. Moreover, PCC Section 8.02.020 requires new construction to comply with CALGreen Chapter 4, Division 4.1 which requires new one- and two-family dwelling units and townhouses with attached private garages to install EV capable raceways, and for new project sites with 17 or more multi-family dwelling units to include three percent of the total number of parking spaces as EV charging spaces. As a result, vehicle fuel consumption resulting from the project would not be wasteful, inefficient, or unnecessary.

[1] Calculation: Annual fuel consumption (113,933 MMBtu) divided by 365 days and divided by the total new residents (2,934 residents).
[2] Calculation: 30 MMBtu (Table 4.5-3) divided by 365.

Table 4.5-4 Project Operational Energy Usage

Source	Energy Consumption	Energy Consumption (in MMBtu)
Vehicle Trips		
Gasoline	849,175 gallons	93,228
Diesel	162,442 gallons	20,705
Built Environment		
Electricity	3,575,200 kWh	12,199
Natural Gas Usage	9,226,667 kBtu	9,568,054

Note: MMBtu = millions of British thermal units; kWh = kilowatt-hours; kBtu = thousands of British thermal units.

See Appendix E for CalEEMod default values for fleet mix and average distance of travel and Appendix D for energy calculation sheets.

As shown in Table 4.5-4, in addition to transportation energy use, development facilitated by the project would consume approximately 3.5 million kWh, or 12,199 MMBtu per year of electricity, and approximately 9 million kBtu of natural gas. The 2022 Building Energy Efficiency Standards (California Code of Regulations, Title 24, Part 6) as well as the City's Reach Code (PCC Section 8.02.070, Ordinance 766 N.S.) requires future projects that include an entirely new level or expand the total roof area by 30 percent or more to install solar panels on the roof. Additionally, the Reach Code encourages the incorporation of energy efficient measures in new development. These standards for new buildings are designed for energy efficient performance, using clean electricity, so that the buildings do not result in wasteful, inefficient, or unnecessary consumption of energy. In addition, pursuant to CALGreen, all plumbing fixtures used in the proposed buildings would be high-efficiency fixtures, which would minimize the inefficient or wasteful consumption of energy related to water and wastewater. Additionally, Goal 6 and associated policies and programs of the City's Housing Element encourages the use of energy efficient designs and materials, as well as renewable energy in order to reduce the consumption of electricity.

Lastly, the proposed project would involve amendments to the Piedmont General Plan Natural Resources and Sustainability Element which include adding the proposed new policy:

> **Greenhouse Gas Emissions Reductions.** Single-family and multifamily development projects shall be encouraged not include natural gas appliances or natural gas plumbing and shall achieve compliance with off-street electric vehicle requirements in the most recently adopted version of CALGreen Tier 2.

This would incentivize prohibition of natural gas appliances and natural plumbing in new development, resulting in a further reduction in operational energy impacts.

Therefore, development facilitated by the project would not result in wasteful, inefficient, or unnecessary consumption of energy, and would not result in potentially significant environmental effects due to the wasteful, inefficient, or unnecessary consumption of energy. This impact would be less than significant.

Moraga Canyon Specific Plan

The proposed Housing Element Implementation project includes adopting a Specific Plan to facilitate development in the MCSP Area. The following includes an analysis of construction and operational impacts associated with future development facilitated by an adopted MCSP.

CONSTRUCTION

Construction and demolition activities associated with the implementation of the Moraga Canyon Specific Plan (MCSP) would require energy resources primarily in the form of fuel consumption to operate heavy equipment, light-duty vehicles, machinery, and generators. Temporary power may also be provided for construction trailers and electric construction equipment. Energy use during demolition and construction would be temporary in nature, and construction equipment used would be typical of construction projects in the region. In addition, the contractors that would typically be employed for development facilitated by the MCSP would be expected to comply with applicable CARB regulations that restrict the idling of heavy-duty diesel motor vehicles and govern the accelerated retrofitting, repowering, or replacement of heavy-duty diesel on- and off-road equipment. Future development would be required to comply with construction waste management practices to divert a minimum of 65 percent of construction and demolition debris in the MCSP Area. In addition, compliance with applicable regulatory requirements such as 2022 or later CALGreen is mandatory. These practices would result in efficient use of energy necessary to implement development facilitated by the MCSP. Therefore, demolition and construction activities associated with the MCSP would not result in potentially significant environmental effects due to the wasteful, inefficient, or unnecessary consumption of energy, and impacts would be less than significant.

OPERATION

Operational energy demand from development facilitated by the MCSP Area would include fuel consumed by passenger vehicles; natural gas consumed for heating and cooking in residential and public buildings and facilities; and electricity consumed by residential and public buildings including, but not limited to lighting, water conveyance, and air conditioning. As discussed in Section 2, *Project Description,* implementation of the MCSP could result in the development of new residences, a new or refurbished Public Works Corporation Yard, new or refurbished recreation facilities, as well as new or expanded internal circulation or utility infrastructure in the MCSP Area. Table 4.5-4 shows the operational energy consumption for development facilitated by the MCSP. Since the MCSP Area is not located as near to transit, services or employment as some other areas in the city, development would not be as energy efficient as that in other parts of Piedmont. However, development in the MCSP Area would be required to be consistent with current Title 24 requirements for building energy efficiency and water conservation. New construction is generally better insulated, weathertight, and energy efficient. Additionally, future development in the MCSP Area would be required to adhere to the proposed new Greenhouse Gas Emissions Reduction policy in the Natural Resources and Sustainability Element, which would incentivize prohibition of natural gas appliances and natural gas plumbing in new development, resulting in a further reduction in operational energy impacts. Therefore, development facilitated by an adopted MCSP would not result in potentially significant environmental effects due to the wasteful, inefficient, or unnecessary consumption of energy, and impacts would be less than significant.

Mitigation Measures

This impact from development facilitated by the proposed Housing Element Implementation project, including development pursuant to an adopted MCSP, would be less than significant. No mitigation measures are required.

Threshold 2:	Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Impact E-2 THE PROPOSED PROJECT WOULD NOT CONFLICT WITH OR OBSTRUCT A STATE OR LOCAL PLAN FOR RENEWABLE ENERGY OR ENERGY EFFICIENCY. THIS IMPACT WOULD BE LESS THAN SIGNIFICANT.

Citywide Housing Element Implementation

As discussed in Section *4.5.2 Regulatory Setting*, several State plans, as well as the City's adopted General Plan, include energy conservation and energy efficiency strategies intended to enable the State and the City to achieve GHG reduction and energy conservation goals. A full discussion of the proposed project's consistency with GHG reduction plans is included in Section 4.7, *Greenhouse Gas Emissions*. As shown in Table 4.5-5, development facilitated by the project would be consistent with State renewable energy and energy efficiency plans.

Table 4.5-5 Consistency with State Renewable Energy and Energy Efficiency Plans

Renewable Energy or Energy Efficiency Plan	Proposed Project Consistency
Assembly Bill 2076: Reducing Dependence on Petroleum. Pursuant to AB 2076, the CEC and CARB prepared and adopted a joint-agency report, *Reducing California's Petroleum Dependence,* in 2003. Included in this report are recommendations to increase the use of alternative fuels to 20 percent of on-road transportation fuel use by 2020 and 30 percent by 2030, significantly increase the efficiency of motor vehicles, and reduce per capita VMT. One of the performance-based goals of AB 2076 is to reduce petroleum demand to 15 percent below 2003 demand.	**Consistent.** The proposed project facilitates development on sites in proximity to corridors served by Class II and Class III bicycle lanes and bus stops such as Oakland Avenue, Highland Avenue, Hampton Road, Park Boulevard, and Moraga Avenue. The sites identified in the Housing Element as having the most potential and feasibility to be developed (as shown on Figure 2-4 in Section 2, *Project Description)* are located within a one mile walk to a bus station, with the exception of development in the northern most corner of the city in MCSP Area which is located approximately 1.2 miles from the nearest bus stop. The City's Pedestrian and Bicycle Master Plan would facilitate the development of a 10-mile designated bikeway network, which future residents from the proposed project would be able to utilize (City of Piedmont 2014). Future development would be required to comply with the proposed new policy in the Transportation Element outlined in Section 4.14, *Transportation*, and would be required to prepare a VMT analysis. Development projects which would result in significant VMT impacts would be required to include travel demand management (TDM) measures to reduce VMT. Future development under the proposed project would not conflict with statewide efforts to increase the use of alternative fuels or increase the efficiency of motor vehicles.
2019 Integrated Energy Policy Report. The 2019 report highlights the implementation of California's innovative policies and the role they have played in establishing a clean energy economy, as well as provides more detail on several key energy policies, including decarbonizing buildings, increasing energy efficiency savings, and integrating more renewable energy into the electricity system.	**Consistent.** Development facilitated by the project would be required to comply with Chapter 8 of the PCC, which mandates the implementation of Title 24. Chapter 8 also contains requirements for energy efficiency measures, and photovoltaic systems, and a Reach Code for the purpose of encouraging the incorporation of energy efficient measures in new development. Future development would also be required to comply with the proposed new Greenhouse Gas Emissions Reduction policy, which would require compliance with CALGreen Tier 2 EV standards and would incentivize prohibition of natural gas appliances or natural gas plumbing in all new developments. Electricity would be provided by Ava, which source all their power from renewable sources for residential customers under the Renewable 100 program.

Renewable Energy or Energy Efficiency Plan	Proposed Project Consistency
	Customers that choose to opt out of the Renewable 100 Plan would be placed in the Bright Choice Plan which utilizes 40 percent renewable energy. Given these features, the project would facilitate decarbonization of buildings (removing GHG emissions from the building's energy use), increase in energy efficiency savings, and integration of more renewable energy into the electricity system. Therefore, the project would not conflict with or obstruct implementation of the 2019 Integrated Energy Policy Report.
California Renewable Portfolio Standard. California's RPS obligates investor-owned utilities, energy service providers, and community choice aggregators to procure 33 percent total retail sales of electricity from renewable energy sources by 2020, 60 percent by 2030, and 100 percent by 2045.	**Consistent.** Ava, a community choice aggregator, supplies electricity to Alameda County residents and businesses. Ava offers 100 percent renewable energy services to residential customers in Piedmont through their Renewable 100 program. Customers that choose to opt out of the Renewable 100 Plan would be placed in the Bright Choice Plan which utilizes 40 percent renewable energy. Since Ava would provide electricity service to the housing sites, the proposed project would not conflict with or obstruct implementation of the California Renewable Portfolio Standard.
Energy Action Plan. In October 2005, the CEC and CPUC updated their energy policy vision by adding some important dimensions to the policy areas included in the original EAP, such as the emerging importance of climate change, transportation-related energy issues, and research and development activities. The CEC adopted an update to the EAP II in February 2008 that supplements the earlier EAPs and examines the State's ongoing actions in the context of global climate change. The nine major action areas in the EAP include energy efficiency, demand response, renewable energy, electricity adequacy/reliability/infrastructure, electricity market structure, natural gas supply/demand/infrastructure, transportation fuels supply/demand/infrastructure, research/development/demonstration, and climate change.	**Consistent.** Future development facilitated by the proposed project would be required to be constructed in accordance with the latest iteration of CALGreen, the California Energy Code, and any locally adopted amendments, which include requirements for the use of energy-efficient design and technologies, as well as provisions for incorporating renewable energy resources into building design. Additionally, Policies 17.2 and 17.3 of the General Plan Natural Resources and Sustainability Element as well as Policies 6.1 through 6.7 and Programs 6.A through 6.D of the City's Housing Element would ensure sustainability and energy efficiency in all development facilitated under the project. Electricity would be provided by Ava, which sources all power from renewable sources under the Renewable 100 program. Customers that choose to opt out of the Renewable 100 Plan would be placed in the Bright Choice Plan which utilizes 40 percent renewable energy. Given these features, the project would facilitate implementation of the nine major action areas in the EAP. Therefore, the project would not conflict with or obstruct implementation of the EAP.
AB 1007: State Alternative Fuels Plans. The State Alternative Fuels Plan assessed various alternative fuels and developed fuel portfolios to meet California's goals to reduce petroleum consumption, increase alternative fuels use, reduce GHG emissions, and increase in-state production of biofuels without causing a significant degradation of public health and environmental quality. **Bioenergy Action Plan, EO S-06-06.** The EO establishes the following targets to increase the production and use of bioenergy, including ethanol and biodiesel fuels made from renewable resources: produce a minimum of 20 percent of its biofuels in California by 2010, 40 percent by 2020, and 75 percent by 2050.	**Consistent**. The project would not interfere with or obstruct the production of biofuels in California. Vehicles used by future residents would be fueled by gasoline and diesel and gasoline and diesel fuels blended with ethanol and biodiesel fuels as required by CARB regulations. Therefore, the project would not conflict with or obstruct implementation of the Bioenergy Action Plan or the State Alternative Fuels Plan.

Renewable Energy or Energy Efficiency Plan	Proposed Project Consistency
Title 24, CCR – Part 6 (Building Energy Efficiency Standards) and Part 11 (CALGreen). The 2019 Building Energy Efficiency Standards move toward cutting energy use in new homes by more than 50 percent and will require installation of solar photovoltaic systems for single-family homes and multi-family buildings of three stories and less. The CALGreen Standards establish green building criteria for residential and nonresidential projects. The 2019 Standards include the following: increasing the number of parking spaces that must be prewired for electric vehicle chargers in residential development; requiring all residential development to adhere to the Model Water Efficient Landscape Ordinance; and requiring more appropriate sizing of HVAC ducts.	**Consistent**. Development facilitated by the project would be required to comply with the City Code, Chapter 8, Division 8.02, which mandates the implementation of Title 24, and includes a Reach Code for the purpose of encouraging the incorporation of energy efficient measures in new development, and future projects that include an entirely new level or expand the total roof area by 30 percent or more would be required to install solar panels on roof. Therefore, the project would not conflict with or obstruct implementation of the Title 24 standards.

Furthermore, as described under Section 4.5.2 *Regulatory Setting,* the Piedmont General Plan and CAP contain goals, policies, and actions related to energy efficiency and renewable energy. As discussed under Impact GHG-2 in Section 4.7, *Greenhouse Gas Emissions*, the proposed project would be consistent with recommended goals, policies, and actions in the City's CAP related to energy efficiency and renewable energy. Table 4.5-6 summarizes the project's consistency with the applicable General Plan policies. As shown therein, the proposed project would be consistent with applicable General Plan policies and therefore would not conflict with or obstruct a State or local plan for renewable energy or energy efficiency. This impact would be less than significant.

Table 4.5-6 Project Consistency with Applicable General Plan and CAP Policies

Policies	Project Consistency
Policy 15.1: Transportation Control Measures. Implement transportation control measures (TCMs) to reduce air pollution emissions at the local level. This should include measures to promote walking and bicycling, continue casual carpooling, sustain or increase public transit service to Piedmont, and coordinate with other jurisdictions to create a more balanced and integrated transportation system. **Policy 16.1: Linking Land Use and Transportation Choices.** Consistent with the Land Use and Transportation Elements of this plan, retain walkable neighborhoods, reliable public transportation, safe cycling, carpooling, convenient access to shops and services, and other measures which reduce the need for driving and fuel consumption in Piedmont.	**Consistent.** The proposed project facilitates development on sites in proximity to corridors served by Class II and Class III bicycle lanes and bus stops such as Oakland Avenue, Highland Avenue, Hampton Road, Park Boulevard, and Moraga Avenue. The sites identified in the Housing Element as having the most potential and feasibility to be developed (as shown on Figure 2-4 in Section 2, *Project Description)* are located within a one mile walk to a bus station, with the exception of development in the northern most corner of the city in the MCSP Area which is located approximately 1.2 miles from the nearest bus station. The City's Safer Streets Plan would facilitate the development of a 10-mile designated bikeway network, which future residents from the proposed project would be able to utilize (City of Piedmont 2021). Future development would be required to comply with the proposed new Transportation Element policy outlined in Section 4.14, *Transportation*, and would be required to prepare a VMT analysis. Development projects which would result in significant VMT impacts would be required to include TDM measures to reduce VMT.

Policies	Project Consistency
Policy 16.2: Green Building. Support the use of green building methods in new construction and rehabilitation projects, including both public agency projects and private projects undertaken by homeowners.	**Consistent.** Development facilitated by the project would be required to comply with green building regulations pursuant to Section 8.10.020 of the PCC as well as the 2022 Green Building Standards Code. In addition, the City has adopted a Reach Code for the purpose of encouraging the incorporation of energy efficient measures in new development. In addition, Policies 17.2 and 17.3 of the General Plan Natural Resources and Sustainability Element as well as Policies 6.1, 6.2, 6.3, and 6.7 of the City's Housing Element would ensure energy-efficient design, water conservation, and the use of energy-efficient materials and renewable energy in new development. Program 6.B of the City's Housing Element would ensure green construction in order to reduce home utility costs and impacts on the environment. Future development would also be required to comply with the proposed new Greenhouse Gas Emissions Reduction General Plan policy, which would require compliance with CALGreen Tier 2 EV standards and would incentivize prohibition of natural gas appliances or natural gas plumbing in all new developments.
Action 16A: Title 24. Implement Title 24 of the California Code of Regulations (energy efficiency standards).	**Consistent**. Development facilitated by the proposed project would be required to be constructed in accordance with Title 24, the latest iteration of CALGreen, the California Energy Code, and locally adopted amendments, which include green building practices. The City has adopted a Reach Code for the purpose of encouraging the incorporation of energy efficient measures in new development. Future development would also be required to comply with the proposed new Greenhouse Gas Emissions Reduction General Plan policy, which would require compliance with CALGreen Tier 2 EV standards and would incentivize prohibition of natural gas appliances or natural gas plumbing in all new developments.
Policy 17.2: Energy Conservation. Strongly advocate for increased energy conservation by Piedmont residents, businesses, and other public agencies such as the Piedmont Unified School District. Support PG&E in their education and outreach efforts and encourage Piedmont residents to participate in PG&E weatherization and appliance rebate programs.	**Consistent**. Development facilitated by the proposed project would be required to be constructed in accordance with the latest iteration of CALGreen, the California Energy Code, and locally adopted amendments, which include green building practices. In addition, the City has adopted a Reach Code for the purpose of encouraging the incorporation of energy efficient measures in new development. Additionally, Policies 17.2 and 17.3 of the General Plan Natural Resources and Sustainability Element as well as Policies 6.1 and 6.2 of the City's Housing Element would require all new housing to be designed to encourage energy efficiency and use energy-efficient materials and appliances.
Policy 17.3: Alternative Energy Sources. Encourage the use of alternative energy sources, such as solar power and wind energy, by Piedmont residents.	**Consistent**. Development facilitated by the project would be served by Ava, which source 100 percent of electricity from renewable sources under the Renewable 100 program. Customers that choose to opt out of the Renewable 100 Plan would be placed in the Bright Choice Plan which utilizes 40 percent renewable energy. Additionally, pursuant to the City's Reach Code, future projects that include an entirely new level or expand the total roof area by 30 percent or more would be required to install solar panels on roof. Additionally, the City offers a streamlined permitting process for installation of small solar photovoltaic (PV) systems on rooftops of single family or duplex homes in order to encourage the usage of solar energy (City of Piedmont n,d.). Policy 17.3 of the General Plan Natural Resources and Sustainability Element as well as Policy 6.4 of the City's Housing Element also aims to increase the usage of alternative energy sources, specifically solar, for future development under the project.

Source: City of Piedmont 2009

Moraga Canyon Specific Plan

As discussed in Section 4.5.2 *Regulatory Setting*, several State plans, as well as the city's adopted General Plan, include energy conservation and energy efficiency strategies intended to enable the State and the City to achieve GHG reduction and energy conservation goals. Development facilitated in the MCSP Area, including refurbishment of the Public Works corporation yard and recreation facilities, would be required to comply with the same State and local regulations as discussed above, such as the most recent iteration of Title 24 Building Energy Efficiency Standards, CALGreen, and the Piedmont General Plan. Additionally, future development would also be required to comply with the proposed new Greenhouse Gas Emissions Reduction General Plan policy and the proposed new Transportation Element policy which would require compliance with CALGreen Tier 2 EV standards and would incentivize the prohibition of natural gas appliances or natural gas plumbing in all new developments, as well as require preparation of a quantitative VMT analysis and implementation of VMT reduction measures. Therefore, the impacts would be less than significant.

Mitigation Measures

This impact would be less than significant with implementation of proposed new policies in the General Plan Natural Resources and Sustainability Element and Transportation Element which are proposed as part of the project. Mitigation measures would not be required.

c. Cumulative Impacts

A project's environmental impacts are "cumulatively considerable" if the "incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects" (*CEQA Guidelines* Section 15065[a][3]). The geographic scope for energy consumption is the City of Piedmont. This geographic scope is appropriate because the smallest scale at which energy consumption information is readily available is the city level.

Cumulative development would increase demand for energy resources, but those resources would not be consumed in a wasteful, inefficient, or unnecessary manner. However, new iterations of the California Building Energy Efficiency Standards and CALGreen would require increasingly more efficient appliances, building construction techniques, and building materials that reduce energy consumption in new development. In addition, vehicle fuel efficiency is anticipated to continue to improve through implementation of the existing Pavley Bill regulations under AB 1493.

As described under Impact E-1, development facilitated by the project would be constructed in accordance with the California Building Energy Efficiency Standards and CALGreen. Additionally, housing development would be located in proximity to jobs, services, and transit, which would reduce the usage of single-occupancy vehicles and lower projected VMT. Therefore, the project's contribution to a significant cumulative energy impact is not cumulatively considerable.

Development facilitated by the project would not result in a wasteful, inefficient, or unnecessary consumption of energy, and operation of the new residential, public, and recreational structures and facilities would not result in potentially significant environmental effects due to the wasteful, inefficient, or unnecessary consumption of energy. Therefore, the project would not make a cumulatively considerable contribution to a significant cumulative impact.

The geographic scopes for the cumulative impact analysis of consistency with renewable energy and energy efficiency plans are the State of California and the City of Piedmont. Projects throughout the State of California are required to adhere to applicable renewable energy and energy efficiency laws,

programs, and policies such as California's RPS, AB 2076, and Title 24 standards. All other pending and future projects in the city would be required to adhere to General Plan policies and the PCC to mitigate energy impacts where feasible. In addition, all pending and future projects would be reviewed for consistency with the City General Plan and CAP. Future development would also be required to comply with the proposed new Greenhouse Gas Emissions Reduction General Plan policy which would require compliance with CALGreen Tier 2 EV standards and would incentivize prohibition of natural gas appliances or natural gas plumbing in all new developments. Therefore, the cumulative impact would be less than significant with mitigation. As discussed under Impact E-2, development facilitated by the project would be consistent with the energy-related goals, policies, and actions of the statewide plans and the City's General Plan; therefore, the project would not make a cumulatively considerable contribution to a significant adverse cumulative impact with respect to consistency with renewable energy and energy efficiency plans.

4.6 Geology and Soils

This section assesses potential impacts related to geologic and soil hazards associated with implementation of the proposed Housing Element Implementation project, including development facilitated by an adopted Moraga Canyon Specific Plan (MCSP).

4.6.1 Setting

a. Topography and Geology

Piedmont is located on the East Bay Plain (the Plain), a relatively flat area that extends 50 miles from Richmond in the north to San Jose in the south. The Plain is part of the larger Coast Ranges geomorphic province, one of the eleven geomorphic provinces of California. The Coast Ranges extend along the majority of California's coast from the California-Oregon border to Point Arguello in Santa Barbara County in the south and consist of northwest-trending mountain ranges and valleys (Norris and Webb 1990). The Coast Ranges are composed of Mesozoic and Cenozoic sedimentary, igneous, and metamorphic strata. The eastern side is characterized by strike-ridges and valleys in the Upper Mesozoic strata. The Coast Ranges province runs parallel to and overlaps the San Andreas Fault in some areas, although not in Piedmont (California Geological Survey 2002).

There are two predominant soil types in Piedmont, one of which consists of alluvial deposits created by hundreds of thousands of years of erosion from the East Bay Hills. These soils tend to occur in the city's lower elevations and on flatter terrains. The second type consists of residual material from sandstone and shale. These soils are less fertile, shallower, and more prone to erosion. The city has six primary creeks including Indian Gulch, Wildwood Creek, Bushy Dell Creek, Pleasant Valley Creek, Cemetery Creek, and Sausal Creek that all drain into Lake Merritt. Piedmont represents roughly one-quarter of the Lake Merritt watershed (City of Piedmont 2009a).

Piedmont is located in the United States Geological Survey's (USGS) *Oakland East* 7.5-minute topographic quadrangle. The area is typified by low topographic relief, with gentle slopes to the west in the direction of San Francisco Bay. The city's terrain rises gently from west to east, with the steepest slopes located along canyons and ravines (City of Piedmont 2009a). Geologic maps indicate that the Plain is underlain primarily by Quaternary alluvial deposits (Graymer 2000). Piedmont is underlain with sandstone of the Novato Quarry terrane and Pleistocene alluvial fan and fluvial deposits.

Additionally, Piedmont is located near the San Andreas, Calaveras, and Hayward faults, one of the most seismically active regions in the United States. The San Andreas Fault is located approximately 15 miles west of Piedmont. The Calaveras Fault lies on the edge of the Diablo Range, about 12.6 miles to the east. The Hayward Fault runs about 0.25 miles east of Piedmont, along an alignment that roughly parallels State Highway 13, as shown in Figure 4.6-1; adjacent to the Hayward Fault is the Chabot Fault. The Hayward Fault extends from Point Pinole more than 40 miles south to Milpitas. Faults near Piedmont are discussed in greater detail below under section (c).

Figure 4.6-1 Fault Lines in the Vicinity of Piedmont

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Additional data provided by USGS, 2020.

21-11542_Piedmont_HE
Fig 4.6-3 Faults

b. Soils

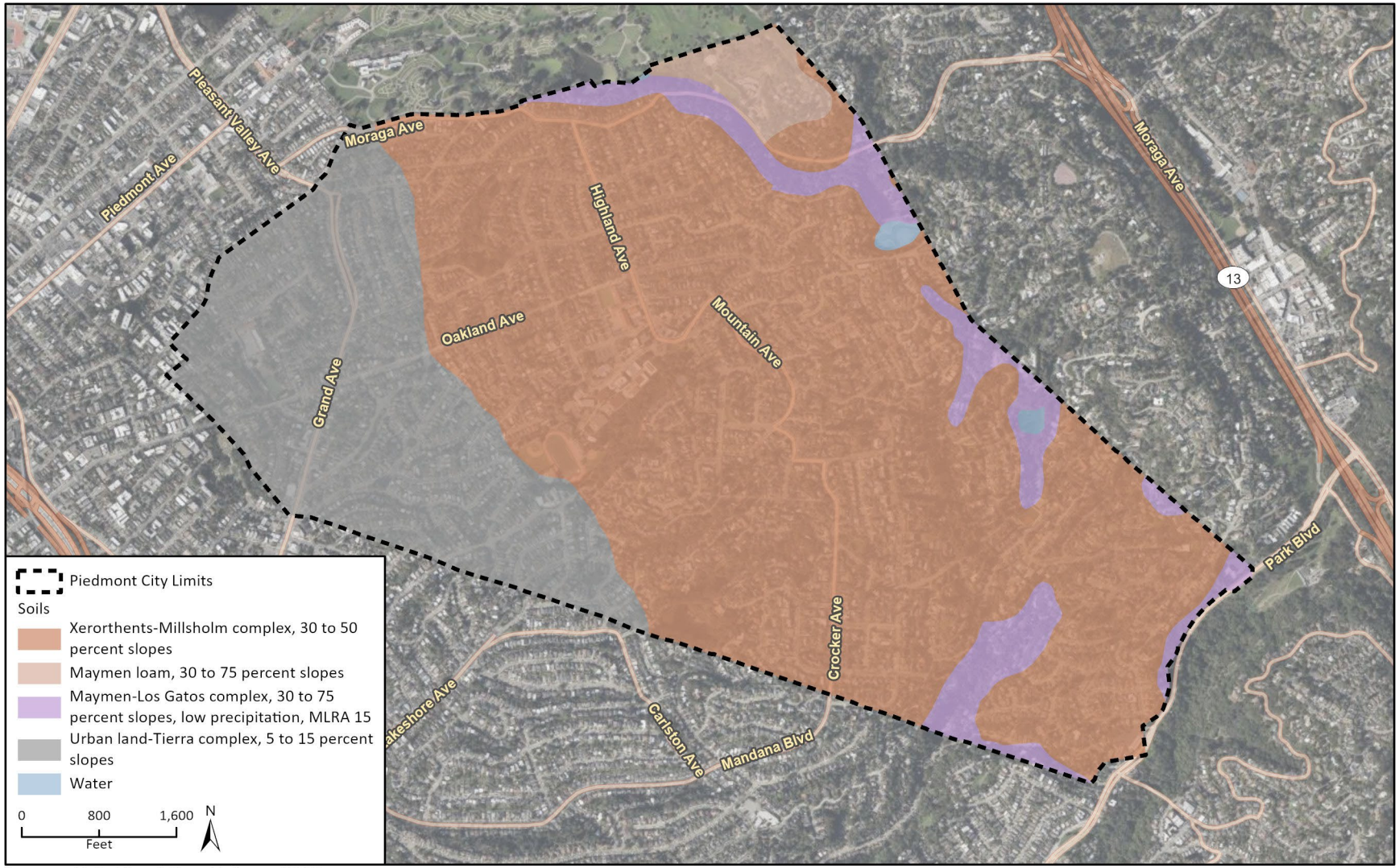
As mapped by the U.S. Department of Agriculture (USDA), Natural Resource Conservation Service (NRCS), Piedmont features four soil types (USDA 2023). Table 4.6-1 presents soil characteristics related to water holding capacity, permeability, shrink-swell potential, rate of surface runoff, and erosion hazard. Figure 4.6-2 shows soils In Piedmont.

Table 4.6-1 Piedmont Soil Parameters

Map Unit #	Name	Water Holding Capacity (cm per cm)	Permeability (in/hr)	Shrink-Swell Potential	Rate of Surface Runoff	Erosion Hazard
126	Maymen loam, 30 to 75 percent slopes	0.13	Moderate	Low	Very High	Moderate
127	Maymen-Los Gatos complex, 30 to 75 percent slopes	0.17	Moderate	Low	Very High	Moderate
151	Urban land Tierra Complex, 5 to 15 percent slopes	0.12	Low	Moderate	Medium	Low
159	Xerorthents-Millsholm Complex, 30 to 50 percent slopes	0.14	Moderate	Low	High	Low

Sources: USDA 2023

Figure 4.6-2 Piedmont Soils Map



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Additional soils data from SSURGO, 2022

21-11542_Piedmont_HE
Fig 4.6-4 Soils in Piedmont

c. Geologic Hazards

Similar to much of California, Piedmont is located in a seismically active region. The seismic hazards relevant to Piedmont are described below.

Faulting and Seismically-Induced Ground Shaking

The USGS defines active faults as those that have had surface displacement within the Holocene period (about the last 11,000 years). Surface displacement can be recognized by the existence of cliffs in alluvium, terraces, offset stream courses, fault troughs and saddles, the alignment of depressions, sag ponds, and the existence of steep mountain fronts. Potentially active faults are those that have had surface displacement during the last 1.6 million years. Inactive faults have not had surface displacement within that period. Several faults are located near or within Piedmont (Figure 4.6-1). The major faults and fault zones are described in the paragraphs below.

San Andreas Fault

The San Andreas Fault, the most likely source of a major earthquake in California, is located approximately 15 miles southwest of Piedmont. The San Andreas Fault is the primary surface boundary between the Pacific and the North American plates. There have been numerous historic earthquakes along the San Andreas Fault, and it generally poses the greatest earthquake risk to California. In general, the San Andreas Fault is likely capable of producing a Maximum Credible Earthquake of magnitude 8.0 on the Richter Scale.

Hayward Fault

The Hayward Fault, one of ten major faults that make up the San Andreas Fault Zone, runs directly east of Piedmont along State Highway 13. Although the last major earthquake generated by the Hayward Fault was in 1868, pressure is slowly building again and will eventually overcome the friction and other forces that cause the fault zone to stick. The probability of the Hayward Fault experiencing an earthquake of magnitude 6.7 or greater is 27 percent. It has the single highest risk among the Bay Area faults. A major earthquake along the Hayward Fault would likely cause extensive damage in Piedmont due to the fault's proximity to urban communities and infrastructure. The Hayward Fault and surrounding area – approximately 530 feet on either side of the fault – are designated as Alquist-Priolo Zone (Figure 4.6-1). No portion of Piedmont is within the Alquist-Priolo Zone.

Other active faults near Piedmont include the Calaveras Fault, about 12.6 miles to the east, and the Chabot Fault, which is adjacent to the Hayward Fault (Figure 4.6-1). There are few or no studies pertaining to these additional secondary faults, and it is unknown whether they may or may not experience secondary ground rupture during a large earthquake.

In addition to the primary hazard of surface rupture, earthquakes often result in secondary hazards that can cause widespread damage. The most likely secondary geologic earthquake hazards within Piedmont are ground shaking, liquefaction, and surface rupture (City of Piedmont 2009b).

Surface Rupture

Faults generally produce damage in two ways: ground shaking and surface rupture. Surface rupture is limited to land very near the fault. As discussed above, the Hayward Fault runs less than a mile east of Piedmont. The city is not located within the Alquist-Priolo Zone of the Hayward Fault, thus the potential for surface rupture is low (Figure 4.6-1).

Ground Shaking

Seismically induced ground shaking covers a wide area and is greatly influenced by the distance of the site to the seismic source, soil conditions, and depth to groundwater. The USGS and Association of Bay Area Governments (ABAG) have worked together to map the likely intensity of ground-shaking throughout the Bay Area under various earthquake scenarios. The most intense ground-shaking scenario mapped in Piedmont assumes a magnitude 6.9 earthquake on the Hayward Fault. The predicted ground-shaking from such an earthquake would be "very violent" or "violent" throughout Piedmont (ABAG 2021).

Hazards associated with seismically induced ground shaking include liquefaction, seismically induced settlement, and earthquake-triggered landslides. Movement along any of the faults shown Figure 4.6-1 could potentially generate substantial ground shaking in Piedmont leading to these secondary hazards, as discussed below.

Liquefaction and Seismically-Induced Settlement

Liquefaction is defined as the sudden loss of soil strength due to a rapid increase in soil pore water pressure resulting from seismic ground shaking. Liquefaction potential is dependent on such factors as soil type, depth to ground water, degree of seismic shaking, and the relative density of the soil. When liquefaction of the soil occurs, buildings and other objects on the ground surface may tilt or sink, and lightweight buried structures (such as pipelines) may float toward the ground surface. Liquefied soil may be unable to support its own weight or that of structures, which could result in loss of foundation bearing or differential settlement. Liquefaction may also result in cracks in the ground surface followed by the emergence of a sand-water mixture.

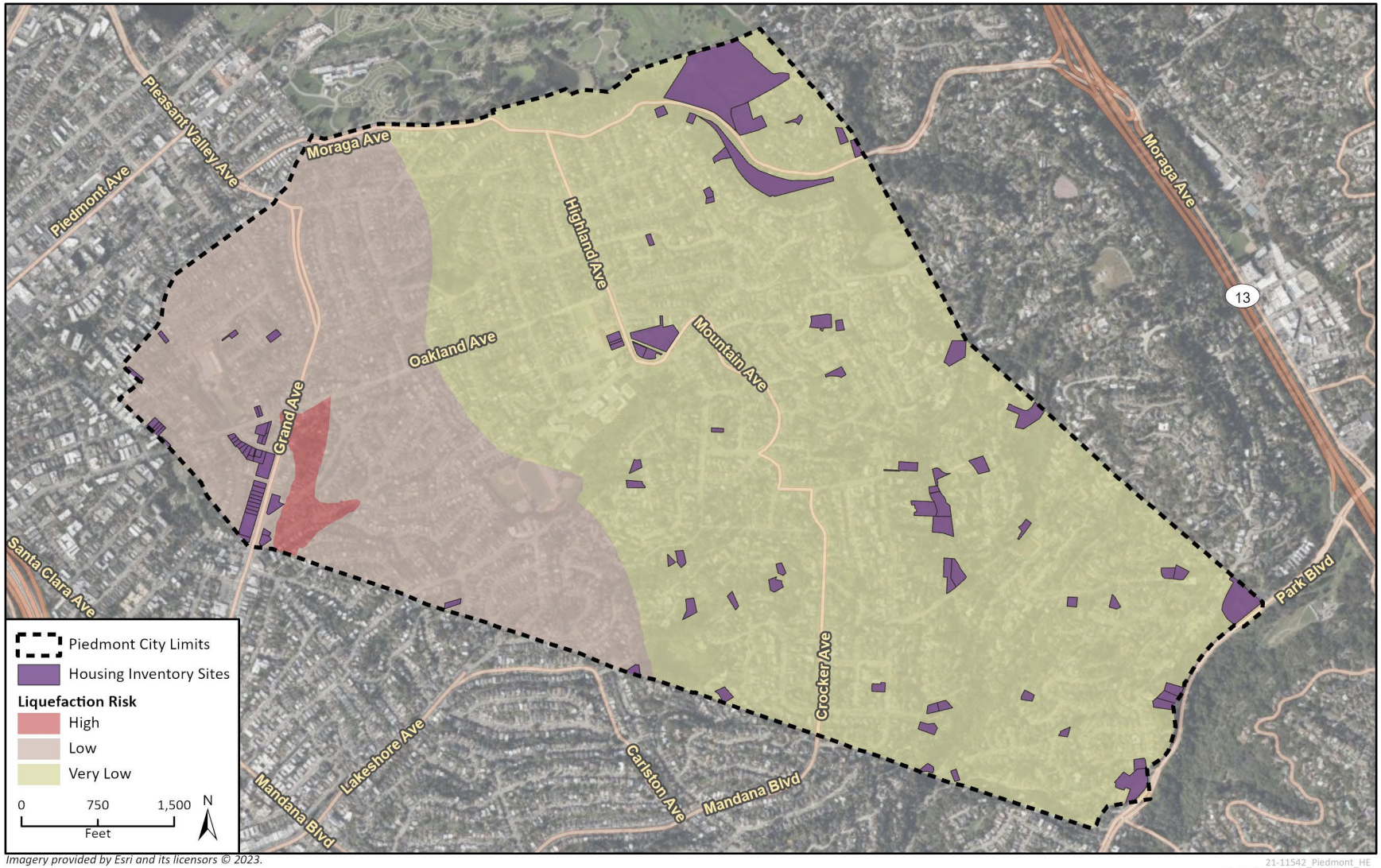
Seismically induced settlement occurs in loose to medium dense unconsolidated soil above groundwater. These soils compress (settle) when subject to seismic shaking. The settlement can be exacerbated by increased loading, such as from the construction of buildings. Settlement can also result solely from human activities including improperly placed artificial fill, and structures built on soils or bedrock materials with differential settlement rates.

Piedmont is in an area identified by ABAG as having very low to low susceptibility to liquefaction (ABAG 2021). As shown in Figure 4.6-3, Piedmont is generally located in areas of very low or low liquefaction risk, except for a small portion of the city southeast of the intersection at Grand Avenue and Oakland Avenue, which is located in an area with high liquefaction risk. In addition, there may be areas of uncompacted fill, such as within Moraga Canyon.

Landslides

Landslides result when the driving forces that act on a slope (i.e., the weight of the slope material, and the weight of objects placed on it) are greater than the slope's natural resisting forces (i.e., the shear strength of the slope material). Slope instability may result from natural processes, such as the erosion of the toe of a slope by a stream, or by ground shaking caused by an earthquake. Slopes can also be modified artificially by grading, or by the addition of water or structures to a slope. Development that occurs on a slope can substantially increase the frequency and extent of potential slope stability hazards.

Figure 4.6-3 Piedmont Liquefaction Susceptibility



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Additional data provided by USGS, 2022.

21-11542_Piedmont_HE
Fig 4.6-1 Liquefaction in Piedmont

Areas susceptible to landslides are typically characterized by steep, unstable slopes in weak soil/bedrock units that have a record of previous slope failure. There are numerous factors that affect the stability of the slope, including: slope height and steepness, type of materials, material strength, structural geologic relationships, ground water level, and level of seismic shaking.

Figure 4.6-4 shows identified landslide hazard zones in Piedmont. As shown in Figure 4.6-4, because of the varying topography, most of Piedmont is within moderate to very high landslide susceptibility zones. The western part of Piedmont generally has high landslide susceptibility, and the eastern part of the city generally has very high landslide susceptibility. The risk of landslides is typically highest in Moraga Canyon, along Indian Gulch, in Piedmont Park, in the Wildwood Gardens area, along Park Boulevard, and in the Somerset Road area along the Oakland border (City of Piedmont 2009b).

Expansive Soils

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 moistures that can trigger this shrink-swell phenomenon 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 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. The clay minerals present typically include montmorillonite, smectite, and/or bentonite. Within the city, soils with moderate shrink-swell potential are the Urban Land Tierra-Complex 5 to 15 percent slopes as listed in Table 4.6-1 and illustrated on Figure 4.6-2; these soils have a moderate potential for expansiveness.

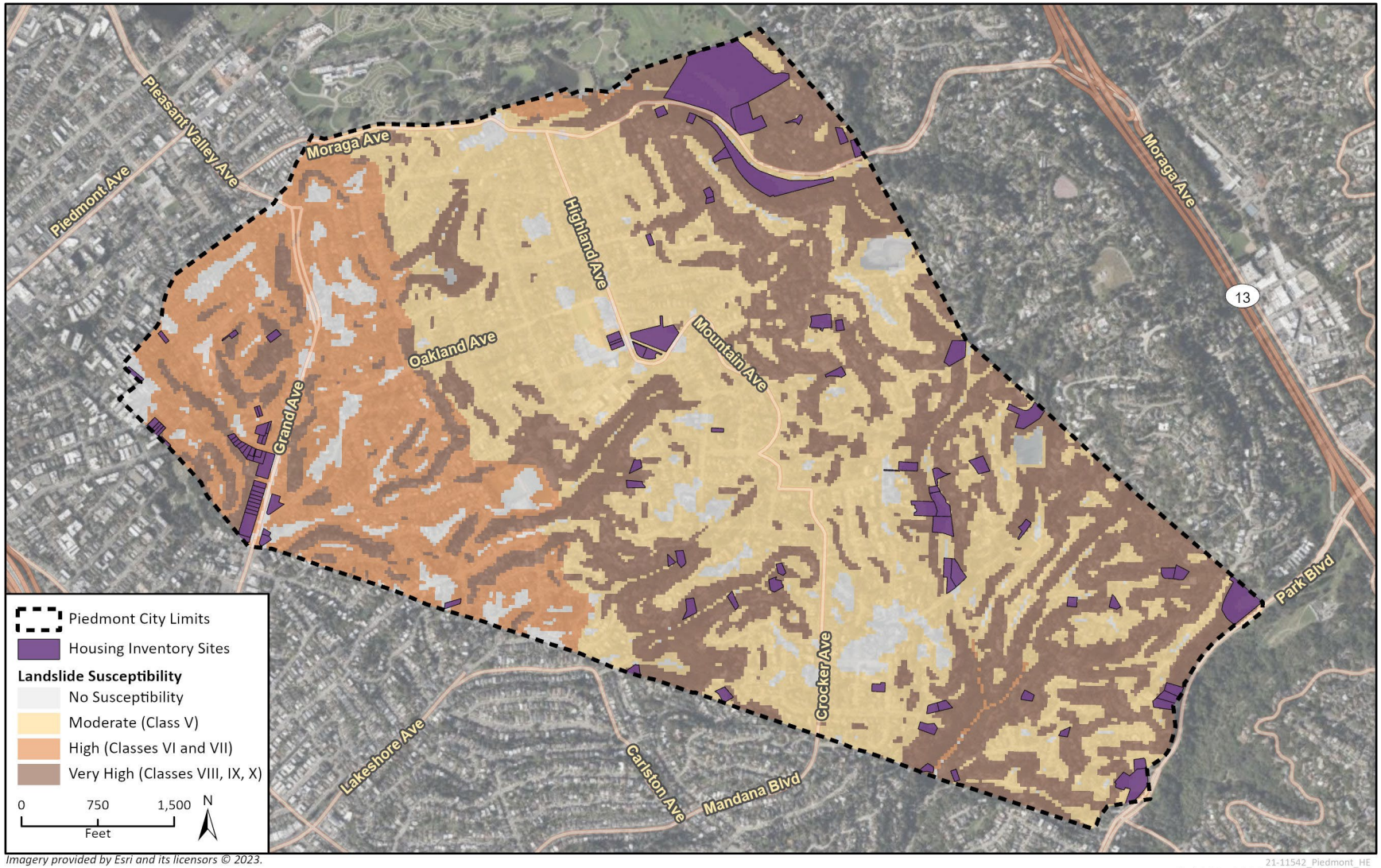
Erosion

Erosion is the wearing away of the soil mantle by running water, wind, or geologic forces. It is a naturally occurring phenomenon and ordinarily is not hazardous. However, excessive erosion can contribute to landslides, siltation of streams, undermining of foundations, and ultimately the loss of structures. Removal of vegetation tends to heighten erosion hazards.

d. Paleontological Setting

Paleontological resources, or fossils, are the evidence of once-living organisms preserved in the rock record. They include both the fossilized remains of ancient plants and animals and the traces thereof (e.g., trackways, imprints, burrows, etc.). Paleontological resources occur within bedrock geologic deposits that may or may not underly the soil layer and are almost exclusively preserved in sedimentary rocks; however, in rare cases, fossils can also be preserved in volcanic rocks and low-grade metamorphic rocks under certain conditions. The Society of Vertebrate Paleontology (SVP) has defined fossils as being remains or traces of plants and animals that are greater than 5,000 years old (i.e., older than middle Holocene in age) (2010). Fossils occur in a non-continuous and often unpredictable distribution within some sedimentary units, and the potential for fossils to occur within sedimentary units depends on several factors. It is possible to evaluate the potential for geologic units to contain scientifically important paleontological resources, and therefore to evaluate the potential for impacts to those resources and provide mitigation for paleontological resources if they are discovered during construction of a development project.

Figure 4.6-4 Piedmont Landslide Susceptibility



Imagery provided by Esri and its licensors © 2023.
Additional data provided by CGS, Map Sheet 58, 2018.

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Fig 4.6-2 Landslide Susceptibility in Piedmont

The region was mapped at a scale of 1:50,000 by Graymer (2000), who identified five distinct geologic units underlying the City of Piedmont. A map of geologic units is shown on Figure 4.6-5. Holocene alluvial fan and fluvial deposits (Qhaf); Pleistocene alluvial fan and fluvial deposits (Qpaf); sandstone of the Novato Quarry Terrane (Kfn); Franciscan Complex mélange (KJfm); and chert of the Franciscan Complex (fc). The paleontological sensitivity of geologic units underlying the City of Piedmont are discussed below in Section 4.6.3.

e. Moraga Canyon Specific Plan Area Setting

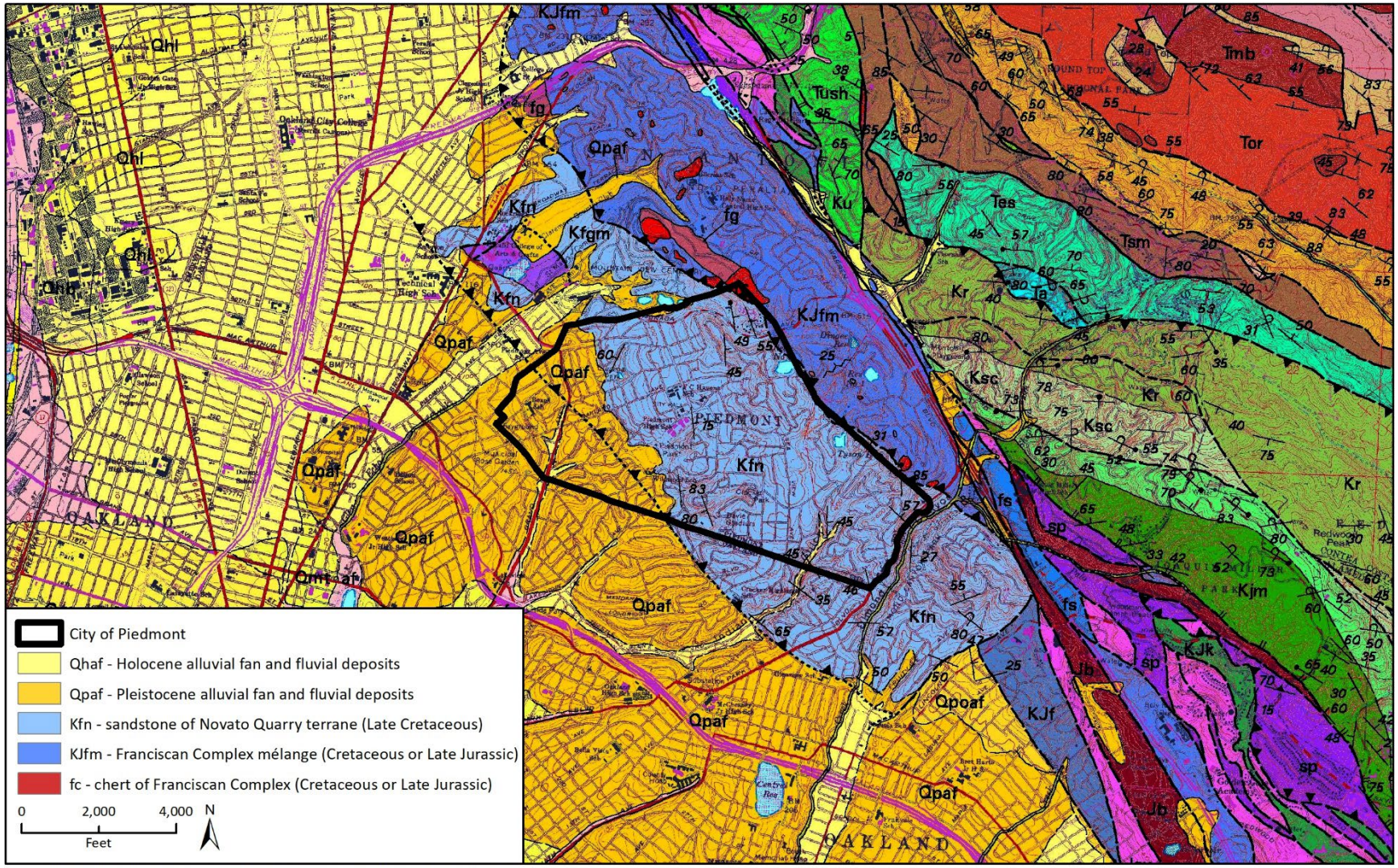
The MCSP Area is in the northeastern portion of Piedmont situated north and south of Moraga Avenue in Moraga Canyon. Part of the MCSP Area north or Moraga Avenue was historically used as a quarry, and then filled in with artificial, non-engineered fill. Thus, much of the soil substrate in proximity to Moraga Avenue consists of fill. These activities resulted in an area generally characterized by relatively flat areas comprised of fill situated directly adjacent to steep, sometimes almost vertical, slopes. Figure 4.6-6 shows the topography of the MCSP Area.

The linear-shaped portion of the MCSP Area on the south side of Moraga Avenue, Blair Park, is an open space and park area and designated as an off-leash dog walking area. This area also has evidence of artificial, non-engineered fill, and the current ground surface elevation of Blair Park increases towards the east, from approximately 400 feet near Moraga Avenue, to approximately 500 feet at the southern point of the MCSP Area adjacent to the single-family residences on Alta Avenue, to 480 feet on the most eastern portion of Blair Park.

The portion of the MCSP Area on the north side of Moraga Avenue is currently utilized for a combination of uses such as City offices, shop, materials storage, and vehicle storage (Piedmont Corporation Yard), Coaches Field (soccer/softball fields), a skate park (Kennelly Skatepark), parking, and temporary sales including a holiday tree and pumpkin lot. These areas are situated in relatively flat areas comprised of fill, but are directly adjacent to the sides of the canyon that slope steeply downward to the west and upward to the north and east. Elevations of Coaches Field, Kennelly Skatepark, and the Piedmont Corporation are approximately 400 feet, 420 feet, and 420 feet, respectively, and elevations increase to approximately 640 feet at the northern tip of the MCSP Area and 660 feet at the northeastern tip of the MCSP Area adjacent to Maxwelton Road.

The principal active faults near the MCSP Area include the Hayward Fault, located approximately 2,700 feet east of Blair Park, and the adjacent Chabot Fault (Figure 4.6-1); the San Andreas Fault, located 15 miles to the southwest; and the Calaveras Fault, located approximately 12.6 miles to the east of the MCSP Area. As shown in Figure 4.6-3 and Figure 4.6-4, the MCSP Area is located in an area with very low liquefaction risk, and very high landslide risk. Additionally, as shown in Figure 4.6-2 and Table 4.6-1, the MCSP Area is underlain with Maymen loam, 30 to 75 percent slopes and Maymen-Los Gatos complex, 30 to 75 percent slopes soil types, which have low shrink-swell potential, or expansivity. Lastly, as discussed below in Section 4.6.3, the MCSP Area is underlain with Novato Quarry terrane (Kfn), which has low paleontological sensitivity.

Figure 4.6-5 Geological Units Underlying the City of Piedmont



Imagery provided by Graymer, "Geologic map and map database of the Oakland metropolitan area, Alameda, Contra Costa, and San Francisco Counties, California," 2000.

Figure 4.6-6 Moraga Canyon Specific Plan Area Topography

Imagery provided by Esri and its licensors © 2023.

21-11542_Piedmont_HE
Fig 4.6-5 MCSP Topography

4.6.2 Regulatory Setting

a. Federal Regulations

Clean Water Act

Congress enacted the Clean Water Act (CWA), formerly the Federal Water Pollution Control Act of 1972, with the intent of restoring and maintaining the chemical, physical, and biological integrity of the waters of the United States. The CWA requires states to set standards to protect, maintain, and restore water quality through the regulation of point source and non-point source discharges to surface water. Those discharges are regulated by the National Pollutant Discharge Elimination System (NPDES) permit process (CWA Section 402). NPDES permitting authority is administered by the California State Water Resources Control Board (SWRCB) and its nine Regional Water Quality Control Boards (RWQCB). Piedmont is in a watershed administered by the Bay Area RWQCB. Individual projects within Piedmont that disturb more than one acre would be required to obtain NPDES coverage under the California General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit). The Construction General Permit requires the development and implementation of a storm water pollution prevention plan describing best management practices (BMP) the discharger would use to prevent and retain stormwater runoff and to prevent soil erosion.

b. State Regulations

California Building Code

The California Building Code (CBC), Title 24, Part 2 provides building codes and standards for the design and construction of structures in California. It requires, among other things, seismically resistant construction and foundation and soil investigations prior to construction. The CBC also establishes grading requirements that apply to excavation and fill activities and requires the implementation of erosion control measures. The city is responsible for enforcing the 2016 CBC, or most current CBC version, within Piedmont.

The referenced codes and standards include requirements for evaluations of geologic conditions at future project sites and design and construction standards to address geologic hazards. Geotechnical investigations are performed to identify the geologic conditions at a site and to evaluate whether a proposed project is feasible given the existing geological conditions. The geotechnical report must be completed by a California licensed professional and must provide recommendations for foundation and structural design to address any geologic hazards. Such reports are required under the following conditions:

- New structures designed under the California Building Code in accordance with CBC 1803.5.11 and CBC 1803.5.12.
- New structures designed under the California Residential Code and located in a seismic hazard zone in accordance with CRC R401.4. This requirement does not apply to new accessory structures including utility sheds, garages, and accessory dwelling units.

- New structures within a delineated earthquake fault zone:
  - A single-family wood-frame or steel-frame dwelling exceeding two stories or when any dwelling is part of a development of four or more dwellings.
  - Multi-family and commercial of any kind.
- Alterations or additions to any structure within a seismic hazard zone which exceed either 50 percent of the value of the structure or 50 percent of the existing floor area of the structure.
- In accordance with CBC 1803.5.2 and CRC R401.4.1 where design values exceed the presumptive values or the classification, strength or compressibility of the soil is in doubt.
- Where deep foundations will be used, a geotechnical investigation shall be conducted in accordance with CBC 1803.5.5.
- For new structures assigned to Seismic Design Category C, D, E or F, a geotechnical investigation shall be conducted in accordance with CBC 1803.5.11.

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act of 1972 was passed into law following the destructive February 9, 1971 magnitude 6.6 San Fernando earthquake. The Act provides a mechanism for reducing losses from surface fault rupture on a statewide basis. The intent of the Act is to ensure public safety by prohibiting the siting of most structures for human occupancy across traces of active faults that constitute a potential hazard to structures from surface faulting or fault creep. This Act groups faults into categories of active, potentially active, and inactive. Historic and Holocene age faults are considered active, Late Quaternary and Quaternary age faults are considered potentially active, and pre-Quaternary age faults are considered inactive.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act addresses geo-seismic hazards, other than surface faulting, and applies to public buildings and most private buildings intended for human occupancy. The Seismic Hazards Mapping Act identifies and maps seismic hazard zones to assist cities and counties in preparing the safety elements of their general plans and encourages land use management policies and regulations that reduce seismic hazards. The Act mandated the preparation of maps delineating "Liquefaction and Earthquake-Induced Landslide Zones of Required Investigation." Areas of potential liquefaction exist throughout Piedmont. However, liquefaction hazard maps prepared by ABAG indicate only one high-risk area, located along an old streambed that runs beneath Grand Avenue (City of Piedmont 2009b).

California Environmental Quality Act – Paleontological Resources

Paleontological resources are protected under CEQA, which states in part a project will "normally" have a significant effect on the environment if it, among other things, will disrupt or adversely affect a paleontological site except as part of a scientific study. Specifically, in Section VII(f) of Appendix G of the *CEQA Guidelines*, the Environmental Checklist Form, the question is posed thus: "Will the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature." To determine the uniqueness of a given paleontological resource, it must first be identified or recovered (i.e., salvaged). Therefore, CEQA mandates mitigation of adverse impacts, to the extent practicable, to paleontological resources.

CEQA does not define "a unique paleontological resource or site." However, the Society of Vertebrate Paleontology (SVP) has defined a "significant paleontological resource" in the context of environmental review as follows:

> Fossils and fossiliferous deposits, here defined as consisting of identifiable vertebrate fossils, large or small, uncommon invertebrate, plant, and trace fossils, and other data that provide taphonomic, taxonomic, phylogenetic, paleoecologic, stratigraphic, and/or biochronologic information. Paleontological resources are typically to be older than recorded human history and/or older than middle Holocene (i.e., older than about 5,000 radiocarbon years) (SVP 2010).

The loss of paleontological resources meeting the criteria outlined above (i.e., a significant paleontological resource) would be a significant impact under CEQA, and the CEQA lead agency is responsible for ensuring that impacts to paleontological resources are mitigated, where practicable, in compliance with CEQA and other applicable statutes.

California Public Resources Code

Section 5097.5 of the Public Resources Code states:

> No person shall knowingly and willfully excavate upon, or remove, destroy, injure or deface any historic or prehistoric ruins, burial grounds, archaeological or vertebrate paleontological site, including fossilized footprints, inscriptions made by human agency, or any other archaeological, paleontological or historical feature, situated on public lands, except with the express permission of the public agency having jurisdiction over such lands. Violation of this section is a misdemeanor.

Here "public lands" means those owned by, or under the jurisdiction of, the state or any city, county, district, authority, or public corporation, or any agency thereof. Consequently, public agencies are required to comply with Public Resources Code Section 5097.5 for their own activities, including construction and maintenance, and for permit actions (e.g., encroachment permits) undertaken by others.

c. Local Regulations

City of Piedmont General Plan

The Piedmont General Plan, adopted in April 2009 and last updated in 2019, lists several geology goals, policies, and actions as part of the Environmental Hazards Element. The following goals, policies, and actions are applicable to the proposed project (City of Piedmont 2009b, 2019):

Goal 18: Minimize the loss of life, personal injury, and property damage resulting from earthquakes, landslides, unstable soils, and other geologic hazards.

Policy 18.1: Restricting Development on Unstable Sites. Permit development only in those areas where potential danger to health, safety, and welfare of Piedmont residents can be adequately mitigated.

Policy 18.2: Seismic Design Standards. Maintain and enforce seismic design and construction standards which meet or exceed the standards established in the Building Code. Piedmont's Municipal Code should be periodically reviewed, updated, and amended to incorporate the most current knowledge and highest standards of seismic safety.

Policy 18.3: Infrastructure Reliability. Maintain road and infrastructure design standards which address geologic conditions in Piedmont, including the potential for earthquakes and landslides. Infrastructure should be retrofitted where necessary to improve reliability during and after an earthquake.

Policy 18.4: Soil and Geologic Reports. Require site specific soil reports and geologic studies in instances where development may be exposed to substantial geologic or seismic hazards, including ground shaking and landslides. Ensure that any identified hazards are appropriately mitigated.

Policy 18.5: Seismic Upgrades. Encourage the upgrading and reinforcement of homes, businesses, schools, and other public buildings to protect against future damage, injury, and loss of life in the event of a major earthquake. The City will encourage the mitigation of seismic deficiencies through bolting of structures to their foundations, lateral bracing of cripple walls, bracing of water heaters and potential falling objects, and similar measures. Structural hazards in public buildings should be mitigated based on the severity of risk and the type of occupancy.

Policy 18.6: Siting of Critical Facilities. Design and locate new critical facilities (in addition to those outlined in Table E-1 of the LHMP) including schools, municipal offices, disaster supply containers, and emergency shelters, in a manner which maximizes their ability to remain functional after a major earthquake.

Policy 18.7: Earthquake Safety Education. Provide earthquake safety information to citizens, property owners, and volunteer groups.

Action 18.A: Soil and Geotechnical Reporting Requirements. Require soil and geotechnical reports for any structure constructed on a slope exceeding 20 percent, any application for a tentative subdivision map, and any new residence on any lot, regardless of slope.

Action 18.B: Data Base of Geologic Reports. Maintain any soil and geologic reports completed for development applications as public records. Keep records of the location and extent of areas covered by such reports and refer to these records as needed when future applications for development are made.

Action 18.C: Incentives for Seismic Retrofits. Consider a variety of incentives that encourage Piedmont residents to retrofit their homes for seismic safety. Incentives might include reduced fees for households seeking permits to replace brick foundations, install shear walls, or perform other seismic upgrades.

Action 18.D: Post-Earthquake Structural Evaluation. Continue the program providing for evaluation of structures following a major earthquake, and take appropriate actions in the event a structure is determined to be unsafe.

Piedmont City Code (PCC)

The PCC includes code requirements to mitigate potential geologic hazards including:

- **8.02.020.S Section R401.4.3 Foundation and Soils Investigations** – A geotechnical evaluation shall be required:
  1. For any building on a site having a slope of 20% or greater, a soils report must be prepared by a geotechnical engineer licensed by the State of California.
  2. At discretion of the Building Official based on the characteristics of the site and the nature of the construction proposed.

- **8.02.030.S Section 1803.2 – Geotechnical Investigations Required**. A geotechnical investigation is required:
  1. For a building on a site having a slope of 20% or greater, or
  2. At discretion of the Building Official based on the characteristics of the site and the nature of the construction proposed.

4.6.3 Impact Analysis

a. Methodology and Significance Thresholds

In accordance with Appendix G of the *CEQA Guidelines*, the proposed project would result in a significant impact if it would:

1. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:
   I. 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
   II. Strong seismic ground shaking
   III. Seismic-related ground failure, including liquefaction
   IV. 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 wastewater disposal systems where sewers are not available for the disposal of wastewater; or,
6. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

Paleontological Resources Sensitivity

Paleontological sensitivity refers to the potential for a geologic unit to produce scientifically significant fossils. Direct impacts to paleontological resources occur when earthwork activities, such as grading or trenching, cut into the geologic deposits within which fossils are buried and physically destroy the fossils. Since fossils are the remains of prehistoric animal and plant life, they are nonrenewable. Such impacts have the potential to be significant and, under the *CEQA Guidelines*, may require mitigation. Sensitivity is determined by rock type, history of the geologic unit in producing significant fossils, and fossil localities recorded from that unit. Paleontological sensitivity is derived from the known fossil data collected from the entire geologic unit, not just from a specific survey.

The discovery of a vertebrate fossil locality is of greater significance than that of an invertebrate fossil locality, especially if it contains a microvertebrate assemblage. The recognition of new vertebrate fossil locations could provide important information on the geographical range of the taxa, their radiometric age, evolutionary characteristics, depositional environment, and other important scientific research questions. Vertebrate fossils are almost always significant because they occur more

rarely than invertebrates or plants. Thus, geological units having the potential to contain vertebrate fossils are considered the most sensitive.

The SVP outlines in its Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources (2010) guidelines for categorizing paleontological sensitivity of geologic units within a project area. The SVP (2010) describes sedimentary rock units as having a high, low, undetermined, or no potential for containing significant nonrenewable paleontological resources. This criterion is based on rock units within which vertebrates or significant invertebrate fossils have been determined by previous studies to be present or likely to be present. Significant paleontological resources are fossils or assemblages of fossils, which are unique, unusual, rare, uncommon, diagnostically, stratigraphically, taxonomically, or regionally. The paleontological sensitivity of the project site has been evaluated according to the following SVP (2010) categories:

- **High Paleontological Sensitivity.** Rock units from which significant vertebrate or significant invertebrate fossils or significant suites of plant fossils have been recovered are considered to have a high potential for containing significant non-renewable fossiliferous resources. These units include but are not limited to, sedimentary formations and some volcanic formations which contain significant nonrenewable paleontological resources anywhere within their geographical extent, and sedimentary rock units temporally or lithologically suitable for the preservation of fossils. Sensitivity comprises both (a) the potential for yielding abundant or significant vertebrate fossils or for yielding a few significant fossils, large or small, vertebrate, invertebrate, or botanical and (b) the importance of recovered evidence for new and significant taxonomic, phylogenetic, ecologic, or stratigraphic data. Areas which contain potentially datable organic remains older than recent, including deposits associated with nests or middens, and areas that may contain new vertebrate deposits, traces, or trackways are also classified as significant. Full-time monitoring is typically recommended during any project-related ground disturbance in geologic units with high sensitivity.
- **Low Paleontological Sensitivity.** Sedimentary rock units that are potentially fossiliferous but have not yielded fossils in the past or contain common and/or widespread invertebrate fossils of well documented and understood taphonomic (processes affecting an organism following death, burial, and removal from the ground), phylogenetic species (evolutionary relationships among organisms), and habitat ecology. Reports in the paleontological literature or field surveys by a qualified vertebrate paleontologist may allow determination that some areas or units have low potentials for yielding significant fossils prior to the start of construction. Generally, these units will be poorly represented by specimens in institutional collections and will not require protection or salvage operations.
- **Undetermined Paleontological Sensitivity.** Specific areas underlain by sedimentary rock units for which little information is available are considered to have undetermined fossiliferous potentials. Field surveys by a qualified vertebrate paleontologist to specifically determine the potentials of the rock units are required before programs of impact mitigation for such areas may be developed.
- **No Paleontological Sensitivity.** Rock units of metamorphic or igneous origin are commonly classified as having no potential for containing significant paleontological resources. For geologic units with no sensitivity, a paleontological monitor is not required.

Paleontological Sensitivity of Geologic Units Underlying the City of Piedmont

The geographic distribution, lithological characteristics, and paleontological sensitivities (SVP 2010) of each geologic unit underlying the City of Piedmont (as shown on Figure 4.6-5) is discussed below. The paleontological sensitivity of each unit is assessed based on published geologic maps, literature review, and online fossil locality databases (Paleobiology Database [PBDB] 2022; University of California Museum of Paleontology [UCMP] 2022).

HOLOCENE ALLUVIAL FAN AND FLUVIAL DEPOSITS (QHAF)

Holocene alluvial fan and fluvial deposits (Qhaf) are found within Indian Gulch and an unnamed valley/gulch in the southern part of the City of Piedmont (Figure 4.6-5). Qhaf is brown to tan, gravelly sand or sandy gravel that grades upward to sandy or silty clay (Graymer 2000). The fact that these deposits underlie what were once stream channels in the City of Piedmont suggests that they are likely relatively coarse-grained. Holocene sediments are generally considered too young to preserve scientifically significant paleontological resources (SVP 2010). Therefore, Qhaf is assigned a **low paleontological sensitivity.**

PLEISTOCENE ALLUVIAL FAN AND FLUVIAL DEPOSITS (QPAF)

Pleistocene alluvial fan and fluvial deposits (Qpaf) underlie the western part of the City of Piedmont (Figure 4.6-5). Qpaf consists of brown, dense, variably sorted, gravelly and clayey sand or clayey gravel that grades upward into sandy clay that are at least 150 feet thick (Graymer 2000). Pleistocene alluvial and fluvial deposits have produced fossils in Alameda County, including mammoth (*Mammuthus*), ground sloth (*Nothrotheriops*, *Paramylodon*), camel (*Camelops*), American lion (*Panthera atrox*), and dire wolf (*Canis dirus*) (Graymer 2000; Jefferson 2010; PBDB 2022; Savage 1951; UCMP 2022). Based on the fossil record of these deposits throughout California, Qpaf is assigned a **high paleontological sensitivity.**

SANDSTONE OF THE NOVATO QUARRY TERRANE (KFN)

Sandstone of the Novato Quarry terrane (Kfn) underlies the central and eastern parts of the City of Piedmont (Figure 4.6-5). Kfn is a bedded (~3-foot-thick) to massive, fine- to coarse-grained wacke sandstone with inch-scale siltstone interbeds that is Late Cretaceous in age (Graymer 2000). Kfn is part of the larger Franciscan Complex, which comprises much of the Coast Ranges (Norris and Webb 1990). Sedimentary rocks of the Franciscan Complex can produce fossils, but these fossils are primarily invertebrates such as bivalves and gastropods, though vertebrates are known (PBDB 2022; UCMP 2022). Graymer (2000) reports that fossils are known from Kfn in Marin County, but none have been reported in Alameda County. Given that fossils are rare in the Franciscan Complex rocks, Kfn is assigned a **low paleontological sensitivity.**

FRANCISCAN COMPLEX MÉLANGE (KJFM)

The Franciscan Complex mélange (KJfm) underlies the northern edge of the City of Piedmont (Figure 4.6-5). KJfm is made up of sheared blocks that range from pebble-sized to hundreds of meters of varying lithological composition such as argillite claystone, wacke sandstone, metachert, shale, serpentinite, greenstone, tuff, schist, basalt, marble, and more, that is late Jurassic or Cretaceous in age (Graymer 2000). Sedimentary rocks of the Franciscan Complex can produce fossils, but these fossils are primarily common invertebrates such as bivalves and gastropods, though vertebrates are known (PBDB 2022; UCMP 2022). Therefore, KJfm has **low paleontological sensitivity.**

CHERT OF THE FRANCISCAN COMPLEX (FC)

Chert of the Franciscan Complex (fc) underlies a very small area of the northern edge of the City of Piedmont (Figure 4.6-5). Areas mapped as fc represent blocks of sheared chert within the Franciscan Complex mélange that are large enough to be depicted on the map of Graymer (2000). These blocks are late Jurassic or Cretaceous in age. Fossils have been recovered from chert units in the Franciscan Complex, but they are rare and generally consist of invertebrate specimens, though one of the few marine reptile fossils (*Ichthyosaurus*) from the Franciscan Complex was recovered from chert (PBDB 2022; UCMP 2022). For Piedmont's soil conditions, fc is assigned a **low paleontological sensitivity.**

b. Project Impacts and Mitigation

The proposed project involves implementation of the 2023-2031 Housing Element (including revisions to the General Plan Land Use Element, revisions to the PCC, and the Moraga Canyon Specific Plan) as well as an updates to the General Plan Transportation Element, Environmental Hazards Element, Natural Resources and Sustainability Element, Design and Preservation Element, Community Services and Facilities Element, and Parks, Recreation and Open Space Element. The updates to the General Plan elements themselves would not result in physical changes to the environment such that impacts related to geology and soils would occur. Therefore, this analysis focuses on impacts associated with implementation of the Housing Element which would facilitate housing development throughout Piedmont. This analysis does take into account potential effects associated with new and revised policies in the Environmental Hazards Element that are part of the proposed project as the updates to this element pertain to geology and soils hazards.

Threshold 1:	Would the project 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, strong seismic ground shaking, seismic-related ground failure, including liquefaction, or landslides?
Threshold 3:	Would the project 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?

Impact GEO-1 THE HAYWARD FAULT RUNS EAST OF PIEDMONT. SINCE NO PART OF PIEDMONT IS LOCATED WITHIN AN ALQUIST-PRIOLO ZONE, DEVELOPMENT FACILITATED BY THE PROJECT WOULD NOT BE SUBJECT TO SURFACE OR GROUND RUPTURE. DEVELOPMENT FACILITATED BY THE PROPOSED PROJECT WOULD BE SUBJECT TO SEISMICALLY-INDUCED GROUND SHAKING AND OTHER SEISMIC HAZARDS, INCLUDING LIQUEFACTION AND LANDSLIDES, WHICH COULD DAMAGE STRUCTURES AND RESULT IN LOSS OF PROPERTY AND RISK TO HUMAN HEALTH AND SAFETY. IMPACTS WOULD BE LESS THAN SIGNIFICANT WITH REQUIRED COMPLIANCE WITH STATE-MANDATED BUILDING STANDARDS, PIEDMONT GENERAL PLAN POLICIES AND ACTIONS, AND THE PCC CITYWIDE REGULATIONS. IMPACTS FOR THE MORAGA CANYON SPECIFIC PLAN AREA WOULD BE LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED AND ADHERENCE TO APPLICABLE LAWS, REGULATIONS, AND POLICIES.

Citywide Housing Element Implementation

GROUND RUPTURE

The Hayward Fault runs east of Piedmont (see Figure 4.6-1). As discussed above under "Geologic Hazards," the Hayward Fault and surrounding areas approximately 530 feet on either side of the fault are a designated Alquist-Priolo Zone. However, no part of Piedmont is within or directly adjacent to the Hayward Fault's Alquist-Priolo Zone. Therefore, development facilitated by the proposed Housing Element Implementation project would not be subject to surface or ground rupture as development would not be located in a fault zone.

SEISMIC GROUND SHAKING

Piedmont is located in a seismically active region of California and is subject to potential ground shaking associated with seismic activities. The proposed project includes increasing allowed density in Zone A and Zone B, which are the zoning districts on the eastern portion of the city running parallel to the Hayward Fault. Further, the entire city is subject to ground shaking from faults shown in Figure 4.6-1 and described in the Setting section. Because full build-out under the proposed project would increase the allowed density in Zone A, B, C, D and E, the population of Piedmont, structural development, and infrastructure would be exposed to these hazards.

As discussed above under Section 4.6.1d, the most intense ground-shaking scenario mapped in Piedmont assumes a magnitude 6.9 earthquake on the Hayward Fault. The predicted ground-shaking from such an earthquake would be "very violent" or "violent" throughout Piedmont (ABAG 2021). However, several applicable laws, regulations, and policies would reduce hazards related to rupture. New development that would occur within Piedmont would be required to conform to the CBC (as amended at the time of permit approval) as required by law. The City of Piedmont has adopted the CBC by reference pursuant to Division 8.02 of the PCC. The City of Piedmont Building Code (PCC Sections 8.02.020 and 8.02.030) includes requirements for geotechnical investigations pursuant to CBC Section 1803.2; foundation and soils investigations pursuant to CBC Section R401.4.3; foundation anchorage requirements pursuant to CBC Section R403.1.6; design requirements pursuant to CBC Section R404.1.1; and concrete or masonry foundation requirements pursuant to CBC Section R405.1 in order to resist seismic hazards. New projects would be reviewed by the city's Building Official to ensure that development would be designed and constructed consistent with the current City of Piedmont Building Codes and with the findings and recommendations of the site-specific geotechnical reports to effectively minimize or avoid potential hazards associated with redevelopment and/or new building construction. Additionally, future development facilitated by the proposed project would be required to comply with policies 18.1 through 18.5 of the City of Piedmont's Environmental Hazards Element, which would restrict development on unstable sites; maintain and enforce seismic design and construction standards; ensure infrastructure reliability; require site-specific soils reports and geologic studies for development that may be exposed to substantial geologic or seismic hazards and identify mitigation; and require seismic upgrades to structures. The proposed project would promote infill development which would replace older buildings subject to seismic damage with newer structures built to current seismic standards that could better withstand the adverse effects of strong ground shaking. Proper engineering, including compliance with the City of Piedmont Building Codes, would minimize the risk to life and property associated with potential seismic activity in the area. Impacts related to fault rupture and seismic shaking would be less than significant.

LIQUEFACTION

As mentioned above under Section 4.6.1c, liquefaction is a potential hazard associated with certain types of soils and subsurface conditions. Liquefaction occurs when saturated or partially saturated and unconsolidated soils lose strength in response to stress, typically an earthquake. This phenomenon can result in damage to infrastructure and foundations. Similarly, seismically-induced settlement, or the potential for the ground surface to lower/settle, is an existing geologic hazard that typically occurs where loose- to medium-density unconsolidated soils are located above groundwater; settlement can also be induced or exacerbated by the improper placement of artificial fill, or the placement of structures on soils or bedrock with differential settlement rates. As shown in Figure 4.6-3, Piedmont is generally located in areas of very low or low liquefaction risk, except for a small portion of the city southeast of the intersection at Grand Avenue and Oakland Avenue which is located in an area with high liquefaction risk and areas with uncompacted fill such as in Moraga Canyon. Three housing inventory sites are located adjacent to the high liquefaction zone east of Grand Avenue and one is within Moraga Canyon. Full build-out of the proposed project would increase population, structural development, and infrastructure that would be exposed to these hazards. However, as described above under Seismic Ground Shaking, proper engineering and required compliance with CBC and other City requirements such as the PCC and proposed new policies 18.1 and 18.4 in the General Plan Environmental Hazards Element would minimize the risk to life or property associated with liquefaction hazards. This impact would be less than significant.

LANDSLIDES

As shown in Figure 4.6-4, because of the varying topography, most of Piedmont is within moderate to very high landslide susceptibility zones. The western part of Piedmont generally has high landslide susceptibility, and the eastern part of the city generally has very high landslide susceptibility. Therefore, the increase in development potential allowed by the proposed project in these areas could result in impacts related to landslides. As described above, the Public Resources Code (PRC) Section 2690-2699.6, *Seismic Hazards Mapping Act,* CBC requirements as adopted in the PCC, and proposed new policies 18.8 and 18.9 and associated actions 18.A through 18.D of the General plan Environmental Hazards Element would require site-specific geotechnical investigations for individual development projects within the landslide-susceptible portions of Piedmont to identify the degree of potential hazards, design parameters for the project based on the hazard, and describe appropriate design measures to address hazards. Policies 18.8 and 18.9 of the Environmental Hazards Element are proposed new policies and are listed as follows:

> **Policy 18.8: Siting of New Developments.** Minimize risks from landslide by requiring new developments to be sited outside of hazards areas, when possible, and to incorporate design that minimizes the potential for damage.
>
> **Policy 18.9: Landslide Susceptibility Inspections.** Regularly inspect locations with high landslide susceptibility directly following major storm and atmospheric events.

Future development in Piedmont would be required to adhere to such recommendations to ensure that related hazards are adequately mitigated. Moreover, the proposed project would promote infill development which would replace older buildings subject to seismic damage with newer structures built to current seismic standards that could better withstand the adverse effects associated with unstable soils and liquefaction. Compliance with Piedmont General Plan policies, PCC, and PRC Section 2690-2699.6 would ensure that potential impacts associated with landslides would be less than significant, except in the MCSP as discussed below.

UNSTABLE SOILS

Seismic hazards in Piedmont also include the potential for unstable soils to result in damage to existing or proposed infrastructure, and/or to introduce potential hazards to human health and safety. Unstable soils may include any materials not capable of supporting a selected land use. It is anticipated that site-specific geotechnical evaluations would be conducted for individual development as the proposed project builds out. Compliance with CBC and other standards discussed in this section would minimize potential adverse effects.

In addition, projects would be required to comply with proposed policies 18.1 and 18.4 in the General Plan Environmental Hazards Element, which would restrict development on unstable sites and require site-specific soils reports and geologic studies for development which may be exposed to substantial geologic or seismic hazards.

Future development in Piedmont in areas with identified hazards would be required to appropriately address and be designed to withstand associated hazards to the maximum extent feasible. In general, the proposed project could facilitate projects that would replace older buildings subject to seismic damage with newer structures built to current seismic standards that could better withstand the adverse effects associated with unstable soils and impacts would be less than significant, except in the MCSP as discussed below.

SUMMARY

Future development under the proposed project would be subject to the policies and actions of the Piedmont General Plan (listed in the Regulatory Setting) which would minimize the risks to lives and property due to seismic and geologic hazards. Compliance with the CBC, PRC Section 2690-2699.6, General Plan policies, and the PCC would ensure that potential impacts associated with strong seismic ground shaking, unstable soils, and potential liquefaction and landslides would be less than significant, except that impacts as to unstable soils and landslides would be potentially significant in the MCSP Area, as discussed below.

Moraga Canyon Specific Plan

The MCSP would facilitate development in the MCSP Area, which is in the northeastern portion of the city closest to the nearby Hayward Fault that runs parallel to the eastern border of the city. An adopted MCSP would involve adding residential units which would increase the population, structural development, and infrastructure in the MCSP Area that would be exposed to seismic hazards.

As shown in Figure 4.6-3 and Figure 4.6-4, the MCSP Area is located within a very low liquefaction potential zone and has soil type with low shrink-swell potential (or expansivity). Most development would be anticipated to occur on areas of Moraga Canyon with gentler slopes, and development facilitated by the MCSP would be required to comply with the same State and local regulations as discussed above. Pursuant to Section R401.4.3 of the CBC, as incorporated into the PCC, development in the MCSP Area that would occur on slopes 20 percent or greater would be required to prepare a mandatory soils report, and recommendations in the report must be implemented; this would minimize potential impacts from geologic hazards. However, the MCSP Area is in a very high landslide potential zone and contains areas of non-engineered fill. Therefore, impacts related to landslides and unstable soils in the MCSP would still be potentially significant.

Mitigation Measures

The following mitigation measure is required:

MCSP-GEO-1 Geotechnical Assessment for Moraga Canyon Specific Plan Area

A geotechnical assessment shall be prepared for development in the Moraga Canyon Specific Plan Area by a qualified engineer prior to issuance of a grading permit. The geotechnical assessment shall include onsite sampling of existing soil to ascertain current conditions and characterize the potential for risks and implications for future building foundation elements. The analysis of the onsite conditions and risks shall be based on laboratory results generated in accordance with current procedures and applicable state and local construction, engineering, and geotechnical building standards at the time the assessment is prepared. The design of individual projects and/or construction shall incorporate all recommendations of the geotechnical assessment. The assessment and recommendations shall be prepared by a California-licensed professional engineer and shall comply with current state and local building codes. The intention of the geotechnical assessment is to sufficiently inform design related to geologic hazards and to help ensure that the design of building foundations, subgrades, and transportation infrastructure can withstand existing conditions, or that the individual site can be treated in such a manner as to address hazardous geologic conditions.

Significance After Mitigation

Impacts associated with the Housing Element Implementation project would be less than significant except for in the MCSP Area. In the MCSP Area, implementation of Mitigation Measure MCSP-GEO-1 would require preparation of a geotechnical assessment and incorporation of recommended measures, which would reduce impacts related to geologic hazards. Therefore, impacts associated with future development in the MCSP Area would be less than significant with mitigation.

Threshold 2: Would the project result in substantial soil erosion or the loss of topsoil?

Impact GEO-2 WITH ADHERENCE TO APPLICABLE LAWS AND REGULATIONS, THE PROPOSED PROJECT WOULD NOT RESULT IN SUBSTANTIAL SOIL EROSION OR THE LOSS OF TOPSOIL. THEREFORE, THIS IMPACT WOULD BE LESS THAN SIGNIFICANT.

Citywide Housing Element Implementation

Soil types in Piedmont are shown in Figure 4.6-2. Table 4.6-1 lists soil characteristics related to water holding capacity, permeability, shrink-swell potential, rate of surface runoff, and erosion hazard. Piedmont soils are characterized by having “low” or a “moderate” potential for erosion hazards. Development facilitated by the proposed project would involve construction activities such as stockpiling, grading, excavation, paving, and other earth-disturbing activities that could result in erosion and loss of topsoil, particularly if soils are exposed to wind or stormwater during construction.

New development in Piedmont would be required to comply with the SWRCB’s General Permit for Discharges of Stormwater Associated with Construction Activity (Construction General Permit Order 2009-0009-DWQ). Additionally, construction activities that disturb one or more acres of land surface are subject to the NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Order No. 2012-0006-DWQ) adopted by the SWRCB. Compliance with the NPDES permit requires each qualifying development project to file a Notice of Intent with the SWRCB. Permit conditions require the development of a stormwater pollution prevention plan, which must describe the site, the facility, erosion and sediment controls, runoff water quality monitoring, means of waste disposal, implementation of approved local plans, control of construction sediment and erosion control measures, maintenance responsibilities, and non-stormwater management controls. Inspection of construction sites before and after storms is also required to

identify stormwater discharge from the construction activity and to identify and implement erosion controls, where necessary. Future development would also be required to comply with Section R401.4.3 of the CBC, as incorporated into the PCC, and Policy 18.4 of the General Plan Environmental Hazards Element, which would require a foundation and soils investigation as well as a soil and geologic report to ensure any impacts to soil erosion or the loss of topsoil is mitigated.

Required compliance with aforementioned policies, NPDES permit, and other regulations would ensure that impacts associated with substantial soil erosion or loss of topsoil would be less than significant.

Moraga Canyon Specific Plan

As shown in Figure 4.6-2 and Table 4.6-1, soils in the MCSP Area are characterized by having "low" or a "moderate" potential for erosion-related hazards, and development on areas of uncompacted fill would be subject to the regulations described above. Similar to the analysis above, with adherence to the NPDES permit, the Construction General Permit, the PCC and Piedmont General Plan policies, impacts related to soil erosion and the loss of topsoil would be less than significant.

Mitigation Measures

This impact from development facilitated by the proposed Housing Element Implementation project, including development pursuant to an adopted MCSP, would be less than significant. No mitigation measures are required.

Threshold 4:	Would the project be located on expansive soil, as defined in Table 1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

Impact GEO-3 THE CITY OF PIEDMONT IS LOCATED ON SOILS WITH LOW TO MODERATE EXPANSIVITY. WITH ADHERENCE TO CBC REQUIREMENTS, THE PCC, AND PIEDMONT GENERAL PLAN POLICIES, IMPACTS ASSOCIATED WITH UNSTABLE OR EXPANSIVE SOILS WOULD BE LESS THAN SIGNIFICANT.

Citywide Housing Element Implementation

Expansive soils are characterized by high clay content which expands when saturated with water and shrinks when dry, potentially threatening the integrity of buildings and infrastructure foundations. Figure 4.6-2 shows the soil types in Piedmont which include 4 different soil types. As indicated in Table 4.6-1, many of the soil types within Piedmont have "low" to "moderate" potential for shrink-swell behavior, or expansiveness. The presence of expansive soils throughout Piedmont would make it necessary to conduct geologic investigations for all future development projects and ensure that soils for foundation support are sound. Building on unsuitable soils would have the potential to create future subsidence or collapse issues that could result in the settlement of proposed project infrastructure, and/or the disruption of utility lines and other services.

Compliance with existing State of California and local laws and regulations, such as the CBC Section R401.4.3, PCC Section 8.02.020.S, and General Plan Environmental Hazards Element policies 18.1 and 18.4, would ensure that the impacts from development associated with implementation of the proposed project on expansive soil are minimized by requiring the submittal and review of detailed soils and geologic reports prior to construction. Such evaluations must contain recommendations for ground preparation and earthwork specific to the site, which then become an integral part of the construction design. The CBC includes requirements to address soil-related hazards. Typical measures to treat hazardous soil conditions involve removal of soil or fill materials, proper fill selection, and

compaction. In cases where soil remediation is not feasible, the CBC requires structural reinforcement of foundations to resist the forces of expansive soils. Additionally, Policy 18.4 of the General Plan Environmental Hazards Element requires site-specific investigations for projects where there are soil-related hazards and implementation of design recommendations in the investigations. Compliance with the CBC, PCC and other City requirements would ensure that potential impacts associated with expansive soils would be minimized or avoided.

With adherence to CBC requirements, the PCC, and General Plan policies, impacts associated with expansive soils that could occur with implementation of future development under the proposed project would be minimized or avoided because specified studies and design considerations would be employed as relevant at the individual project level. Impacts associated with expansive soils would be less than significant.

Moraga Canyon Specific Plan

As shown in Figure 4.6-2 and Table 4.6-1, soils in the MCSP Area are characterized as having "low" potential for expansiveness, and development on uncompacted fill in this area would be subject to the requirements described above. Similar to the analysis above, with adherence to CBC requirements, the PCC, and General Plan policies, impacts related to expansive soils would be less than significant.

Mitigation Measures

This impact from development facilitated by the proposed Housing Element Implementation project, including development pursuant to an adopted MCSP, would be less than significant. No mitigation measures are required.

Threshold 5:	Would the project have 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?

Impact GEO-4 THE PROPOSED PROJECT WOULD NOT INCLUDE SEPTIC TANKS OR ALTERNATIVE WASTEWATER DISPOSAL SYSTEMS. NO IMPACT WOULD OCCUR.

Citywide Housing Element Implementation

Future development under the proposed project would be served by the East Bay Municipal Utilities District (EBMUD), which is responsible for wastewater collection, treatment, and disposal of wastewater from all residential and commercial sources within its sewer service area. Development facilitated by the proposed project would not include septic tanks or alternative wastewater disposal systems; therefore, there is no potential for adverse effects due to soil incompatibility. No impact would occur.

Moraga Canyon Specific Plan

Future development under the MCSP would be served by the EBMUD, which is responsible for wastewater collection, treatment, and disposal of wastewater from all residential and commercial sources within its sewer service area. Development facilitated by the MCSP would not include septic tanks or alternative wastewater disposal systems; therefore, there is no potential for adverse effects due to soil incompatibility. No impact would occur.

Mitigation Measures

This impact from development facilitated by the proposed Housing Element Implementation project, including development pursuant to an adopted MCSP, would be less than significant. No mitigation measures are required.

Threshold:	Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Impact GEO-5 DEVELOPMENT FACILITATED BY THE PROPOSED PROJECT HAS THE POTENTIAL TO IMPACT PALEONTOLOGICAL RESOURCES. NONETHELESS, WITH ADHERENCE TO NEW GENERAL PLAN POLICIES INCLUDED AS PART OF THE PROPOSED PROJECT, THIS IMPACT WOULD BE LESS THAN SIGNIFICANT.

Citywide Housing Element Implementation

Rincon assessed the paleontological sensitivity of each of the five geologic units underlying the City of Piedmont according to SVP (2010) standards. Four geologic units were assigned low paleontological sensitivity: Holocene alluvial fan and fluvial deposits (Qhaf), sandstone of the Novato Quarry terrane (Kfn), Franciscan Complex mélange (KJfm), and chert of the Franciscan Complex (fc). One unit located in the western part of Piedmont was assigned high paleontological sensitivity, Pleistocene alluvial fan and fluvial deposits (Qpaf).

Ground disturbing construction activities (e.g., grading, drilling, excavation, trenching) associated with this project have the potential to damage or destroy scientifically significant paleontological resources. However, the proposed project involves amendments to the General Plan Natural Resources and Sustainability Element which include adding the following new policy:

> **Paleontological Resources**. For new development that involves ground disturbance within the high sensitivity Pleistocene alluvial fan and fluvial deposits (Qpaf) geologic unit, the project applicant shall retain a Qualified Paleontologist prior to excavations who shall direct all mitigation measures related to paleontological resources. If evidence of subsurface paleontological resources is found during construction, excavation and other construction activity shall cease and the construction contractor shall contract a qualified paleontologist to evaluate the find and make appropriate recommendations. If warranted, the paleontologist shall prepare and implement a standard Paleontological Resources Mitigation Program for the salvage and curation of the identified resources.

Adherence to this policy would ensure procedures are in place for future development to manage the potential for discovery of paleontological resources. This includes the recovery, identification, and curation of previously unrecovered fossils. With adherence to this policy, this impact would be less than significant.

Moraga Canyon Specific Plan

As shown in Figure 4.6-5, the MCSP Area is located in an area assigned low paleontological sensitivity. Areas of uncompacted artificial fill have low probability of containing paleontological resources. Nonetheless, with adherence to the added Paleontological Resources policy to the General Plan Natural Resources and Sustainability Element as part of the proposed project, impacts would be less than significant.

Mitigation Measures

This impact would be less than significant with implementation of proposed new policies to the General Plan Natural Resources and Sustainability Element which are proposed as part of the project. Mitigation measures would not be required.

c. Cumulative Impacts

All development in Piedmont is subject to geological hazards related to seismic activity, including strong ground shaking. In addition, development in some parts of Piedmont could disturb potential unrecorded paleontological resources.

Cumulative development facilitated by the Housing Implementation project, as described in Section 3, *Environmental Setting,* would increase population and therefore gradually increase the number of people exposed to potential geological hazards, including effects associated with seismic events such as ground rupture and strong shaking. However, conformance with the current CBC, PCC, and City's General Plan policies and the other laws and regulations, would ensure that project-specific impacts associated with geology and soils would be less than significant; thereby reducing the potential cumulative impact associated with any single development project to a level of less than significant. Development under the proposed project could also result in soil erosion or the loss of topsoil which could result in cumulative impacts when combined with other development in Piedmont and the region that might also cause erosion. However, compliance with existing regulations would reduce potential erosion impacts associated with new development. Potential impacts associated with geology and soils would not be cumulatively considerable, and cumulative impacts related to geologic hazards would be less than significant.

Cumulative development in Piedmont would disturb areas that may contain paleontological resources. It is anticipated that potential impacts associated with individual development projects would be addressed on a case-by-case basis and would be subject to local and State regulations regarding the protection of such resources. With compliance with existing policies and regulations, as well as the proposed new policy in the General Plan as part of the proposed project, future development in Piedmont would be required to avoid or mitigate the loss of these resources. Therefore, significant cumulative paleontological resource impacts would not occur.

4.7 Greenhouse Gas Emissions

This section analyzes impacts related to greenhouse gas (GHG) emissions, including the potential for the proposed project to generate GHG emissions in excess of standards or to conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions, associated with the proposed Housing Element Implementation project.

4.7.1 Setting

Greenhouse gas emissions and climate change are a cumulative global issue. The United States Environmental Protection Agency (U.S. EPA) and the California Air Resources Board (CARB) regulate GHG emissions within the United States and the State of California, respectively. While CARB has the primary regulatory responsibility within California for GHG emissions, local agencies can also adopt policies for GHG emissions reduction. CARB has divided California into regional air basins. The project is in Alameda County, which is within the San Francisco Bay Area Air Basin (SFBAAB) and under the jurisdiction of the Bay Area Air Quality Management District (BAAQMD).

a. Climate Change and Greenhouse Gases

Climate change is the observed increase in the average temperature of the Earth's atmosphere and oceans along with other substantial changes in climate (such as wind patterns, precipitation, and storms) over an extended period. The term "climate change" is often used interchangeably with the term "global warming," but climate change is preferred because it conveys that other changes are happening in addition to rising temperatures. The baseline against which these changes are measured originates in historical records that identify temperature, rainfall, and other weather conditions, such as during previous ice ages. The global climate is changing continuously, as evidenced in the geologic record which indicates repeated episodes of substantial warming and cooling. The rate of change has typically been incremental, with warming or cooling trends occurring over the course of thousands of years. The past 10,000 years have been marked by a period of incremental warming, as glaciers have steadily retreated across the globe. However, scientists have observed acceleration in the rate of warming over the past 150 years. The United Nations Intergovernmental Panel on Climate Change (IPCC) expressed that the rise and continued growth of atmospheric carbon dioxide (CO_2) concentrations is unequivocally due to human activities in the IPCC's Sixth Assessment Report (2021). Human influence has warmed the atmosphere, ocean, and land, which has led the climate to warm at an unprecedented acceleration rate in the last 2,000 years. It is estimated that between the period of 1850 through 2019, that a total of 2,390 gigatonnes of anthropogenic (manmade) CO_2 was emitted. It is likely that anthropogenic activities have increased the global surface temperature by approximately 1.07 degrees Celsius (°C) between the years 2010 through 2019 (IPCC 2021). Furthermore, since the late 1700s, estimated concentrations of CO_2, methane, and nitrous oxide in the atmosphere have increased by over 43 percent, 156 percent, and 17 percent, respectively, primarily due to human activity (U.S. EPA 2021a). Emissions resulting from human activities are thereby contributing to an average increase in Earth's temperature.

Gases that absorb and re-emit infrared radiation in the atmosphere are called GHGs. The gases widely seen as the principal contributors to human-induced climate change include carbon dioxide (CO_2), methane (CH_4), nitrous oxides (N_2O), fluorinated gases such as hydrofluorocarbons (HFCs) and perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). Water vapor is excluded from the list of GHGs

because it is short-lived in the atmosphere, and natural processes, such as oceanic evaporation, largely determine its atmospheric concentrations.

GHGs are emitted by natural processes and human activities. Of these gases, CO_2 and CH_4 are emitted in the greatest quantities from human activities. Emissions of CO_2 are usually by-products of fossil fuel combustion, and CH_4 results from off-gassing associated with agricultural practices and landfills. Human-made GHGs, many of which have greater heat-absorption potential than CO_2, include fluorinated gases and SF_6 (U.S. EPA 2021a).

Different types of GHGs have varying global warming potentials (GWP). The GWP of a GHG is the potential of a gas or aerosol to trap heat in the atmosphere over a specified timescale (generally, 100 years). Because GHGs absorb different amounts of heat, a common reference gas (CO_2) is used to relate the amount of heat absorbed to the amount of the gas emitted. This is referred to as "carbon dioxide equivalent" (CO_2e) and is defined as the amount of GHG emitted multiplied by its GWP. Carbon dioxide has a 100-year GWP of one. By contrast, methane has a GWP of 30, meaning its global warming effect is 30 times greater than CO_2 on a molecule per molecule basis (IPCC 2021).[1]

The accumulation of GHGs in the atmosphere regulates the earth's temperature. Without the natural heat-trapping effect of GHGs, the earth's surface would be about 91 degrees Fahrenheit (°F) cooler (World Meteorological Organization 2022).

b. Global Emissions Inventory

In 2015, worldwide anthropogenic GHG emissions totaled 47,000 million metric tons (MMT) of CO_2e, which is a 43 percent increase from 1990 GHG levels (U.S. EPA 2021b). Specifically, 34,522 MMT of CO_2e of CO_2, 8,241 MMT of CO_2e of CH_4, 2,997 MMT of CO_2e of N_2O, and 1,001 MMT of CO_2e of fluorinated gases were emitted in 2015. The largest source of GHG emissions were energy production and use (includes fuels used by vehicles and buildings), which accounted for 75 percent of the global GHG emissions. Agriculture uses and industrial processes contributed 12 percent and six percent, respectively. Waste sources contributed three percent, and two percent was due to international transportation sources. These sources account for approximately 98 percent because there was a net sink of two percent from land-use change and forestry. (U.S. EPA 2021b).

United States Emissions Inventory

Total U.S. GHG emissions were 6,558 MMT of CO_2e in 2019. Emissions decreased by 1.7 percent from 2018 to 2019; since 1990, total U.S. emissions have increased by an average annual rate of 0.06 percent for a total increase of 1.8 percent between 1990 and 2019. The decrease from 2018 to 2019 reflects the combined influences of several long-term trends, including population changes, economic growth, energy market shifts, technological changes such as improvements in energy efficiency, and decrease in carbon intensity of energy fuel choices. In 2019, the industrial and transportation end-use sectors accounted for 30 percent and 29 percent, respectively, of nationwide GHG emissions while the commercial and residential end-use sectors accounted for 16 percent and 15 percent of nationwide GHG emissions, respectively, with electricity emissions distributed among the various sectors (U.S. EPA 2021c).

[1] The Intergovernmental Panel on Climate Change's (2021) *Sixth Assessment Report* determined that methane has a GWP of 30. However, the 2017 Climate Change Scoping Plan published by the California Air Resources Board uses a GWP of 25 for methane, consistent with the Intergovernmental Panel on Climate Change's (2007) *Fourth Assessment Report*. Therefore, this analysis utilizes a GWP of 25.

California Emissions Inventory

Based on the CARB California Greenhouse Gas Inventory for 2000-2019, California produced 418.2 MMT of CO_2e in 2019, which is 7.2 MMT of CO_2e lower than 2018 levels. The major source of GHG emissions in California is the transportation sector, which comprises 40 percent of the State of California's total GHG emissions. The industrial sector is the second largest source, comprising 21 percent of the State's GHG emissions while electric power accounts for approximately 14 percent (CARB 2021). The magnitude of California's total GHG emissions is due in part to its large size and large population compared to other states. However, a factor that reduces California's per capita fuel use and GHG emissions as compared to other states is its relatively mild climate. In 2016, the State of California (State) achieved its 2020 GHG emission reduction target of reducing emissions to 1990 levels as emissions fell below 431 MMT of CO_2e (CARB 2021). The annual 2030 statewide target emissions level is 260 MMT of CO_2e (CARB 2017).

Local Emissions Inventory

Based on the City's 2021 GHG inventory, Piedmont's in-territory (i.e., occurring within City boundaries) emissions totaled approximately 32,357 metric tons of CO_2e ($MTCO_2e$). This was a 34 percent reduction below 2005 levels of 48,818 $MTCO_2e$, and 3.1 percent reduction compared to 2020 levels of 33,402 $MTCO_2e$. The reduction is largely a result of Piedmont's residential and municipal enrollment in Ava Community Energy (Ava, formally known as East Bay Community Energy) 100 percent Renewable Energy service plan (carbon-free service). 96 percent of emissions for residential energy was attributed to natural gas use, and the remaining 4 percent to residential electricity use. Residential electricity emissions have decreased by 97 percent since 2005 (City of Piedmont 2023).

In 2021, the sectors that contributed the most to Piedmont's community in-territory GHG emissions were transportation and mobile sources (48 percent) and residential energy (47 percent). Transportation and mobile sources resulted in approximately 15,115 $MTCO_2e$, while residential energy resulted in approximately 15,491 $MTCO_2e$. The remaining sectors that contributed to Piedmont's community in-territory GHG emissions include fugitive emissions (2 percent), solid waste (1 percent), commercial energy (1 percent), and water and wastewater (less than 1 percent) (City of Piedmont 2023).

c. Potential Effects of Climate Change

Globally, climate change has the potential to affect numerous environmental resources though potential impacts related to future air temperatures and precipitation patterns. Scientific modeling predicts that continued GHG emissions at or above current rates would induce more extreme climate changes during the 21st century than were observed during the 20th century. Each of the past three decades has been warmer than all the previous decades in the instrumental record, and the decade from 2000 through 2010 has been the warmest on record. The observed global mean surface temperature (GMST) from 2015 to 2017 was approximately 1.0°C higher than the average GMST over the period from 1880 to 1900 (National Oceanic and Atmospheric Administration 2020). Furthermore, several independently analyzed data records of global and regional Land-Surface Air Temperature (LSAT) obtained from station observations jointly indicate that LSAT and sea surface temperatures have increased.

According to *California's Fourth Climate Change Assessment*, statewide temperatures from 1986 to 2016 were approximately 0.6 to 1.1°C higher than those recorded from 1901 to 1960. Potential impacts of climate change in California may include reduced water supply from snowpack, sea level

rise, more extreme heat days per year, more large wildfires, and more drought years (State of California 2018). In addition to statewide projections, *California's Fourth Climate Change Assessment* includes regional reports that summarize climate impacts and adaptation solutions for nine regions of the State and regionally specific climate change case studies (State of California 2018). However, while there is growing scientific consensus about the possible effects of climate change at a global and statewide level, current scientific modeling tools are unable to predict what local impacts may occur with a similar degree of accuracy. A summary follows of some of the potential effects that could be experienced in California as a result of climate change.

Air Quality and Wildfires

Scientists project that the annual average maximum daily temperatures in California could rise by 2.4 to 3.2°C in the next 50 years and by 3.1 to 4.9°C in the next century (State of California 2018). Higher temperatures are conducive to air pollution formation, and rising temperatures could therefore result in worsened air quality in California. As a result, climate change may increase the concentration of ground-level ozone, but the magnitude of the effect, and therefore its indirect effects, are uncertain. In addition, as temperatures have increased in recent years, the area burned by wildfires throughout the State has increased, and wildfires have occurred at higher elevations in the Sierra Nevada Mountains (State of California 2018). If higher temperatures continue to be accompanied by an increase in the incidence and extent of large wildfires, air quality could worsen. Severe heat accompanied by drier conditions and poor air quality could increase the number of heat-related deaths, illnesses, and asthma attacks throughout the State. However, if higher temperatures are accompanied by possible wetter, rather than drier conditions, the rains could tend to temporarily clear the air of particulate pollution, which would effectively reduce the number of large wildfires and thereby ameliorate the pollution associated with them (California Natural Resources Agency 2009).

Water Supply

Analysis of paleoclimatic data (such as tree-ring reconstructions of stream flow and precipitation) indicates a history of naturally and widely varying hydrologic conditions in California and the West, including a pattern of recurring and extended droughts. Uncertainty remains with respect to the overall impact of climate change on future precipitation trends and water supplies in California. Year-to-year variability in statewide precipitation levels has increased since 1980, meaning that wet and dry precipitation extremes have become more common (California Department of Water Resources 2018). This uncertainty regarding future precipitation trends complicates the analysis of future water demand, especially where the relationship between climate change and its potential effect on water demand are not well understood. The average early spring snowpack in the western U.S., including the Sierra Nevada Mountains, decreased by about 10 percent during the last century. During the same period, sea level rose over 0.15 meter along the central and southern California coasts (State of California 2018). The Sierra snowpack provides the majority of California's water supply as snow that accumulates during wet winters is released slowly during the dry months of spring and summer. A warmer climate is predicted to reduce the fraction of precipitation that falls as snow and the amount of snowfall at lower elevations, thereby reducing the total snowpack (State of California 2018). Projections indicate that average spring snowpack in the Sierra Nevada and other mountain catchments in central and northern California will decline by approximately 66 percent from its historical average by 2050 (State of California 2018).

Hydrology and Sea Level Rise

Climate change could affect the intensity and frequency of storms and flooding (State of California 2018). Furthermore, climate change could induce substantial sea level rise in the coming century. Rising sea level increases the likelihood of and risk from flooding and erosion of coastal areas. The rate of increase of global mean sea levels between 1993 to 2020, observed by satellites, is approximately 3.3 millimeters per year, double the twentieth century trend of 1.6 millimeters per year (World Meteorological Organization 2022; National Aeronautics and Space Administration 2020). Global mean sea levels in 2013 were about 0.23 meter higher than those of 1880 (National Aeronautics and Space Administration 2020). Sea levels are rising faster now than in the previous two millennia, and the rise will probably accelerate, even with robust GHG emission control measures. The most recent IPCC report predicts a mean sea level rise ranging between 0.25 to 1.01 meters by 2100 with the sea level ranges dependent on a low, intermediate, or high GHG emissions scenario (IPCC 2021). A rise in sea levels could erode 31 to 67 percent of southern California beaches and cause flooding of approximately 370 miles of coastal highways during 100-year storm events. This would also jeopardize California's water supply due to saltwater intrusion and induce groundwater flooding and/or exposure of buried infrastructure (State of California 2018). Furthermore, increased storm intensity and frequency could affect the ability of flood-control facilities, including levees, to handle storm events.

Agriculture

California has an over $50 billion annual agricultural industry that produces over a third of the country's vegetables and two-thirds of the country's fruits and nuts (California Department of Food and Agriculture 2020). Higher CO_2 levels can stimulate plant production and increase plant water-use efficiency. However, if temperatures rise and drier conditions prevail, certain regions of agricultural production could experience water shortages of up to 16 percent, which would increase water demand as hotter conditions lead to the loss of soil moisture. In addition, crop yield could be threatened by water-induced stress and extreme heat waves, and plants may be susceptible to new and changing pest and disease outbreaks (State of California 2018). Temperature increases could also change the time of year certain crops, such as wine grapes, bloom or ripen, and thereby affect their quality (California Climate Change Center 2006).

Ecosystems

Climate change and the potential resultant changes in weather patterns could have ecological effects on the global and local scales, including habitat for plants, animals, and people. Soil moisture is likely to decline in many regions as a result of higher temperatures, and intense rainstorms are likely to become more frequent. Rising temperatures could have four major impacts on plants and animals: timing of ecological events; geographic distribution and range of species; species composition and the incidence of nonnative species within communities; and ecosystem processes, such as carbon cycling and storage (Parmesan 2006; State of California 2018).

4.7.2 Regulatory Setting

a. Federal Regulations

Federal GHG Emissions Regulation

The U.S. Supreme Court in *Massachusetts et al. v. Environmental Protection Agency et al.* ([2007] 549 U.S. 497) held that the U.S. EPA has the authority to regulate motor-vehicle GHG emissions under the federal Clean Air Act. The U.S. EPA issued a Final Rule for mandatory reporting of GHG emissions in October 2009. This Final Rule applies to fossil fuel suppliers, industrial gas suppliers, direct GHG emitters, and manufacturers of heavy-duty and off-road vehicles and vehicle engines, and requires annual reporting of emissions. In 2012, the U.S. EPA issued a Final Rule that establishes the GHG permitting thresholds that determine when Clean Air Act permits under the New Source Review Prevention of Significant Deterioration (PSD) and Title V Operating Permit programs are required for new and existing industrial facilities.

In 2014, the U.S. Supreme Court in Utility Air Regulatory Group v. EPA (134 S. Ct. 2427 [2014]) held that U.S. EPA may not treat GHGs as an air pollutant for purposes of determining whether a source is a major source required to obtain a PSD or Title V permit. The Court also held that PSD permits that are otherwise required (based on emissions of other pollutants) may continue to require limitations on GHG emissions based on the application of best available control technology.

Safer Affordable Fuel-Efficient Vehicle Rule

On September 27, 2019, the U.S. EPA and the National Highway Safety Administration published the "Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule Part One: One National Program." The Part One Rule revokes California's authority to set its own GHG emissions standards and set zero-emission vehicle mandates in California. To account for the effects of the Part One Rule, CARB released off-model adjustment factors on November 20, 2019, to adjust criteria air pollutant emissions outputs from the EMFAC model. The Final SAFE Rule (i.e., Part Two) then relaxed federal GHG emissions and Corporate Average Fuel Economy standards to increase in stringency at only about 1.5 percent per year from model year 2020 levels over model years 2021-2026 (CARB 2020). The previously established emission standards and related fuel economy standards would have achieved about four percent per year improvements through model year 2025. Therefore, CARB has prepared off-model CO_2 emissions adjustment factors for both the EMFAC2014 and EMFAC2017 models to account for the impact of the SAFE Vehicles Rule (CARB 2020). With the incorporation of these adjustment factors, operational emission factors for CO_2 generated by light-duty automobiles, light-duty trucks, and medium-duty trucks associated with project-related vehicle trips may increase by approximately one percent (in 2020) up to as much as 17 percent (in 2050) compared to non-adjusted estimates. These increases would not alter the significance of the operational GHG emissions from development facilitated by the project as studied in this EIR and discussed further below.

b. State Regulations

California's Advanced Clean Cars program (Assembly Bill 1493)

Assembly Bill (AB) 1493 (2002), California's Advanced Clean Cars program (referred to as Pavley), requires CARB to develop and adopt regulations to achieve "the maximum feasible and cost-effective reduction of GHG emissions from motor vehicles." On June 30, 2009, U.S. EPA granted the waiver of Clean Air Act preemption to California for its GHG emission standards for motor vehicles beginning

with the 2009 model year. Pavley I regulates model years from 2009 to 2016 and Pavley II, which is now referred to as "Low Emission Vehicle III GHG", regulates model years from 2017 to 2025. The Advanced Clean Cars program coordinates the goals of the Low Emission Vehicle, Zero Emissions Vehicles, and Clean Fuels Outlet programs, and would provide major reductions in GHG emissions. By 2025, when the rules will be fully implemented, new automobiles will emit 34 percent fewer GHGs and 75 percent fewer smog-forming emissions compared to their model year 2016 levels (CARB 2011). The implementation of these rules is currently delayed due to the SAFE Vehicle Rule, described under *Federal Regulations*.

Assembly Bill 32 (Global Warming Solutions Act and Scoping Plan)

California's major initiative for reducing GHG emissions is outlined in Assembly Bill (AB) 32, the "California Global Warming Solutions Act of 2006," which was signed into law in 2006. AB 32 codifies the statewide goal of reducing GHG emissions to 1990 levels by 2020 and requires CARB to prepare a Scoping Plan that outlines the main State strategies for reducing GHGs to meet the 2020 deadline. In addition, AB 32 requires CARB to adopt regulations to require reporting and verification of statewide GHG emissions. Based on this guidance, CARB approved a 1990 Statewide GHG level and 2020 limit of 427 million $MTCO_2e$. The Scoping Plan was approved by CARB on December 11, 2008 and included measures to address GHG emission reduction strategies related to energy efficiency, water use, and recycling and solid waste, among other measures. Many of the GHG reduction measures included in the Scoping Plan (e.g., Low Carbon Fuel Standard, Advanced Clean Car standards, and Cap-and-Trade) have been adopted since approval of the Scoping Plan.

In May 2014, CARB approved the first update to the AB 32 Scoping Plan. The 2013 Scoping Plan Update defined CARB's climate change priorities for the next five years and set the groundwork to reach post-2020 Statewide goals. The 2013 Scoping Plan Update highlighted California's progress toward meeting the 2020 GHG emission reduction goals defined in the original Scoping Plan. It also evaluated how to align the State's longer-term GHG reduction strategies with other State policy priorities, including those for water, waste, natural resources, clean energy, transportation, and land use. The State of California achieved its 2020 GHG emission reduction targets in 2016, and emissions have subsequently fallen further in 2018 to 425 $MMTCO_2e$.

Senate Bill 32 (Global Warming Solutions Act and Scoping Plan Extension)

Senate Bill (SB) 32 signed into law on September 8, 2016, tightens the requirements of AB 32 by requiring the State to further reduce GHGs to 40 percent below 1990 levels by 2030 (the other provisions of AB 32 remain unchanged). On December 14, 2017, CARB adopted the 2017 Scoping Plan, which provides a framework for achieving the 2030 target. The 2017 Scoping Plan relies on the continuation and expansion of existing policies and regulations, such as the Cap-and-Trade Program, as well as implementation of recently adopted policies, such as SB 350 and SB 1383. The 2017 Scoping Plan also puts an increased emphasis on innovation, adoption of existing technology, and strategic investment to support its strategies. As with the 2013 Scoping Plan Update, it recommends that local governments adopt policies consistent with statewide per capita goals of 6 $MTCO_2e$ by 2030 and 2 $MTCO_2e$ by 2050. As stated in the 2017 Scoping Plan, these goals may be appropriate for plan-level analyses (city, county, subregional, or regional level).

AB 1279 (California Climate Crisis Act and Scoping Plan Extension)

The California Climate Crisis Act (AB 1279), signed into law on September 16, 2022, requires the State to achieve and maintain net zero GHG emissions as soon as possible, but not later than 2045. The Climate Crisis Act also requires the State to reduce Statewide anthropogenic GHG emissions to 85 percent below the 1990 levels by 2045. Updates to the Scoping Plan are required to identify and recommend measures to achieve these goals and identify and implement policies and strategies that enable carbon dioxide removal solutions and carbon capture, utilization, and storage technologies in the State.

On November 16, 2022, CARB also adopted the 2022 Scoping Plan, which provides a framework for achieving targets for carbon neutrality and reducing anthropogenic GHG emissions by 85 percent below 1990 levels no later than 2045, as directed by AB 1279. The 2022 Scoping Plan relies on significant reductions in fossil fuel combustion by deploying clean technologies and fuels, further reductions in short-lived climate pollutants, support for sustainable development, increased action on natural and working lands to reduce emissions and sequester carbon, and the capture and storage of carbon.

Renewables Portfolio Standard Program (Senate Bill 100)

Adopted on September 10, 2018, SB 100 supports the reduction of GHG emissions from the electricity sector by accelerating the State's Renewables Portfolio Standard Program, which was last updated by SB 350 in 2015. SB 100 requires electricity providers to increase procurement from eligible renewable energy resources to 33 percent of total retail sales by 2020, 60 percent by 2030, and 100 percent by 2045.

Senate Bill 97 and CEQA Guidelines Update

SB 97, signed in August 2007, acknowledges that climate change is an environmental issue that requires analysis in CEQA documents. In March 2010, the California Natural Resources Agency adopted amendments to the *CEQA Guidelines* for the feasible mitigation of GHG emissions and analysis of the effects of GHG emissions. The adopted guidelines give lead agencies the discretion to set quantitative or qualitative thresholds for the assessment and mitigation of GHG and climate change impacts.

Senate Bill 375

SB 375, signed in August 2008, enhances the State's ability to reach AB 32 goals by directing CARB to develop regional GHG emission reduction targets to be achieved from passenger vehicles by 2020 and 2035. SB 375 directs each of the State's 18 major Metropolitan Planning Organizations to prepare a "sustainable communities strategy" (SCS) that contains a growth strategy to meet these emission targets for inclusion in the Regional Transportation Plan. On March 22, 2018, CARB adopted updated regional targets for reducing GHG emissions from 2005 levels by 2020 and 2035. ABAG was assigned targets of a 10 percent reduction in GHGs from transportation sources by 2020 and a 19 percent reduction in GHGs from transportation sources by 2035. In the ABAG region, SB 375 also provides the option for the coordinated development of subregional plans by the subregional councils of governments and the county transportation commissions to meet SB 375 requirements.

PRC Division 30 Part 3 Chapter 13.1 and Health and Safety Code Sections 39730.5-8 (Senate Bill 1383)

Adopted in September 2016, SB 1383 requires the CARB to approve and begin implementing a comprehensive strategy to reduce emissions of short-lived climate pollutants. The bill requires the strategy to achieve the following reduction targets by 2030:

1. Methane – 40 percent below 2013 levels
2. Hydrofluorocarbons – 40 percent below 2013 levels
3. Anthropogenic black carbon – 50 percent below 2013 levels

The bill also requires the California Department of Resources Recycling and Recovery (CalRecycle), in consultation with CARB, to adopt regulations that achieve specified targets for reducing organic waste in landfills.

Executive Order B-55-18

On September 10, 2018, Governor Brown issued Executive Order B-55-18, which established a new statewide goal of achieving carbon neutrality by 2045 and maintaining net negative emissions thereafter. This goal is in addition to the existing statewide GHG reduction targets established by SB 375, SB 32, SB 1383, and SB 100.

California Code of Regulations Title 24 (California Building Code)

The California Energy Commission (CEC) first adopted the Energy Efficiency Standards for Residential and Nonresidential Buildings (CCR, Title 24, Part 6) in 1978 in response to a legislative mandate to reduce energy consumption in the State. Although not originally intended to reduce GHG emissions, increased energy efficiency, and reduced consumption of electricity, natural gas, and other fuels would result in fewer GHG emissions from residential and nonresidential buildings subject to the standard. The standards are updated periodically to allow for the consideration and inclusion of new energy efficiency technologies and methods.

Part 11 of the Title 24 Building Standards is referred to as the California Green Building Standards (CALGreen) Code and was developed to help the State achieve its GHG reduction goals under HSC Division 25.5 (e.g., AB 32) by codifying standards for reducing building-related energy, water, and resource demand, which in turn reduces GHG emissions from energy consumption, water storage and delivery, and other resource consumption activities. The purpose of the CALGreen Code 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 positive environmental impact and encouraging sustainable construction practices in the following categories: (1) planning and design; (2) energy efficiency; (3) water efficiency and conservation; (4) material conservation and resource efficiency; and (5) environmental air quality." The CALGreen Code is not intended to substitute for or be identified as meeting the certification requirements of any green building program that is not established and adopted by the California Building Standards Commission. The CALGreen Code establishes mandatory measures for new residential and non-residential buildings. Such mandatory measures include energy efficiency, water conservation, material conservation, planning and design, and overall environmental quality.

On August 11, 2021, the CEC adopted the 2022 Title 24 Standards, which went into effect on January 1, 2023. The 2022 standards continue to improve upon the previous (2019) Title 24 standards for new construction of, and additions and alterations to, residential and non-residential buildings (CEC 2022a). The 2022 Title 24 Standards "build on California's technology innovations, encouraging energy efficient approaches to encourage building decarbonization, emphasizing in particular on heat pumps for space heating and water heating. This set of Energy Codes also extends the benefits of photovoltaic and battery storage systems and other demand flexible technology to work in combinations with heat pumps to enable California buildings to be responsive to climate change. This Energy code also strengthens ventilation standards to improve indoor air quality. This update provides crucial steps in the state's progress toward 100 percent clean carbon neutrality by midcentury" (CEC 2022b). The 2022 Energy Code is anticipated to reduce GHG emissions by 10 MMT of CO_2e over the next 30 years and result in approximately 1.5 billion dollars in consumer savings (CEC 2022c). Compliance with Title 24 is enforced through the building permit process.

Assembly Bill 341/Assembly Bill 1826 (Mandatory Recycling/Composting)

The California Integrated Waste Management Act of 1989, as modified by AB 341, requires each jurisdiction's source reduction and recycling element to include an implementation schedule that shows diversion away from landfills of 75 percent of all solid waste by 2020 and annually thereafter. AB 1826 requires recycling of organic waste (i.e., composting). All businesses and public entities that generate four or more cubic yards of solid waste per week and multi-family residential dwellings that have five or more units are required to recycle and compost.

Senate Bill 1383

In September 2016, Governor Brown signed Senate Bill 1383 into law. SB 1383 establishes methane reduction targets as part of a larger strategy to combat climate change and reduce greenhouse gas emissions. The law establishes a mandated target to achieve a 75 percent reduction in statewide disposal of organic waste by 2025 and requires the state to increase edible food recovery by 20 percent for human consumption by 2025. To achieve these targets, the California Department of Resources, Recycling, and Recovery (CalRecycle) developed a series of rules for all cities and counties throughout California to implement. The regulations were finalized by CalRecycle in November 2020 and take effect on January 1, 2022.

Senate Bills 350 and 100 (Renewable Portfolio/Clean Energy and Pollution Reduction Act)

The Clean Energy and Pollution Reduction Act of 2015 (SB 350) requires the amount of electricity generated and sold to retail customers per year from eligible renewable energy resources to be increased to 50 percent by December 31, 2030. This act also requires doubling of the energy efficiency in existing buildings by 2030.

Adopted on September 10, 2018, SB 100 supports the reduction of GHG emissions from the electricity sector by accelerating the State's Renewables Portfolio Standard Program, which was last updated by SB 350 in 2015. SB 100 requires electricity providers to increase procurement from eligible renewable energy resources to 33 percent of total retail sales by 2020, 44 percent by 2024, 60 percent by 2030, and 100 percent by 2045.

Assembly Bill 1493 (Reduce GHG Emissions from Vehicle Use)

AB 1493 (Chapter 200, Statutes of 2002), known as the first Pavley Bill, amended Health and Safety Code Sections 42823 and added 43018.5 requiring CARB to develop and adopt regulations that achieve maximum feasible and cost-effective reduction of GHG emissions from passenger vehicles, light-duty trucks, and other vehicles used for noncommercial personal transportation in California.

Assembly Bill 1007 (State Alternative Fuels Plan)

AB 1007 (Chapter 371, Statutes of 2005) required the CEC to prepare a State plan to increase the use of alternative fuels in California. The CEC prepared the State Alternative Fuels Plan (SAF Plan) in partnership with CARB and in consultation with other federal, State, and local agencies. The SAF Plan presents strategies and actions California must take to increase the use of alternative non-petroleum fuels in a manner that minimizes costs to California and maximizes the economic benefits of in-State production. The SAF Plan assessed various alternative fuels and developed fuel portfolios to meet California's goals to reduce petroleum consumption, increase alternative fuels use, reduce GHG emissions, and increase in-State production of biofuels without causing a significant degradation of public health and environmental quality.

CARB In-Use On-Road and Off-Road Diesel Rules

The CARB rule imposes limits on idling, restricts the addition of older vehicles, and requires the retirement or replacement of older engines depending on their fleet size category. This policy indirectly impacts energy consumption. More specifically, CARB is also charged with developing air pollution control regulations based upon the best available control measures and implementing feasible control measures under the State and Federal Clean Air Act. (Health & Saf. Code, §§ 39602.5, 39667, 43013, subds. (a) and (h), 43018, 40600, 40601, 40612(a)(2) and (c)(1)(A).) Pursuant to these statutory authorities, more stringent emission standards were adopted in 2004 for off-road construction equipment (i.e., "Tier 4" standards) (40 Code of Federal Regulations Parts 1039, 1065, and 1068; Cal. Code Regs., tit. 13, § 2025; AR 2854). CARB also adopted emission standards for on-road heavy duty diesel vehicles (i.e. haul trucks). (Cal. Code Regs., tit. 13, § 1956.8.) These haul truck regulations mandate fleet turn-over to ensure that by January 1, 2023 nearly all on-road diesel trucks will have 2010 model year engines or equivalent [i.e. Tier 4]. In addition, interim steps are incorporated into the regulations (e.g., vehicles older than 1999 will be replaced with newer engines by 2020).

California Advance Clean Trucks Program

In June 2020, CARB approved the Advanced Clean Trucks regulation, which requires manufacturers who certify Class 2b-8 chassis or complete vehicles with combustion engines to sell zero-emission trucks as an increasing percentage of their annual California sales from 2024 to 2035. In addition, the regulation requires company and fleet reporting for large employers and fleet owners with 50 or more trucks. By 2045, all new trucks sold in California must be zero-emission. Implementation of this regulation would reduce consumption of nonrenewable transportation fuels as trucks transition to alternative fuel sources.

Executive Order B-48-18 (Zero-Emission Vehicles)

On January 26, 2018, Governor Brown signed Executive Order B-48-18 requiring all State entities to work with the private sector to have at least 5 million zero-emission vehicles (ZEVs) on the road by 2030, as well as install 200 hydrogen fueling stations and 250,000 electric vehicle (EV) charging stations by 2025. It specifies that 10,000 of the EV charging stations should be direct current fast chargers. This order also requires all State entities to continue to partner with local and regional governments to streamline the installation of ZEV infrastructure. The Governor's Office of Business and Economic Development is required to publish a Plug-in Charging Station Design Guidebook and update the 2015 Hydrogen Station Permitting Guidebook to aid in these efforts. All State entities are required to participate in updating the 2016 Zero-Emissions Vehicle Action Plan, along with the 2018 ZEV Action Plan Priorities Update, which includes and extends the 2016 ZEV Action Plan (Governor's Interagency Working Group on Zero-Emission Vehicles 2016, 2018), to help expand private investment in ZEV infrastructure with a focus on serving low-income and disadvantaged communities.

Executive Order N-79-20 (Zero Emissions Vehicles Sales)

Governor Gavin Newsom signed Executive Order N-79-20 in September 2020, which sets a statewide goal that 100 percent of all new passenger car and truck sales in the State will be zero-emissions by 2035. It also sets a goal that 100 percent of statewide new sales of medium- and heavy-duty vehicles will be zero emissions by 2045, where feasible, and for all new sales of trucks to be zero emissions by 2035. Additionally, the Executive Order targets 100 percent of new off-road vehicle sales in the State to be zero emission by 2035. CARB is responsible for implementing the new vehicle sales regulation.

Senate Bill 1020

Senate Bill 1020 (SB 1020), signed into law on September 16, 2022, requires renewable energy and zero-carbon resources to supply 90 percent of all retail electricity sales by 2035, 95 percent by 2040, and 100 percent by 2045. All State agencies facilities must be served by 100 percent renewable and zero-carbon resources by 2030. SB 1020 also requires the Public Utilities Commission, Energy Commission, and CARB to issue a joint progress report outlining the reliability of the electrical grid with a focus on summer reliability, as well as challenges and gaps. Additionally, SB 1020 requires the Public Utilities Commission to define energy affordability and use energy affordability metrics to develop protections, incentives, discounts, or new programs for residential customers facing hardships due to energy or gas bills.

CARB Gas Appliances Sales Ban

As part of the 2022 State Implementation Plan, CARB adopted a ban on new sales of natural gas heaters, water heaters, and furnaces by 2030 in September of 2022. This new measure is intended to reduce emissions from new residential and commercial space and water heaters sold in the State. An emission standard for space and water heaters will go into effect in 2030. Beginning in 2030, 100 percent of the sales of new natural gas-powered heaters and water heaters would need to comply with the emission standard, such as putting in electric heaters or other zero-emission options.

c. Regional and Local Regulations

Bay Area Air Quality Management District

In 2013, the Bay Area Air Quality Management District (BAAQMD) adopted resolution no. 2013-11, "Resolution Adopting a Greenhouse Gas Reduction Goal and Commitment to Develop a Regional Climate Protection Strategy" that builds on State and regional climate protection efforts by (BAAQMD 2013):

1. Setting a goal for the Bay Area region to reduce GHG emissions by 2050 to 80 percent below 1990 levels.
2. Developing a Regional Climate Protection Strategy to make progress towards the 2050 goal, using BAAQMD's Clean Air Plan to initiate the process.
3. Developing a 10-point work program to guide the BAAQMD's climate protection activities in the near-term.

BAAQMD is currently developing the Regional Climate Protection Strategy and has outlined the 10-point work program, which includes policy approaches, assistance to local governments, and technical programs that will help the region make progress toward the 2050 GHG emissions goal.

BAAQMD is responsible for enforcing standards and regulating stationary sources in its jurisdiction, including the San Francisco Bay Area Air Basins and the City of Piedmont. BAAQMD regulates GHG emissions through specific rules and regulations, as well as project and plan level emissions thresholds for GHGs to ensure that new land use development in the San Francisco Bay Area Air Basin contributes to its fair share of emissions reductions (BAAQMD 2017).

Plan Bay Area 2050

Plan Bay Area 2050 is a state-mandated, integrated long-range transportation, land-use, and housing plan (sustainable communities strategy or SCS) that would support a growing economy, provide more housing and transportation choices, and reduce transportation-related pollution in the nine-county San Francisco Bay Area (MTC/ABAG 2021). The SCS builds on earlier efforts to develop an efficient transportation network and grow in a financially and environmentally responsible way. Plan Bay Area 2050 focuses on advancing equity and improving resiliency in the Bay Area by creating strategies in the following four elements: Housing, Economy, Transportation, and Environment. The Plan discusses how the future of the region is uncertain due to anticipated employment growth, lack of housing options, and outside forces, such as climate change and economic turbulence. These uncertainties will impact growth in the Bay Area and exacerbate issues for all residents including those who are historically and systemically marginalized, underserved, and excluded. Thus, Plan Bay Area 2050 has created strategies and considered investments that will serve those systemically underserved communities and provide equitable opportunities. The Plan presents a total of 35 strategies to outline how the $1.4 trillion dollar investment would be utilized. The strategies include, but are not limited to, the following: providing affordable housing, allowing higher-density in proximity to transit-corridors, optimizing the existing roadway network, creating complete streets, providing subsides for public transit, reducing climate emissions, and expanding open space area. To bring these strategies to fruition, Plan Bay Area 2050 will require participation by agencies, policymakers, and the public. An implementation plan is also included as part of the Plan to assess the requirements needed to carry out the strategies, identify the roles of pertinent entities, create an appropriate method to implement the strategies, and create a timeline for implementation (ABAG/MTC 2021).

City of Piedmont General Plan

The Piedmont General Plan, adopted in April 2009 and last updated in 2019 (Environmental Hazards Element), includes the following applicable policies and actions as part of the Natural Resources and Sustainability Element and Transportation Element that support the goal of reducing GHG emissions (City of Piedmont 2009a, 2009b):

Transportation Element

Policy 7.1: Balancing Travel Modes. Ensure that transportation planning balances the needs of motorists, transit users, pedestrians, and bicycles. Where feasible, future land use and transportation decisions should discourage driving in single passenger autos and instead encourage alternative modes of travel.

Policy 9.3: Transit Vehicles. Due to the high operating expense and greater impacts of full-size transit vehicles on Piedmont streets, encourage the use of mini-buses, shuttles, paratransit, and other smaller vehicle transit systems. Also, encourage the use of quiet, clean-fuel buses on Piedmont streets.

Policy 10.5: Bicycle Infrastructure. Expand the "infrastructure" necessary to accommodate bicycle travel, including bike racks in parks, at schools, and at public buildings, and adequate space for bicycle storage in residential garages.

Natural Resources and Sustainability Element

Policy 15.1: Transportation Control Measures. Implement transportation control measures (TCMs) to reduce air pollution emissions at the local level. This should include measures to promote walking and bicycling, continue casual carpooling, sustain or increase public transit service to Piedmont, and coordinate with other jurisdictions to create a more balanced and integrated transportation system.

Policy 15.2: Alternative Fuel Vehicles. Encourage the use of cleaner-burning fuels and low-emission vehicles. This could include providing infrastructure for "plug-in" vehicles; hydrogen fuel pumps at the city's gas stations; and a gradual switch to hybrid, electric, or alternative fuel vehicles for the City fleet.

Policy 16.1: Linking Land Use and Transportation Choices. Consistent with the Land Use and Transportation Elements of this plan, retain walkable neighborhoods, reliable public transportation, safe cycling, carpooling, convenient access to shops and services, and other measures which reduce the need for driving and fuel consumption in Piedmont.

Action 17.A: Climate Action Plan. Complete and adopt a Piedmont Climate Action Plan that identifies the steps the City can take to reduce greenhouse gas emissions and achieve the emission reduction targets established by Assembly Bill 32.

Policy 17.3: Alternative Energy Sources. Encourage the use of alternative energy sources, such as solar power and wind energy, by Piedmont residents.

City of Piedmont Climate Action Plan

The City of Piedmont first adopted its Climate Action Plan (CAP) in March 2010 and updated it in March 2018 (CAP 2.0) (City of Piedmont 2018). In July 2023, the City adopted amendments to the CAP 2.0 establishing updated GHG emission reduction goals to align with current State, federal, and global

targets. The current goals of the CAP 2.0 are for Piedmont to reduce GHG emissions by 50 percent below 2005 levels by 2030, and achieve carbon neutrality no later than 2045 (City of Piedmont 2022). The CAP 2.0 contains measures and action items in seven different areas (transportation, buildings and energy, adaptation, municipal, solid waste, water, and consumption) in order to direct the city's reduction efforts and provide guidance for residents and businesses in how to reduce their individual GHG emissions. The Transportation section of the CAP 2.0 contains the following objectives and measures that aim to reduce the use of single occupancy vehicles and encourage the use of alternative transportation:

- **Objective T-1:** Increase number of trips made by biking and walking
  - **Measure T-1.2:** Provide access to bicycles and improve biking infrastructure
- **Objective T-3:** Increase residents' use of public transit
  - **Measure T-3.1:** Increase the use of buses and BART
- **Objective T-4:** Accelerate the adoption of Zero Emissions Vehicles (ZEVs) in Piedmont
  - **Measure T-4.1:** Support the adoption of ZEVs and the growth of EV charging stations
- **Objective T-5:** Reduce miles traveled in personal gasoline vehicles
  - **Measure T-5.2:** Facilitate ride-sharing opportunities

The Consumption section of the CAP 2.0 contains the follow objectives and measures that aim to reduce GHG emissions related to foods, goods, and services:

- **Objective C-2:** Reduce emissions associated with food consumption and food waste
  - **Measure C-2.2:** Reduce carbon intensity of food consumption
- **Objective C-3:** Reduce emissions from consumption and disposal of goods
  - **Measure C-3.1:** Reduce emissions from the consumption goods
  - **Measure C-3.2**: Reduce emissions from the construction and demolition of buildings

The Buildings and Energy Use section of the CAP 2.0 contains the following objectives and measures that aim to reach the 2030 goals of sourcing 100 percent renewable energy and reducing natural gas consumption by 50 percent:

- **Objective BE-1:** Reduce residential building energy use
  - **Measure BE-1.2:** Reduce electricity and natural gas consumption
  - **Measure BE-1.3:** Switch from natural gas to electric appliances, coupled with renewable energy
- **Objective BE-3:** Increase renewable energy to 100 percent by 2030
  - **Measure BE-3.1:** Commit to being a renewable energy city
  - **Measure BE-3.2:** Install on-site renewable energy
  - **Measure BE-3.3**: Increase the amount of renewable energy delivered through the grid
- **Objective BE-5:** Reduce local air pollution and high global warming potential gases
  - **Measure BE-5.1**: Decrease the impact of Piedmont's building stock on pollution and GHG emissions

- **Objective BE-6:** Investigate infrastructure upgrades and new technology
  - **Measure BE-6.1:** Explore deep decarbonization infrastructure

The Solid Waste section of the CAP 2.0 contains the following objectives and measures that aim to divert 85 percent of waste from the landfill by 2030 and divert all organic and recyclable material from the landfill by 2050 in order to reduce methane emissions:

- **Objective SW-1.1:** Reduce waste going to the landfill
  - **Measure SW-1.1:** Establish a waste diversion target for 2030
  - **Measure SW-1.2:** Provide education on ways to reduce consumption and divert waste from landfill
  - **Measure SW-1.3:** Reduce construction and demolition waste

Piedmont Safer Streets Plan

The PSS Plan is the update to the City of Piedmont's 2014 *Piedmont Pedestrian and Bicycle Master Plan* (PBMP). The PSS Plan has an additional focus on general traffic safety.

The objectives of the PSS Plan include determining changes in the community's needs and concerns regarding walking, bicycling and general traffic safety. Top recommended projects include:

- Enhanced street crossings at key locations
- Designated citywide bikeway network
- Highland Avenue reconfiguration study
- Neighborhood traffic calming program

Additional recommendations from the PSS Plan include:

- Adopting a Vision Zero policy
- Promoting and supporting community-based traffic safety campaigns
- Creating an online "fix-it" request form
- Creating a GIS data portal
- Adopting a transportation demand management program (TDM)
- Updating the Piedmont Safer Streets Plan every five years

4.7.3 Impact Analysis

a. Methodology and Thresholds of Significance

Significance Thresholds

To determine whether a project would result in a significant impact related to GHG emissions, Appendix G of the *CEQA Guidelines* requires consideration of whether a project would:

1. Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment; or
2. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs.

The construction of individual development projects does not generate enough GHG emissions to create significant project-specific environmental effects. However, the environmental effects of a project's GHG emissions can contribute incrementally to cumulative adverse environmental effects that are significant, contributing to climate change, even if an individual project's environmental effects are limited (*CEQA Guidelines* Section 15064[h][1]). The issue of a project's environmental effects and contribution towards climate change typically involves an analysis of whether a project's contribution towards climate change is cumulatively considerable. Cumulatively considerable means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, other current projects, and probable future projects (*CEQA Guidelines* Section 15064[h][1]).

CEQA Guidelines Section 15064.4 recommends that lead agencies quantify GHG emissions of projects and consider several other factors that may be used in the determination of significance of GHG emissions from a project, including the extent to which the project may increase or reduce GHG emissions; whether a project exceeds an applicable significance threshold; and the extent to which the project complies with regulations or requirements adopted to implement a plan for the reduction or mitigation of GHG emissions. CEQA Guidelines Section 15064.4 does not establish a threshold of significance. Lead agencies have the discretion to establish significance thresholds for their respective jurisdictions, and in establishing those thresholds, a lead agency may appropriately look to thresholds developed by other public agencies, or suggested by other experts, as long as any threshold chosen is supported by substantial evidence (see *CEQA Guidelines* Section 15064.7[c]).

In response to climate change, California implemented AB 32, the "California Global Warming Solutions Act of 2006." AB 32 requires the reduction of statewide GHG emissions to 1990 emissions levels (essentially a 15 percent reduction below 2005 emission levels) by 2020 and the adoption of rules and regulations to achieve the maximum technologically feasible and cost-effective GHG emissions reductions. On September 8, 2016, the Governor signed SB 32 into law, extending AB 32 by requiring the State to further reduce GHG emissions to 40 percent below 1990 levels by 2030 (the other provisions of AB 32 remain unchanged). On December 14, 2017, the CARB adopted the 2017 Scoping Plan, which provides a framework for achieving the 2030 target. The 2017 Scoping Plan relies on the continuation and expansion of existing policies and regulations, such as the Cap-and-Trade Program and the Low Carbon Fuel Standard, and implementation of recently adopted policies and legislation, such as SB 1383 (aimed at reducing short-lived climate pollutants including methane, hydrofluorocarbon gases, and anthropogenic black carbon) and SB 100 (discussed further below). The 2017 Scoping Plan also puts an increased emphasis on innovation, adoption of existing technology, and strategic investment to support its strategies. As with the 2013 Scoping Plan Update, the 2017 Scoping Plan does not provide project-level thresholds for land use development. Instead, it recommends local governments adopt policies and locally appropriate quantitative thresholds consistent with a statewide per capita goal of 6 metric tons MT CO_2e by 2030 and 2 MT CO_2e by 2050 (CARB 2017). On September 10, 2018, the Governor signed Executive Order (EO) B-55-18, which identifies a new goal of carbon neutrality by 2045 and supersedes the goal established by EO S-3-05.[2] AB 1279, "The California Climate Crisis Act," was passed on September 16, 2022, and declares the State would achieve net zero GHG emissions as soon as possible, but no later than 2045, and to achieve and maintain net negative GHG emissions thereafter. In addition, the bill states that the State would reduce GHG emissions by 85 percent below 1990 levels no later than 2045. In response to the

[2] Executive Order (EO) S-3-05, signed by Governor Arnold Schwarzenegger in 2005, proclaims that California is vulnerable to the impacts of climate change. It declares that increased temperatures could reduce the Sierra Nevada snowpack, further exacerbate California's air quality problems, and potentially cause a rise in sea levels. To combat those concerns, the EO established total GHG emission targets for the state. Specifically, emissions are to be reduced to the 2000 level by 2010, the 1990 level by 2020, and to 80 percent below the 1990 level by 2050.

passage of AB 1279 and the identification of the 2045 GHG reduction target, CARB published the Final 2022 Climate Change Scoping Plan in November 2022 (CARB 2022). The 2022 Scoping Plan Update focuses on outcomes needed to achieve carbon neutrality by assessing paths for clean technology, energy deployment, natural and working lands, and others, and is designed to meet the State's long-term climate objectives and support a range of economic, environmental, energy security, environmental justice, and public health priorities (CARB 2022).

According to the *CEQA Guidelines*, projects can tier from a qualified GHG reduction plan, which allows for project-level evaluation of GHG emissions through the comparison of the project's consistency with the GHG reduction policies included in a qualified GHG reduction plan. This approach is considered by the Association of Environmental Professionals (AEP) in their white paper, *Beyond Newhall and 2020*, to be the most defensible approach presently available under CEQA to determine the significance of a project's GHG emissions (AEP 2016). Although Piedmont recently approved amendments to the city's CAP 2.0 by establishing an updated goal of reducing GHG emissions by 50 percent from 2005 levels and achieving carbon neutrality no later than 2045, the CAP 2.0 does not meet the criteria under *CEQA Guidelines* Section 15183.5(b)(1)(D) and 15183.5(b)(1)(E) since it does not quantify or provide substantial evidence that measures in the CAP 2.0 would achieve carbon neutrality no later than 2045, and does not establish a mechanism to monitor the plan's progress towards achieving the goal or require an amendment if the plan fails to achieve the specified levels. Therefore, Piedmont's current CAP does not meet the requirements of a qualified GHG reduction plan and this approach is not feasible. BAAQMD recently adopted updated thresholds for evaluating the significance of climate impacts from development projects (BAAQMD 2023). The new project-level thresholds state that development projects must either include the following project design elements, or be consistent with a local GHG reduction strategy that meets the criteria under *CEQA Guidelines* Section 15183.5(b):

1. **Buildings**
    a. The project will not include natural gas appliances or natural gas plumbing (in both residential and nonresidential development).
    b. The project will not result in any wasteful, inefficient, or unnecessary energy use as determined by the analysis required under CEQA Section 21100(b)(3) and Section 15126.2(b) of the State CEQA Guidelines.

2. **Transportation**
    a. The project will achieve a reduction in project-generated vehicle miles traveled (VMT) below the regional average consistent with the current version of the California Climate Change Scoping Plan (currently 15 percent) or meet a locally adopted Senate Bill 743 VMT target that reflects the recommendations provided in the Governor's Office of Planning and Research's Technical Advisory: *Evaluating Transportation Impacts in CEQA*:
        i. Residential projects: 15 percent below the existing VMT per capita
        ii. Office projects: 15 percent below the existing VMT per employee
        iii. Retail projects: no net increase in existing VMT
    b. The project will achieve compliance with off-street electric vehicle requirements in the most recently adopted version of CALGreen Tier 2.

Methodology

The analysis below is based on the Housing Element Implementation project's consistency with BAAQMD's building and transportation design elements thresholds. BAAQMD's project-level thresholds are applicable since the proposed project would only facilitate the development of residential uses, and future development by default would be required to comply with BAAQMD project-level thresholds.

GHG emissions for development facilitated by the project (operation) were also quantified for informational purposes only using CalEEMod Version 2022.1. The model calculates emissions of the following GHGs: CO_2, N_2O, and CH_4, which are combined using each GHGs' GWP and reported as CO_2e. GHG emissions include mobile sources, area sources, energy sources, solid waste sources, water sources, and refrigerant sources. CalEEMod output files are included in Appendix E.

b. Project Impacts and Mitigation

The proposed project involves implementation of the 2023-2031 Housing Element (including revisions to the General Plan Land Use Element, revisions to the PCC, and the Moraga Canyon Specific Plan) as well as an updates to the General Plan Environmental Hazards Element, Transportation Element, Natural Resources and Sustainability Element, Parks, Design and Preservation Element, Community Services and Facilities, and Parks, Recreation, and Open Space Element. The updates to the General Plan elements themselves would not result in physical changes to the environment such that impacts related to greenhouse gas emissions would occur. Therefore, this analysis focuses on impacts associated with implementation of the Housing Element which would facilitate housing development throughout Piedmont.

Threshold 1:	Would the project generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?

Impact GHG-1 THE PROPOSED PROJECT WOULD NOT BE CONSISTENT WITH BAAQMD'S BUILDING AND TRANSPORTATION THRESHOLDS. EVEN WITH IMPLEMENTATION OF PROPOSED NEW POLICIES IN THE GENERAL PLAN NATURAL RESOURCES AND SUSTAINABILITY ELEMENT AND TRANSPORTATION ELEMENT, THIS IMPACT WOULD REMAIN SIGNIFICANT AND UNAVOIDABLE.

Citywide Housing Element Implementation

As discussed above under Thresholds of Significance, since the City of Piedmont does not have a qualified CAP that meets the criteria under *CEQA Guidelines* Section 15183.5(b), this analysis is based on project consistency with BAAQMD's building and transportation design elements threshold.

The City has adopted a Reach Code (PCC Section 8.02.070, Ordinance No. 766 N.S.) for the purpose of encouraging the incorporation of energy efficient measures in new development. In addition, the Reach Code requires all-electric development for newly constructed single-family residences and new detached ADUs. However, development facilitated by the proposed project may include multi-family development as well as single-family residences or ADUs; therefore, future development facilitated by the proposed project could still include natural gas appliances. Further, the ability to regulate all electric development has been affected by the recent Ninth Circuit decision in *California Restaurant Association v. City of Berkeley*, which found that cities cannot ban natural gas appliances. As a result, future development facilitated by the proposed project would be inconsistent with threshold 1.a, and impacts would be potentially significant.

As discussed in Section 4.5, *Energy*, development facilitated by the proposed project would be subject to the energy conservation requirements of the California Energy Code (Title 24, Part 6 of the California Code of Regulations, California's Energy Efficiency Standards for Residential and Nonresidential Buildings), and the California Green Building Standards Code (CALGreen, Title 24, Part 11 of the California Code of Regulations), as well as the City's Reach Code, PCC, and General Plan policies which would ensure that the proposed project would not result in potentially significant environmental effects due to the wasteful, inefficient, or unnecessary consumption of energy. Therefore, the proposed project would be consistent with threshold 1.b. of the project-level BAAQMD thresholds and impacts would be less than significant.

Further, as discussed under Section 4.14, *Transportation*, and as shown in Table 4.14-4, the proposed project would result in a household VMT per capita of 17.8, which is above the Bay Area regional baseline threshold of 16.8 (15 percent below the baseline VMT per capita of 19.8). Therefore, the proposed project would not meet the locally adopted SB 743 VMT target and future development facilitated by the proposed project would not be consistent with threshold 2.a. of the project-level BAAQMD thresholds. This impact would be potentially significant. As discussed in Section 4.14, *Transportation*, VMT impacts would be significant and unavoidable.

Additionally, although the City currently requires new construction to comply with CALGreen Chapter 4, Division 4.1 pursuant to PCC Section 8.02.020, which requires new one- and two-family dwelling units and townhouses with attached private garages to install EV capable raceways, and for new project sites with 17 or more multi-family dwelling units to include three percent of the total number of parking spaces as EV charging spaces, these requirements are less stringent than CALGreen Tier 2. As a result, future development facilitated by the Housing Element implementation project would also be inconsistent with threshold 2.b of the project-level BAAQMD thresholds.

Overall, based on the City's current regulations and the findings of the VMT analysis, the proposed project would not be consistent with the BAAQMD's building and transportation design elements threshold. However, the proposed project would involve amendments to Piedmont General Plan Natural Resources and Sustainability Element which include adding the proposed new policy:

> **Greenhouse Gas Emissions Reductions.** Single-family and multi-family development projects shall be encouraged to not include natural gas appliances or natural gas plumbing and shall achieve compliance with off-street electric vehicle requirements in the most recently adopted version of CALGreen Tier 2.

With adherence to this policy, future development in the city would be encouraged not to include natural gas and would achieve compliance with CALGreen Tier 2 EV charging requirements. Therefore, with implementation of this policy, future development would also be consistent with threshold 2.b of the project-level BAAQMD thresholds.

However, pursuant to case law California Restaurant Association v. City of Berkeley, mentioned above, the 9th Circuit Appellate Court found that a city cannot ban natural gas because they are preempted from doing so by federal law under the Energy Policy and Conservation Act. Therefore, implementation of the Greenhouse Gas Emissions policy in the Natural Resources and Sustainability Element would not be able to ensure that future development facilitated by the proposed project would be consistent with BAAQMD's updated GHG threshold of prohibiting natural gas appliances or natural gas plumbing. As a result, future development facilitated by the proposed project would still be inconsistent with threshold 1.a. Therefore, this impact is potentially significant.

GHG Emissions

Total GHG emissions for future development under the proposed project are provided below for informational purposes. Operation of future development under the proposed Housing Element Implementation project would generate GHG emissions associated with area sources, energy and water usage, vehicle trips, wastewater and solid waste generation, and refrigerants. Table 4.7-1 shows the estimated operational GHG emissions associated with full buildout of 1,048 units for future development under the proposed project. As shown therein, annual emissions from the proposed project would be approximately 7,115 MT of CO_2e per year.

Table 4.7-1 Operational GHG Emissions

Emission Source	Annual Emissions (MT of CO_2e)
Operational	
Mobile	5,890
Area	67
Energy	825
Water	91
Waste	240
Refrigerants	1
Operational Total	**7,115**

Source: Appendix E

Moraga Canyon Specific Plan

The Moraga Canyon Specific Plan area was addressed in the analysis above. Therefore, for the same reasons provided above, development facilitated by the Moraga Canyon Specific Plan would be inconsistent with threshold 1.a. This environmental impact is potentially significant.

Mitigation Measures

No feasible mitigation measures are available.

Significance After Mitigation

As noted above, the City is limited in the its ability to regulate natural gas appliances. In addition, although future development would be required to adhere to the proposed new policy in the General Plan Transportation Element to reduce VMT as discussed in Section 4.14, *Transportation*, since the location, size, and characteristics of individual development projects that would be implemented by the proposed project, as well as the specific mitigation measures that would be implemented at each of these future developments, cannot be known at this time, this analysis cannot determine the effectiveness of the new Transportation Element policy in reducing the proposed project's VMT and GHG impact to a less than significant level. Thus, this impact would remain significant and unavoidable.

Threshold 2:	Would the project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Impact GHG-2 THE PROPOSED PROJECT WOULD BE CONSISTENT WITH THE 2022 SCOPING PLAN, PLAN BAY AREA 2050, THE PIEDMONT GENERAL PLAN, AND THE CITY'S CAP. THIS IMPACT WOULD BE LESS THAN SIGNIFICANT WITH COMPLIANCE WITH THE PROPOSED NEW GENERAL PLAN POLICIES.

The proposed project was evaluated for consistency with applicable State and local plans that were developed with the intent of reducing GHG emissions. Each applicable plan is discussed separately below.

Citywide Housing Element Implementation

2022 SCOPING PLAN

The principal State plans and policies for reducing GHG emissions are AB 32, SB 32, SB 375, and AB 1279. The quantitative goal of AB 32 is to reduce GHG emissions to 1990 levels by 2020; the goal of SB 32 is to reduce GHG emissions to 40 percent below 1990 levels by 2030; the goal of SB 375 is to link transportation planning and land use planning; and the goal of AB 1279 is to achieve net zero greenhouse gas emissions no later than 2045, (reduce GHG emissions by 85 percent below 1990 levels no later than 2045). The 2022 Scoping Plan expands upon earlier plans to include the AB 1279 targets. The 2022 Scoping Plan's strategies that are applicable to the proposed Housing Element Implementation project include reducing fossil fuel use and vehicle miles traveled; decarbonizing the electricity sector, maximizing recycling and diversion from landfills; and increasing water conservation. The project would be consistent with these goals since future development would be required to comply with the latest Title 24 Green Building Code and Building Efficiency Energy Standards, as well as the AB 341 waste diversion goal of 75 percent and recycle organic wastes pursuant to SB 1383. Future development facilitated by the project would also be located along or near arterial roadways served by Class II and Class III bicycle lanes and bus stops such as Oakland Avenue, Highland Avenue, Hampton Road, Park Boulevard, and Moraga Avenue. All housing sites would be within a one mile walk to a bus stop, with the exception of development in the northern most corner of the city in MCSP Area which is located approximately 1.2 miles from the nearest bus stop. Nonetheless, most future development in the city would be within walking or bicycling distance to the nearest bus stop and to other goods and services which may reduce reliance on single-occupancy vehicles and thereby VMT. The City has adopted a Reach Code for the purpose of encouraging the incorporation of energy efficient measures in new development, and inclusion of solar panels for projects that include an entirely new level or expand the total roof area by 30 percent or more. Future development would also be required to comply with proposed new policies in the General Plan Natural Resources and Sustainability Element and Transportation Element which would require compliance with CALGreen Tier 2 EV standards and would encourage prohibition of natural gas appliances or natural gas plumbing in all new developments, as well as require preparation of a quantitative VMT analysis and implementation of VMT reduction measures. Additionally, future development would receive electricity from Ava, which sources all their power from renewable sources for residential customers under the Renewable 100 service plan. Therefore, the project would not conflict with the 2022 Scoping Plan and this impact would be less than significant.

PLAN BAY AREA 2050

As shown in Table 4.7-2, development facilitated by the Housing Element Implementation project would be consistent with the key goals of Plan Bay Area 2050. Therefore, impacts related to consistency with GHG emissions reduction plans would be less than significant.

Table 4.7-2 Project Consistency with Plan Bay Area 2050

Measure	Project Consistency
T8. Build a Complete Streets network. Enhance streets to promote walking, biking and other micro-mobility through sidewalk improvements, car-free slow streets, and 10,000 miles of bike lanes or multi-use paths.	**Consistent**. The proposed project encourages development on sites in proximity to corridors served by Class II and Class III bicycle lanes and bus stops such as Oakland Avenue, Highland Avenue, Hampton Road, Park Boulevard, and Moraga Avenue. The sites identified in the Housing Element as having the most potential and feasibility to be developed (as shown on Figure 2-4 in Section 2, *Project Description)* are located within a one mile walk to a bus stop, with the exception of development in the northern most corner of the city in MCSP Area which is located approximately 1.2-miles from the nearest bus stop. The City's Pedestrian and Bicycle Master Plan (Piedmont Safer Streets Plan) would facilitate the development of a 10-mile designated bikeway network, which future residents from the proposed project would be able to utilize (City of Piedmont 2014). The city also has seven bicycle parking racks with additional locations in the Civic Center which future residents could utilize (City of Piedmont 2014).
EN4. Maintain urban growth boundaries. Using urban growth boundaries and other existing environmental protections, focus new development within the existing urban footprint or areas otherwise suitable for growth, as established by local jurisdictions.	**Consistent.** The proposed project does not involve changes to the city limits or otherwise change urban growth boundaries. The project would focus development within the city's existing urban footprint and facilitate infill development on underutilized sites.
EN8. Expand clean vehicle initiatives. Expand investments in clean vehicles, including more fuel-efficient vehicles and electric vehicle subsidies and chargers.	**Consistent.** Future development facilitated by the project would be required to comply with EV requirements pursuant to PCC Section 8.02.020, requiring new construction to comply with CALGreen Chapter 4, Division 4.1 which requires new one- and two-family dwelling units and townhouses with attached private garages to install EV capable raceways, and for new project sites with 17 or more multi-family dwelling units to include three percent of the total number of parking spaces as EV charging spaces. Additionally, future development would be required to adhere to the proposed new Greenhouse Gas Reduction policy of the Natural Resources and Sustainability Element which would require compliance with CALGreen Tier 2 EV standards.

Source: ABAG 2021

CITY OF PIEDMONT GENERAL PLAN

The Natural Resources and Sustainability Element and Transportation Element of the Piedmont General Plan contains emissions goals that would have the effect of reducing GHG emissions. As shown in Table 4.7-3, the proposed project would be generally consistent with these policies and actions. Therefore, impacts related to consistency with GHG emissions-related goals of the General Plan would be less than significant.

Table 4.7-3 City of Piedmont General Plan Consistency for GHG Emissions

General Plan 2035 Policy or Action	Consistency
Transportation	
Policy 7.1: Balancing Travel Modes. Ensure that transportation planning balances the needs of motorists, transit users, pedestrians, and bicycles. Where feasible, future land use and transportation decisions should discourage driving in single passenger autos and instead encourage alternative modes of travel.	**Consistent.** The proposed Housing Element Implementation project encourages development on sites in proximity to corridors served by Class II and Class III bicycle lanes and bus stops such as Oakland Avenue, Highland Avenue, Hampton Road, Park Boulevard, and Moraga Avenue. The sites identified in the Housing Element as having the most potential and feasibility to be developed (as shown on Figure 2-4 in Section 2, *Project Description)* are located within a one mile walk to a bus stop, with the exception of development in the northern most corner of the city in MCSP Area which is located approximately 1.2 miles from the nearest bus stop. The City's Pedestrian and Bicycle Master Plan (Piedmont Safer Streets Plan) would facilitate the development of a 10-mile designated bikeway network, which future residents from the proposed project would be able to utilize (City of Piedmont 2014). The Moraga Canyon Specific Plan study includes consideration of new complete streets improvements, including the extension of public sidewalks.
Policy 10.5: Bicycle Infrastructure. Expand the "infrastructure" necessary to accommodate bicycle travel, including bike racks in parks, at schools, and at public buildings, and adequate space for bicycle storage in residential garages.	**Consistent.** The City's Pedestrian and Bicycle Master Plan (Piedmont Safer Streets) would facilitate the development of a 10-mile designated bikeway network, which future residents from the proposed project would be able to utilize (City of Piedmont 2014). The City also has seven bicycle parking racks with additional locations in the Civic Center which future residents could utilize (City of Piedmont 2014).
Natural Resources and Sustainability Element	
Policy 15.1: Transportation Control Measures. Implement transportation control measures (TCMs) to reduce air pollution emissions at the local level. This should include measures to promote walking and bicycling, continue casual carpooling, sustain or increase public transit service to Piedmont, and coordinate with other jurisdictions to create a more balanced and integrated transportation system.	**Consistent.** The proposed project facilitates development on sites in proximity to corridors served by Class II and Class III bicycle lanes and bus stops such as Oakland Avenue, Highland Avenue, Hampton Road, Park Boulevard, and Moraga Avenue. The sites identified in the Housing Element as having the most potential and feasibility to be developed (as shown on Figure 2-4 in Section 2, *Project Description)* are located within a one mile walk to a bus stop, with the exception of development in the northern most corner of the city in MCSP Area which is located approximately 1.2 miles from the nearest bus stop. The City's Pedestrian and Bicycle Master Plan (Piedmont Safer Streets Plan) would facilitate the development of a 10-mile designated bikeway network, which future residents from the proposed project would be able to utilize (City of Piedmont 2014). Future development would be required to comply with the proposed new policy in the Transportation Element outlined in Section 4.14, *Transportation*, and would be required to prepare a VMT analysis. Development projects which would result in significant VMT impacts according to the VMT analysis would be required to include travel demand management (TDM) measures to reduce VMT. The Moraga Canyon Specific Plan study includes consideration of new complete streets improvements, including the extension of public sidewalks.

General Plan 2035 Policy or Action	Consistency
Policy 16.1: Linking Land Use and Transportation Choices. Consistent with the Land Use and Transportation Elements of this plan, retain walkable neighborhoods, reliable public transportation, safe cycling, carpooling, convenient access to shops and services, and other measures which reduce the need for driving and fuel consumption in Piedmont.	**Consistent.** The proposed project facilitates development on sites in proximity to corridors served by Class II and Class III bicycle lanes and bus stops such as Oakland Avenue, Highland Avenue, Hampton Road, Park Boulevard, and Moraga Avenue. The sites identified in the Housing Element as having the most potential and feasibility to be developed (as shown on Figure 2-4 in Section 2, *Project Description)* are located within a one mile walk to a bus stop, with the exception of development in the northern most corner of the city in MCSP Area which is located approximately 1.2 miles from the nearest bus stop. The City's Pedestrian and Bicycle Master Plan (Piedmont Safer Streets Plan) would facilitate the development of a 10-mile designated bikeway network, which future residents from the proposed project would be able to utilize (City of Piedmont 2014). The Moraga Canyon Specific Plan study includes consideration of new complete streets improvements, including the extension of public sidewalks.
Policy 17.3: Alternative Energy Sources. Encourage the use of alternative energy sources, such as solar power and wind energy, by Piedmont residents	**Consistent.** Future development facilitated by the proposed project would be required to be constructed in accordance with the latest iteration of CALGreen, the California Energy Code, and any locally adopted amendments pursuant to PCC Chapter 8, which include requirements for the use of energy-efficient design and technologies as well as provisions for incorporating renewable energy resources into building design. Chapter 8 also contains requirements for energy efficiency measures, photovoltaic systems, and encourages all-electric construction in new single-family residences and detached ADUs. Electricity would be provided by Ava, which source all their power from renewable sources for residential customers under the Renewable 100 service plan. Customers that choose to opt out of the Renewable 100 Plan would be placed in the Bright Choice Plan which utilizes 42 percent renewable energy. Given these features, the project would facilitate decarbonization of buildings (removing GHG emissions from the building's energy use), increase in energy efficiency savings, and integration of more renewable energy into the electricity system.

Source: City of Piedmont 2009a, 2009b

CITY OF PIEDMONT CLIMATE ACTION PLAN (CAP 2.0)

The City's CAP 2.0 includes strategies applicable to the proposed project. As shown in Table 4.7-4, development facilitated by the Housing Element Implementation project would be generally consistent with these goals. Therefore, impacts related to consistency with the City of Piedmont CAP would be less than significant.

Table 4.7-4 City of Piedmont CAP Consistency

CAP Measures	Consistency
Transportation	
Objective T-1: Increase number of trips made by biking and walking Measure T-1.2: Provide access to bicycles and improve biking infrastructure	**Consistent.** The proposed project facilitates development on sites in proximity to corridors served by Class II and Class III bicycle lanes and bus stops such as Oakland Avenue, Highland Avenue, Hampton Road, Park Boulevard, and Moraga Avenue. The sites identified in the Housing Element as having the most potential and feasibility to be developed (as shown on Figure 2-4 in Section 2, *Project Description)* are located within a one mile walk to a bus stop, with the exception of development in the northern most corner of the city in MCSP Area which is located approximately 1.2 miles from the nearest bus stop. The City's Pedestrian and Bicycle Master Plan (Piedmont Safer Streets Plan) would facilitate the development of a 10-mile designated bikeway network, which future residents from the proposed project would be able to utilize (City of Piedmont 2014). The City also has seven bicycle parking racks with additional locations in the Civic Center which future residents could utilize (City of Piedmont 2014). The Moraga Canyon Specific Plan study includes consideration of new complete streets improvements, including the extension of public sidewalks.
Objective T-3: Increase residents' use of public transit Measure T-3.1: Increase the use of buses and BART	**Consistent.** The proposed project facilitates development on sites in proximity to corridors served by Class II and Class III bicycle lanes and bus stops such as Oakland Avenue, Highland Avenue, Hampton Road, Park Boulevard, and Moraga Avenue. The sites identified in the Housing Element as having the most potential and feasibility to be developed (as shown on Figure 2-4 in Section 2, *Project Description)* are located within a one mile walk to a bus stop, with the exception of development in the northern most corner of the city in MCSP Area which is located approximately 1.2 miles from the nearest bus stop. Nonetheless, this would allow for walking or bicycling to the nearest bus stop and would allow for the more convenient use of alternative modes of transport.
Objective T-4: Accelerate the adoption of Zero Emissions Vehicles (ZEVs) in Piedmont Measure T-4.1: Support the adoption of ZEVs and the growth of EV charging stations	**Consistent.** PCC Section 8.02.020 requires new construction to comply with CalGreen Chapter 4, Division 4.1 which requires new one- and two-family dwelling units and townhouses with attached private garages to install EV capable raceways, and for new project sites with 17 or more multi-family dwelling units to include three percent of the total number of parking spaces as EV charging spaces. Additionally, future development would be required to adhere to a new Greenhouse Gas Reduction policy in the Natural Resources and Sustainability Element which would require compliance with CALGreen Tier 2 EV standards.

CAP Measures	Consistency
Objective T-5: Reduce miles traveled in personal gasoline vehicles Measure T-5.2: Facilitate ride-sharing opportunities	**Consistent.** The proposed project encourages development on sites in proximity to corridors served by Class II and Class III bicycle lanes and bus stops such as Oakland Avenue, Highland Avenue, Hampton Road, Park Boulevard, and Moraga Avenue. The sites identified in the Housing Element as having the most potential and feasibility to be developed (as shown on Figure 2-4 in Section 2, Project Description) are located within a one mile walk to a bus stop, with the exception of development in the northern most corner of the city in MCSP Area which is located approximately 1.2 miles from the nearest bus stop. Nonetheless, this would allow for walking or bicycling to the nearest bus stop and reduce reliance on single-occupancy vehicles and thereby VMT. The city's Pedestrian and Bicycle Master Plan (Piedmont Safer Streets Plan) would facilitate the development of a 10-mile designated bikeway network, which future residents from the proposed project would be able to utilize (City of Piedmont 2014). Further, as discussed in Section 4.14, *Transportation*, the proposed project is estimated to reduce VMT per resident in the City of Piedmont from existing VMT per resident of 18.85 by 5 percent to 17.8 in 2031 and 9 percent to 17.1 in 2040. Therefore, the proposed project would reduce per capita miles traveled in personal gasoline vehicles.
Consumption	
Objective C-2: Reduce emissions associated with food consumption and food waste Measure C-2.2: Reduce carbon intensity of food consumption	**Consistent.** Future development facilitated by the proposed project would be required to recycle organic wastes pursuant to SB 1383, which would reduce emissions associated with the decomposition of food wastes at landfills.
Objective C-3: Reduce emissions from consumption and disposal of goods Measure C-3.2: Reduce emissions from the construction and demolition for buildings	**Consistent.** Future development facilitated by the proposed project would be required to comply with the City's Construction and Demolition Debris Ordinance, which requires all projects to divert at least 65 percent of debris generated.
Buildings and Energy Use	
Objective BE-1: Reduce residential building energy use Measure BE-1.2: Reduce electricity and natural gas consumption Measure BE-1.3: Switch from natural gas to electric appliances, coupled with renewable energy	**Consistent.** Development facilitated by the proposed project would be required to comply with Chapter 8 of the PCC, which mandates the implementation of Title 24. The City has adopted a Reach Code for the purpose of encouraging the incorporation of energy efficient measures in new development. Additionally, future development would be required to adhere to the new Greenhouse Gas Emissions Reduction policy of the Natural Resources and Sustainability Element and would be incentivized not to include natural gas appliances or natural gas plumbing.
Objective BE-3: Increase renewable energy to 100 percent by 2030 Measure BE-3.1: Commit to being a renewable energy city Measure BE-3.2: Install on-site renewable energy Measure BE-3.3: Increase the amount of renewable energy delivered through the grid	**Consistent.** Development facilitated by the proposed project would be required to comply with Chapter 8 of the PCC, which mandates the implementation of Title 24. The City has adopted a Reach Code for the purpose of encouraging the incorporation of energy efficient measures in new development. Furthermore, electricity would be provided by Ava, which source all their power from renewable sources under the Renewable 100 service plan. Customers that choose to opt out of the Renewable 100 Plan would be placed in the Bright Choice Plan which utilizes 42 percent renewable energy. Policy 17.3 of the General Plan Natural Resources and Sustainability Element as well as Policy 6.4 of the City's Housing Element also aims to increase the usage of alternative energy sources, specifically solar, for future development under the project.

CAP Measures	Consistency
Objective BE-5: Reduce local air pollution and high global warming potential gases Measure BE-5.1: Decrease the impact of Piedmont's building stock on pollution and GHG emissions	**Consistent.** Future development facilitated by the proposed project would encourage housing development near corridors served by Class II and Class III bicycle lanes and bus stops such as Oakland Avenue, Highland Avenue, Hampton Road, Park Boulevard, and Moraga Avenue. The sites identified in the Housing Element as having the most potential and feasibility to be developed (as shown on Figure 2-4 in Section 2, *Project Description)* are located within a one mile walk to a bus stop, with the exception of development in the northern most corner of the city in MCSP Area which is located approximately 1.2 miles from the nearest bus stop. Future development would be required to be constructed in accordance with the latest iteration of CALGreen, the California Energy Code, and any locally adopted amendments, which include requirements for the use of energy-efficient design and technologies as well as provisions for incorporating renewable energy resources into building design. Additionally, Policies 17.2 and 17.3 of the General Plan Natural Resources and Sustainability Element as well as Policies 6.1 and 6.2 of the City's Housing Element would require all new housing to be designed to encourage energy efficiency and use energy-efficient construction methods, materials, and appliances.
Solid Waste	
Objective SW-1.1: Reduce waste going to the landfill Measure SW-1.1: Establish a waste diversion target for 2030 Measure SW-1.2: Provide education on ways to reduce consumption and divert waste from landfill Measure SW-1.3: Reduce construction and demolition waste	**Consistent.** Pursuant to applicable regulatory requirements such as 2022 or later CALGreen, future development facilitated by the proposed project would comply with construction waste management practices to divert a minimum of 65 percent of construction and demolition debris. Future development would also be required to recycle organic wastes pursuant to SB 1383.

Source: City of Piedmont 2018

SUMMARY

As described above, the project would be generally consistent with the 2022 Scoping Plan, Plan Bay Area 2050, the Piedmont General Plan, and the City's CAP 2.0, and GHG emissions from development facilitated by the project would be reduced with implementation of the proposed Greenhouse Gas Reduction policy of the Natural Resources and Sustainability Element, which would require compliance with CALGreen Tier 2 EV standards and encourages prohibition of natural gas appliances or natural gas plumbing, and the proposed VMT Analysis and Reduction policy of the Transportation Element which requires preparation of a quantitative VMT analysis and implementation of VMT reduction measures. Therefore, impacts would be less than significant with compliance with the proposed new General Plan policies.

Moraga Canyon Specific Plan

Development facilitated in the MCSP Area would be required to comply with the same State and local regulations as discussed above, such as the most recent iteration of Title 24 Building Energy Efficiency Standards, CALGreen, the City's Reach Code, and the Piedmont General Plan, as well as implement proposed added policies of the Natural Resources and Sustainability Element and Transportation Element (Greenhouse Gas Reduction policy and VMT Analysis and Reduction policy, respectively). Although the northern-most corner of the MCSP Area would be located a 1.2-mile walk from the

nearest bus stop, other parts of the MCSP Area would be within a one-mile walk to the nearest bus stop which would allow for walking and bicycling to transit stops and to other goods and services. Additionally, Moraga Avenue is a designated Class III bicycle lane, which connects to Highland Avenue, another Class III bicycle lane. Highland Avenue leads directly to schools, parks, and services in the Civic Center which would encourage future residents to utilize bicycles instead of single-occupancy vehicles. The city's pedestrian and bicycle master plan (Piedmont Safer Streets Plan) also envisions the development of a 10-mile designated bikeway network which would further connect future residents in Moraga Canyon to other areas of Piedmont. Therefore, development in the Moraga Canyon Specific Plan would also be generally consistent with 2022 Scoping Plan, Plan Bay Area 2050, the Piedmont General Plan, and the City's CAP 2.0, and impacts would be less than significant with compliance with the proposed new General Plan policies.

Mitigation Measures

This impact would be less than significant with adherence to the proposed new Greenhouse Gas Reduction policy of the Natural Resources and Sustainability Element and adoption and implementation of proposed new VMT analysis and TDM policy of the Transportation Element listed in Section 4.14, *Transportation*.

d. Cumulative Impacts

The impact of GHG emissions generated by development facilitated by the proposed Housing Element Implementation project is inherently cumulative. GHG emissions from one project cannot, on their own, result in changes in climatic conditions; therefore, the emissions from any project must be considered in the context of their contribution to cumulative global emissions, which is the basis for determining a significant cumulative impact. This is determined through the project's consistency with applicable GHG emission thresholds and applicable plans, policies, or regulations adopted for the purpose of reducing the emissions of GHGs. The proposed project would be generally consistent with the State's 2022 Scoping Plan, Plan Bay Area 2050, the Piedmont General Plan, and the City's CAP 2.0. However, as discussed under Impact GHG-1, despite implementation of mitigation measures GHG-1 and T-1, the proposed project would still be inconsistent with BAAQMD's project-level thresholds, specifically transportation threshold 1.a., as VMT would not be guaranteed to be below the baseline regional threshold; building threshold 1.a., as the City's Reach Code does not regulate multi-family residences and the City's ability to regulate all electric development has been affected by recent caselaw; building threshold 1.b., as the City's EV requirements are less stringent than CALGreen Tier 2. Therefore, the proposed project would result in a significant and unavoidable cumulative impact on GHG emissions.

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4.8 Hazards and Hazardous Materials

This section evaluates the potential impacts relating to hazards and hazardous materials impacts associated with implementation of the proposed Housing Element Implementation Project. Potential hazards associated with wildland fires are discussed in Section 4.15, *Wildfire.*

4.8.1 Setting

a. Hazardous Materials

The term "hazardous material" has different definitions for different regulatory programs. For the purpose of this EIR, the term "hazardous materials" refers to both hazardous materials and hazardous waste. The California Health and Safety Code Section 25501(n)(1) defines a hazardous material as any material that "because of its quantity, concentrations, 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 administering agency has a reasonable basis for believing would be injurious to the health and safety of persons or harmful to the environment if released into the workplace or environment.

A material is hazardous if it exhibits one or more of the following characteristics: toxicity, ignitability, corrosivity, and reactivity. These types of hazardous materials are defined below:

- **Toxic Substances.** Toxic substances may cause short-term or long-lasting health effects, ranging from temporary effects to permanent disability, or even death. For example, such substances can cause disorientation, acute allergic reactions, asphyxiation, skin irritation, or other adverse health effects if human exposure exceeds certain levels (the level depends on the substances involved and is chemical-specific). Carcinogens, substances that can cause cancer, are a special class of toxic substances. Examples of toxic substances include asbestos, lead, arsenic, benzene (a component of gasoline and suspected carcinogen) and methylene chloride (a common laboratory solvent and a suspected carcinogen).
- **Ignitable Substances.** Ignitable substances are hazardous because of their ability to burn. Gasoline, hexane, and natural gas are examples of ignitable substances.
- **Corrosive Materials.** Corrosive materials can cause severe burns. Corrosives include strong acids and bases such as sodium hydroxide (lye) or sulfuric acid (battery acid).
- **Reactive Materials.** Reactive materials may cause explosions or generate toxic gases. Explosives, pure sodium or potassium metals (which react violently with water), and cyanides are examples of reactive materials.

Soil and groundwater can become contaminated by hazardous material releases in a variety of ways, including permitted or illicit use and accidental or intentional disposal or spillage. Before the 1980s, most land disposal of chemicals was unregulated, resulting in numerous industrial properties and public landfills becoming dumping grounds for unwanted chemicals. The largest and most contaminated of these sites became Superfund sites, so named for their eligibility to receive cleanup money from a federal fund established under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). The National Priorities List (NPL) is the list of national priorities among the known releases or threatened releases of hazardous substances, pollutants, or contaminants throughout the United States and its territories. The NPL is intended primarily to guide

the United States Environmental Protection Agency (U.S. EPA) in determining which sites warrant further investigation. Sites are added to the NPL following a hazard ranking system.

Numerous smaller properties have been designated as contaminated sites. Often these are gas station sites where leaking, underground storage tanks (USTs) were upgraded under a federal requirement in the late 1980s. Another category of sites that may have some overlap with the types already mentioned is "brownfields" – previously used, often abandoned, sites that due to actual or suspected contamination are undeveloped or underused. Both the U.S. EPA and California Department of Toxic Substances Control (DTSC) maintain lists of known brownfields sites. These sites are often difficult to inventory due to their owners' reluctance to publicly label their property as potentially contaminated.

Asbestos Containing Materials

Asbestos is a naturally occurring fibrous material that was widely used in structures built between 1945 and 1978 for its fireproofing and insulating properties. Asbestos-containing materials (ACM) were banned by U.S. EPA between the early 1970s and 1991 under the authority of the CAA and the Toxic Substances Control Act (TSCA) due to their harmful health effects. Exposure to asbestos increases risk of developing lung disease, such as lung cancer, mesothelioma, or asbestosis (U.S. EPA 2023a). Common ACMs include vinyl flooring and associated mastic, wallboard and associate joint compound, plaster, stucco, acoustic ceiling spray, ceiling tiles, heating system components, and roofing materials. Pre-1973 structures are affected by asbestos regulations and can cause potential exposure if damage occurs, or if remodeling, renovation, or demolition activities disturb ACMs.

Lead and Lead-Based Paint

Lead is a naturally occurring metallic element. Because of its toxic properties, lead is regulated as a hazardous material. Excessive exposure to lead can result in the accumulation of lead in the blood, soft tissues, and bones. Children are particularly susceptible to potential lead-related health problems because it is easily absorbed into developing systems and organs. Lead can affect almost every organ and system in the body. In children, lead can cause behavior and learning problems, lower IQ, hyperactivity, hearing problems, and anemia. In adults, lead can cause cardiovascular effects, decreased kidney function, and reproductive problems. In addition, lead can result in serious effects to the developing fetus and infant for pregnant women (U.S. EPA 2023b). Among its numerous uses and sources, lead can be found in paint, water pipes, solder in plumbing systems, and in soils surrounding buildings and structures that are painted with lead-based paint (LBP). LBP was primarily used during the same time period as ACMs. Pre-1978 structures are affected by LBP regulations and can cause potential exposure if the paint is in a deteriorated condition or if remodeling, renovation, or demolition activities disturb LBP surfaces.

Polychlorinated Biphenyls

Polychlorinated biphenyls (PCB) belong to a broad family of man-made organic chemicals known as chlorinated hydrocarbons. PCBs were domestically manufactured from 1929 until manufacturing was banned in 1979. They have a range of toxicity and vary in consistency from thin, light-colored liquids to yellow or black waxy solids. Due to their non-flammability, chemical stability, high boiling point and electrical insulating properties, PCBs were used in hundreds of industrial and commercial applications.

b. Existing Conditions in Piedmont

Hazardous Materials Sites

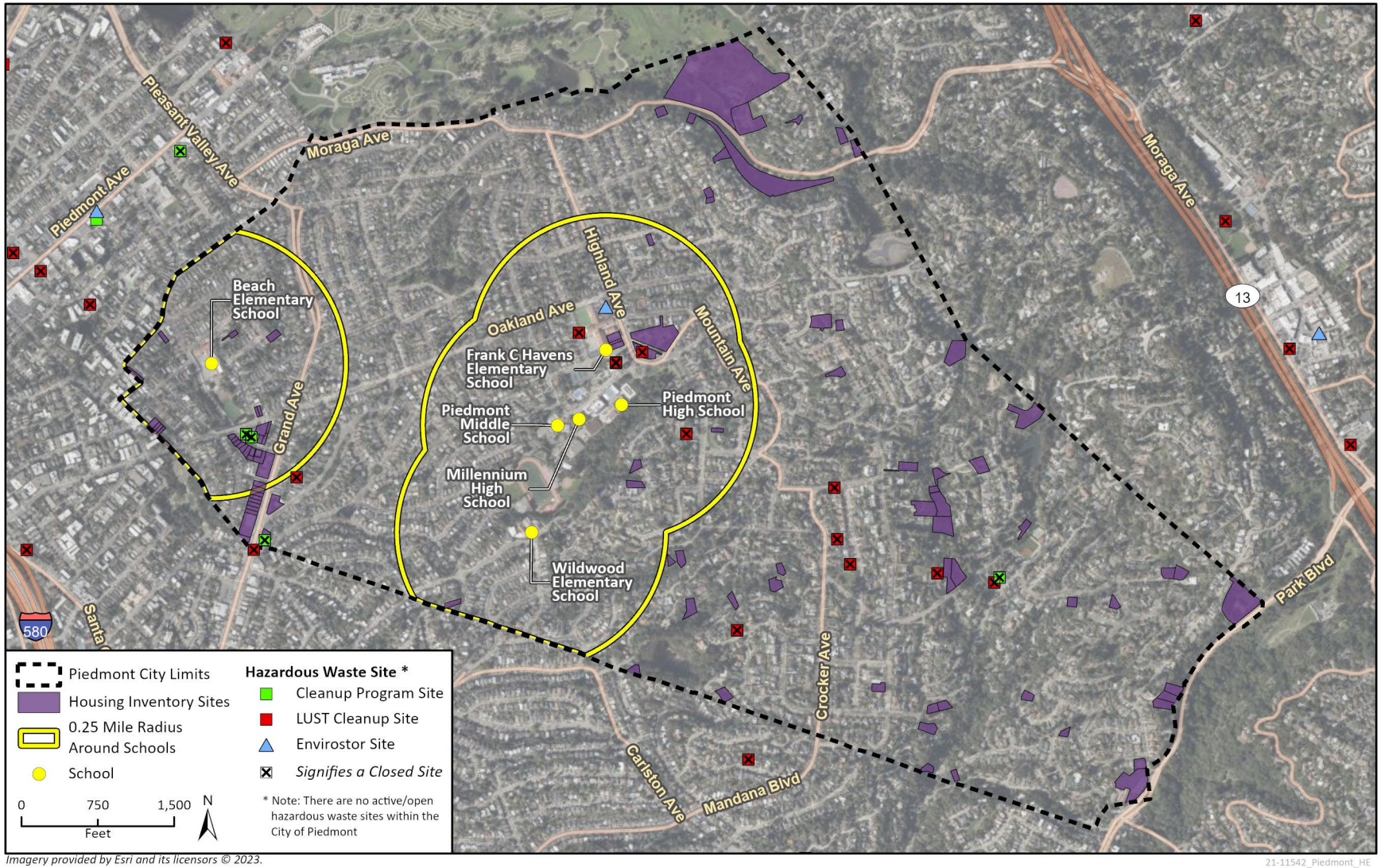
The locations where hazardous materials are or were used, stored, treated and/or disposed of come to the attention of regulatory agencies through various means, including licensing and permitting, enforcement actions, and anonymous tips. To the extent possible, the locations of these businesses and operations are recorded in database lists maintained by various State, federal, and local regulatory agencies. In addition, federal, State, and local agencies enforce regulations applicable to hazardous waste generators and users.

Permitted uses of hazardous materials include those facilities that use hazardous materials or handle hazardous wastes in accordance with current hazardous materials and hazardous waste regulations. The use and handling of hazardous materials from these sites is considered low risk, although there can be instances of unintentional chemical releases. In such cases, the site and the response to the release would be tracked in the environmental databases as an environmental case. Permitted sites without documented releases are, nevertheless, potential sources of hazardous materials in the soil and/or groundwater due to accidental spills, incidental leakage, or spillage that may have gone undetected. Some facilities are permitted for more than one hazardous material use and, therefore, could appear in more than one database.

The potential to encounter hazardous materials in soil and groundwater in Piedmont is generally based on a search of federal, State, and local regulatory databases that identify permitted hazardous materials uses, environmental cases, and spill sites. The DTSC EnviroStor database contains information on properties in California where hazardous substances have been released or where the potential for a future release exists. The California State Water Resources Control Board (SWRCB) GeoTracker database contains information on properties in California for sites that require cleanup, such as leaking underground storage tank (LUST) sites, which may impact, or have potential impacts, to water quality, with emphasis on groundwater.

Figure 4.8-1 shows the locations of hazardous material sites in Piedmont. According to databases of hazardous material sites maintained by the DTSC (EnviroStor) and the SWRCB (GeoTracker), and as shown in Figure 4.8-1, Piedmont has four closed cleanup program sites, 12 closed leaking underground storage tank (LUST) sites, and one school investigation (DTSC 2023; SWRCB 2023a). Existing sites that may potentially contain hazardous land uses in Piedmont include small-quantity generators of hazardous waste, such as corporation yard fueling station and gas stations. As shown in Figure 4.8-1, one housing site is located on a closed LUST cleanup site (gas station), and two housing sites are located on a closed cleanup program site (PG&E substation and gas station). As shown on Figure 4.8-1, one site remains open (Envirostor) and remaining hazardous sites in Piedmont have been closed, meaning the identified contamination or release has been investigated.

Figure 4.8-1 Hazardous Materials Sites and Public Schools in Piedmont



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Additional data provided by GeoTracker, 2023.

21-11542_Piedmont_HE
Fig 4.8-1 Hazardous Sites

Use, Transport, and Abatement of Hazardous Materials

The use of hazardous materials is typically associated with industrial land uses. Activities such as manufacturing, plating, cleaning, refining, and finishing, frequently involve chemicals that are considered hazardous when accidentally released into the environment.

To a lesser extent, hazardous materials may also be used by various commercial enterprises, as well as residential uses. In particular, dry cleaners use cleaning agents considered to be hazardous materials. Hardware stores typically stock paints and solvents, as well as fertilizers, herbicides, and pesticides. Swimming pool supply stores stock acids, algaecides, and caustic agents. Most commercial businesses occasionally use commonly available cleaning supplies that, when used in accordance with manufacturers' recommendations, are considered safe by the State of California, but when not handled properly can be considered hazardous. Private residences and building contractors also use and store commonly available cleaning materials, paints, solvents, swimming pool and spa chemicals, as well as fertilizers, herbicides, and pesticides.

If improperly handled, hazardous materials can result in public health hazards through human contact with contaminated soils or groundwater, or through airborne releases in vapors, fumes, or dust. There is also the potential for accidental or unauthorized releases of hazardous materials that would pose a public health concern. The use, transport, and disposal of hazardous materials and wastes are required to occur in accordance with federal, State, and local regulations. In accordance with such regulations, the transport of hazardous materials and wastes can only occur with transporters who have received training and appropriate licensing. Additionally, hazardous waste transporters are required to complete and carry a hazardous waste manifest, which includes forms, reports, and procedures designed to seamlessly track hazardous waste.

Schools

School locations require consideration because children are particularly sensitive to hazardous materials exposure. Additional protective regulations apply to projects that could use or disturb potentially hazardous products near or at schools. The California Public Resources Code requires projects that would be located within 0.25 mile of a school and might reasonably be expected to emit or handle hazardous materials to consult with the school district regarding potential hazards. As shown in Figure 4.13-1 of Section 4.13, *Public Services and Recreation*, there are six public schools in Piedmont: Beach Elementary School, Frank C Havens Elementary School, Wildwood Elementary School, Piedmont Middle School, Piedmont High School, and Millennium High School. Private schools include Corpus Christi School and Zion School, as well as pre-schools at Piedmont Community Church, Kehilla Synagogue, and Hampton Park. Other childcare centers and preschools may also be located throughout the city.

Airports

There are no airport or airstrip facilities in Piedmont. The nearest airport is the Oakland International Airport which is located 7.8 miles south of Piedmont.

c. Moraga Canyon Specific Plan Area Setting

Existing land uses within the Moraga Canyon Specific Plan (MCSP) Area include Coaches Field, Blair Park, the William F. Kennelly Skate Park, and the Piedmont Corporation Yard. The Piedmont Corporation Yard functions as the base of operations for Public Works Department and involves storage of maintenance equipment and Fire Department vehicles, which may contain hazardous

materials. As shown in Figure 4.8-1, there are no schools or hazardous waste sites within the MCSP Area. There are no airport or airstrip facilities in the vicinity of Moraga Canyon. The nearest airport is the Oakland International Airport which is located 7.2 miles southwest of the MCSP Area.

4.8.2 Regulatory Setting

Hazardous materials and waste can pose a potential hazard to human health and the environment when improperly treated, stored, transported, disposed of, or otherwise managed. Federal, State, and local programs that regulate the use, storage, and transportation of hazardous materials and hazardous waste are in place to prevent unwanted consequences. These regulatory programs are designed to reduce the risk that hazardous substances may pose to people and businesses under normal daily circumstances and as a result emergencies and disasters.

a. Federal Regulations

Primary federal agencies with responsibility for hazardous materials management include the U.S. EPA, U.S. Department of Labor's Occupational Safety and Health Administration (OSHA), and the U.S. Department of Transportation (USDOT). The major laws enforced by these agencies are described below.

Toxic Substances Control Act (1976) and the Resource Conservation and Recovery Act of 1976 (RCRA)

These acts established a program administered by the U.S. EPA for the regulation of the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA was amended in 1984 by the Hazardous and Solid Waste Act, which affirmed and extended the "cradle to grave" system of regulating hazardous wastes. Among other things, the use of certain techniques for the disposal of some hazardous wastes was specifically prohibited by the Hazardous and Solid Waste Act.

Comprehensive Environmental Response, Compensation and Liability Act, Amended by the Superfund Amendments and Reauthorization Act (1986)

This law was first enacted in 1980 and provides broad federal authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the environment. Among other things, Comprehensive Environmental Response, Compensation and Liability Act established requirements concerning closed and abandoned hazardous waste sites, provided for liability of persons responsible for releases of hazardous waste at these sites, and established a trust fund to provide for cleanup when no responsible party could be identified. Comprehensive Environmental Response, Compensation and Liability Act also enabled revision of the National Contingency Plan, which provided the guidelines and procedures needed to respond to releases and threatened releases of hazardous substances, pollutants, or contaminants. The National Contingency Plan also established the National Priorities List.

Federal Insecticide, Fungicide and Rodenticide Act

This Act (7 U.S. Code [USC] 136 et seq.) provides federal control of pesticide distribution, sale, and use. The U.S. EPA was given authority under the Act to study the consequences of pesticide usage, and to require users (farmers, utility companies, and others) to register when purchasing pesticides. Later amendments to the law required users to take exams for certification as applicators of pesticides. All pesticides used in the United States must be registered (licensed) by the U.S. EPA.

Registration assures that pesticides will be properly labeled and that, if used in accordance with specifications, they will not cause unreasonable harm to the environment.

Lead-Based Paint Elimination Final Rule 24 Code of Federal Regulations

Governed by the U.S. Department of Housing and Urban Development (HUD), regulations for LBP are contained in the Lead-Based Paint Elimination Final Rule 24 Code of Federal Regulations (CFR) 33, which requires sellers and lessors to disclose known LBP and LBP hazards to perspective purchasers and lessees. Additionally, all LBP abatement activities must follow California and federal occupational safety and health administrations (California Occupational Safety and Health Administration [Cal/OSHA] and federal Occupational Safety and Health Administration [OSHA], respectively, and with the State of California Department of Health Services requirements. Only LBP trained and certified abatement personnel can perform abatement activities. All lead and LBP removed from structures must be hauled and disposed of by a transportation company licensed to transport this type of material at a landfill or receiving facility licensed to accept the waste.

U.S. Environmental Protection Agency

The U.S. EPA is the agency primarily responsible for enforcement and implementation of Federal laws and regulations pertaining to hazardous materials. Applicable federal regulations pertaining to hazardous materials are contained in the CFR Titles 29, 40, and 49. Hazardous materials, as defined in the CFR, are listed in 49 CFR 172.101. The management of hazardous materials is governed by the following laws:

1. Resource Conservation and Recovery Act of 1976 (42 USC 6901 et seq.)
2. Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (also called the Superfund Act) (42 USC 9601 et seq.)
3. Federal Insecticide, Fungicide, and Rodenticide Act (7 USC 136 et. Seq.)
4. Superfund Amendments and Reauthorization Act of 1986 (Public Law 99 499)

These laws and associated regulations include specific requirements for facilities that generate, use, store, treat, and/or dispose of hazardous materials. U.S. EPA provides oversight and supervision for Federal Superfund investigation/remediation projects, evaluates remediation technologies, and develops hazardous materials disposal restrictions and treatment standards.

U.S. Department of Transportation Regulations

USDOT prescribes strict regulations for the safe transportation of hazardous materials, including requirements for hazardous waste containers and licensed haulers that transport hazardous waste on public roads. The Secretary of the USDOT receives the authority to regulate the transportation of hazardous materials from the Hazardous Materials Transportation Act (HMTA), as amended and codified in in 49 U.S. Code (U.S.C.) Section 5101 et seq. The Secretary is authorized to issue regulations to implement the requirements of 49 U.S.C. The Pipeline and Hazardous Materials Safety Administration (PHMSA), formerly the Research and Special Provisions Administration, was delegated the responsibility to write the hazardous materials regulations, which are contained in Title 49 of the CFR Parts 100-180. Title 49 of the CFR, which contains the regulations set forth by the HMTA, specifies requirements and regulations with respect to the transport of hazardous materials. It requires that every employee who transports hazardous materials receive training to recognize and identify hazardous materials and become familiar with hazardous materials requirements. Under the HMTA,

the Secretary "may authorize any officer, employee, or agent to enter upon, inspect, and examine, at reasonable times and in a reasonable manner, the records and properties of persons to the extent such records and properties relate to: (1) the manufacture, fabrication, marking, maintenance, reconditioning, repair, testing, or distribution of packages or containers for use by any 'person' in the transportation of hazardous materials in commerce; or (2) the transportation or shipment by any 'person' of hazardous materials in commerce.

Occupational Safety and Health Act of 1970

The U.S. Department of Labor's Occupational Safety and Health Administration (OSHA) was created to assure safe and healthful working conditions by setting and enforcing standards and by providing training, outreach, education, and assistance. OSHA provides standards for general industry and construction industry on hazardous waste operations and emergency response. The Occupational Safety and Health Act, which is implemented by OSHA, contains provisions with respect to hazardous materials handling. Federal Occupational Safety and Health Act requirements, as set forth in Title 29 of the CFR Section 1910, et. seq., are designed to promote worker safety, worker training, and a worker's right-to-know. OSHA has delegated the authority to administer OSHA regulations to the State of California.

Title 49 of the CFR, which contains the regulations set forth by the Hazardous Materials Transportation Act of 1975, specifies additional requirements and regulations with respect to the transport of hazardous materials. Title 49 of the CFR requires that every employee who transports hazardous materials receive training to recognize and identify hazardous materials and become familiar with hazardous materials requirements. Drivers are also required to be trained in function and commodity specific requirements.

Other Hazardous Materials Regulations

In addition to the USDOT regulations for the safe transportation of hazardous materials, there are other applicable federal laws that also address hazardous materials:

- Community Environmental Response Facilitation Act of 1992
- Clean Water Act
- Clean Air Act
- Safe Drinking Water Act
- Atomic Energy Act
- Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA)

b. State Regulations

Department of Toxic Substances Control

As a department of the California Environmental Protection Agency, the DTSC is the primary agency in California that regulates hazardous waste, cleans up existing contamination, and looks for ways to reduce the hazardous waste produced in California. The DTSC regulates hazardous waste in California primarily under the authority of the Resource Conservation and Recovery Act (RCRA) and the California Health and Safety Code.

The DTSC also administers the California Hazardous Waste Control Law to regulate hazardous wastes. While the Hazardous Waste Control Law is generally more stringent than the RCRA, both State and

federal laws apply in California. The Hazardous Waste Control Law lists 791 chemicals and approximately 300 common materials that may be hazardous; establishes criteria for identifying, packaging, and labeling hazardous wastes; prescribes management controls; establishes permit requirements for treatment, storage, disposal, and transportation; and identifies some wastes that cannot be disposed of in landfills.

Government Code Section 65962.5 requires the DTSC, the State Department of Health Services, the State Water Resources Control Board, and the California Department of Resources Recycling and Recovery (CalRecycle) to compile and annually update lists of hazardous waste sites and land designated as hazardous waste sites throughout the State. The Secretary for Environmental Protection consolidates the information submitted by these agencies and distributes it to each city and county where sites on the lists are located. Before the lead agency accepts an application for any development project as complete, the applicant must consult these lists to determine if the site at issue is included.

If any soil is excavated from a site containing hazardous materials, it would be considered a hazardous waste if it exceeded specific criteria in Title 22 of the California Code of Regulations. Remediation of hazardous wastes found at a site may be required if excavation of these materials is performed, or if certain other soil disturbing activities would occur. Even if soil or groundwater at a contaminated site does not have the characteristics required to be defined as hazardous waste, remediation of the site may be required by regulatory agencies subject to jurisdictional authority. Cleanup requirements are determined on a case-by-case basis by the agency taking jurisdiction.

California Occupational Safety and Health Act – California Labor Code, Section 6300 et seq.

The California Occupational Safety and Health Act of 1973 addresses California employee working conditions, enables the enforcement of workplace standards, and provides for advancements in the field of occupational health and safety. The Act also created CalOSHA, the primary agency responsible for worker safety in the handling and use of chemicals in the workplace. CalOSHA's standards are generally more stringent than federal regulations. Under the former, the employer is required to monitor worker exposure to listed hazardous substances and notify workers of exposure. The regulations specify requirements for employee training, availability of safety equipment, accident-prevention programs, and hazardous substance exposure warnings. At sites known or suspected to be contaminated by hazardous materials, workers must have training in hazardous materials operations and a Site Health and Safety Plan must be prepared, which establishes policies and procedures to protect workers and the public from exposure to potential hazards at the contaminated site.

California Code of Regulations, Title 22, Hazardous Waste Management

At the State level, under Title 22, Division 4.5 of the CCR, DTSC regulates hazardous waste in California primarily under the authority of the Federal RCRA and the California Health and Safety Code (HSC). The Hazardous Waste Control Law (HWCL), under CCR 22, Chapter 30, establishes regulations that are similar to RCRA but more stringent in their application and empowers the DTSC to administer the State's hazardous waste program and implement the federal program in California. The DTSC is responsible for permitting, inspecting, ensuring compliance, and imposing corrective action programs to ensure that entities that generate, store, transport, treat, or dispose of potentially hazardous materials and waste comply with federal and State laws. The DTSC defines hazardous waste as waste with a chemical composition or other properties that make it capable of causing illness, death, or

some other harm to humans and other life forms when mismanaged or released into the environment. The DTSC shares responsibility for enforcement and implementation of hazardous waste control laws with the SWRCB and, at the local level, the San Francisco Bay RWQCB, and city and county governments.

California Code of Regulations Title 23, Chapter 15 Discharges of Hazardous Waste to Land Section 2511 (b)

CCR 23, Chapter 15 Discharges of Hazardous Waste to Land Section 2511(b) pertains to water quality aspects of waste discharge to land. The regulation establishes waste and site classifications as well as waste management requirements for waste treatment, storage, or disposal in landfills, surface impoundments, waste piles, and land treatment facilities. Requirements are minimum standards for proper management of each waste category, which allows regional water boards to impose more stringent requirements to accommodate regional and site-specific conditions. In addition, the requirements of CCR 23, Chapter 15 applies to cleanup and abatement actions for unregulated hazardous waste discharges to land (e.g., spills).

California Fire and Building Code

The 2019 Fire and Building Code establishes the minimum requirements consistent with nationally recognized good practices to safeguard the public health, safety, and general welfare for the hazards of fire, explosion, or dangerous conditions in new and existing buildings, structures and premises, and to provide safety and assistance to firefighters and emergency responders during emergency operations. The provisions of this code apply to the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal, and demolition of every building or structure or any appurtenances connected or attached to such building structures throughout the State of California.

Proposition 65

Proposition 65, officially known as the Safe Drinking Water and Toxic Enforcement Act of 1986, was enacted as a ballot initiative in November 1986. The proposition protects the State's drinking water sources from being contaminated with chemicals known to cause cancer, birth defects or other reproductive harm, and requires businesses to inform Californians (“Proposition 65 Warning”) about exposures to such chemicals. Proposition 65 requires the State to maintain and update a list of chemicals known to the State to cause cancer or reproductive toxicity.

c. Regional and Local Regulations

Alameda County Department of Environmental Health

The Alameda County Department of Environmental Health (ACDEH) includes a Hazardous Materials Division which regulates clean water, Certified Unified Program Agency (CUPA), and waste tires within Alameda County. The ACDEH, through the Clean Water Program, helps: reduce or eliminate the pollution of receiving waters, including creeks and the San Francisco Bay; and protect and enhance the water quality in county water bodies, including watercourses, wetlands, creeks, and flood control facilities. The ACDEH is also the CUPA that coordinates and enforces numerous local, State, and federal hazardous materials management and environmental protection programs in the county, including in the City of Piedmont. The ACDEH was granted waste tire enforcement activity (TEA)

authority by CalRecycle for all of Alameda County which allows them to enforce requirements for the storage and disposal of waste tires (ACDEH 2023).

City of Piedmont General Plan

The Piedmont General Plan Environmental Hazards Element identifies, prevents, mitigates, and manages reasonably anticipated hazards to the city including exposure to hazardous materials. Policies from the current (2009) Environmental Hazards Element related to hazardous materials are listed below.

Policy 20.1: Hazardous Material Handling, Storage, and Disposal. Require that the handling, storage, and disposal of hazardous materials complies with all applicable local, county, state, and federal laws. Where appropriate, clearance from the Piedmont Fire Department should be required before businesses licenses are issued.

Policy 20.3 Hazardous Building Materials. Work with property owners to remediate hazardous building materials such as asbestos, mercury, and lead. Ensure that any hazardous building materials removed during home renovations are properly handled and disposed.

Policy 20.5: Household Hazardous Materials. Minimize the use of toxic and hazardous household products. As feasible, residents should be encouraged to consider safer alternatives, such as pesticide-free landscaping and non-toxic household cleaners and building materials. Information on proper methods of household hazardous waste disposal should be provided to Piedmont residents.

Policy 20.6: Underground Tanks. Ensure that any underground storage tanks containing hazardous materials are properly installed, used, removed, and monitored.

Piedmont Local Hazard Mitigation Plan (LHMP)

Piedmont is exposed to several natural and human caused hazards that vary in their intensity and impacts on the city. The LHMP, adopted as part of the Environmental Hazards Element in 2019, addresses dam failures, floods, earthquakes, drought, liquefaction, landslides, wildfires, and other severe weather events. Hazardous materials release is described as a cascading impact of a natural hazard. Piedmont's LHMP's purpose is to guide hazard mitigation planning to better protect the people and property of the City from the effects of hazardous events.

4.8.3 Impact Analysis

a. Methodology and Thresholds of Significance

The following thresholds are based on *CEQA Guidelines* Appendix G. For purposes of this EIR, impacts related to hazards and hazardous materials are considered significant if implementation of the proposed project 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, would create a significant hazard to the public or the environment;
5. For a project 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, result in a safety hazard or excessive noise for people residing or working in the project area;
6. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; or,
7. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires.

An analysis of Threshold Questions 6 and 7, the potential of the project to impair or interfere with emergency response or evacuation and the risk of exposure to wildland fires resulting from implementation of the proposed project, is contained in Section 4.17, *Wildfire*.

b. Project Impacts and Mitigation

The proposed project involves implementation of the 2023-2031 Housing Element (including revisions to the General Plan Land Use Element, revisions to the PCC, and the Moraga Canyon Specific Plan) as well as an updates to the General Plan Transportation Element, Environmental Hazards Element, Natural Resources and Sustainability Element, Design and Preservation Element, Community Services and Facilities Element, and Parks, Recreation and Open Space Element. The updates to the General Plan elements themselves would not result in physical changes to the environment such that impacts related to hazards and hazardous materials would occur. Therefore, this analysis focuses on impacts associated with implementation of the Housing Element, including the PCC revisions and MSCP implementation, which would facilitate housing development throughout Piedmont. This analysis also takes into account potential effects associated with new and revised policies in the Environmental Hazards Element that are part of the proposed project as the updates to this Element pertain to hazards and hazardous materials.

Threshold 1:	Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?
Threshold 2:	Would the project 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?

Impact HAZ-1 IMPLEMENTATION OF THE PROPOSED HOUSING ELEMENT IMPLEMENTATION PROJECT WOULD FACILITATE NEW RESIDENTIAL DEVELOPMENT. PROPOSED RESIDENTIAL DEVELOPMENT WOULD NOT INVOLVE ROUTINE TRANSPORTATION, USE, DISPOSAL OF HAZARDOUS MATERIALS. HOWEVER, CONSTRUCTION OF NEW RESIDENCES COULD RESULT IN AN INCREASE IN THE OVERALL ROUTINE, TRANSPORT, USE, AND DISPOSAL OF HAZARDOUS MATERIALS IN PIEDMONT NEAR RESIDENTIAL LAND USES. NONETHELESS, REQUIRED COMPLIANCE WITH APPLICABLE REGULATIONS RELATED TO HAZARDOUS MATERIALS AND COMPLIANCE WITH GENERAL PLAN POLICIES WOULD MINIMIZE THE RISK OF RELEASES AND EXPOSURE TO THESE MATERIALS. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Citywide Housing Element Implementation

OPERATION

Although no specific development projects are proposed as part of the project, development facilitated by the proposed project could facilitate construction of an estimated 1,048 new residential units in Piedmont.

Hazardous materials are typically utilized by most land uses such as industrial, retail/office, commercial, residential, agriculture, medical, and recreational uses, among other activities. Residential uses do not typically use hazardous materials other than small amounts for cleaning and landscaping. These materials would not be different from household chemicals and solvents already in wide use throughout Piedmont. Residents and workers are anticipated to use limited quantities of products routinely for periodic cleaning, repair, and maintenance or for landscape maintenance/pest control that could contain hazardous materials. Those using such products would be required to comply with all applicable regulations regarding the disposal of household waste. Additionally, future development would be required to comply with policies 20.1, 20.2, and 20.5 of the General Plan Environmental Hazards Element (these policies would not change under the proposed updates to this Element under the proposed project), which outline requirements for the handling, storage, disposal, and transport of hazardous materials and household hazardous materials. Therefore, operation of new residential uses poses little risk of exposing the public to hazardous materials.

The proposed project would involve zoning ordinance amendments to accommodate additional housing. The proposed project would not facilitate the establishment of new industrial, warehouse, auto-service, or manufacturing uses. Therefore, the proposed project would not introduce new manufacturing, warehouse, or industrial uses that would sell, use, store, transport, or release substantial quantities of hazardous materials.

CONSTRUCTION ACTIVITIES

The following discussion addresses the use of hazardous materials during construction activities, the potential for release of existing contaminated materials during construction, and the potential for release of lead-based paint (LBP) or asbestos-containing materials (ACM) during demolition or construction.

USE OF HAZARDOUS MATERIALS DURING CONSTRUCTION

Construction associated with future development in Piedmont may include the temporary transport, storage, and use of potentially hazardous materials including fuels, lubricating fluids, cleaners, or solvents. If spilled, these substances could pose a risk to the environment and to human health. However, the transport, storage, use, or disposal of hazardous materials is subject to various federal, State, and local regulations designed to reduce risks associated with hazardous materials, including potential risks associated with upset or accident conditions. Hazardous materials would be required to be transported under U.S. Department of Transportation (DOT) regulations (U.S. DOT Hazardous Materials Transport Act, 49 Code of Federal Regulations), which stipulate the types of containers, labeling, and other restrictions to be used in the movement of such material on interstate highways. In addition, the use, storage, and disposal of hazardous materials are regulated through the Resources Conservation and Recovery Act (RCRA). The California Department of Toxic Substances Control (DTSC) is responsible for implementing the RCRA program, as well as California's own hazardous waste laws. DTSC regulates hazardous waste, cleans up existing contamination, and looks for ways to control and reduce the hazardous waste produced in California. It does this primarily under the authority of RCRA and in accordance with the California Hazardous Waste Control Law (California H&SC Division 20, Chapter 6.5) and the Hazardous Waste Control Regulations (Title 22, California Code of Regulations, Divisions 4 and 4.5). DTSC also oversees permitting, inspection, compliance, and corrective action programs to ensure that hazardous waste managers follow federal and State requirements and other laws that affect hazardous waste specific to handling, storage, transportation, disposal, treatment, reduction, cleanup, and emergency planning. Additionally, Policy 20.1 of the General Plan Environmental Hazards (Safety) Element would continue to require that the handling, storage, and disposal of hazardous materials complies with all applicable local, county, state, and federal laws. Compliance with existing regulations would reduce the risk of potential release of hazardous materials during construction.

HAZARDOUS MATERIALS TRANSPORT

Hazardous materials may be transported into, throughout, and near Piedmont on US-13, Moraga Avenue, Grand Avenue, Crocker Avenue, Pleasant Valley Avenue, Park Boulevard, and collector and local streets. Accidents on these roadways could result in the release of hazardous materials.

The U.S. Department of Transportation's Office of Hazardous Materials Safety regulates the transportation of hazardous materials, as described in Title 49 of the CFR, and implemented by Title 13 of the CCR. Documentation of compliance with hazardous materials regulations codified in Titles 8, 22, and 26 of the CCR, and their enabling legislation set forth in Chapter 6.95 of the California Health and Safety Code, is required for all hazardous waste transport. In addition, individual contractors and property owners are required to comply with all applicable federal, State, and local laws and regulations pertaining to the transport, use, disposal, handling, and storage of hazardous waste, including but not limited to, Title 49 of the CFR. Adherence to applicable regulations and laws would reduce the potential hazards associated with the transport of hazardous materials, including accidental release of hazardous materials during transport.

In addition to mandatory adherence to laws and regulations, Policy EH-20.2 Transport of Hazardous Material of the General Plan states that the City must coordinate and cooperate with nearby cities, regional organizations, and environmental agencies in efforts to control hazardous materials and regulate the transport of hazardous materials on Piedmont streets. Following these laws and regulations reduces the risk of accidental release of hazardous materials in transport.

HAZARDOUS MATERIALS USE AND DISPOSAL

Although the overall quantity of hazardous materials used and requiring disposal in Piedmont could incrementally increase as a result of implementation of the proposed project, all new development that uses hazardous materials would be required to comply with the regulations, standards, and guidelines established by the U.S. EPA, the State of California, Alameda County, and Piedmont related to storage, use, and disposal of hazardous materials.

As described above in the *Regulatory Setting* discussion, the Alameda County Department of Environmental Health, the Piedmont LHMP and the Piedmont General Plan aim to minimize community exposure to hazardous and potentially hazardous materials by avoiding toxic cleaning and building materials and products in civic facilities and services; providing information, opportunities, and incentives to the community for proper disposal of toxic materials; and encouraging non-toxic materials and products in homes and businesses as an alternative to products containing potentially hazardous materials. Additionally, future development would be required to comply with existing policies 20.1 to 20.5 of the General Plan Environmental Hazards Element, which outline requirements for the handling, storage, and disposal of hazardous materials and minimizing the use of toxic and hazardous household products. Compliance with these policies would further prepare the city, and protect the public, in the event of an accidental spill or exposure, and would reduce the potential for accidental exposure and hazards associated with the use and disposal of hazardous materials.

DEMOLITION AND REDEVELOPMENT ACTIVITIES

Infill development under the proposed project could involve demolition of existing structures. Demolition could result in emission of lead and asbestos. However, lead-based materials and asbestos exposure are regulated by CalOSHA. CCR Section 1532.1 requires testing, monitoring, containment, and disposal of lead-based materials such that exposure levels do not exceed CalOSHA standards. Under this rule, construction workers (and by extension, neighboring properties) may not be exposed to lead at concentrations greater than 50 micrograms per cubic meter of air averaged over an eight-hour period and exposure must be reduced to lower concentrations if the workday exceeds eight hours. Similarly, CCR Section 1529 sets requirements for asbestos exposure assessments and monitoring, methods of complying with exposure requirements, safety gear wear, communication of hazards, and medical examination of workers.

The control of asbestos during demolition or renovation of buildings is regulated under the Federal Clean Air Act (FCAA). The FCAA requires a thorough inspection for asbestos where demolition will occur and specifies work practices to control emissions, such as removing all asbestos-containing materials, adequately wetting all regulated asbestos-containing materials, sealing the material in leak tight containers, and disposing of the asbestos-containing waste material as expediently as practicable (U.S. EPA 2023c). Compliance with the CCR and FCAA would reduce the potential hazards and risks associated with release of lead and asbestos to a less than significant level. Additionally, Policy 20.3 of the General Plan Environmental Hazards Element would continue to ensure that hazardous building materials removed during redevelopment activities are properly handled and disposed of.

Demolition of housing and other residential uses would not require the use hazardous materials in demolition activities, and thereby pose little risk of exposing the public to hazardous materials. Commercial uses associated with mixed-use developments would be subject to compliance with CCR, CalOSHA, and other agencies to ensure hazardous materials risks to the public are also minimized.

SUMMARY

Compliance with existing applicable regulations and programs would minimize risks from routine transport, use, and disposal of hazardous materials, including potential hazards from the accidental release of hazardous materials, associated with development under the Housing Element Implementation project. Oversight by the appropriate federal, State, and local agencies and compliance by new development and new Piedmont residents with applicable regulations related to the handling and storage of hazardous materials would minimize the risk of the public's potential exposure to these materials. Therefore, impacts from a hazard to the public or the environment through routine transport, use, or disposal of hazardous materials, or from accidental release or exposure to these materials would be less than significant.

Moraga Canyon Specific Plan

Similar to the Housing Element Implementation, implementation of the Moraga Canyon Specific Plan (MCSP) on City owned land in Moraga Canyon would not facilitate the establishment of new industrial, warehouse, auto-service, or manufacturing uses. Therefore, the MCSP would not introduce new manufacturing, warehouse, or industrial uses that would sell, use, store, transport, or release substantial quantities of hazardous materials.

The MCSP Area does not contain residential development. Existing land uses within the MCSP Area include Coaches Field, Blair Park, the William F. Kennelly Skate Park, and the Piedmont Corporation Yard. The Piedmont Corporation Yard functions as the base of operations for Public Works Department and involves storage of maintenance equipment and Fire Department vehicles, which may contain hazardous materials. Construction associated with future development in the MCSP Area may include the temporary transport, storage, and use of potentially hazardous materials including fuels, paints, lubricating fluids, cleaners, or solvents. If spilled, these substances could pose a risk to the environment and to human health. However, the transport, storage, use, or disposal of hazardous materials is subject to the same federal, State, and local regulations as discussed above designed to reduce risks associated with hazardous materials, including potential risks associated with upset or accident conditions. Compliance with existing regulations would reduce the risk of potential release of hazardous materials during construction and operation.

Residential development or other structures and facilities in the MCSP Area could potentially use and dispose of hazardous materials. Hazardous materials may be transported into, throughout, and near the MCSP Area on US-13, Moraga Avenue, and collector and local streets. Accidents on these roadways could result in the release of hazardous materials. Nonetheless, with adherence to the same federal, State, and local regulations as discussed above, the risk of accidental release of hazardous materials in transport as well as the potential for accidental exposure and hazards associated with the use and disposal of hazardous materials would be reduced, and impacts would be less than significant.

Infill development under the MCSP could involve demolition of existing structures. Demolition could result in emission of lead and asbestos. However, compliance with the CCR and FCAA would reduce impacts to a less than significant level.

Mitigation Measures

The impact from development facilitated by the proposed Housing Element Implementation project, including development pursuant to an adopted MCSP, would be less than significant. No mitigation measures are required.

Threshold 3:	Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?

Impact HAZ-2 DEVELOPMENT FACILITATED BY THE PROPOSED PROJECT WOULD NOT EMIT HAZARDOUS EMISSIONS OR HANDLE HAZARDOUS OR ACUTELY HAZARDOUS MATERIAL, SUBSTANCES, OR WASTE WITHIN 0.25 MILE OF AN EXISTING OR PROPOSED SCHOOL. THIS IMPACT WOULD BE LESS THAN SIGNIFICANT.

Citywide Housing Element Implementation

The proposed Housing Element Implementation project would facilitate residential development at a higher density in the vicinity of some schools. As shown in Figure 4.8-1, the proposed project would facilitate development within 0.25 miles of the Beach Elementary School, Frank C Havens Elementary School, Wildwood Elementary School, Millennium High School, Piedmont Middle School, and Piedmont High School, as well as within .25 miles of private schools at Corpus Christi Church and Zion Church, and pre-schools at Piedmont Community Church, Kehilla Synagogue, and Hampton Park, and various pre-schools and childcare facilities throughout Piedmont. However, as described above under Impact HAZ-1, the proposed project would not involve new industrial or manufacturing uses. Hazardous materials and waste generated from reasonably foreseeable development accommodated under the proposed project would not pose a health risk to nearby schools or childcare facilities as a majority of these developments would be residential, which is a use that does not typically handle or emit hazardous materials or substances. Residential uses may involve use and storage of some materials considered hazardous, though primarily these would be limited to solvents, paints, chemicals used for cleaning and building maintenance, and landscaping supplies. These materials would not be different from household chemicals and solvents already in general and wide use throughout Piedmont. Uses in Piedmont that sell, use, store, generate, or release hazardous materials must adhere to applicable federal, State, and local safety standards, ordinances, and regulations.

As mentioned in Impact HAZ-1, construction facilitated by the proposed project may include the temporary transport, storage, and use of potentially hazardous materials including fuels, paints, lubricating fluids, cleaners, or solvents. Specifically, demolition, grading, and excavation activities associated with new construction may result in emissions and transport of hazardous materials. Further, the sites subject to zoning ordinance amendments may have unrecorded pre-existing contamination that could be exposed during grading or construction activities. However, adherence to applicable policies regarding emission and transport of hazardous materials such as the Toxic Substances Control Act, the Resource Conversation and Recovery Act, and the Hazardous Waste Control Act, as listed the Regulatory Setting and under Impact HAZ-1, would ensure potential impacts would be reduced.

Additionally, compliance with General Plan Environmental Hazards Element policies would further reduce impacts. Therefore, potential impacts associated with hazardous materials, substances, or wastes within 0.25 mile of an existing or proposed school would be less than significant.

Moraga Canyon Specific Plan

As shown in Figure 4.8-1, there are no schools in the vicinity of the MCSP Area. Therefore, development facilitated by the MCSP would not emit hazardous emissions or handle hazardous or acutely hazardous material, substances, or waste within 0.25 mile of an existing or proposed school, and this impact would be less than significant.

Mitigation Measures

The impact from development facilitated by the proposed Housing Element Implementation project, including development pursuant to an adopted MCSP, would be less than significant. No mitigation measures are required.

Threshold 4:	Would the project be located on a site that is included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

Impact HAZ-3 IMPLEMENTATION OF THE PROPOSED PROJECT WOULD ACCOMMODATE DEVELOPMENT ON OR NEAR HAZARDOUS MATERIALS SITES. HOWEVER, COMPLIANCE WITH APPLICABLE REGULATIONS AND STANDARD CONDITIONS OF APPROVAL REQUIRING SITE CHARACTERIZATION AND CLEANUP WOULD MINIMIZE HAZARDS FROM DEVELOPMENT ON CONTAMINATED SITES. IMPACTS WOULD BE LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED.

Citywide Housing Element Implementation

Existing sites that use or have historically used hazardous materials or that may contain contaminants in soils or groundwater in the city include large and small-quantity generators of hazardous waste, such as gas stations and dry cleaners. As described in Section 4.8.1, *Setting*, Piedmont has four closed cleanup program sites, 12 closed leaking underground storage tank (LUST) sites, and one school investigation (DTSC 2023; SWRCB 2023a). Development facilitated by the project on or near these hazardous material sites could expose construction workers and future occupants to hazardous materials. As shown in Figure 4.8-1, one site is located on a closed LUST cleanup site (gas station), and two sites are located on a closed cleanup program site (PG&E substation and gas station).

Development of identified hazard sites would be preceded by investigation, remediation and cleanup under the supervision of the Regional Water Quality Control Board, the Alameda County Health Hazardous Materials Division, or DTSC, before construction activities could begin as currently required by federal, State, and local regulations. The agency responsible for oversight would determine the types of remediation and cleanup required and could include excavation and off-haul of contaminated soils, installation of vapor barriers beneath habitable structures, continuous monitoring wells onsite with annual reporting requirements, or other mechanisms to ensure the site does not pose a health risk to workers or future occupants. Compliance with General Plan Environmental Hazards Element policies as listed in Section 4.8.2, *Regulatory Setting*, and compliance with federal, State, and local regulations would continue to apply to development and provide the same level of protection as they do under existing conditions.

It is also possible that underground storage tanks (UST) in use prior to permitting and record keeping requirements may be present in the city. If an unidentified UST were uncovered or disturbed during construction activities, it would be removed under permit from the City; if such removal would potentially undermine the structural stability of existing structures, foundations, or impact existing utilities, the tank might be closed in place without removal. Tank removal activities could pose both health and safety risks, such as the exposure of workers, tank handling personnel, and the public to tank contents or vapors. Potential risks, if any, posed by USTs would be minimized by managing the tank according to existing standards contained in Division 20, Chapters 6.7 and 6.75 (UST Program) of the California Health and Safety Code as enforced and monitored by the State Environmental Programs Division. Additionally, Policy 20.6 of the General Plan Environmental Hazards Element

would ensure that any USTs containing hazardous materials are properly installed, used, removed, and monitored.

The extent to which groundwater may be affected by an UST or other potential contamination source, if at all, depends on the type of contaminant, the amount released, the duration of the release, distance from source, and depth to groundwater. If groundwater contamination is identified, characterization of the vertical and lateral extent of the contamination and remediation activities would be required by the Regional Water Quality Control Board prior to the commencement of any new construction activities that would disturb the subsurface. If contamination exceeds regulatory action levels, the developer would be required to undertake remediation procedures prior to grading and development under the supervision of the Regional Water Quality Control Board, depending upon the nature of any identified contamination.

Further, the proposed project involves amendments to the General Plan Environmental Hazards Element which include adding the following proposed new policy:

> **Hazardous Waste Sites Cleanup.** The City shall regulate development on sites with known contamination of soil and groundwater to ensure that construction workers, future occupants, and the environment as a whole, are adequately protected from hazards associated with contamination, and encourage cleanup of such sites. Applicants for development projects shall be required to provide documentation that the proposed development site is not impacted by former/current site uses, including but not limited to, agricultural chemicals, aerially deposited lead, common railroad contaminants, and hazardous material storage and/or use.

Compliance with existing State and local regulations, and adherence to this proposed new General Plan policy, would reduce impacts to less than significant levels.

Moraga Canyon Specific Plan

As shown in Figure 4.8-1, no known hazardous waste sites are present in the MCSP Area. However, if an unidentified UST or other contamination were uncovered or disturbed during construction activities, the State and local regulations and Environmental Hazards Element policies 20.1, 20.3, 20.5, and 20.6, and the proposed new Hazardous Wastes Sites Cleanup policy, as discussed above, would apply. Nonetheless, because the MCSP Area includes the Piedmont Corporation Yard, which functions as the base of operations for Public Works Department and involves storage of maintenance equipment and Fire Department vehicles which may contain hazardous materials, this impact is potentially significant and additional mitigation for the MCSP Area is required.

Mitigation Measures

The following mitigation measures are required for development in the MCSP Area.

MCSP HAZ-1 Property Assessment - Phase I and II ESAs

Prior to the issuance of any grading, demolition or grading permit for development in the Moraga Canyon Specific Plan Area, the project applicant shall retain a qualified environmental professional (EP), as defined by ASTM E-1527 to prepare a project-specific Phase I Environmental Site Assessment (ESA) in accordance with standard ASTM methodologies, to assess the land use history of the project site.

If the Phase I ESA identifies recognized environmental conditions or potential areas of concern, the project applicant shall retain a qualified environmental consultant, California Professional Geologist (PG) or California Professional Engineer (PE), to prepare a Phase II ESA for the project site to determine whether the soil, groundwater, and/or soil vapor has been impacted at concentrations exceeding regulatory screening levels. The Phase II ESA shall be completed prior to the issuance of any building permit authorizing construction, grading permit or demolition permit and shall be based on the results of the Phase I ESA.

As part of the Phase II ESA, the qualified environmental consultant (PG or PE) shall screen the analytical results against the San Francisco Bay Regional Water Quality Control Board environmental screening levels (ESL). These ESLs are risk-based screening levels under various depth and land use scenarios. The City shall review and approve the Phase II ESA prior to the issuance of any building, grading or demolition permit.

If the Phase II ESA for the project site indicates that contaminants are present in the subsurface at the project site, the project applicant shall take appropriate steps to protect site workers and the public. This may include the preparation of a Soil Management Plan (see Mitigation Measure MCSP HAZ-2) prior to issuance of a building, grading or demolition permit.

If the Phase II ESA for the project site indicates that contaminants are present at concentrations exceeding hazardous waste screening thresholds for contaminants in soil and/or groundwater (California Code of Regulations [CCR] Title 22, Section 66261.24 Characteristics of Toxicity), the project applicant shall take appropriate steps to protect site workers and the public. This may include the completion of remediation (see Mitigation Measure MCSP HAZ-3) at the project site prior to onsite construction.

MCSP HAZ-2 Soil Management Plan

For future development in the Moraga Canyon Specific Plan Area, if impacted soils or other impacted wastes are present at the project site, the project applicant shall retain a qualified environmental consultant (PG or PE), to prepare a Soil Management Plan (SMP) prior to issuance of a building, demolition or grading permit. The SMP, or equivalent document, shall address:

1. On-site handling and management of impacted soils or other impacted wastes (e.g., stained soil, and soil or groundwater with solvent or chemical odors) if such soils or impacted wastes are encountered, and
2. Specific actions to reduce hazards to construction workers and offsite receptors during the construction phase.

The plan must establish remedial measures and soil management practices to ensure construction worker safety, the health of future workers and visitors, and the off-site migration of contaminants from the project site. These measures and practices may include, but are not limited to:

- Stockpile management, including stormwater pollution prevention and the installation of BMPs
- Proper disposal procedures of contaminated materials
- Investigation procedures for encountering known and unexpected odorous or visually stained soils, other indications of hydrocarbon piping or equipment, and/or debris during ground-disturbing activities
- Monitoring and reporting

- A health and safety plan for contractors working at the project site that addresses the safety and health hazards of each phase of site construction activities with the requirements and procedures for employee protection
- The health and safety plan shall also outline proper soil handling procedures and health and safety requirements to minimize worker and public exposure to hazardous materials during construction

The City of Piedmont Public Works Director or designee shall review and approve the project site SMP prior to issuing of any grading, demolition or grading permit. The project applicant shall implement the SMP during demolition, grading, and construction at the project site.

MCSP HAZ-3 Remediation

For future development in the Moraga Canyon Specific Plan Area, where contaminated soil is identified during implementation of Mitigation Measures MCSP HAZ-1 and/or MCSP HAZ-2 as present within the demolition, grading or construction envelope at the project site at chemical concentrations exceeding ESLs and/or hazardous waste screening thresholds for contaminants in soil (California Code of Regulations [CCR] Title 22, Section 66261.24), the project applicant shall retain a qualified environmental consultant (PG or PE), to properly dispose of the contaminated soil. The qualified environmental consultant shall utilize the project site analytical results for waste characterization purposes prior to offsite transportation or disposal of potentially impacted soils or other impacted wastes. The qualified consultant shall provide disposal recommendations and arrange for proper disposal of the waste soils or other impacted wastes (as necessary), and/or provide recommendations for remedial engineering controls, if appropriate.

Remediation of impacted soils and/or implementation of remedial engineering controls may require: additional delineation of sub-surface impacts; additional analytical testing per landfill or recycling facility requirements; soil excavation; and offsite disposal or recycling.

The City of Piedmont Public Works Director or designee shall review and approve the project site disposal recommendations prior to transportation of waste soils offsite, and review and approve remedial engineering controls, prior to construction.

The project applicant shall review and implement the project site disposal recommendations prior to transportation of waste soils offsite and review and implement the remedial engineering controls prior to construction.

The City of Piedmont shall review and approve the project site disposal recommendations and remedial engineering controls prior to issuing a building, demolition or grading permit.

Significance After Mitigation

Impacts associated with the Housing Element Implementation project would be less than significant except for in the MCSP Area. Specific to the MCSP, implementation of Mitigation Measure MCSP-HAZ-1 would require completion of a Phase I ESA to investigate the former site uses and possibly the completion of a Phase II ESA to physically investigate the subsurface for potential impacts.

Where potential impacts are identified in the Phase II ESA, implementation of Mitigation Measure MCSP-HAZ-2 would address the onsite handling and management of impacted soils or other impacted wastes and would reduce hazards to construction workers and offsite receptors during construction.

Where remediation of onsite soils or other impacted wastes is necessary, implementation of Mitigation Measure HAZ-3 would address the offsite removal and proper disposal of impacted soils or other impacted wastes.

Implementation of mitigation measures MCSP-HAZ-1, MCSP-HAZ-2, and MCSP-HAZ-3 would identify, manage onsite, and/or remove hazardous material impacted soils prior to construction (demolition and grading) and would reduce exposure to hazards resulting from development of a potential hazardous materials site in the MCSP Area to a less than significant level.

Threshold 5:	For a project 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, would the project result in a safety hazard or excessive noise for people residing or working in the project area?

Impact HAZ-4 THERE ARE NO AIRPORTS WITHIN TWO MILES OF THE CITY OF PIEDMONT, AND PIEDMONT IS NOT WITHIN THE INFLUENCE AREA OF AN AIRPORT. NO IMPACT WOULD OCCUR.

Citywide Housing Element Implementation

There are no public or private airports within Piedmont. The nearest airport is the Oakland International Airport which is located 7.8 miles south of the City limits. The proposed project would have no impact related to a safety hazard or excessive noise hazards within airport land use plan areas or proximity to airports.

Moraga Canyon Specific Plan

As discussed above, there are no public or private airports within Piedmont. Therefore, development facilitated by the MCSP would have no impact related to a safety hazard or excessive noise hazards within airport land use plan areas or proximity to airports.

Mitigation Measures

No impact from development facilitated by the proposed Housing Element Implementation project, including development pursuant to an adopted MCSP, would occur. No mitigation measures are required.

c. Cumulative Impacts

The geographic scope for cumulative hazardous materials impacts is limited to projects within 0.25 mile of future development sites. This geographic scope is appropriate for hazardous materials because risks associated with hazards and hazardous materials occur largely in a site-specific and localized context as adverse impacts from a hazardous materials release or spill diminish in magnitude with distance. Cumulative residential development in the vicinity of any identified hazardous materials sites would gradually increase the population exposed to the use and transport of hazardous materials; the routine use, storage, and disposal of hazardous materials; and listed hazardous materials sites. The magnitude of hazards for individual projects would depend upon the location, type, and size of development and the specific hazards associated with individual sites. Implementation of existing laws and regulations, including remedial action on contaminated sites, as adherence to the proposed new General Polan policy as well as mitigation measures MCSP-HAZ-1 through MCSP-HAZ-3, as discussed with regard to the project under Impacts HAZ-1 through HAZ-5, would avoid potential hazard impacts.

Overall, hazards and hazardous materials impacts associated with individual developments are site specific in nature and must be addressed on a case-by-case basis. Since hazards and hazardous materials are required to be examined as part of the existing permit application and review process, potential impacts associated with individual projects would be adequately addressed prior to permit approval. With adherence to existing regulatory standards and proposed new General Plan policies for hazardous materials, no significant cumulative human health impacts would occur, and the project would not have a cumulatively considerable contribution to a significant cumulative impact related to hazards and hazardous materials.

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4.9 Hydrology and Water Quality

This section evaluates the potential environmental effects related to hydrology and water quality associated with implementation of the proposed Housing Element Implementation project.

4.9.1 Setting

a. Watersheds

The California Department of Water Resources divides surface watersheds in California into 10 hydrologic regions. Piedmont lies in San Francisco Bay Hydrologic Region (Bay Region), which contains 33 alluvial groundwater basins, covers approximately 4,500 square miles, and includes all of San Francisco County and portions of Marin, Sonoma, Napa, Solano, San Mateo, Santa Clara, Contra Costa, and Alameda counties. The Bay Region comprises numerous watersheds that drain directly into San Francisco Bay, downstream of other watersheds such as the Sacramento-San Joaquin River Delta and coastal creek watersheds in Marin and San Mateo counties that drain directly to the Pacific Ocean.

Piedmont is located on the eastern portion of the San Francisco Bay Area and is surrounded by the City of Oakland. There is one primary watershed within the city limits. The Indian Gulch/Pleasant Valley Creek Watershed covers about three square miles, draining much of the City of Piedmont and parts of the Lower Hills District in the City of Oakland. The watershed in Piedmont utilizes five small creeks that converge downstream and flow into eastern Lake Merritt, and from there into the San Francisco Bay (Alameda County 2022).

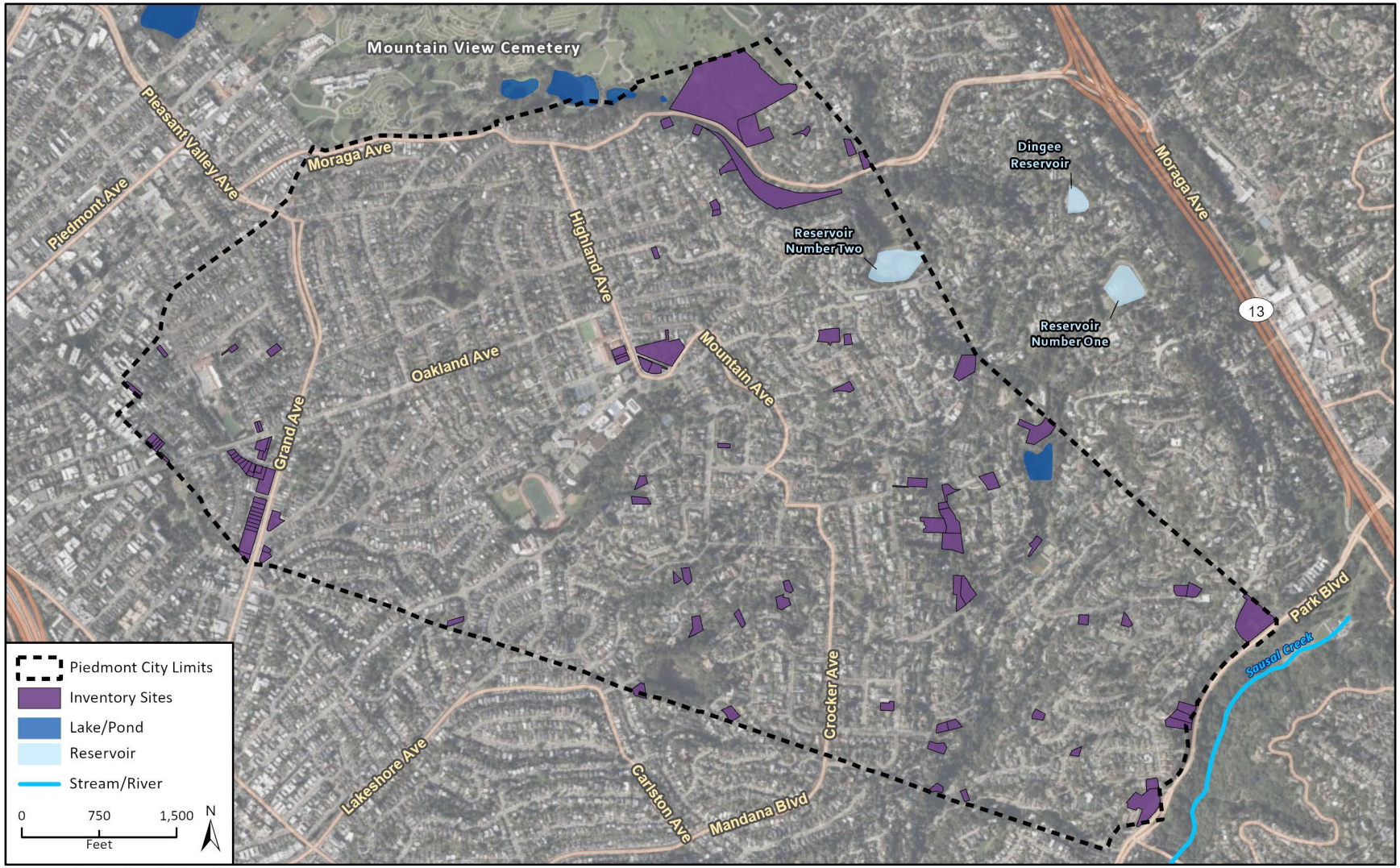
b. Groundwater

Piedmont lies within the East Bay Plain Subbasin for which the East Bay Municipal Utility District (EBMUD) serves as the Groundwater Sustainability Agency (GSA). Water supply in Piedmont is also provided by EBMUD. The majority of the water delivered by EBMUD originates from the Mokelumne River watershed, and the remaining water originates as runoff from the protected watershed lands and reservoirs in the East Bay Hills. Supplemental groundwater projects planned or constructed by EBMUD would allow EBMUD to be flexible in response to changing external conditions, such as single-year or multiple-year droughts. For example, the Bayside Groundwater Project will allow EBMUD to bank water during wet years for extraction, treatment, and use during dry years. Construction of the project was completed in 2010, and the EBMUD operated in injection mode during wet years (2018 and 2019) when surplus water was available for storage. However, no groundwater pumping has been conducted from the project as a drinking water supply permit is required to extract groundwater for public water supply (EBMUD 2020).

c. Surface Water

Figure 4.9-1 shows surface water in Piedmont based on the National Hydrology Dataset provided by the U.S. Geological Survey (USGS) and Figure 4.9-2 shows a map of surface water in Piedmont based on Figure 5.2 of the Piedmont General Plan Natural Resources and Sustainability Element. As shown on the figures, there are several creeks, lakes, and reservoirs within and adjacent to Piedmont. Within Piedmont, there is one reservoir (EBMUD Reservoir Number 2) and one privately-owned, man-made lake near LaSalle Avenue, Tyson Lake, at the Oakland city limits. As shown in Figure 4.9-1, as mapped, the small ponds on the northern boundary of the city slightly cross over the city boundary. However, the ponds are associated with and under the jurisdiction of the Mountain View Cemetery.

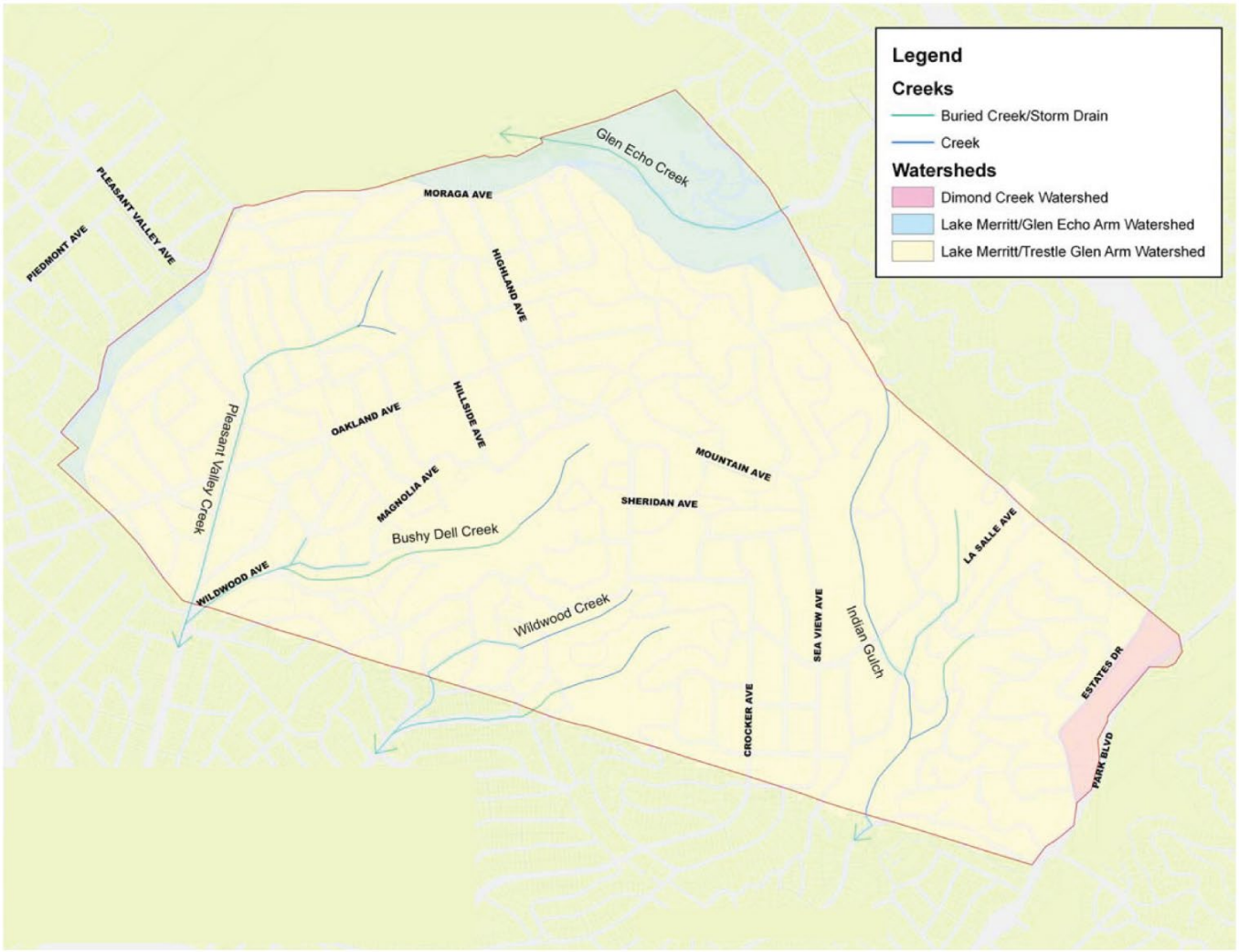
Figure 4.9-1 Surface Water in Piedmont from the National Hydrology Dataset



Imagery provided by Microsoft Bing and its licensors © 2023.
Additional data from National Hydrology Dataset, 2022.

21-11542_Piedmont_HE
Fig 4.9-1 Surface Waters in Piedmont

Figure 4.9-2 Surface Water in Piedmont from the Piedmont General Plan



Source: Oakland Museum, 1993.

Piedmont contains five principal creeks: Indian Gulch, Wildwood Creek, Bushy Dell Creek, Pleasant Valley Creek, and Cemetery Creek, all of which flow west from Piedmont and into eastern Lake Merritt which later releases into the San Francisco Bay. These creeks are mostly ephemeral with only intermittent flows. Many stretches of these creeks have been buried underground with only some portions at the surface. Additional information about these creeks is provided below, based on the Piedmont General Plan:

- Indian Gulch Creek originates near the Sotelo-Glen Alpine loop and flows parallel to Sea View Avenue before flowing through Crocker Highlands to Lake Merritt.
- Wildwood Creek flows from Wildwood Gardens to Oakmont Avenue, and continues underground under Lakeshore Avenue to Lake Merritt.
- Bushy Dell Creek begins in Piedmont Park and flows underground under Witter Field, then underground under Magnolia Avenue to Grand Avenue.
- Pleasant Valley Creek originates in Dracena Park and flows underground under Grand Avenue to Lake Merritt.
- Cemetery Creek follows from Moraga Avenue and crosses Mountain View Cemetery, becoming Glen Echo Creek in the Piedmont Avenue neighborhood of Oakland.
- Sasual Creek is located out Piedmont city limits but drains a small area along Park Boulevard.

The entire city, with the exception of a narrow strip of land along Park Boulevard, drains to Lake Merritt. Piedmont represents about one-quarter of the Lake Merritt watershed (City of Piedmont 2009a).

d. Water Quality

The San Francisco Bay region's immediate watershed is highly urbanized, resulting in contaminant loads from point and nonpoint sources. Stormwater runoff pollutants vary with land use, topography, and the amount of impervious surface, as well as the amount and frequency of rainfall and irrigation practices. Typically, runoff in developed areas contains oil, grease, litter, and metals accumulated in streets, driveways, parking lots, and rooftop. It also contains pollutants applied to landscaped areas. Other contaminants can include chemicals, dust, and smoke pollution that settles or settled out of the air, such as residual lead from leaded gasoline. Stormwater runoff generated in Piedmont eventually discharges into San Francisco Bay. The runoff is conveyed by storm drains, open channel creeks, and culverted creeks to the Bay. The San Francisco Bay Regional Water Quality Control Board (SFBRWQCB) is the primary agency charged with protecting and enhancing surface and ground water quality in the region (City of Piedmont 2009a).

The SFBRWQCB monitors surface water quality through implementation of the Basin Plan and designates beneficial uses for surface water bodies and groundwater. Four of the waterways within the Indian Gulch/Watershed are aboveground and have been assigned some beneficial uses by the San Francisco Bay RWQCB (SFBRWQCB 2023).

e. Flood Hazards

FEMA Flood Hazard Zones

The Federal Emergency Management Agency (FEMA) establishes base flood elevations (BFE) for 100-year and 500-year flood zones and establishes Special Flood Hazard Areas (SFHA). SFHAs are those areas within 100-year flood zones or areas that will be inundated by a flood event having a one

percent chance of being equaled or exceeded in any given year. The 500-year flood zone is defined as the area that could be inundated by the flood which has a 0.2 percent probability of occurring in any given year, or once in 500 years, and is not considered an SFHA.

There are no portions of Piedmont located within the flood hazard zones as mapped by FEMA.

Dams and Levees

Flooding could potentially result from the failure of Tyson Lake dam or the collapse of EBMUD Reservoir #2 tanks in the hills above Piedmont. Also, Estates Reservoir (EBMUD Reservoir #1) Dam, the Dingee Reservoir (EBMUD), and Lake Temescal present additional risks. Only the Tyson Lake Dam inundation area intersects the city. The probability of dam or tank failure is extremely low. Tyson Lake and its associated dam are below the size threshold requiring monitoring by the State Department of Water Resources Division of Dam Safety. The dam is periodically inspected on behalf of the Tyson Lake Homeowners Association. In the event of dam failure, water would cross Hampton Field Park and then follow LaSalle Avenue to Indian Gulch Road, potentially damaging homes in its path (City of Piedmont 2009a).

According to the Piedmont General Plan, the probability of flooding from EBMUD tanks is greatly diminished by the fact that the Piedmont Reservoir #2 (on Blair Avenue) is empty and the Dingee Reservoir is being decommissioned. Moreover, EBMUD Reservoir #1 on Estates Drive is planned for replacement with two reinforced concrete water tanks. In the event the Estates Reservoir (or the replacement tanks) collapses, water would follow the streambed between Glen Alpine Road and Sea View Avenue, cross Hampton Road, and follow St. James Drive to Indian Gulch. In the event the future Piedmont Reservoir #2 tank(s) collapses, water would flow into Moraga Canyon (City of Piedmont 2009a).

Tsunami and Seiches

A tsunami is a series of waves generated by an impulsive disturbance in the ocean or in a small, connected body of water. Tsunamis are produced when movement occurs on faults in the ocean floor, usually during very large earthquakes. Sudden vertical movement of the ocean floor by fault movement displaces the overlying water column, creating a wave that travels outward from the earthquake source. An earthquake anywhere in the Pacific Ocean can cause tsunamis around the entire Pacific basin.

Seiches are waves generated in an enclosed body of water, such as San Francisco Bay, from seismic activity. Seiches are related to tsunamis for enclosed bays, inlets, and lakes. These tsunami-like waves can be generated by earthquakes, subsidence or uplift of large blocks of land, submarine and onshore landslides, sediment failures, and volcanic eruptions. The strong currents associated with these events may be more damaging than inundation by waves. The largest seiche wave ever measured in San Francisco Bay, following the 1906 earthquake, was four inches high.

f. Moraga Canyon Specific Plan Setting

The Moraga Canyon Specific Plan (MCSP) Area is located in an area surrounded by relatively steep slopes at the northern portion of the city. Precipitation and runoff from the canyon are collected within the Cemetery Creek watershed that includes parts of the cities of Oakland and Piedmont. The head of the creek, at an elevation of approximately 650 feet, begins immediately west of the Moraga Avenue exit from State Route 13 in the City of Oakland, flows beneath several blocks in Piedmont, passes through the Mountain View Cemetery (Cemetery) in Oakland, becomes Glen Echo Creek

beyond the cemetery, and then continues to Lake Merritt. Beyond the Mountain View Cemetery, the stormwater is contained in underground culverts, ranging in size from four-by-five feet to five-by-five feet and five and a half feet in size near the Cemetery and, beyond Glen Eden Avenue east of Piedmont Avenue, within a 36-inch reinforced concrete culvert and relatively open segments.

The upper watershed, from its source and continuing down to the Cemetery, comprises areas on both the north and south sides of Moraga Avenue, varying in overall width from about one-half to one mile. Runoff from this portion of the watershed is directed in closed culverts to the western end of Coaches Field, where it flows in a short open channel and culvert down to the Cemetery and into three water storage ponds. Part of the water stored in the three cemetery ponds is used for landscape irrigation.

As noted above under Flood Hazards, the MCSP Area does not contain flood zones and is not located within a FEMA-designated 100-year Flood Hazard Area. The MCSP Area is also not susceptible to tsunami nor seiches. As discussed above under Dams and Levees, in the event the future Piedmont Reservoir tank collapses, water would flow into Moraga Canyon (City of Piedmont 2009a). However, the probability of dam or tank failure is extremely low.

4.9.2 Regulatory Setting

a. Federal Regulations

Federal Clean Water Act

In 1972, Congress passed the Federal Water Pollution Control Act, commonly known as the Clean Water Act (CWA), with the goal of "restor[ing] and maintain[ing] the chemical, physical, and biological integrity of the Nation's waters" (33 U.S.C. § 1251(a)). The CWA directs states to establish water quality standards for all "waters of the United States" and to review and update such standards on a triennial basis. Section 319 mandates specific actions for the control of pollution from non-point sources. The U.S. EPA has delegated responsibility for implementation of portions of the CWA, including water quality control planning and control programs, such as the National Pollutant Discharge Elimination System (NPDES) Program, to the State Water Resources Control Board (SWRCB) and the Regional Water Quality Control Boards (RWQCBs).

Section 303(c)(2)(b) of the CWA requires states to adopt water quality standards for surface waters of the United States based on the water body's designated beneficial use. Water quality standards are typically numeric, although narrative criteria based upon biomonitoring methods may be employed where numerical standards cannot be established or where they are needed to supplement numerical standards. Applicable water quality standards are contained in the Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan).

Section 303(d) of the CWA bridges the technology-based and water quality-based approaches for managing water quality. Section 303(d) requires that states make a list of waters that are not attaining standards after the technology-based limits are put into place. For waters on this list (and where the U.S. EPA administrator deems they are appropriate), states are to develop total maximum daily loads (TMDL). TMDLs are established at the level necessary to implement the applicable water quality standards. A TMDL must account for sources of the pollutants that caused the water to be listed.

Section 404 of the CWA prohibits the discharge of any pollutants into "waters of the United States," except as allowed by permit. 33 Code of Federal Resources § 328.3(a)(3). Section 404 of the CWA authorizes the U.S. Army Corps of Engineers to issue permits for and regulate the discharge of dredged

or fill materials into wetlands or other waters of the United States. Under the CWA and its implementing regulations, "waters of the United States" are broadly defined to consist of rivers, creeks, streams, and lakes extending to their headwaters, including adjacent wetlands.

National Pollutant Discharge Elimination System (NPDES)

In California, the National Pollutant Discharge Elimination System (NPDES) program is administered by the SWRCB through the nine RWQCBs. Piedmont lies within the jurisdiction of SFBRWQCB (Region 2) and is subject to the waste discharge requirements of the Municipal Regional Stormwater Permit (MRP) (Order No. R2-2020-0004) and NPDES Permit No. CA0038504, which was issued on February 12, 2020 and went into effect on April 1, 2020. The order expires on March 31, 2025, and Piedmont would be expected to reissue the MRP. Under Provision C.3 of the MRP, Piedmont is required to use its planning authority to include appropriate source control, site design, and stormwater treatment measures in new development and redevelopment projects to address stormwater runoff pollutant discharges and address increases in runoff flows from new development and redevelopment projects. These requirements are generally reached through the implementation of Low Impact Development (LID) techniques and other controls.

The MRP requires appropriate LID and Stormwater Treatment technologies in new development and redevelopment projects, in order to mimic the natural hydrology of the lands prior to disturbance. The objective of LID and post-construction BMPs for stormwater is to reduce runoff and mimic a site's predevelopment hydrology by minimizing disturbed areas and impervious cover and then infiltrating, storing, detaining, evapotranspiring, and/or biotreating stormwater runoff close to its source. LID employs principles such as preserving and recreating natural landscape features and minimizing imperviousness to create functional and appealing site drainage that treats stormwater as a resource, rather than a waste product. Practices used to adhere to these LID principles include measures such as rain barrels and cisterns, green roofs, permeable pavement, preserving undeveloped open space, and biotreatment through man-made or engineered rain gardens, bioretention units, bioswales, and planter/tree boxes.

b. State Regulations

State Water Resources Control Board General Construction Permit

The SWRCB is responsible for developing statewide water quality policy and exercise the powers delegated to the State of California by the federal government under the Clean Water Act. 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 (Order 2022-0057-DWQ). Under the terms of the permit, applicants must file Permit Registration Documents (PRD) with the SWRCB prior to the start of construction. The PRDs include a Notice of Intent, risk assessment, site map, Stormwater Pollution Prevention Plan (SWPPP) including construction best management practices (BMP), annual fee, and a signed certification statement. The PRDs are submitted electronically to the SWRCB via the Storm Water Multiple Application and Report Tracking System website.

Applicants must demonstrate conformance with applicable BMPs and prepare a Storm Water Pollution Prevention Plan (SWPPP) with a site map that shows the construction site perimeter, existing and proposed buildings, lots, roadways, stormwater collection, and discharge points, general topography before and after construction, and drainage patterns across the city. The SWPPP must list BMPs that would be 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. The updated Construction General Permit (2022-0057-DWQ, effective September 1, 2023) requires applicants to comply with post-construction runoff reduction requirements. For operational requirements, see the discussion under the Alameda County Clean Water Program.

Porter-Cologne Water Quality Act

The California Porter-Cologne Water Quality Control Act establishes the SWRCB and each RWQCB as the principal agencies for coordinating and controlling water quality in the State. Specifically, the Porter-Cologne Act authorizes the SWRCB to adopt, review, and revise policies for waters of the State (including both surface and groundwater) and directs the RWQCBs to develop regional basin plans.

The SFBRWQCB has the authority to implement water quality protection standards through the issuance of permits for discharges to waters in its jurisdiction. Water quality objectives for receiving waters within Piedmont are specified in the Water Quality Control Plan for the Basin Plan, prepared by the SFBRWQCB in compliance with the federal CWA and the Porter Cologne Act. The principal elements of the Basin Plan are a statement of beneficial water uses protected under the plan; water quality objectives necessary to protect the designated beneficial water uses; and strategies and time schedules for achieving the water quality objectives. Together, narrative and numerical objectives define the level of water quality that shall be maintained in the region. The water quality objectives are achieved primarily through the establishment and enforcement of waste discharge requirements (WDR).

The RWQCBs have primary responsibility for issuing WDRs. The RWQCBs may issue individual WDRs to cover individual discharges or general WDRs to cover a category of discharges. WDRs may include effluent limitations or other requirements that are designed to implement applicable water quality control plans, including designated beneficial uses and the water quality objectives established to protect those uses and prevent the creation of nuisance conditions. Violations of WDRs may be addressed by issuing Cleanup and Abatement Orders or Cease and Desist Orders, assessing administrative civil liability, or seeking imposition of judicial civil liability or judicial injunctive relief.

State Updated Model Water Efficient Landscape Ordinance (Assembly Bill 1881)

The updated Model Water Efficient Landscape Ordinance (WELO) required cities and counties to adopt landscape water conservation ordinances by January 31, 2010 or to adopt a different ordinance that is at least as effective in conserving water as the updated WELO. The City of Piedmont adopted the Civic Bay-Friendly Landscape Ordinance for city facilities in accordance with this requirement in 2009. The City of Piedmont has not adopted Bay-Friendly Landscaping requirements for residential uses, but rather states in Section 4.05.02 of their Design Guidelines to “encourage the employment of Bay-Friendly Landscaping principles in landscape design and maintenance”. In May of 2015, the Governor issued Executive Order B-29-15 requiring the State to revise the model WELO to increase water efficiency standards for new and retrofitted landscapes through more efficient irrigation systems, greywater usage, onsite stormwater capture, and by limiting the portion of landscapes that can be covered in turf. The WELO Ordinance in the City of Piedmont applies to any single-family or multi-family residential, public, institutional, or commercial project that requires a permit, plan check or design review from the local reviewing agency and meets one of these size thresholds:

- New construction projects with a total landscape area greater than 500 square feet
- Rehabilitations of existing landscape with a total landscape area greater than 2,500 square feet.

c. Local Regulations

City of Piedmont General Plan

The Piedmont General Plan, adopted in April 2009 and last amended in 2019, lists several hydrology and water quality goals, policies, and actions as part of the Natural Resources and Sustainability Element and the Environmental Hazards Element.

The following goals, policies, and actions in the Natural Resources and Sustainability Element are applicable to the proposed project (City of Piedmont 2009a):

Goal 13: Natural Features - Protect and enhance Piedmont's natural features, including its hillsides, creeks, and woodlands.

Policy 13.3: Creek Protection. Retain creeks in their natural condition rather than diverting them into manmade channels or otherwise altering their flow. Riparian vegetation and habitat along the city's creeks should be protected by requiring setbacks for any development near creek banks. These setbacks should be consistent with state and federal laws governing stream alteration. Figure 5.2 should be used as a general guide for identifying creeks subject to this policy, but it is not intended to be a comprehensive inventory of all watercourses in the city.

Action 13.D: Enforcement of Watercourse Protection Standards. Enforce the watercourse protection provisions of the City's Stormwater Management Ordinance to protect and enhance Piedmont's creeks and drainage ways. The Ordinance requires a permit to modify the natural flow of a watercourse, carry out development within a watercourse setback, discharge into a watercourse, or add or remove any unconsolidated material in a watercourse. Federal regulations also apply to any project which would obstruct the flow of water in a creek.

Goal 15: Actively participate in efforts to improve air and water quality in the San Francisco Bay Area.

Policy 15.3: Urban Runoff. Protect the quality of groundwater and surface water in Piedmont and the watersheds it shares with Oakland. Support the efforts of state, federal, county, and adjacent city agencies to control urban runoff, thereby improving water quality in local creeks, Lake Merritt, and San Francisco Bay.

Policy 15.4: Countywide Clean Water Program Participation. Participate in the Alameda Countywide Clean Water Program and continue to be a co-permittee on the NPDES permit for urban runoff. This will require ongoing measures to monitor stormwater pollution, regulate construction runoff, sweep local streets and clean storm drain inlets, promote education and outreach programs (such as storm drain stenciling), enforce regulations and penalties for illicit discharges, and participate in County meetings to discuss water quality issues.

Policy 15.5: Integrated Pest Management. To the extent feasible and appropriate, use integrated pest management techniques when maintaining City parks, medians, and public facilities. These techniques minimize the use of pesticides, herbicides, and other toxic materials that could potentially pollute surface water and groundwater.

> **Action 15A: Bay-Friendly Landscape Ordinance.** Consider adopting a civic Bay-friendly landscape ordinance which anticipates a gradual shift toward drought-tolerant landscaping on public property, including parks, public buildings, and medians. Promote public education to encourage bay-friendly landscape practices in private yards.

The following goals, policies, and actions in the Environmental Hazards Element are applicable to the proposed project (City of Piedmont 2009b):

> **Policy 19.5: Keeping Flood Hazards Low.** Maintain Piedmont's low potential for flooding through storm drain maintenance, preservation of creeks and drainage courses in their natural state, and periodic clearing of debris from storm drains and catchment basins. Ensure that new development does not increase the risk of off-site flooding, either in Piedmont or downstream in Oakland
>
> **Policy 19.6: Managing Runoff.** Ensure that runoff from individual properties is directed in a way that does not threaten adjacent properties. Runoff should be directed to places where it can be absorbed into the ground, detained in rain barrels or cisterns, or directed toward storm drains.
>
> > **Action 19.D: Tyson Lake Dam Inspections.** Work with Tyson Lake Homeowners to obtain current information on the condition of the Tyson Lake dam, and receive notification and copies of reports when the dam is inspected.
> >
> > **Action 19.E: EBMUD Reservoir Retrofits.** Support EBMUD's efforts to seismically retrofit and/ or replace its reservoirs above Piedmont as a way to reduce the threat of flooding in the event of tank collapse. Minimize the visual impact of any replacement tanks constructed on the reservoir site.
> >
> > **Action 19.F: Drainage Improvements.** Require storm drainage improvements for any development or home improvement which could create or exacerbate the potential for flooding. Development applications should be reviewed by the Public Works Department to ensure that such hazards are identified and mitigated.

Piedmont City Code

The Piedmont City Code (PCC) includes several regulations to manage stormwater and to mitigate potential hydrologic hazards. The following are applicable to the proposed project.

PCC Section 1805.4.3, Drainage Discharge, includes the following:

> Provisions shall be made for the control and drainage of surface and subsurface water around buildings. Whenever plans for an improvement to real property indicate the possibility of change in either surface or subsurface drainage, or both, the applicant shall submit a plan for drainage control which is in compliance with the current version of the C.3 Stormwater Program as adopted by the Alameda County and provides for no increase or other adverse change in drainage on an adjacent property. Methods determined by the Building Official to be reasonable and appropriate under the circumstances and in compliance with the C.3 Stormwater Program guidelines may be approved. The Building Official will require plans by a registered civil engineer, if necessary, based on the characteristics of the site.

PCC Section 5.14, Provisions for Flood Hazard Reduction, includes the following:

1) Standards of Construction. If a proposed building site is in a flood-prone area, all new construction and substantial improvements, including manufactured homes, shall:
   a) Be designed (or modified) and adequately anchored to prevent flotation, collapse or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy.
   b) Be constructed:
      1. With materials and utility equipment resistant to flood damage;
      2. Using methods and practices that minimize flood damage;
      3. With electrical, heating, ventilation, plumbing and air conditioning equipment and other service facilities that are designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding.

2) Standards for Subdivisions or Other Proposed New Development. If a subdivision proposal or other proposed new development, including manufactured home parks or subdivisions, is in a flood-prone area, any such proposals shall be reviewed to assure that:
   a) All such proposals are consistent with the need to minimize flood damage within the floodprone area;
   b) All public utilities and facilities such as sewer, gas, electrical, and water systems are located and constructed to minimize or eliminate flood damage; and
   c) Adequate drainage is provided to reduce exposure to flood hazard.

3) Standards for Utilities.
   a) All new and replacement water supply and sanitary sewage systems shall be designed to minimize or eliminate:
      1. Infiltration of flood waters into the system, and
      2. Discharge from the systems into flood waters.
   b) On-site waste disposal systems shall be located to avoid impairment to them, or contamination from them during flooding. (Ord. 665 N.S. 07/06)

PCC Section 8.12.030, Limitations; Prohibited Discharges, states the following:

A. **Limitations**
   1. Use of the sanitary sewer system is limited to the discharge of sewage and/or industrial wastes in such a quantity and quality as will not endanger the condition, operation or capacity of the sanitary sewer system and the wastewater treatment facilities.
   2. No person may discharge, deposit, or throw into a building sewer lateral or the sanitary sewer system a substance or object that may cause an obstruction or damage to the sewer system, or that may cause a nuisance or hazard, or which will in any manner obstruct the efficient operation or maintenance of the sewer collection system or the wastewater treatment facilities.
   3. It is unlawful for a person to discharge stormwater, surface water, groundwater (including irrigation wells or private wells), roof runoff or subsurface drainage (including discharge from any sump pump) into a building sewer lateral or public sewer.

B. **Prohibited discharges.** No person may discharge any of the following waters or waste into a building sewer lateral or the sanitary sewer system:

1. A discharge that does not meet all requirements set by the City and the District. No one required by the City or the District to have a waste discharge permit may discharge to a building sewer lateral or public sewer without a valid permit.
2. Industrial process water.
3. Gasoline, benzene, naphtha, fuel oil, motor oil, or other flammable or explosive liquid, solid, or gas.
4. Water or waste which contains fats, oils, or grease in excess of those standards established by EBMUD.
5. Garbage, except garbage from a dwellings or establishment where food is prepared and consumed on the premises, and which has been ground to such a degree that all particles will be carried freely under the flow conditions prevailing in the public sewers. No particle may be greater than 3/8-inch in any dimension.
6. Sand, cement, concrete, lime, plaster, cinders, ashes, metal, glass or other heavy solid; straw, shavings, animal hair, feathers, paunch manure or other fibrous matter; tar, asphalt, resins, plastics or other viscous substance; or any other matter of such a nature as to obstruct the flow in sewers or cause other interference with the proper operation of the sewer system.
7. Waters or wastes containing excessive amounts of acid, alkali, or dissolved sulfide, or having any other corrosive property capable of causing damage or hazard to sanitary sewer system structures, equipment or personnel.
8. Waters or wastes containing a toxic or poisonous substance in sufficient quantity to injure or interfere with the operation and maintenance of the sanitary sewer system.
9. Waters or wastes containing more than 500 milligrams per liter of suspended solids.
10. Noxious or malodorous gas or substance capable of creating a public nuisance
11. Radioactive wastes, regulated PCBs, materials regulated by Toxic Substances Control Act, or hazardous waste as defined by Section 25117 of the California Health and Safety Code or by any other federal, state, or local statute or regulation.
12. Waste having more than 1 milligram per liter of sulfides.
13. Waste having a pH of less than 5.5 or more than 10.5
14. Material that obstructs or prevents the effective maintenance or normal operation of the building sewer lateral or sewer main.
15. Septic tanks and cesspools are prohibited notwithstanding any statement in the Plumbing Code to the contrary.
16. Any hazardous waste as defined by EBMUD.

C. **Special agreements.** An individual or industrial concern discharging water or waster of unusual strength, character, composition or volume into the sanitary sewer system may apply for a contract permitting the discharge. If the discharge will cause additional or extraordinary expense to the City or District, the individual or industrial concern is required to reimburse the City or District in an amount as determined by the Director.

D. **Sampling structures.** The Director has the right to require a property owner to construct and maintain, at their own expense, a sampling structure in an accessible location for the purpose of sampling and determining the flow of sewage or industrial wastes through their building sewer lateral. If the accessible location is outside of the public right-of-way or public easement, the property owner shall provide an easement to the City allowing City personnel access to the sampling structure. The property owner must have the design of the structure completed by a licensed engineer and approved by the Director prior to construction.

PCC Chapter 30, Storm Water Management & Discharge, Section 30.10, Reduction of Pollutants in Storm Water, states the following:

Any person engaged in activities which will or may result in pollutants entering the City storm drain system shall undertake all practicable measures to reduce such pollutants. Examples of such activities include ownership and use of facilities which may be a source of pollutants such as parking lots, gasoline stations, industrial facilities, commercial facilities, stores fronting City street, etc. The following minimal requirements shall apply.

30.10.1 **Littering.** No person shall throw, deposit, leave, maintain, keep, or permit to be thrown, deposited, placed, left or maintained any "refuse," "rubbish," "garbage," or other discarded or abandoned objects, articles, and accumulations, in or upon any street, alley, 6 sidewalk, storm drain, inlet, catch basin, conduit or other drainage structures, business place, or upon any public or private lot of land in the City, so that the same might be or become a pollutant, except in containers or in lawfully established dumping grounds.

The occupant or tenant, or in the absence or occupant or tenant, the owner, lessee, or proprietor of any real property in the City of Piedmont in front of which there is a paved sidewalk shall maintain said sidewalks free of dirt or litter. Sweepings from said sidewalks shall not be swept or otherwise made or allowed to go into the gutter or roadway, but shall be disposed of in receptacles maintained on said real property as required for the disposal of garbage.

No person shall throw or deposit litter in any fountain, pond, lake, stream, or any other body of water in a park or elsewhere within the City.

30.10.2 **Standard for Parking Lots and Similar Structures.** Persons owning or operating a parking lot, gas station tarmac or similar structure shall clean those structures as frequently and thoroughly as practicable in a manner that does not result in discharge of pollutants to the City storm drain system.

30.10.3 **Best Management Practices for New Developments and Redevelopments.** Any construction contractor performing work in the City shall comply with and undertake the latest best management practices for construction projects adopted by the Alameda Countywide Clean Water Program, and if required, any approved erosion and sediment control plans incorporated into said building permit. The Director of Public Works may establish controls on the volume and rate of storm water runoff from new developments and redevelopments as may be appropriate to minimize the discharge and transport of pollutants.

30.10.4 **Notification of Intent and Compliance with General Permits.** Each industrial and commercial discharger, discharger associated with construction activity, or other discharger, described in any general storm water permit addressing such discharges, as may be adopted by the United States Environmental Protection Agency, the State Water Resources Control Board or the California Regional Water Quality Control Board, San Francisco Bay Region, shall provide notice of intent, comply with and undertake all other activities required by any general storm water permit applicable to such discharges.

Each discharger identified in an NPDES permit relating to storm water discharges shall comply with and undertake all activities required by such permit.

30.10.5 **Compliance with Best Management Practices.** Where best management practices, guidelines or requirements have been issued by any federal, State of California, regional or city agency, for any activity, operation, or facility which may cause or contribute to storm water pollution or contamination, illicit discharges and/or discharge of non-storm water to the storm drain system, every person undertaking such activity or operation or owning or operating such facility shall comply with such guidelines or requirements (as may be identified by the Director of Public Works). (Ord. 694 N.S. 09/2010)

PCC Section 30.11, Watercourse Protection, states the following:

Every person owning property through which a watercourse passes, or such person's lessee or tenant, shall keep and maintain that part of the watercourse within the property reasonably free of trash, debris, excessive vegetation, and other obstacles which would pollute, contaminate, or significantly retard the flow of water through the watercourse; shall maintain existing privately owned structures within or adjacent to a watercourse, so that such structures will not become a hazard to the use, function, or physical integrity of the watercourse; and shall not remove healthy bank vegetation beyond that actually necessary for said maintenance, nor remove said vegetation in such a manner as to increase the vulnerability of the watercourse to erosion.

No person shall commit or cause to be committed any of the following acts, unless a written permit has first been obtained from the Director of Public Works:

30.11.1 Discharge into or connect any pipe or channel to a watercourse;

30.11.2 Modify the natural flow of water in a watercourse;

30.11.3 Carry out development within a setback;

30.11.4 Deposit in, plant in, or remove any material from a watercourse including its banks, except as required for necessary maintenance;

30.11.5 Construct, alter, enlarge, connect to, change, or remove any structure in a watercourse;

30.11.6 Place any loose or unconsolidated material along the side of or within a watercourse or so close to the side as to cause a diversion of the flow, or to cause a probability of such material being carried away by storm waters passing through such watercourses.

San Francisco Bay Regional Water Quality Control Board

Regional authority for planning, permitting, and enforcement of water quality is delegated to the nine RWQCBs. The regional boards are required to formulate and adopt water quality control plans for areas in the region and establish water quality objectives in the plans. Piedmont is within the jurisdiction of SFBRWQCB (Region 2).

The SFBRWQCB addresses regionwide water quality issues through the Basin Plan, updated most recently in March 2017. This Basin Plan designates beneficial uses of the State waters in 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 (SFBRWQCB 2017). The Water Quality Control Policy for the Enclosed Bays and Estuaries of California, as adopted by the SWRCB in 1995, also provides water quality principles and guidelines to prevent water quality degradation and protect the beneficial uses of waters of enclosed bays and estuaries.

Alameda County Clean Water Program

The City of Piedmont, along with 13 other incorporated cities in Alameda County, has joined with the Alameda County Flood Control District (ACFCD), the Zone 7 Water Agency, and unincorporated Alameda County in the Clean Water Program (CWP) initiative. Members of the program are regulated waste dischargers under the 2015 NPDES Permit issued by the SFBRWQCB and are responsible for municipal storm drain systems that they own or operate. As part of the permitting process, dischargers must submit a Stormwater Management Plan that describes a framework for management of stormwater discharges during the term of the permit.

The City of Piedmont, as a co-permittee under the NPDES permit, is subject to the Provision C.3 requirements for new development and redevelopment projects, including post-construction stormwater management requirements. Provision C.3 requirements are separate from, and in addition to, requirements for erosion and sediment control and for pollution prevention measures during construction (see pages 4.9-4 to 4.9-5). New housing and other development or redevelopment projects that create or replace 10,000 square feet of impervious surfaces, or 5,000 square feet or more of impervious surface for special land use categories (i.e., uncovered parking lots, restaurants, auto service facilities, and gasoline stations) are considered to be “regulated projects” and are required to implement site design measures, source control measures, and stormwater treatment measures to reduce stormwater pollution during operation of the project. The permit specifies methods to calculate the required size of treatment devices. Projects that create and/or replace 2,500 square feet but less than 10,000 square feet of impervious surface are required to meet site design requirements in Provision C.3.i of the MRP.

Regulated projects subject to stormwater treatment measures would require the implementation of LID features, such as harvesting and reuse, bioretention areas, pervious paving, green roofs, flow-through planters, tree well filters, and media filters. LID treatment reductions are provided in terms of a percentage of the total C.3.d amount of runoff that requires treatment. The percentage that is not treated with LID must be treated with either a high flow rate tree well filter, or a high flow rate media filter (CWP 2021).

4.9.3 Impact Analysis

a. Methodology and Significance Thresholds

Assessment of impacts is based on review of site information and conditions and City information regarding hydrology and water quality issues. In accordance with Appendix G of the *CEQA Guidelines*, a project would result in a significant impact if it would:

1. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality;
2. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin;
3. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would
    a. Result in substantial erosion or siltation on- or off-site
    b. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site
    c. 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
    d. Impede or redirect flood flows;
4. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation; or
5. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

b. Project Impacts and Mitigation Measures

The proposed project involves implementation of the 2023-2031 Housing Element (including revisions to the General Plan Land Use Element, revisions to the PCC, and the new Moraga Canyon Specific Plan) as well as updates to the General Plan Transportation Element, Environmental Hazards Element, Natural Resources and Sustainability Element, Design and Preservation Element, Community Services and Facilities Element, and Parks, Recreation and Open Space Element. The updates to the General Plan elements themselves would not result in physical changes to the environment such that substantial impacts related to hydrology and water quality could occur. This analysis does take into account potential effects associated with new and revised policies in the Environmental Hazards Element that are part of the proposed project as the updates to this Element pertain to hydrology and water quality. Therefore, this analysis focuses on impacts associated with development facilitated by the proposed Housing Element Implementation project throughout Piedmont.

Threshold 1:	Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

Impact HYD-1 FUTURE DEVELOPMENT UNDER THE PROPOSED PROJECT WOULD INVOLVE GROUND-DISTURBING ACTIVITIES AND THE USE OF HEAVY MACHINERY THAT COULD RELEASE MATERIALS, INCLUDING SEDIMENTS AND FUELS, WHICH COULD ADVERSELY AFFECT WATER QUALITY. OPERATION OF POTENTIAL FUTURE DEVELOPMENT COULD ALSO RESULT IN DISCHARGES TO STORM DRAINS THAT COULD BE CONTAMINATED AND AFFECT DOWNSTREAM WATERS. HOWEVER, COMPLIANCE WITH REQUIRED PERMITS AND EXISTING REGULATIONS, AND IMPLEMENTATION OF BEST MANAGEMENT PRACTICES CONTAINED THEREIN, WOULD ENSURE THAT POTENTIAL WATER QUALITY IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Citywide Housing Element Implementation

Construction Impacts

Construction activities associated with future development under the proposed Housing Element Implementation project would have the potential to cause soil erosion from exposed soil, and accidental release of hazardous materials used for equipment such as vehicle fuels and lubricant, or temporary siltation from storm water runoff. Soil disturbance would occur during excavation for proposed building foundations, demolition of existing buildings, and grading for improvements to public spaces and landscaped areas or for development projects. However, future development facilitated by the proposed project would be required to comply with State and local water quality regulations designed to control erosion and protect water quality during construction. This includes compliance with the requirements of the SWRCB Construction General Permit, which requires preparation and implementation of a SWPPP for projects that disturb one acre or more of land. The SWPPP must include erosion and sediment control BMPs that would meet or exceed measures required by the Construction General Permit, as well as those that control hydrocarbons, trash, debris, and other potential construction-related pollutants. Construction BMPs would include scheduling inlet protection, silt fencing, fiber rolls, stabilized construction entrances, stockpile management, solid waste management, and concrete waste management. Post-construction stormwater performance standards are also required to specifically address water quality and channel protection events. Implementation of these BMPs would prevent or minimize environmental impacts and ensure that discharges during the construction phase of new development facilitated by the proposed project would not cause or contribute to the degradation of water quality in receiving waters.

In addition, pursuant to Section 1805.4.3 of the CBC, as incorporated into Section 8.02.030 of the PCC, future applicants would be required to submit a plan for drainage control in compliance with the current version of the C.3 Stormwater Program as adopted by the Alameda County. Moreover, pursuant PCC Section 30.10, future development would be required to comply with the latest BMPs for construction adopted by the CWP and incorporate erosion and sediment control plans into the building permit, as well as comply with the applicable general stormwater permits. As discussed below under Operational Impacts, the City of Piedmont is responsible for enforcing the requirements of the Municipal Regional Stormwater Permit (MRP). Future development would be required to comply with the following provision of the MRP, which states:

- **Provision C.6** requires implementation of a construction site inspection and control program at all construction sites and an Enforcement Response Plan to prevent construction-related discharges of pollutants into storm drains. Inspections shall confirm implementation of appropriate and effective erosion and other BMPs by construction site operators/developers, and

reporting shall be used to confirm and demonstrate the effectiveness of its inspections and enforcement activities to prevent polluted construction site discharges into storm drains.

Should dewatering be necessary during construction, it may result in the discharge of potentially contaminated groundwater to surface water and may degrade the water quality of surrounding watercourses and waterbodies. However, future development projects would be subject to the San Francisco Bay Regional Water Quality Control Board Order No. R2-2012-0060, General Waste Discharge Requirements for Discharge or Reuse of Extracted Brackish Groundwater, Reverse Osmosis Concentrate Resulting from Treated Brackish Groundwater, and Extracted Groundwater from Structural Dewatering Requiring Treatment (Groundwater General Permit). The Groundwater General Permit requires dischargers to obtain an Authorization to Discharge, treat effluent to meet water quality-based effluent limitations, and comply with the Monitoring and Reporting Program. Pumped groundwater must be tested and if determined to be contaminated, the water must be collected and either treated or disposed of according to waste discharge requirements of Order No. R2-2012-0060. Future applicants are required to comply with requirements of the Groundwater General Permit.

Compliance with State and local regulatory requirements and implementation of construction BMPs would minimize discharges during the construction phase of future development under the proposed Housing Element Implementation project and would not result in the degradation of water quality in receiving waters. Therefore, construction-related water quality impacts would be less than significant.

Operational Impacts

Development facilitated by and pursuant to the proposed Housing Element Implementation project would mostly involve infill and redevelopment of existing sites. Future development would be required to be implemented in compliance with existing programs and permits, including the PCC and the Municipal Regional Stormwater NPDES Permit (No. CAS612008). Development design and on-going operation would include BMPs to avoid adverse effects associated with stormwater runoff quality. Specifically, future development facilitated by the proposed project would be required to implement LID measures and on-site infiltration, as required under the C.3 provisions of the Municipal Regional Stormwater Permit (MRP). Implementation of LID measures would reduce water pollution from stormwater runoff as compared to existing conditions. For example, on-site infiltration would improve the water quality of stormwater prior to infiltration or discharge from the site.

Development facilitated by the proposed Housing Element Implementation project would result in a significant impact if activities would conflict with applicable water quality permits or waste discharge requirements. Future development facilitated by the project would be subject to multiple permits and approvals associated with the protection of water quality, as discussed below.

The City of Piedmont is responsible for enforcing the requirements of the MRP. Compliance with the MRP must include operational and maintenance control measures, or BMPs and construction-related BMPs. Provisions specified in the MRP that affect construction projects generally include but are not limited to Provision C.3 (New Development and Redevelopment) and Provision C.15 (Exempted and Conditionally Exempted Discharges), as described below. Future projects would be required to comply with the provisions of the existing MRP, including:

- **Provision C.3** requires LID techniques be utilized to employ appropriate source control, site design, and stormwater treatment measures in new development and redevelopment projects; to address stormwater runoff pollutant discharges; and to prevent increases in runoff flows from new development and redevelopment projects by mimicking a site's predevelopment hydrology.

This is to be accomplished by employing principles such as minimizing disturbed areas and imperviousness, and preserving and recreating natural landscape features, in order to "create functional and appealing site drainage that treats stormwater as a resource, rather than a waste product" (SFBRWQCB 2015). These LID practices, as well as other provisions and BMPs specified in the MRP, may require long-term operational inspections and maintenance activities to ensure the effective avoidance of significant adverse impacts associated with water quality degradation.

- **Provision C.10** recognizes trash as a significant pollutant in urban runoff and aims to reduce trash loads from municipal separate storm sewer systems. (Refer to Section 4.16, *Utilities and Service Systems* regarding solid waste generation impacts of the project.) The City of Piedmont currently implements a suite of zero-waste programs, including a requirement that all residential properties of five or more units provide recycling and organics collection for their tenants' food scraps, food soiled papers, and any plant debris generated at the property.
- **Provision C.15** exempts specified unpolluted non-stormwater discharges and to conditionally exempt non-stormwater discharges that are potential sources of pollutants. In order for non-stormwater discharges to be conditionally exempted, those permitted under the MRP must identify appropriate BMPs, monitor the non-stormwater discharges where necessary, and ensure implementation of effective control measures to eliminate adverse impacts to waters of the state consistent with the discharge prohibitions of the Order.

Provision C.3 of the MRP, described above, addresses post-construction stormwater requirements for new housing and other development and redevelopment projects that add and/or replace 10,000 square feet or more of impervious area or special land use categories that create and/or replace 5,000 square feet of impervious surfaces, such as auto service facilities, retail gas stations, restaurants, and uncovered parking lots. These "regulated" projects are required to meet certain criteria: 1) incorporate site design, source control, and stormwater treatment measures into the project design; 2) minimize the discharge of pollutants in stormwater runoff and non-stormwater discharge; and 3) minimize increases in runoff flows as compared to pre-development conditions. Additionally, projects in Berkeley which drain to a natural water body must also construct and maintain hydromodification measures to ensure that estimated post-project runoff peaks and durations do not exceed estimated pre-project peaks and duration. LID methods are the primary mechanisms for implementing such controls.

Compliance with the MRP and PCC would increase infiltration of stormwater, decrease stormwater runoff, and would reduce the risk of water contamination from operation of new developments to the maximum extent practicable, and the proposed Housing Element Implementation project would reduce water pollution from stormwater runoff as compared to existing conditions. Therefore, the proposed project would not violate water quality standards or waste discharge requirements, would not significantly contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff, and would not substantially degrade water quality. Impacts would be less than significant.

Moraga Canyon Specific Plan

Construction activities associated with future development facilitated by the adopted MCSP would have the potential to cause soil erosion from exposed soil, and accidental release of hazardous materials used for equipment such as vehicle fuels and lubricant, or temporary siltation from storm water runoff, as discussed above with respect to the Citywide Housing Element Implementation. Soil disturbance would occur during excavation for proposed building foundations, demolition of existing buildings, and grading for improvements to public spaces, landscaped areas, or development projects.

However, future development facilitated by the MCSP would be required to comply with the same State and local water quality regulations, as discussed above, designed to control erosion and protect water quality during construction. Should dewatering be necessary during construction, future applicants would be required to comply with the requirements of the Groundwater General Permit which would reduce impacts to a less than significant level.

Implementation of development facilitated by the proposed project would result in a significant impact if activities would conflict with applicable water quality permits or waste discharge requirements. Future development facilitated by an adopted MCSP would be subject to the same permits and approvals associated with the protection of water quality as discussed above, such as the MRP, which would reduce operational impacts to a less than significant level.

Mitigation Measures

Impacts from development facilitated by the proposed Housing Element Implementation project, including impacts from development facilitated by the MCSP, would be less than significant without mitigation. No mitigation measures are required.

Threshold 2:	Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?
Threshold 5:	Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Impact HYD-2 FUTURE DEVELOPMENT FACILITATED UNDER 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. IMPLEMENTATION OF LOW IMPACT DEVELOPMENT MEASURES AND ON-SITE INFILTRATION REQUIRED UNDER THE C.3 PROVISIONS OF THE MRP, AND COMPLIANCE WITH THE PIEDMONT CITY CODE WOULD INCREASE THE POTENTIAL FOR GROUNDWATER RECHARGE. FURTHERMORE, THE PROPOSED PROJECT WOULD NOT INTERFERE WITH THE OBJECTIVES AND GOALS WITHIN THE BASIN PLAN. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Citywide Housing Element Implementation

Future development under the proposed Housing Element Implementation project would not use or deplete groundwater resources. Water supply for Piedmont is provided by EBMUD. The groundwater aquifer beneath Piedmont is not currently used for water storage or drinking water supply. Therefore, future development pursuant to the proposed project would not include installation of new groundwater wells or use of groundwater from existing wells.

If construction activities for future development under the proposed project encounter groundwater, dewatering may be required. However, dewatering would only occur to the extent that it was necessary for construction, and a resulting lowering of the groundwater table would be temporary and localized. Potential depressions created by underground structures would also be localized. Groundwater levels would recover upon cessation of dewatering activities.

Piedmont is urbanized, surrounded by development in the City of Oakland, and many development sites include impervious surfaces and existing buildings. Therefore, overall development associated with the proposed project would not result in a substantial increase in the amount of impervious surfaces in Piedmont, and therefore would not substantially interfere with groundwater recharge.

Additionally, development facilitated by the project would be required to comply with Provision C.3 of the MRP which promotes infiltration. Implementation of LID measures would increase absorption of stormwater runoff and the potential for groundwater recharge.

Piedmont is under the jurisdiction of the SFBRWQCB, which is responsible for preparing the Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan). The Basin Plan designates beneficial uses of water in the region and establishes narrative and numerical water quality objectives. The Basin Plan serves as the basis for the SFBRWQCB's regulatory programs and incorporates an implementation plan for achieving water quality objectives. With adherence to the State and local water quality standards, discussed above, the project would not have an adverse effect on water quality and would not interfere with the objectives and goals in the Basin Plan.

Therefore, construction and development pursuant to the proposed Housing Element Implementation project would not result in a net deficit in aquifer volume or a lowering of the groundwater table and would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. Impacts would be less than significant.

Moraga Canyon Specific Plan

As set forth in the analysis above, construction and development facilitated by an adopted MCSP would receive water supplied by EBMUD and would not include installation of new groundwater wells or use of groundwater from existing wells. Future development would be required to comply with Provision C.3 of the MRP which promotes infiltration. Most of the development on the central portion of the MCSP Area is anticipated to be planned for already-impervious areas, whereas development on other portions of the MCSP Area would occur mostly on pervious areas. Nonetheless, implementation of LID measures would increase absorption of stormwater runoff and the potential for groundwater recharge. Additionally, with adherence to the same State and local water quality standards as discussed above, construction and development facilitated by an adopted MCSP would not have an adverse effect on water quality and would not interfere with the objectives and goals in the Basin Plan. Impacts would be less than significant.

Mitigation Measures

Impacts from construction and development pursuant to the proposed Housing Element Implementation project, including impacts from development facilitated by the MCSP, would be less than significant without mitigation. No mitigation measures are required.

Threshold 3a:	Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would result in substantial erosion or siltation on- or off-site?
Threshold 3b:	Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?
Threshold 3c:	Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner that would 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?
Threshold 3d:	Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would substantially increase the rate or amount of surface runoff in a manner which would impede or redirect flood flows?

Impact HYD-3 **FUTURE DEVELOPMENT UNDER THE PROPOSED PROJECT WOULD NOT SUBSTANTIALLY ALTER THE EXISTING DRAINAGE PATTERN OF FUTURE DEVELOPMENT SITES, 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 OR SUBSTANTIALLY INCREASE THE RATE OR AMOUNT OF SURFACE RUNOFF IN A MANNER WHICH WOULD RESULT IN FLOODING OR EXCEED THE CAPACITY OF STORMWATER DRAINAGE SYSTEMS. IMPACTS RELATED TO DRAINAGE PATTERNS WOULD BE LESS THAN SIGNIFICANT.**

Citywide Housing Element Implementation

Construction

Construction activities would involve stockpiling, grading, excavation, paving, and other earth-disturbing activities which may result in limited, localized alteration of existing drainage patterns. As described under Impact HYD-1 above, compliance with the NPDES Construction General Permit, NPDES MS4 General Permit, and the PCC would reduce the risk of short-term erosion and increased runoff resulting from drainage alterations during construction. Therefore, impacts would be less than significant.

Operation

The proposed Housing Element Implementation project would facilitate housing and other development but would not in and of itself involve actions that would directly alter the course of a stream or river. As shown on Figure 4.9-1 and Figure 4.9-2, development facilitated by the proposed project could occur near lakes/ponds and creeks. Such development could potentially alter the exiting drainage patterns at the future development sites through the introduction of new impervious surfaces and infrastructure. However, the future development sites and vicinities are largely sites that have already been developed or are surrounded by developed land. In addition, future development would be required to comply with Policy 13.3 and Action 13.D of the General Plan Natural Resources

and Sustainability Element, which outlines requirements for creek protection and enforces watercourse protection standards; PCC Section 1805.4.3, which regulates drainage discharge and enforces compliance with the C.3 Stormwater Program; PCC Section 8.12.030, which outlines prohibited discharges; PCC Section 30.10, which outlines requirements to reduce pollutants in stormwater; and PCC Section 30.11, which outlines requirements for watercourse protection. Therefore, potential development near creeks or other water bodies would not directly affect the course of a creek and the introduction of impervious surfaces on future development sites would not substantially affect the drainage patterns of the area or stormwater runoff volumes due to the relatively minor change in impervious surface area in the larger context.

New impervious surfaces could locally increase the rate and/or amount of surface runoff, redirect runoff to different discharge locations, or concentrate runoff from sheet flow to channelized flow. Surface water runoff rate and amount is determined by multiple factors, including the amount and intensity of precipitation and amount of precipitation that infiltrates to the groundwater. Infiltration is also determined by several factors, including soil type, antecedent soil moisture, rainfall intensity, the amount of impervious surfaces in a watershed, and topography. The rate of surface runoff is largely determined by topography. Runoff that does not infiltrate would be captured in the city's storm drain system and ultimately conveyed to the San Francisco Bay, as under current conditions.

Although site-specific drainage pattern alterations could occur with development facilitated by the proposed project, such alterations would not result in substantial adverse effects. Many of the likely sites to be redeveloped are already developed with impervious surfaces, and development under the proposed project would not introduce new impervious areas to the extent that the rate or amount of surface runoff would substantially increase. Development that could be facilitated by the proposed project would not introduce substantial new surface water discharges and would not result in flooding on- or off-site. Overall drainage patterns, including direction of flow and conveyance to stormwater infrastructure, would not be modified by the project, and the runoff volume and rate from the project rate would be reduced compared to existing conditions due to State and federal regulation of stormwater runoff.

Further, pursuant to the MRP, projects that create or replace 2,500 square feet or more, but less than 10,000 square feet, of impervious surface, as well as single-family homes that create and/or replace 2,500 square feet or more of impervious surface, must implement site design measures to reduce stormwater runoff. Compliance with the General Plan goals and policies would increase infiltration of stormwater and reduce stormwater runoff from operation of new developments to the extent practicable. Therefore, development that could be facilitated by the proposed project would not substantially alter the existing drainage pattern of the site or area nor alter the course of a stream or river, would not result in erosion or siltation, and would not substantially increase the rate of surface runoff in a manner which would result in flooding on- or off-site or exceed capacity of a stormwater system. Impacts would be less than significant.

Moraga Canyon Specific Plan

No water bodies are located within the MCSP Area. Cemetery Creek begins immediately west of the Moraga Avenue exit from State Route 13 in the City of Oakland and eventually becomes Glen Echo Creek (see Figure 4.9-2) after passing under Moraga Avenue in Piedmont and then through the Mountain View Cemetery, which then continues to Lake Merritt. The upper Cemetery Creek watershed, from its source and continuing down to the cemetery, comprises areas on both the north and south sides of Moraga Avenue. Runoff from this portion of the watershed is directed in closed culverts to the western end of Coaches Field, where it flows in a short open channel and culvert down

to the Cemetery and into three water storage ponds. As shown in Figure 4.9-1, as mapped, the small ponds on the northern boundary of the city slightly crosses over the city boundary. However, the ponds are associated with and under the jurisdiction of the Mountain View Cemetery, and the proposed project would not include housing in that area, and therefore would not directly affect Cemetery Creek or the ponds.

Development could potentially alter the existing drainage patterns at the future development sites through the introduction of new impervious surfaces and infrastructure, as noted above with respect to Citywide Housing Element Implementation. Most of the development on the central portion of the MCSP Area would be planned for already-impervious areas, whereas development on other portions of the MCSP Area would occur mostly on pervious areas. However, future construction and development would be required to comply with the same State and local regulations as discussed above, such as the NPDES Construction General Permit; NPDES MS4 General Permit; the MRP; and the PCC Sections 1805.4.3, 8.12.030, 30.10, and 30.11, which would control stormwater runoff and protect water quality. Therefore, construction and development facilitated by an adopted MCSP would not substantially alter the existing drainage pattern of the site or area or alter the course of a stream or river, would not result in erosion or siltation, and would not substantially increase the rate of surface runoff in a manner which would result in flooding on- or off-site or exceed capacity of a stormwater system. Impacts would be less than significant.

Mitigation Measures

Impacts from the proposed Housing Element Implementation project, including impacts from construction and development facilitated by the proposed MCSP, would be less than significant without mitigation. No mitigation measures are required.

Threshold 4:	In flood hazard, tsunami, or seiche zones, would the project risk release of pollutants due to project inundation?

Impact HYD-4 THERE ARE NO FEMA-DESIGNATED FLOOD HAZARD AREAS IN PIEDMONT. ADHERENCE TO GENERAL PLAN POLICIES AND COMPLIANCE WITH THE PCC AND THE CALIFORNIA HEALTH AND SAFETY CODE WOULD REDUCE POTENTIAL EFFECTS ASSOCIATED WITH FLOOD EVENTS. THIS IMPACT WOULD BE LESS THAN SIGNIFICANT.

Citywide Housing Element Implementation

Piedmont is mostly developed and surrounded by developed land in the City of Oakland and does not contain large surface water bodies that would result in seiches. There are no FEMA-designated 100-year Flood Hazard Areas throughout the project area. The city is also not susceptible to seiches and tsunamis in San Francisco Bay. As discussed above under Section 4.9.1f, Dams and Levees, flooding could potentially result from the failure of Tyson Lake dam or the collapse of EBMUD reservoir tanks in the hills above Piedmont. However, as stated in the Piedmont General Plan and discussed in the Regulatory Setting, the probability of dam or tank failure is extremely low. As mentioned above, Section 5.14 of the PCC contains standards for construction in flood zones, including using building materials and techniques that ensure that flood-resistant design occurs per the most restrictive provisions available. Additionally, development facilitated under the proposed project would be required to adhere to existing General Plan policies related to flooding prevention. Further, the proposed project includes updates to the General Plan Environmental Hazards Element Update, including the following proposed new and revised policies:

Policy 19.30 **Reduce Flood Damage.** Reduce potential flood damage in areas of the city subject to flood conditions through Capital Improvement projects, the development review process, or other means as applicable.

Policy 19.31 **Development Activities in Flood Prone Areas.** Require new development or expansion of existing development adjacent to canyons or valleys to assess potential environmental impacts from increased run-off and erosion and implement appropriate mitigation.

Policy 19.32 **Implement CAP 2.0.** Implement all adaptation measures identified in the CAP 2.0 regarding addressing flooding risks, including the maintenance of storm drains across the city, encouraging green infrastructure, and restoring natural features of the watershed.

Policy 19.33 **Keeping Flood Hazards Low.** Maintain Piedmont's low potential for flooding through storm drain maintenance, preservation of creeks and drainage courses in their natural state, and periodic clearing of debris from storm drains and catchment basins. Ensure that new development does not increase the risk of off-site flooding, either in Piedmont or downstream in Oakland.

Lastly, the development facilitated by the proposed project would be required to adhere to existing federal, State, and local laws and regulations that address the management and control of pollutants, including regulations addressing the proper disposal, transportation, storage, and handling of potentially hazardous materials, including the California Health and Safety Code and the PCC. Adherence to goals and policies in the General Plan, the PCC, and the California Health and Safety Code would reduce the risk of the release of pollutants. This impact would be less than significant.

Moraga Canyon Specific Plan

As noted above, the MCSP Area does not contain flood zones and is not located within a FEMA-designated 100-year Flood Hazard Area. The MCSP Area is also not susceptible to seiches. As discussed above under Section 4.9.1f, Dams and Levees, in the event the future Piedmont Reservoir tank collapses, water would flow into Moraga Canyon (City of Piedmont 2009). However, the probability of dam or tank failure is extremely low. Future development would be required to comply with the same federal, State, and local laws and regulations as discussed above, and impacts related to risk of release of pollutants would be less than significant.

Mitigation Measures

This impact from development facilitated by the Housing Element Implementation project, including impacts from development facilitated by the MCSP, would be less than significant without mitigation. No mitigation measures are required.

c. Cumulative Impacts

The geographic scope for cumulative hydrology and water quality impacts is the Lake Merritt Watershed. This geographic scope is appropriate for hydrology and water quality because water quality impacts are localized in the watershed where the impact occurs.

Cumulative development would generally increase impermeable surface area in Lake Merritt's watersheds. In general, development could potentially increase peak flood flows, alter drainage patterns, reduce groundwater recharge, and increase pollutants in the regional stormwater.

However, cumulative development would also be required to adhere to applicable State and local regulations designed to control erosion and protect water quality, including the NPDES Construction General Permit and the Municipal Stormwater Permit. Construction sites larger than one acre in size would be required to prepare and submit a SWPPP, thereby reducing the risk of water degradation on- and off-site from soil erosion and other pollutants. This would reduce the quantity of stormwater runoff that enters the storm drainage system and discharges to Lake Merritt.

Implementation of NPDES and PCC requirements would also reduce the potential for increased pollutants in stormwater and groundwater. The Construction General Permit requires the implementation of BMPs on construction sites to limit erosion and sedimentation, thereby minimizing water quality impacts. The requirements of the PCC and the Municipal Stormwater Permit would also decrease operational effects of cumulative development because each development proposal would be required to reduce the on-site post-development peak discharges at or below pre-development peak discharge rates by implementing on-site LID features and other groundwater recharge design elements. Compliance with mandatory Clean Water Act (NPDES Construction General Permit and MS4 General Permit) and PCC requirements would further reduce the potential for water quality degradation and violations of water quality standards as a result of cumulative development. Therefore, cumulative impacts from the proposed Housing Element Implementation project, including from an adopted MCSP would be less than significant.

As discussed under Impacts HYD-1 and HYD-3, development under the project would increase impervious surface at the housing sites and may alter drainage patterns. Cumulative development in the Lake Merritt watershed may also increase impervious surfaces resulting in localized impacts. However, development projects subsequent to the proposed project would be analyzed, evaluated for consistency with this EIR, and possibly mitigated on a case-by-case basis, and development projects would be designed to avoid or mitigate potential impacts related to runoff and groundwater recharge in compliance with the jurisdiction's Municipal Code, relevant water quality regulations, BMPs, and policies which would help reduce the risk of water degradation from soil erosion and other pollutants related to project construction and operational activities. Construction and operation of cumulative development would be required to comply with Alameda County CWP C.3 requirements which would enforce post-construction stormwater requirements and implementation of LIDs to reduce impacts to water quality and groundwater recharge. Impacts from the project, including development pursuant to an adopted MCSP, on water quality and groundwater recharge would be less than significant.

As discussed under Impacts HYD-2, the proposed Housing Element Implementation project would increase the demand for water in the EBMUD service area. Cumulative development in the EBMUD service area would increase the demand for water from EBMUD. However, EBMUD has not conducted groundwater pumping as part of the Bayside Groundwater Project and groundwater would not be affected by the increased population resulting from cumulative development. Therefore, development facilitated by the project, including development pursuant to an adopted MCSP, would not result in a significant cumulative impact.

As discussed under Impact HYD-4, none of the housing sites are located within a 100-year flood hazard area. Cumulative development in other areas in the Lake Merritt watershed that are subject to inundation may have localized impacts. However, development projects would be analyzed, evaluated for consistency with this EIR, and possibly mitigated on a case-by-case basis, and development projects would be designed to avoid or mitigate potential impacts related to flooding in compliance with the jurisdiction's Municipal Code. Cumulative impacts related to flooding, seiche, and tsunami from development facilitated by the proposed Housing Element Implementation project,

including development pursuant to an adopted MCSP, would therefore be less than significant. The Housing Element Implementation project would not impede or redirect flood flows or risk release of pollutants due to inundation. Impacts from the Housing Element Implementation project related to flood flows and inundation would be less than significant. Because flooding is localized and site-specific, the Housing Element Implementation project would not have a cumulatively considerable contribution to a significant cumulative impact related to flood hazard or inundation risks.

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4.10 Land Use and Planning

This section analyzes the consistency of the proposed Housing Element Implementation project with applicable land use plans, policies, and regulations adopted for the purpose of avoiding or mitigating an environmental effect and identifies environmental effects that would arise from such inconsistencies.

4.10.1 Setting

a. Existing Land Uses

Based on information in the Piedmont General Plan, Piedmont is primarily a single-family residential community. Single-family residential uses make up 68.1 percent of the city's total land area. Streets occupy approximately 19.7 percent of the total land area and the remaining percentage consists primarily of schools, civic buildings, parks, and open space. Commercial uses comprise less than one percent of the city's land area and there are no industrial uses within the city (City of Piedmont 2009).

Table 4.10-1 outlines the existing land uses and their respective acreages within the city and Figure 4.10-1 shows the locations of existing land uses.

Table 4.10-1 Existing Land Use Summary

Land Use	Acres	Percentage of Total Land Use (%)
Single Family Residential	772.4	68.1
Multi-Family Residential	3.7	0.3
Commercial[1]	3.7	0.3
Parks[2]	43.6	3.8
Other Open Space[3]	25.0	2.2
Civic[4]	8.6	0.8
Public Schools	25.5	2.2
Religious	6.8	0.6
Vacant[5]	21.6	1.9
Streets	223.0	19.7
Total	**933.2**	**100.0**

[1] Excludes homes that are zoned commercially but used residentially.

[2] Includes Davies Tennis Stadium and a portion of the Oakland Rose Garden.

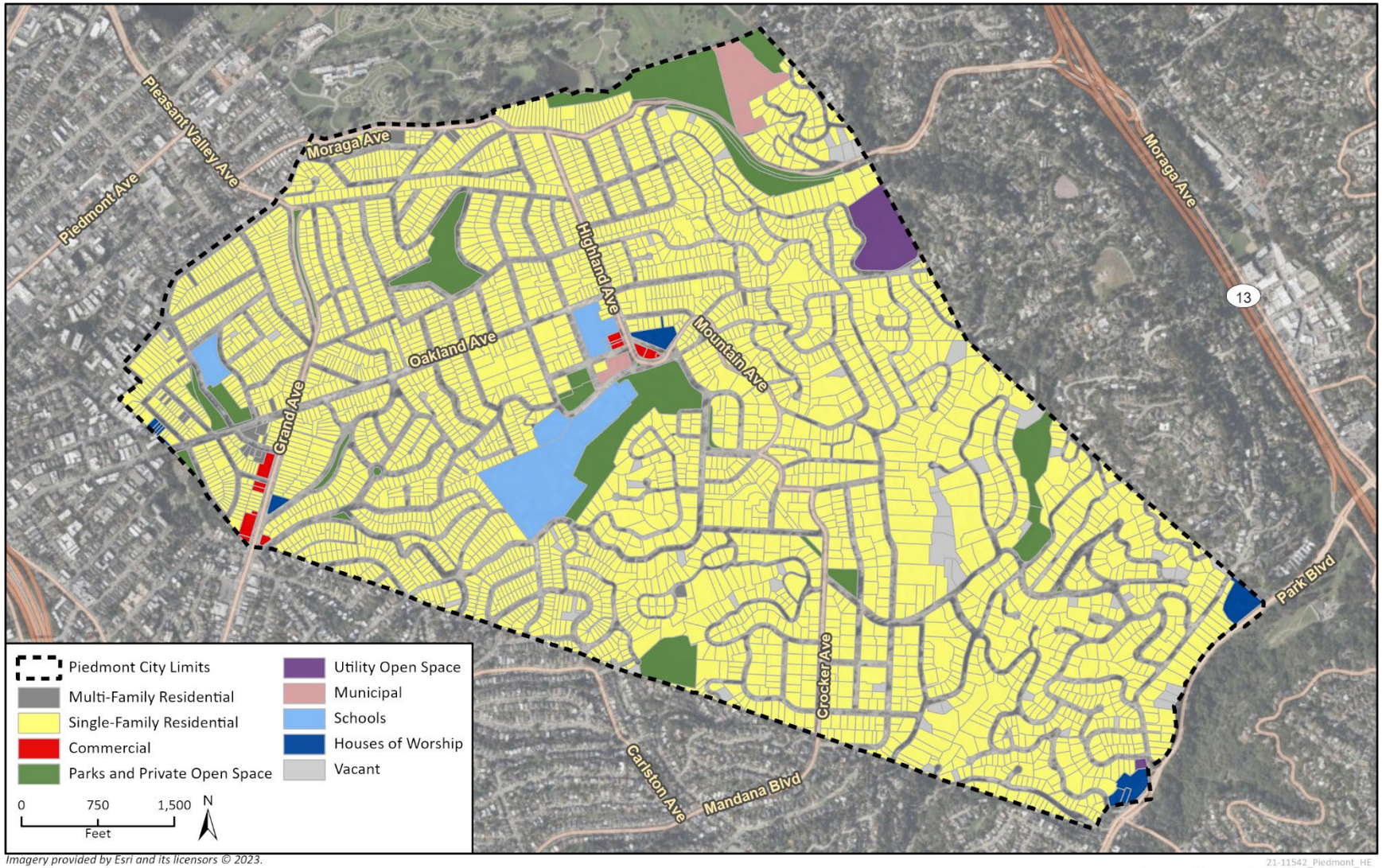
[3] Includes EBMUD Reservoir, Tyson Lake, parts of Mountain View Cemetery.

[4] City Hall, Corp Yard, Veterans Building, pump stations, and transmission lines.

[5] Includes vacant PG&E building.

Source: City of Piedmont 2009

Figure 4.10-1 Existing Land Uses in Piedmont



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Additional data provided by the City of Piedmont, 2023.

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Fig 4.10-1 Existing General Plan Land Use Designations

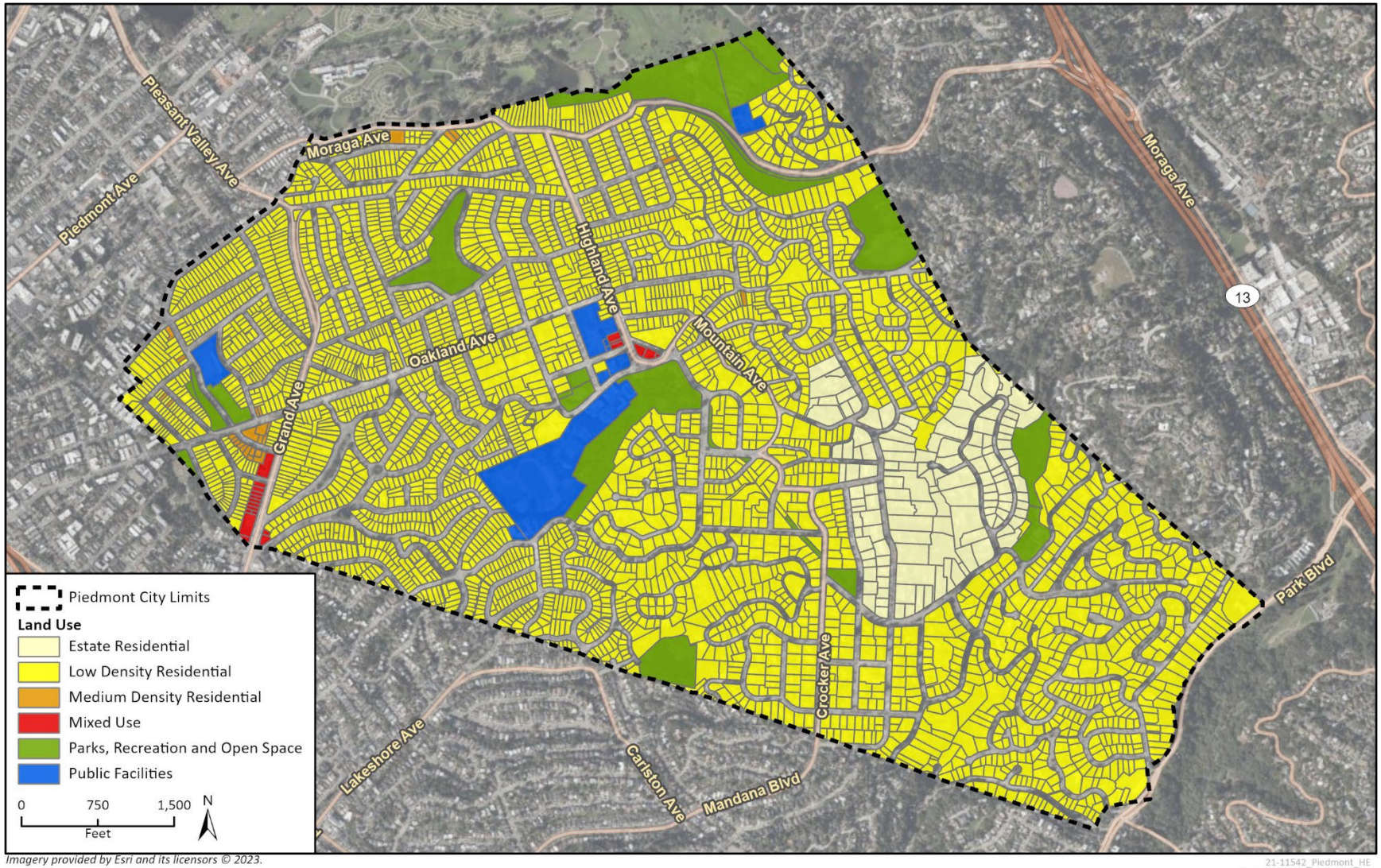
b. City of Piedmont General Plan Land Use Categories

The city uses six categories to describe the general types of uses allowed in the city. Each category generally corresponds to one of five zoning district which includes more specific and prescriptive regulations for use of the property (City of Piedmont 2009). Figure 4.10-2 shows the current location of the six land use categories within the city. The General Plan land use categories include:

- **Estate Residential (1-2 du/ac):** The Estate Residential land use category applies to use of land for single family homes and related accessory structures (including second units), religious uses (churches, parochial schools, etc.), and other uses stipulated by state law including family child care, small group homes, and home occupations. This designation corresponds to Piedmont's Zone "E," which has a 20,000 square foot minimum lot size. Existing vacant lots smaller than 20,000 square feet may be developed, but any land subdivision must conform to this standard. This designation has been mapped in eastern Piedmont, along the Sotelo-Glen Alpine loop, and along Sea View and King Avenues, portions of Lincoln and Lakeview Avenues, and portions of Mountain and Bellevue Avenues.
- **Low Density Residential (3-8 du/ac):** This land use category is the predominant General Plan designation in Piedmont, consisting of 75 percent of the City. The Low Density Residential land use category applies to use of land for single family homes and related accessory structures (including second units), religious uses (churches, parochial schools, etc.), and other uses stipulated by state law including family child care, small group homes, and home occupations. The designation corresponds to Piedmont's Zone "A," which has a 10,000 square foot minimum lot size. Existing vacant lots smaller than 10,000 square feet may be developed, but any land subdivision must conform to this standard.
- **Medium Density Residential (9-20 du/ac):** The Medium Density Residential land use category applies to use of land for multi-family housing and accessory structures that are harmonious with the character of existing development. Multi-family housing is defined as multiple dwelling units in a single building, designed to be occupied by more than one family independent of each other. It includes apartments, condominiums, townhomes, as well as duplexes, triplexes, and fourplexes. The designation corresponds to Piedmont's Zone "C,"[1] and applies to a small area near Oakland and Linda Avenues, adjacent to the Grand Avenue commercial district.
- **Mixed Use (Up to 20 du/ac; FAR 0.75):** The Mixed Use land use category applies to the use of land for the City's commercial properties, as well as a handful of existing residences that are zoned for commercial use. This designation corresponds to Piedmont's Zone "D". The two Mixed Use areas in Piedmont are the Civic Center commercial district, and the Grand Avenue district. Commercial uses in these areas are required to be local-serving, rather than regional in nature. Projects which are entirely commercial are permitted in these areas, subject to a maximum FAR of 0.75. Projects which include multi-family residential uses are encouraged but are only permitted when combined with ground floor commercial uses; densities in such projects may not exceed 20 units per acre.

[1] Because designations on the Land Use Diagram are generalized and not parcel-specific, a few properties zoned for multifamily use and currently developed with apartments are contained within the Low-Density Residential area. However, the overall gross density of these areas remains within the 3-8 unit per acre range.

Figure 4.10-2 Existing General Plan Land Use Categories



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Additional data provided by the City of Piedmont, 2023.

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Fig 4.10-3 Land Use Categories

- **Public Facilities (FAR 0.75):** The Public Facilities land use category applies to the use of land for public schools and municipal facilities, including City Hall, the Corporation Yard, and the Veterans Building. This land use category has been applied only to land owned by the City of Piedmont and the Piedmont Unified School District. Although the maximum FAR is 0.75, the actual FAR on most parcels with this designation is considerably lower. Any increase in square footage on public land is subject to environmental review, and a public process which ensures resident participation. Consistent with the Piedmont zoning code, housing is a permitted use within Public Facility areas. This designation generally corresponds to Piedmont's Zone "B."
- **Parks, Recreation, and Open Space:** The Parks, Recreation, and Open Space land use category applies to the use of land for public parks and other public and private open space areas. Open space areas include EBMUD facilities, Tyson Reservoir, and the Piedmont portion of Mountain View Cemetery. Permitted uses in these areas include recreation, resource conservation, and facilities which support park and recreation activities. Depending on site conditions, these facilities may include recreation centers, swimming pools, tennis courts, sports fields, restrooms, child care centers, parking areas, park maintenance and staging areas, and similar uses. Because the primary activity in these areas is recreation, no floor area ratio limit has been established. The intent is to maintain these sites as open space to the greatest extent feasible. This designation generally corresponds to Piedmont's Zone "B."

c. Piedmont City Code

The Piedmont City Code (PCC) divides Piedmont into five zones. The zones are shown on Figure 4.10-3. More than 95 percent of Piedmont's single-family homes are located in Zone A. Less than five percent are located in Zone E. Multi-family dwellings are generally located in Zone C (City of Piedmont 2023. The intent, allowed uses, and development standards for each zone are described in the PCC and include:

- **Zone A: Single-Family Residential Zone.** According to Division 17.20 of the PCC, allowed uses within Zone A include single-family residence together with accessory structures and associated uses, located on the same lot); and accessory dwelling unit, subject to Division 17.38.
- **Zone B: Public Facilities Zone.** According to Division 17.22 of the PCC, allowed uses within Zone B include a single-family residence, accessory structures, and associated uses listed in Section 17.20.020 (for Zone A); and an accessory dwelling unit used for residential purposes, subject to Division 17.38.
- **Zone C: Multi-Family Residential Zone.** According to Division 17.24 of the PCC, allowed uses within Zone C include a single-family residence, accessory structures, and associated uses listed in Section 17.20.020 (for Zone A); a multi-family dwelling at a minimum density of one dwelling unit per each 3,600 square feet of lot area (12 units/acre), and not exceeding one dwelling unit per each 2,000 square feet of lot area (21 units/acre); and accessory dwelling unit, subject to Division 17.38.
- **Zone D: Commercial and Mixed-Use Commercial/Residential Zone.** According to Division 17.26 of the PCC, allowed uses within Zone D include a single-family residence, accessory structures, and associated uses listed in Section 17.20.020 (for Zone A); and an accessory dwelling unit used for residential purposes, subject to Division 17.38.
- **Zone E: Single-Family Residential Estate Zone.** According to Division 17.28 of the PCC, allowed uses within Zone E include a single-family residence together with accessory structures and associated uses, located on the same lot; and accessory dwelling unit, subject to Division 17.38.

Figure 4.10-3 Existing Zoning Map

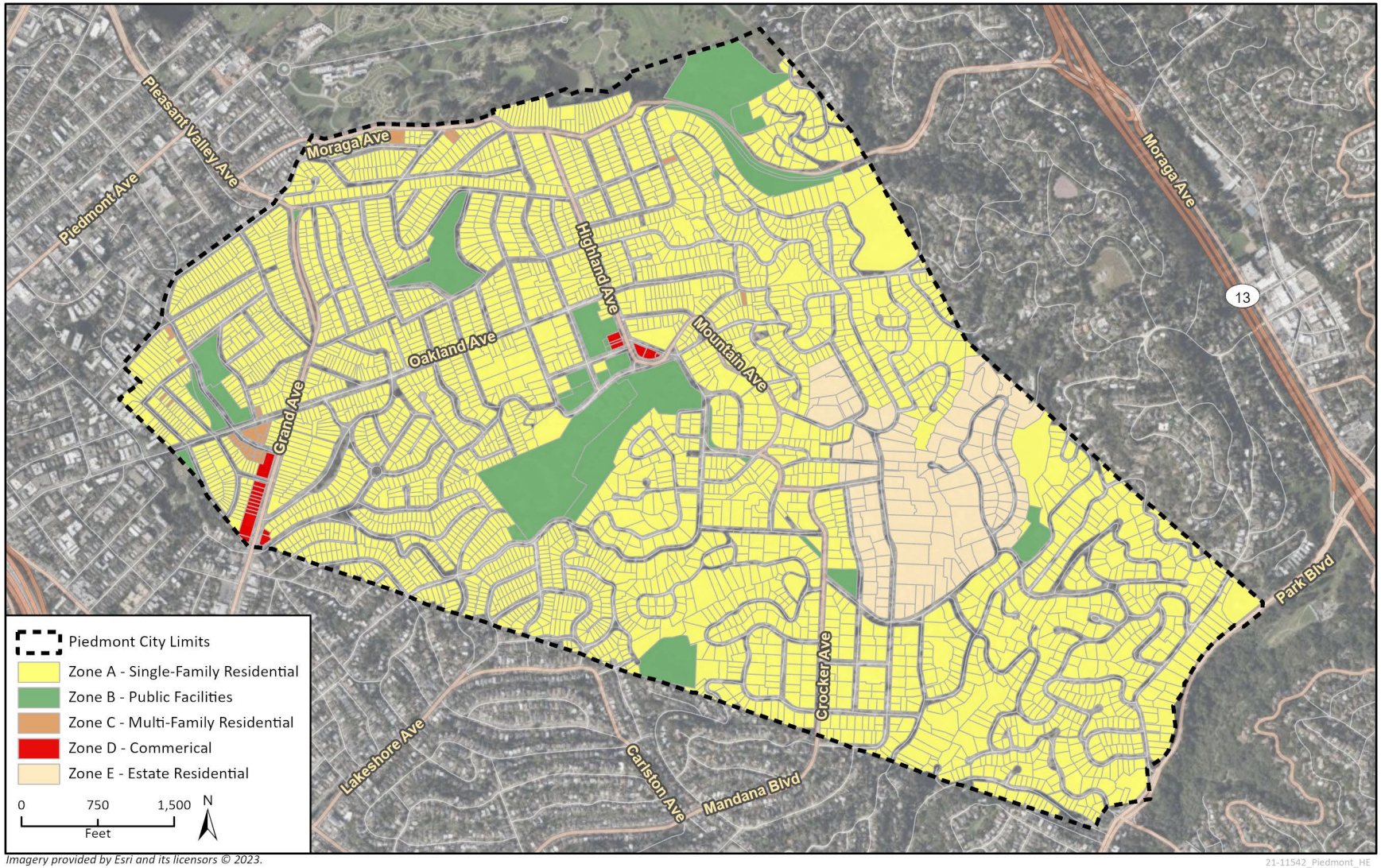

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Fig 4.10-2 Zoning

d. Moraga Canyon Specific Plan Setting

Existing land uses within the Moraga Canyon Specific Plan (MCSP) Area (Housing Element Program 1.L) include Coaches Field, Blair Park, the William F. Kennelly Skate Park, and the Piedmont Corporation Yard. A map of the MCSP Area is shown on Figure 2-3 in Section 2, *Project Description.* Coaches Field and Blair Park are both designated as Parks and Private Open Space according to the General Plan and are zoned as Public Facilities (Zone B). Piedmont Corporation Yard is designated as Municipal according to the General Plan and is also zoned as Public Facilities (Zone B).

4.10.2 Regulatory Setting

a. State Regulations

Planning and Zoning Law

State law requires each city and county in California to adopt a General Plan for the physical development of the land within its planning area (Government Code Sections 65300-65404). The General Plan must contain land use, housing, circulation, open space, conservation, noise, and safety elements, as well as any other elements that the city or county may wish to adopt. The circulation element of a local General Plan must be correlated with the land use element.

Zoning authority originates from city and county police power and from the State's Planning and Zoning Law, which sets minimum requirements for local zoning ordinances. The city or county zoning code is the set of detailed requirements that implement the General Plan policies at the level of the individual parcel. The zoning code presents standards for different uses and identifies which uses are allowed in the various zoning districts of the jurisdiction. Since 1971, State law has required the city or county zoning code to be consistent with the jurisdiction's General Plan. The consistency requirement does not apply to charter cities other than Los Angeles unless the charter city adopts a consistency rule.

Sustainable Communities and Climate Protection Act (SB 375)

The Sustainable Communities and Climate Protection Act (SB 375) supports the State's climate goals by helping reduce greenhouse gas emissions through coordinated transportation, housing, and land use planning. Under the Act, the California Air Resources Board (CARB) set targets for 2020 and 2035 for each of the 18 metropolitan planning organization regions in 2010 and updated them in 2018. Each of the regions must prepare a Sustainable Communities Strategy (SCS), as an integral part of its Regional Transportation Plan (RTP), that contains land use, housing, and transportation strategies that, if implemented, would allow the region to meet CARB's targets. The Act establishes some incentives to encourage implementation of the development patterns and strategies included in an SCS. Developers can get relief from certain environmental review requirements under the California Environmental Quality Act (CEQA) if their new residential and mixed-use projects are consistent with a regions SCS that meets the targets (see Public Resources Code Sections 21155, 21155.1, 21155.2, 21159.28).

b. Regional Regulations

Association of Bay Area Governments (ABAG)/Metropolitan Transportation Commission (MTC) Plan Bay Area 2050

The Association of Bay Area Governments and the Metropolitan Transportation Commission (ABAG/MTC) Plan Bay Area 2050, adopted in October 2021, integrated transportation and land-use plan for the nine-county San Francisco Bay Area, including Alameda County. Plan Bay Area 2050 meets all State and federal requirements for a Regional Transportation Plan and Sustainable Communities Strategy, also referred to as the RTP/SCS. The Plan describes where and how the region can accommodate the slightly fewer than 1.4 million new households and 1.4 million new jobs projected in the Bay Area by 2050 and details the regional transportation investment strategy over this period. The plan identifies 35 strategies focus on improving housing, the economy, transportation, and the environment across the Bay Area over a 30-year period. The plan has identified four geographic areas to guide where future growth in housing and jobs would be focused over the next 30 years: Priority Development Areas (PDA), Priority Production Areas (PPA), Transit-Rich Areas (TRA), and High-Resource Areas (HRA). ABAG/MTC developed land use and transportation scenarios in Plan Bay Area 2050 that distributes the total amount of anticipated growth across the region and measure how well each scenario measures against the plan goals. Based upon performance, the preferred scenario provides a regional pattern of household and employment growth and a corresponding transportation investment strategy (ABAG/MTC 2021).

c. Local Regulations

City of Piedmont General Plan

Adopted by the City Council on April 6, 2009, the Piedmont General Plan is a long-range statement of policies for the development and preservation of Piedmont. The General Plan's goals are implemented through decisions and actions consistent with the objectives, policies, and actions of each of the eight Elements: Land Use; Transportation; Natural Resources and Sustainability; Environmental Hazards; Parks, Recreation, and Open Space; Design and Preservation; Community Services and Facilities; and Housing. The General Plan provides the foundation for Piedmont's zoning regulations, and focuses not only on local issues, but broader regional issues that affect Piedmont residents as well.

The Land Use Element of the General Plan includes goals, policies, and actions that aim to conserve Piedmont's neighborhoods, guide the development of vacant lots, preserve the City's open spaces, and avoid conflicts between adjacent users. The focus of the Land Use Element is to preserve the stability and integrity of the city's residential areas (City of Piedmont 2009).

City of Piedmont Zoning Ordinance

Pursuant to Chapter 17 of the Piedmont City Code (PCC), the city is divided into five zoning districts: Zone A, Zone B, Zone C, Zone D, and Zone E, as summarized in Table 4.10-2 below. Within each zone, certain uses of land and buildings are allowed as permitted or conditional uses, and certain other uses of land and buildings are restricted or prohibited.

Table 4.10-2 City of Piedmont Zoning Districts

	Zone A	Zone B	Zone C	Zone D	Zone E
	Single Family Residential	Public Facilities	Multiple Family Residential	Commercial/Mixed Use Commercial & Multifamily Residential	Single Family Residential Estate
Lot Size	8,000 sf	None	10,000 sf	None	20,000 sf
Lot Frontage	60’	None	90’	None	120’
Maximum Lot Coverage	40%	None	50%	None	40%
Landscaping minimum	30%	None	30%	None to 10%	40%
Height	35’	35’	35’	35’ to 40’	35’
Street Yard	20’	None [1]	20’	None, unless adjacent to Zone A[1]	20’
Side Yard	5’	None	5’	None, unless adjacent to Zone A	20’
Rear Yard	5’	None	5’	None, unless adjacent to Zone A	20’

[1] Single family residential uses in Zones B and D are subject to Zone A development regulations.

Source: Piedmont City Code

City of Piedmont 2023-2031 Housing Element

The City of Piedmont Housing Element serves as the city's framework for housing goals, policies, and detailed programs for meeting existing and future housing needs and for increasing affordable housing opportunities. The current 2023-2031 Housing Element addresses the planning period of January 31, 2023 to January 31, 2031 as required by State Housing Element Law. The Housing Element guides decisions to facilitate the development, rehabilitation, and availability of housing in Piedmont and affirmatively furthers fair housing.

4.10.3 Impact Analysis

a. Methodology and Thresholds of Significance

The analysis in this section focuses on environmental impacts from the proposed Housing Element Implementation project, as well as consistency with applicable land use plans, policies, or regulations. The following thresholds of significance are based on Appendix G of the *CEQA Guidelines*. For purposes of this Program EIR, implementation of the project may have a significant adverse impact if it would do any of the following:

1. Physically divide an established community; or,
2. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

The consistency analysis describes existing regional and local plans and policies and is intended to fulfill the requirements of *CEQA Guidelines* Section 15125(d). The emphasis of the analysis is on the project’s inconsistency and potential conflicts between the project and existing applicable land use plans adopted for the purpose of avoiding or mitigating an environmental effect, and whether any inconsistencies are significant environmental effects. The project is considered consistent with the provisions of the identified regional and local plans if it meets the general intent of the applicable plans and does not conflict with directly applicable policies. A given project need not be in perfect

conformity with each and every policy nor does State law require precise conformity of a proposed project with every policy or land use designation. Courts have also acknowledged that General Plans and specific plans attempt to balance a range of competing interests, and that it is nearly, if not absolutely, impossible for a project to be in perfect conformity with each and every policy set forth in the applicable plan. Additionally, in reaching such consistency conclusions, the city may also consider the consequences of denial of a project, which can also result in other policy inconsistencies. For example, Government Code Section 65589.5 explains that the potential consequences of limiting the approval of housing are reduced mobility, urban sprawl, excessive commuting, and air quality deterioration.

For an impact to be considered significant, an inconsistency would also have to result in a significant adverse change in the environment not already addressed in the other resource chapters of this EIR. The analysis below provides a discussion of the most relevant policies from the various planning documents. However, the City's consistency conclusions are based upon the planning documents as a whole.

b. Project Impacts and Mitigation

The proposed project involves implementation of the 2023-2031 Housing Element (including revisions to the General Plan Land Use Element, revisions to the PCC, and the Moraga Canyon Specific Plan) as well as an updates to the General Plan Transportation Element, Environmental Hazards Element, Natural Resources and Sustainability Element, Design and Preservation Element, Community Services and Facilities Element, and Parks, Recreation and Open Space Element. The updates to the General Plan elements themselves would not result in physical changes to the environment such that impacts related to land use would occur. Therefore, this analysis focuses on impacts associated with development facilitated by the proposed Housing Element Implementation project throughout Piedmont.

Threshold 1:	Would the project physically divide an established community?

Impact LU-1 PROJECT IMPLEMENTATION WOULD NOT PHYSICALLY DIVIDE AN ESTABLISHED COMMUNITY. THIS IMPACT WOULD BE LESS THAN SIGNIFICANT.

Citywide Housing Element Implementation

The proposed project is designed to implement the 2023-2031 Housing Element, which does not include policies or programs that would physically divide Piedmont. Adoption of the proposed General Plan changes, zoning amendments, and updates to the Transportation Element, Natural Resources and Sustainability Element, Design and Preservation Element, Community Services and Facilities Element, Parks, Recreation and Open Space Element, and Environmental Hazards Element would not include approval of any physical development (e.g., construction of housing or infrastructure). Further, development facilitated by the General Plan and Land Use Element amendments under the proposed project would facilitate housing development and would not facilitate the construction of barriers, such as new roads or other linear development or infrastructure, that would divide the existing communities surrounding the sites. As discussed in Section 4.16, *Utilities and Service Systems*, off-site improvements for utilities may be required for some of future development in Piedmont under the proposed project; however, utility improvements would not result in the construction of new roadways or other major intervening infrastructure that might physically divide an established community. New roadways may consist of local collector streets or Fire Department access roads.

No new transportation infrastructure would be required (refer to Section 4.14, *Transportation*, and Section 4.16, *Utilities and Service Systems*). Therefore, existing roadways would not be blocked, and construction would not limit access to a community or restrict movement within a community.

Development facilitated by the project would not divide a community; rather it would promote the development of existing vacant, underdeveloped, or underutilized properties, thereby locating people closer to existing employment, goods, and services within an established community. Furthermore, the proposed project would comply with requirements to Affirmatively Further Fair Housing (AFFH) in order to reduce displacement risk, included as Appendix F of the Housing Element. Therefore, impacts related to dividing an established community would be less than significant.

Moraga Canyon Specific Plan

Existing land uses within the MCSP Area include Coaches Field, Blair Park, the William F. Kennelly Skate Park, and the Piedmont Corporation Yard. The MCSP Area does not contain residential development. The proposed MCSP would facilitate housing development in the MCSP Area and would not divide or separate an established community. As outlined under Program 1.L of the 2023-2031 Housing Element, the MCSP must include improvements to pedestrian and vehicular circulation and must provide public utilities to new housing and city facilities to be constructed under the specific plan. Development facilitated by the MCSP would not result in the construction of barriers that would divide the existing residences surrounding the sites from each other or from the community. Short-term construction impacts would be mostly contained within the parcels but off-site improvements for utilities may be required for some of the MCSP Area (refer to Section 4.16, *Utilities and Service Systems*). However, these utility improvements would not result in the construction of new roadways or other major intervening infrastructure that might physically divide an established community. New roadways may consist of local collector streets or Fire Department access roads. Therefore, development in the MCSP Area would not divide an established community and impacts would be less than significant.

Mitigation Measure

This impact from development facilitated by the proposed Housing Element Implementation project, including development pursuant to an adopted MCSP, would be less than significant. No mitigation measures are required.

Threshold 2:	Would the project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

Impact LU-2 THE PROJECT WOULD NOT RESULT IN A SIGNIFICANT ENVIRONMENTAL IMPACT DUE TO A CONFLICT WITH A LAND USE PLAN, POLICY, OR REGULATION ADOPTED FOR THE PURPOSE OF AVOIDING OR MITIGATING AN ENVIRONMENTAL EFFECT. THEREFORE, THIS IMPACT WOULD BE LESS THAN SIGNIFICANT.

Citywide Housing Element Implementation

The proposed project would amend the Land Use Element to change the Land Use Diagram (map) to add a Specific Plan land use designation and fix discrepancies for internal consistency. The proposed project would also include zoning amendments to increase allowances within Zones A, B, C, and D to facilitate the construction of new housing. This includes:

- **Allow Religious Affiliated Housing Development in Zone A (Single-Family Zone):** In order to implement Program 1.D, in coordination with Programs 4.V, 5.G, and 5.H, proposed Zoning Ordinance amendments would amend Zone A to permit housing development affiliated with religious institutions at a density of 21 dwellings per acre. On sites with religious uses, the proposed Zoning Ordinance amendments increase the permitted density in Zone A from approximately 5 dwelling per acre to 21 per acre.
- **Increasing Allowed Density in Zone B (Public Facilities Zone):** In order to implement Program 1.F, a Zoning Ordinance amendment would increase the allowed density in Zone B from 5 dwelling units per acre to 60 dwelling units per acre maximum. This change would affect publicly owned land, including the Moraga Canyon Specific Plan Area (Program 1.L).
- **Increasing Allowed Density in Zone C (Multi-Family Residential):** In order to implement Programs 1.G and 4.L, proposed Piedmont Zoning Ordinance amendments would increase the permitted density in Zone C from 21 dwelling units an acre to 60 dwelling units per acre, increase the height limit from 3 to 4 stories, and relax parking requirements for multi-family and affordable housing development.
- **Increasing Allowed Density in Zone D (Commercial Zone).** In order to implement Programs 1.H and 4.L, proposed Zoning Ordinance amendments would increase the permitted density in Zone D from 20 dwelling units per acre to 81 dwelling units per acre, increase the height limit from 3 stories to 4 stories, remove Conditional Use Permit requirements for multi-family development, remove ground floor commercial requirement, and relax parking, setback, and lot coverage requirements.

The proposed project would also involve ADU regulations and incentives in all zones in Piedmont and SB 9 development in single-family zones in Piedmont. A more detailed description of General Plan and PCC changes is included in Section 2, *Project Description.*

The following analysis discusses the Housing Element Implementation project's consistency with applicable plans and regulations, including Plan Bay Area 2050, Piedmont General Plan, and the PCC. Consistency with Plan Bay Area 2050 is presented in Table 4.10-3. Consistency with the General Plan is presented in Table 4.10-4. The project is determined to be either "consistent" or "inconsistent" with the identified goals and policies.

Plan Bay Area 2050

As shown in Table 4.10-3, the project would be consistent with the key goals and strategies of Plan Bay Area 2050. Therefore, the project would not conflict with Plan Bay Area 2050 and impacts would be less than significant.

Table 4.10-3 Project Consistency with Plan Bay Area 2050

Measure	Project Consistency
Transportation. Create Healthy and Safe Streets	
T8. Build a Complete Streets network. Enhance streets to promote walking, biking and other micro-mobility through sidewalk improvements, car-free slow streets, and 10,000 miles of bike lanes or multi-use paths.	**Consistent**. Since much of Piedmont is built out, the proposed project would place housing in proximity to corridors served by Class II and Class III bicycle lanes and bus stops such as Oakland Avenue, Highland Avenue, Hampton Road, Park Boulevard, and Moraga Avenue. The sites identified in the Housing Element as having the most potential and feasibility to be developed (as shown on Figure 2-4 in Section 2, *Project Description)* are located within a one mile walk to a bus station, with the exception of development in the northern most corner of the city in MCSP Area which is located approximately 1.2-miles from the nearest bus station. Additionally, Piedmont Safer Streets, the City's Pedestrian and Bicycle Master Plan, envisions development of a 10-mile designated bikeway network that future residents would be able to utilize (City of Piedmont 2014 and 2021).
Housing. Spur Housing Production for Residents of all Income Levels	
H1. Further strengthen renter protections beyond state law. Building upon recent tenant protection laws, limit annual rent increases to the rate of inflation, while exempting units less than 10 years old.	**Consistent.** The City's Regional Housing Needs Assessment (RHNA) allocation is 587 units, which are distributed across over four income levels. The units would be distributed as is over the four income levels: 163 very low units, 94 low units, 92 moderate units, and 238 above moderate units. The proposed project would implement the City's Housing Element which would help satisfy the City's RHNA allocation. Policy 2.8 of the City's Housing Element serves to conserve rental housing opportunities; Policy 3.1 encourages the creation of rent restricted ADUs for low and very low-income households; and Policy 3.7 continues to allow for rental of rooms in private homes to provide housing opportunities for single people. The city is subject to statewide and countywide renter protections.
H2. Preserve existing affordable housing. Acquire homes currently affordable to low and middle-income residents for preservation as permanently deed-restricted affordable housing. **H4. Build adequate affordable housing to ensure homes for all**. Construct enough deed-restricted affordable homes to fill the existing gap in housing for the unhoused community and to meet the needs of low-income households.	**Consistent**. As described above, the City's Housing Element is designed to accommodate development of 163 very low-income units, 94 low-income units, 92 moderate-income units. The affordable housing would be preserved for these income levels. Goal 3 of the City's Housing Element ensures affordable housing opportunities. Policy 3.8 encourages affordable housing as part of market rate multi-family housing projects, and Program 3.G builds upon this by ensuring inclusionary housing which would require provision of affordable housing on-site or off-site, or payment of an affordable housing in-lieu fee, as part of market-rate housing development. Programs 3.B through 3.D increase the number of legal ADUs and monitor ADU missed opportunities or additional development opportunities.
H3. Allow a greater mix of housing densities and types in Growth Geographies. Allow a variety of housing types at a range of densities to be built in Priority Development Areas, select Transit-Rich Areas and Select High-Resource Areas.	**Consistent.** The proposed project would include zoning ordinance amendments to increase allowances for housing in Zones A, B, C, D, and E in order to facilitate the construction of new housing. Specifically, Policy 1.10 of the City's Housing Element creates incentives to merge lots for new multi-family and mixed-use housing in Zone D and multi-family housing in Zone C; Program 1.D allows religious institution affiliated housing in Zone A; Program 1.E requires ADUs for new single-family residence construction; Program 1.F amends the Zoning Ordinance to increase allowed density in Zone B to 60 dwelling units per acre maximum; Program 1.G encourages or incentivizes multi-family development in Zone C; Program 1.H amends the Zoning Ordinance to allow residential densities up to 81 units per acre in Zone D; and Program 1.J facilitates SB 9 amendments for single-family zoning districts.

Measure	Project Consistency
H5. Integrate affordable housing into all major housing projects. Require a baseline of 10-20% of new market-rate housing developments of five units or more to be affordable to low-income households.	**Consistent**. Future development would be required to comply with Program 3.G of the City's Housing Element, which implements an inclusionary housing program that requires provision of affordable housing on-site or off-site, or payment of an affordable housing in-lieu fee, as part of an otherwise market-rate housing development.
Environment. Expand Access to Parks and Open Space	
EN4. Maintain urban growth boundaries. Using urban growth boundaries and other existing environmental protections, focus new development within the existing urban footprint or areas otherwise suitable for growth, as established by local jurisdictions.	**Consistent.** The proposed project does not involve changes to the city limits or otherwise change urban growth boundaries.

Source: ABAG 2021

City of Piedmont General Plan

The proposed Housing Element Implementation project involves amendments to the Piedmont General Plan. Future development under the project would be reviewed for consistency with applicable General Plan land use designations and policies. The proposed project implements the policies and programs set forth in the adopted 2023-2031 Housing Element, including by implementing General Plan changes called for in the Housing Element. Impacts associated with implementation of these General Plan changes are discussed throughout this EIR.

Table 4.10-4 discusses proposed project consistency with the applicable policies in the Piedmont General Plan.

Table 4.10-4 Project Consistency with Relevant General Plan Goals and Policies

General Plan Policy	Consistency
Land Use Element	
Policy 1.3: Harmonious Development Maintain planning and development review procedures which ensure that new development is harmonious with its surroundings and will not conflict with adjacent properties. New development and home alterations should be consistent with established standards for setbacks, height, and bulk, thereby conserving the low-density, pedestrian-friendly character of the city's neighborhoods.	**Consistent.** Future development facilitated by the proposed project would be subject to the City's design standards and guidelines and design review process pursuant to Section 17.66 and 17.67 of the PCC. The design review process would ensure new construction is attractive, safe, and harmonious with its surroundings.
Policy 1.4: Lot Sizes Retain lot size standards that conserve prevailing densities and discourage the division of developed lots into multiple parcels.	**Consistent/Inconsistent.** Certain policies of the proposed project would discourage division of developed lots into multiple parcels, and would incentivize lot mergers in order to facilitate multi-family development in order to satisfy RHNA goals. Specifically, Program 1.I of the City's Housing Element encourages lot mergers in order to facilitate housing in Zones C and D. However, certain policies of the proposed project such as Program 1.J would facilitate SB 9 amendments and would streamline review and approval of projects on properties that are eligible for lot splits under SB 9.

General Plan Policy	Consistency
Policy 5.2: Lots on the City Limit Line Coordinate with Oakland on the permitting of development on lots that are bisected by the Piedmont-Oakland line.	**Consistent.** The City of Piedmont would continue its coordination with the City of Oakland regarding properties that are located in both Piedmont and Oakland.
Transportation Element	
Policy 7.3: Reducing Vehicle Miles Traveled Support changes that would reduce the number of vehicle miles traveled (VMT) by Piedmont residents, including enabling residents to conduct business with City Hall on the internet, allowing home-based businesses, supporting telecommuting, encouraging carpooling, improving public transit, and upgrading facilities for bicycles and pedestrians.	**Consistent/Inconsistent**. The proposed project facilitates development on sites in proximity to corridors served by Class II and Class III bicycle lanes and bus stops such as those on Oakland Avenue, Highland Avenue, Hampton Road, Park Boulevard, and Moraga Avenue. The sites identified in the Housing Element as having the most potential and feasibility to be developed (as shown on Figure 2-4 in Section 2, *Project Description)* are located within a one mile walk to a bus station, with the exception of development in the northern most corner of the city in MCSP Area which is located approximately 1.2-miles from the nearest bus station. The proposed project would continue the strategies outlined in policy 7.3. However, as discussed in Section 4.14, *Transportation*, the proposed project would result in a significant and unavoidable impact and therefore the proposed project would be inconsistent with reducing VMT.
Policy 8.3: Traffic-Generating Uses Discourage development projects which would significantly increase congestion on Piedmont streets or create substantially increased road maintenance requirements.	**Consistent.** The proposed project would facilitate housing within Piedmont pursuant to the RHNA. The proposed project would place housing sites in proximity to corridors served by Class II and Class III bicycle lanes and bus stops such as those on Oakland Avenue, Highland Avenue, Hampton Road, Park Boulevard, and Moraga Avenue. The sites identified in the Housing Element as having the most potential and feasibility to be developed (as shown on Figure 2-4 in Section 2, *Project Description)* are located within a one mile walk to a bus station, with the exception of development in the northern most corner of the city in MCSP Area which is located approximately 1.2-miles from the nearest bus station. Additionally, Policy 6.6 of the City's Housing Element strives to create local housing opportunities for persons employed within Piedmont in order to reduce commuting, thereby reducing congestion.
Policy 10.5: Bicycle Infrastructure Expand the "infrastructure" necessary to accommodate bicycle travel, including bike racks in parks, at schools, and at public buildings, and adequate space for bicycle storage in residential garages.	**Consistent.** Piedmont Safer Streets, the city's Pedestrian and Bicycle Master Plan, would facilitate the development of a 10-mile designated bikeway network, which future residents from the proposed project would be able to utilize (City of Piedmont 2014 and 2021). Additionally, as discussed in Section 4.14, *Transportation*, the proposed project would not conflict with a program, plan, ordinance, or policy addressing bicycle facilities.
Policy 11.1: Off-Street Parking Standards Maintain off-street parking requirements for new development—including the addition of bedrooms to existing residences—that minimize increases in on-street parking. At the same time, consider modifications to the parking standards which recognize factors such as proximity to major bus lines, incentives for hybrid or electric vehicles, allowances for bicycles, and other measures which discourage driving. These modifications could include allowing smaller parking spaces under appropriate conditions.	**Consistent.** Future development facilitated under the project would be required to comply with Division 17.30 of the PCC, which specifies requirements for parking in all zones and discourages on-street parking. Additionally, pursuant to Government Code section 65852.2, the City may not require parking for an ADU located within half a mile of public transit. Future development would also be required to comply with Program 4.L of the City's Housing Element, which allows parking reductions for certain multi-family, mixed-use, and affordable housing projects in order to reduce constraints on housing that may adversely affect multi-family project feasibility.

General Plan Policy	Consistency
Natural Resources and Sustainability Element	
Policy 16.2: Green Building Support the use of green building methods in new construction and rehabilitation projects, including both public agency projects and private projects undertaken by homeowners.	**Consistent.** Future development facilitated by the proposed project would be required to be constructed in accordance with the latest iteration of CALGreen, the California Energy Code, and any locally adopted amendments, which include requirements for the use of energy-efficient design and technologies as well as provisions for incorporating renewable energy resources into building design. Development facilitated by the project would also be required to comply with the City Code, Article IV, Division 1, which mandates the implementation of Title 24. Additionally, future development would be required to comply with Policies 6.1 and 6.2 of the Housing Element, which requires all new housing to be designed to encourage energy efficiency and usage of energy-efficient materials. Program 6.B of the Housing Element would also encourage usage of the "Build it Green" checklist in order to encourage greener housing construction.
Policy 16.3: Water Conservation Maintain development standards and building requirements that encourage the efficient use of water. These requirements should include the use of plumbing fixtures designed for water efficiency, irrigation systems designed to minimize water waste, and allowances for graywater use in residential construction, where feasible.	**Consistent.** Future development with total irrigated landscape areas greater than 500 square feet would be required to comply with the State's Water Efficient Landscape Ordinance (WELO) for water conservation.
Policy 17.1: Solid Waste Reduction Actively promote recycling, composting, and other programs that reduce the amount of solid waste requiring disposal in landfills. The City of Piedmont will strive to exceed the waste diversion targets set by State and County waste management agencies.	**Consistent.** Future development facilitated under the project would be required to comply with SB 1383 and provide organic waste recycling to residents.
Design and Preservation Element	
Policy 28.1: Scale, Height, and Bulk Compatibility Strengthen the defining qualities of Piedmont neighborhoods by relating the scale of new construction, additions, and alterations to existing homes and neighborhood context. Overpowering contrasts in scale and height on adjacent lots should be avoided.	**Consistent.** Future development facilitated by the proposed project would be subject to the City's design standards and guidelines and design review process pursuant to Sections 17.66 and 17.67 of the PCC. The design review process would ensure new construction is attractive, safe, and harmonious with its surroundings. Future development would also be required to be consistent with zoning standards pursuant to Chapter 17, Article 2 of the PCC.
Policy 28.2: Style Compatibility On blocks where one architectural style or design theme is predominant, require new construction and alterations that respect and are compatible with the prevailing style. On blocks where no particular style is predominant, new construction and alterations should be compatible with the style of homes nearby. This applies not only to the house as a whole but to building elements such as foundations, porches, exterior stairs, doors, exterior materials, ornamentation, roofs, and doors.	

General Plan Policy	Consistency
Policy 28.11: Design Review Implement General Plan residential design policies through zoning and design review. Design guidelines, requirements, policies, and procedures should be stated clearly and applied consistently.	
Policy 28.7: Hillside Home Design On steep hillside sites, take advantage of topography and views and encourage designs that reduce effective visual bulk. New hillside homes should follow the contour of the slope, with buildings broken into several horizontal and vertical elements rather than large building planes.	
Policy 28.10: Multi-family Design Require any new development in Piedmont's multi-family and mixed use areas to be compatible with the single family architectural styles of Piedmont. Avoid "motel style" apartment buildings which face the side yard rather than the street, and "podium" (or soft-story) units built over street facing parking bays. Where feasible, multi-family buildings should be broken into clusters to reduce perceived size and bulk.	
Policy 29.2: Landscape Design Use landscaping to soften the appearance of buildings, frame desirable views, screen undesirable views, buffer potentially incompatible uses, and maintain an attractive streetscape. Landscape design should fit the surrounding context and complement the city's natural landscape.	**Consistent.** Future development facilitated by the proposed project would be subject to Chapter 3 of the City's design standards and guidelines which governs landscaping design. Specifically, Section 3.11 and Divisions 6 and 7 impose design standards that encourages the proper use of landscaping, and the use of landscaping to frame views, soften buildings, and screen undesirable views.
Policy 29.8: Exterior Lighting Discourage excessive or overly bright exterior lighting and lighting which could interfere with motorist safety. Exterior yard lighting should be designed to avoid spillover on to adjacent properties.	**Consistent.** Future development facilitated by the proposed project would be required to comply with General Plan Policy 29.8 and refrain from usage of excessive or overly bright exterior lighting.

As explained in "Methodology and Significance Thresholds," the proposed project would be considered consistent with the provisions of the identified regional and local plans if it meets the general intent of the applicable plans and does not conflict with directly applicable policies. A given project need not be in perfect conformity with each and every policy nor does State law require precise conformity of a proposed project with every policy or land use designation. Courts have also acknowledged that General Plans and specific plans attempt to balance a range of competing interests, and that it is nearly, if not absolutely, impossible for a project to be in perfect conformity with each and every policy set forth in the applicable plan. As shown in Table 4.10-4, the Housing Element Implementation project would be generally consistent with the goals, policies, and actions within the General Plan, with the exception of policies 1.4 and 7.3. The inconsistency related to Policy 1.4 would not result in a significant adverse environmental impact since development would still occur on the same site whether or not the lot is merged or split. Further, as discussed in the table and in Section 4.14, *Transportation*, no mitigation measures are feasible to reduce VMT impacts to a less than significant level. Further, as noted above in the "Methodology and Significance Thresholds" section, for an impact to be considered significant, an inconsistency would also have to result in a significant adverse change in the environment not already addressed in the other resource chapters

of this EIR. The impact related to Policy 7.3 is acknowledged in the *Transportation* section of the EIR as it is a transportation impact.

As noted under Government Code Section 65589.5(a), the Legislature has concluded that "the lack of housing, including emergency shelters, is a critical problem that threatens the economic, environmental, and social quality of life in California." More specifically, the Legislature's stated intent is "to assure that counties and cities recognize their responsibilities in contributing to the attainment of the state housing goal…to assure that counties and cities will prepare and implement housing elements which…will move toward attainment of the state housing goal" (Government Code Section 65581). The proposed project would help meet the city's RHNA allocation, as well as efficiently utilize vacant, underutilized, and underdeveloped lots within the city to increase the supply of housing. The proposed project would encourage development of housing, which is supportive of the General Plan goal and policies. Therefore, impacts related to land use would be less than significant.

PCC Consistency

Future development under the project would be reviewed for consistency with zoning for residential uses as described in Chapter 17, *Planning and Land Use*, of the PCC. The proposed project implements the policies and programs set forth in the adopted 2023-2031 Housing Element, including by implementing the zoning changes called for in the Housing Element and amendments to the Land Use Element studied in this EIR. Impacts associated with implementation of these zoning changes are discussed throughout this EIR.

Overall, the project would comply with the land use requirements set forth by Plan Bay Area 2050, the Piedmont General Plan, and the PCC, and therefore would not result in adverse physical land use impacts.

Moraga Canyon Specific Plan

Program 1.L of the Housing Element calls for development of a specific plan for four City-owned parcels in Moraga Canyon. Future development in the MCSP Area would be required to comply with design standards and guidelines and policies in the MCSP. Specifically, as outlined under Program 1.L of the Piedmont Housing Element, the MCSP must include improvements to pedestrian and vehicular circulation and encourage walking and pedestrian safety. Additionally, future development in MCSP Area would be required to comply with the same State and local regulations, discussed above. Although the northern-most corner of the MCSP Area would be located a 1.2-mile walk from the nearest bus stop, other parts of the MCSP Area would be within a one-mile walk to the nearest bus stop which would allow for walking and bicycling and the use of alternative modes of transportation. Additionally, Moraga Avenue is a designated Class III bicycle lane, which connects to Highland Avenue, another Class III bicycle lane. Highland Avenue leads directly to schools, parks, and services in the civic center which would allow future residents to utilize bicycles instead of single-occupancy vehicles. Piedmont Safer Streets, the city's Pedestrian and Bicycle Master Plan, also envisions the development of a 10-mile designated bikeway network which would further connect future residents in MCSP Area to other areas of Piedmont. Nonetheless, as discussed in Section 4.14, *Transportation*, impacts related to VMT would be significant and unavoidable. Therefore, although development in the MCSP Area would be inconsistent with transportation policies of the General Plan related to VMT, development in the MCSP Area would generally be consistent with other goals and policies within Plan Bay Area 2050, the Piedmont General Plan, and the PCC. As noted above in the "Methodology and Significance Thresholds" section, for an impact to be considered significant, an inconsistency would also have to result in a significant adverse change in the environment not already addressed in the other resource

chapters of this EIR. This impact is acknowledged in the *Transportatio*n section of the EIR as it is a transportation impact. Impacts related to land use would be less than significant.

Mitigation Measures

This impact from development facilitated by the proposed Housing Element Implementation project, including development pursuant to an adopted MCSP, would be less than significant. No mitigation measures are required.

c. Cumulative Impacts

A project's environmental impacts are "cumulatively considerable" if the "incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects" (*CEQA Guidelines* Section 15065[a][3]). The geographic scope for cumulative land use and planning impacts includes the geographic area of the City of Piedmont and the cumulative setting is described in Section 3, *Environmental Setting*.

Cumulative development in accordance with the General Plan would incrementally modify land use patterns and the general setting of the City of Piedmont. Planned cumulative development would incrementally increase overall development intensity throughout Piedmont. However, land use and policy consistency impacts associated with buildout of the Piedmont General Plan would be addressed through updates to the General Plan Land Use Element, Transportation Element, Environmental Hazards Element, Natural Resources and Sustainability Element, Design and Preservation Element, Community Services and Facilities Element, and Parks, Recreation and Open Space Element, as well as revisions to the PCC and the Moraga Canyon Specific Plan. Since the planned projects would be required to be consistent with the General Plan, they would implement the city's vision for Piedmont. Because the project's impacts related to land use compatibility and consistency with local plans and goals would be less than significant, the project's contribution to cumulative land use impacts would be less than significant.

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4.11 Noise

This section evaluates noise and groundborne vibration impacts resulting from the construction and operation of new housing development facilitated by the proposed Housing Element Implementation project. Topics addressed consist of short-term construction and long-term operational noise and vibration, including the exposure of noise-sensitive receivers to substantial or incompatible noise levels.

4.11.1 Setting

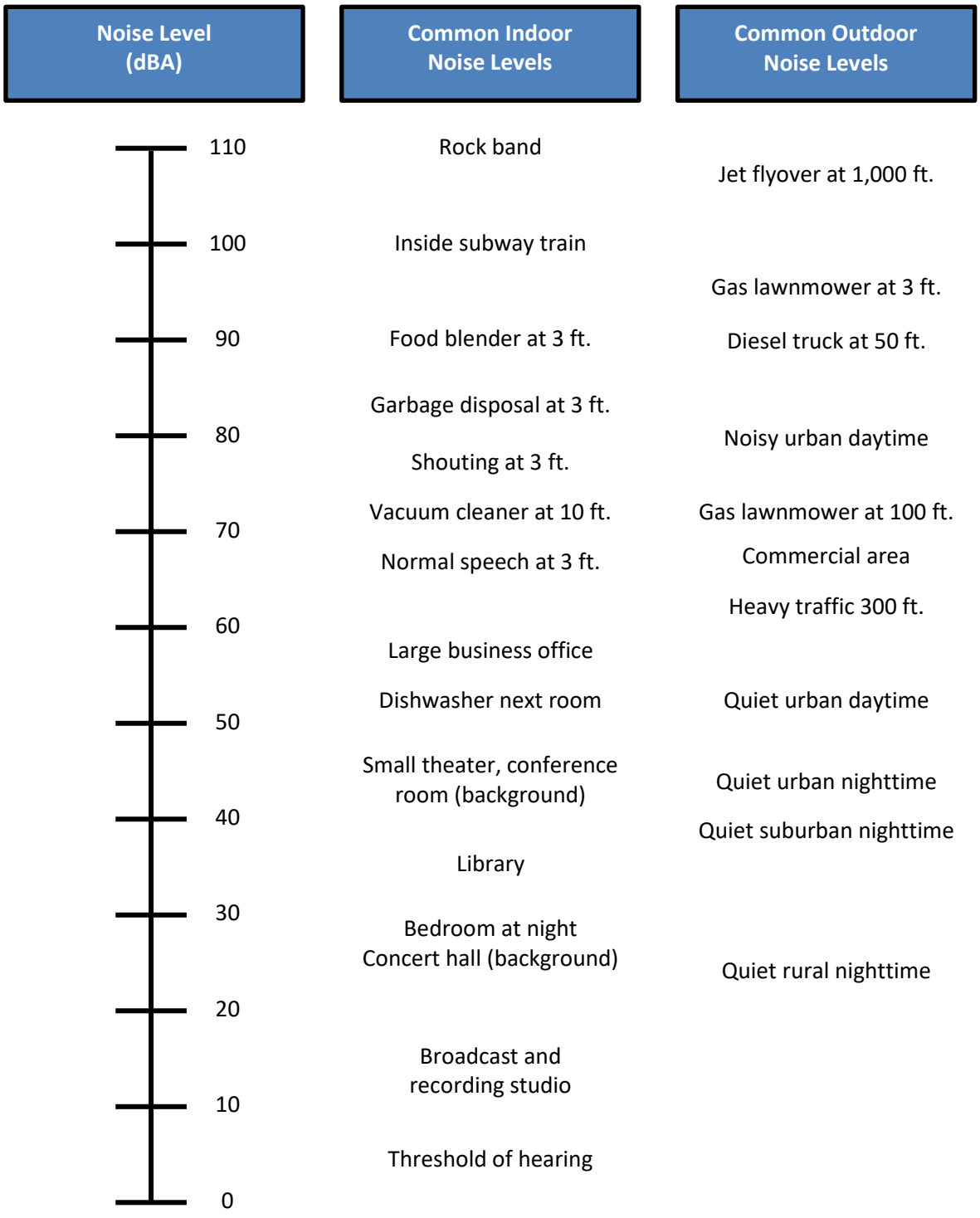
a. Fundamentals of Noise

Sound is a vibratory disturbance created by a moving or vibrating source, which is capable of being detected by the hearing organs (e.g., the human ear). Noise is defined as sound that is loud, unpleasant, unexpected, or undesired and may therefore be classified as a more specific group of sounds. The effects of noise on people can include general annoyance, interference with speech communication, sleep disturbance, and, in the extreme, hearing impairment (California Department of Transportation [Caltrans] 2013).

Noise levels are commonly measured in decibels (dB) using the A-weighted sound pressure level (dBA). The A-weighting scale is an adjustment to the actual sound pressure levels per occurrence so that they are consistent with the human hearing response, which is most sensitive to frequencies around 4,000 Hertz (Hz) and less sensitive to frequencies around and below 100 Hz (Kinsler, et. al. 1999). Decibels are measured on a logarithmic scale that quantifies sound intensity in a manner similar to the Richter scale used to measure earthquake magnitudes. A doubling of the energy of a noise source, such as a doubling of traffic volume, would increase the noise level by 3 dB; similarly, dividing the energy in half would result in a decrease of 3 dB (Crocker 2007). Common outdoor and indoor noise sources and their typical corresponding A-weighted noise levels are shown in Figure 4.11-1.

Human perception of noise has no simple correlation with sound energy. The perception of sound is not linear in terms of dBA or in terms of sound energy. Two sources do not “sound twice as loud” as one source. It is widely accepted that the average healthy ear can barely perceive an increase (or decrease) of up to 3 dBA in noise levels (i.e., twice [or half] the sound energy); that a change of 5 dBA is readily perceptible (8 times the sound energy); and that an increase (or decrease) of 10 dBA sounds twice (or half) as loud (10.5 times the sound energy) (Crocker 2007).

Figure 4.11-1 Examples of Typical Noise Levels



Source: Caltrans 2013

Sound changes in both energy level and frequency spectrum as it travels from the source to the receiver. The most obvious change is the decrease in sound level as the distance from the source increases. The manner by which noise declines with distance depends on factors such as the type of sources (e.g., point or line), the path the sound will travel, site conditions, and obstructions. Noise levels from a point source (e.g., construction, industrial machinery, ventilation units) typically attenuate, or drop off, at a rate of 6 dBA per doubling of distance. Noise from a line source (e.g., roadway, pipeline, railroad) typically attenuates at about 3 dBA per doubling of distance (Caltrans 2013). The propagation of noise is also affected by the intervening ground, known as ground absorption. A hard site, such as a parking lot or smooth body of water, receives no additional ground attenuation and the changes in noise levels with distance (drop-off rate) result simply from the geometric spreading of the source. An additional ground attenuation value of 1.5 dBA per doubling of distance applies to a soft site (e.g., soft dirt, grass, or scattered bushes and trees) (Caltrans 2013).

Noise levels may also be reduced by intervening structures. The amount of attenuation provided by this "shielding" depends on the size of the object and the frequencies of the noise levels. Natural terrain features, such as hills and dense woods, and man-made features, such as buildings, fences, and walls, can alter noise levels. Generally, any large structure blocking the line of sight will provide at least a 5 dBA reduction in source noise levels at the receiver (Federal Highway Administration [FHWA] 2011). Structures can substantially reduce occupants' exposure to noise as well. The FHWA's guidelines indicate that modern building construction generally provides an exterior-to-interior noise level reduction of 20 to 35 dBA with closed windows.

Descriptors

The impact of noise is not a function of loudness alone. The time of day when noise occurs, its frequency, and the duration of the noise are also important. In addition, most noise that lasts for more than a few seconds is variable in its intensity. Consequently, a variety of noise descriptors have been developed.

One of the most frequently used noise metrics that considers both duration and intensity is the equivalent noise level (L_{eq}). The L_{eq} is defined as the single steady A-weighted level that is equivalent to the same amount of energy as that contained in the actual fluctuating levels over a period of time. Typically, L_{eq} is equivalent to a one-hour period, even when measured for shorter durations as the noise level of a 10- to 30-minute period would be the same as the hour if the noise source is relatively steady. L_{max} is the highest Root Mean Squared (RMS) sound pressure level within the sampling period, and L_{min} is the lowest RMS sound pressure level within the measuring period (Crocker 2007). Normal conversational levels at three feet are in the 60- to 65-dBA L_{eq} range and ambient noise levels greater than 65 dBA L_{eq} can interrupt conversations (Federal Transit Administration [FTA] 2018).

Noise that occurs at night tends to be more disturbing than that which occurs during the day. Community noise is usually measured using Day-Night Average Level (L_{dn} or DNL), which is a 24-hour average noise level with a +10 dBA penalty for noise occurring during nighttime (10:00 p.m. to 7:00 a.m.) hours, or Community Noise Equivalent Level (CNEL), which is the 24-hour average noise level with a +5 dBA penalty for noise occurring from 7:00 p.m. to 10:00 p.m. and a +10 dBA penalty for noise occurring from 10:00 p.m. to 7:00 a.m. (Caltrans 2013). Noise levels described by DNL and CNEL usually differ by about 0.5 dBA. In general, quiet suburban areas typically have a CNEL in the range of 40 to 50 dBA, while areas near arterial streets are typically in the 50 to 70+ CNEL range.

Propagation

Sound from a small, localized source (approximating a "point" source) radiates uniformly outward as it travels away from the source in a spherical pattern, known as geometric spreading. The sound level decreases or drops off at a rate of approximately 6 dBA for each doubling of distance.

Traffic noise is not a single, stationary point source of sound. Rather, the movement of vehicles makes the source of the sound appear to emanate from a line (line source) rather than a point. The drop-off rate for a line source is approximately 3 dBA for each doubling of distance.

b. Fundamentals of Vibration

Groundborne vibration of concern in environmental analysis consists of the oscillatory waves that move from a source through the ground to adjacent structures. The number of cycles per second of oscillation makes up the vibration frequency, described in terms of hertz (Hz). The frequency of a vibrating object describes how rapidly it oscillates. The normal frequency range of most groundborne vibration that can be felt by the human body starts from a low frequency of less than 1 Hz and goes to a high of about 200 Hz (Crocker 2007).

While people have varying sensitivities to vibrations at different frequencies, in general they are most sensitive to low-frequency vibration. Vibration in buildings, such as from nearby construction activities, may cause windows, items on shelves, and pictures on walls to rattle. Vibration of building components can also take the form of an audible low-frequency rumbling noise, referred to as groundborne noise. Groundborne noise is usually only a problem when the originating vibration spectrum is dominated by frequencies in the upper end of the range (60 to 200 Hz), or when foundations or utilities, such as sewer and water pipes, physically connect the structure and the vibration source (FTA 2018). Although groundborne vibration is sometimes noticeable in outdoor environments, it is almost never annoying to people who are outdoors. The primary concern from vibration is that it can be intrusive and annoying to building occupants and vibration-sensitive land uses.

Descriptors

Vibration amplitudes are usually expressed in peak particle velocity (PPV) or RMS vibration velocity. The PPV and RMS velocity are normally described in inches per second (in./sec.). PPV is defined as the maximum instantaneous positive or negative peak of a vibration signal. PPV is often used in monitoring of vibration because it is related to the stresses that are experienced by buildings (Caltrans 2020).

Response to Vibration

Vibration associated with construction has the potential to be an annoyance to nearby land uses. Caltrans has developed limits for the assessment of vibrations from transportation and construction sources. The Caltrans vibration limits are reflective of standard practice for analyzing vibration impacts. As shown in Table 4.11-1 and Table 4.11-2, the Caltrans *Transportation and Construction Vibration Guidance Manual* (2020) identifies guideline impact criteria for damage to buildings and additional impact criteria for annoyance to humans from transient and continuous/frequent sources.

Table 4.11-1 Building Vibration Damage Potential

Structure and Condition	Maximum PPV (in./sec.)	
	Transient Sources	Continuous/Frequent Intermittent Sources
Extremely fragile historic buildings, ruins, ancient mountains	0.12	0.08
Fragile buildings	0.20	0.10
Historic and similar old buildings	0.50	0.25
Older residential structures	0.50	0.30
New residential structures	1.00	0.50
Modern industrial/commercial buildings	2.00	0.50

Notes: Transient sources create a single isolated vibration event, such as blasting or drop balls (i.e., a loose steel ball that is dropped onto structures or rock to reduce them to a manageable size). Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.

PPV = peak particle velocity; in./sec. = inches per second

Source: Caltrans 2020

Table 4.11-2 Vibration Annoyance Potential

Human Response	Maximum PPV (in./sec.)	
	Transient Sources	Continuous/Frequent Intermittent Sources
Barely perceptible	0.04	0.01
Distinctly perceptible	0.25	0.04
Strongly perceptible	0.90	0.10
Severe	2.00	0.40

Notes: Transient sources create a single isolated vibration event, such as blasting or drop balls (i.e., a loose steel ball that is dropped onto structures or rock to reduce them to a manageable size). Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.

PPV = peak particle velocity; in./sec. = inches per second

Source: Caltrans 2020

Propagation

Vibration energy spreads out as it travels through the ground, causing the vibration level to diminish with distance away from the source. High-frequency vibrations diminish much more rapidly than low frequencies, so low frequencies tend to dominate the spectrum at large distances from the source. Variability in the soil strata can also cause diffractions or channeling effects that affect the propagation of vibration over long distances (Caltrans 2020). When a building is exposed to vibration, a ground-to-foundation coupling loss (the loss that occurs when energy is transferred from one medium to another) will usually reduce the overall vibration level. However, under rare circumstances, the ground-to-foundation coupling may amplify the vibration level due to structural resonances of the floors and walls.

c. Sensitive Receivers

Noise exposure goals for various types of land uses reflect the varying noise sensitivities associated with those uses. According to the Piedmont General Plan Environmental Hazards Element, hospitals, convalescent homes, schools, religious institutions, sensitive wildlife habitat, and residential areas are considered noise-sensitive uses (City of Piedmont 2009).

Vibration-sensitive receivers, which are similar to noise-sensitive receivers, include residences and institutional uses, such as hospitals, schools, and religious institutions. However, vibration-sensitive receivers also include buildings where vibrations may interfere with vibration-sensitive equipment that is affected by vibration levels that may be well below those associated with human annoyance (e.g., recording studies or medical facilities with sensitive equipment). Other uses that may have particular sensitivity to groundborne vibration include historic sites and structures.

Piedmont encompasses 1.7 square miles and consists of a mix of urban uses including residential, schools, civic buildings, parks and open space, and commercial uses. There are no industrial uses in the city. According to the Land Use Element of the General Plan, 68.4 percent of the city is comprised of residential land uses (City of Piedmont 2009). Therefore, residential uses comprise most of the sensitive receivers in the city. Other sensitive receivers consist of recreational uses (e.g., parks), and institutional uses (e.g., schools and religious institutions). In addition, refer to Section 4.4, *Cultural Resources*, for a discussion of historic properties in Piedmont that may be particularly sensitive to increases in groundborne vibration levels.

d. Existing Conditions

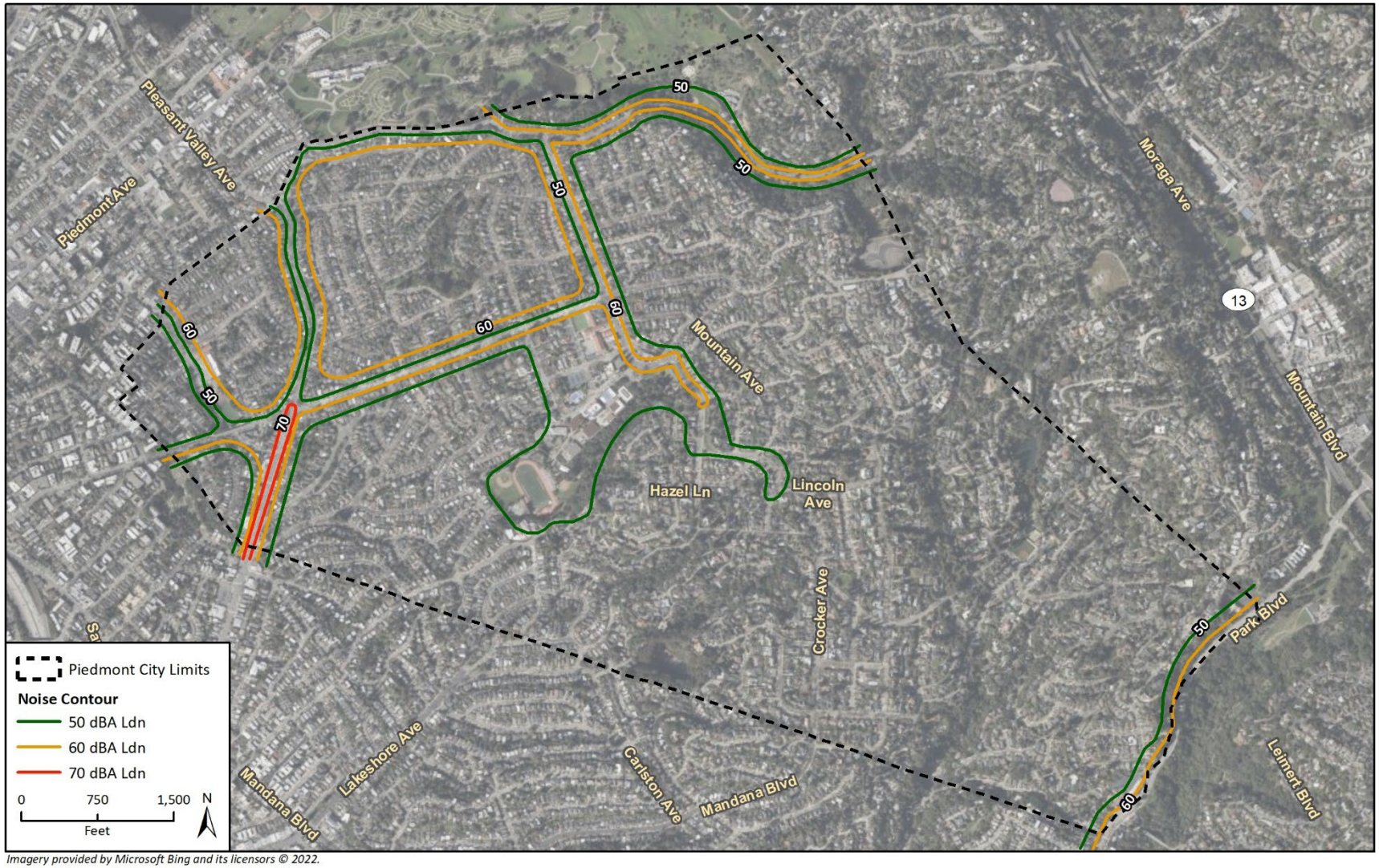
Noise Sources

Piedmont is affected by a variety of noise sources, including mobile and stationary sources. According to the General Plan Environmental Hazards Element, the most prevalent noise source is traffic noise. Generally, the character of Piedmont is relatively quiet; noise from sporting events at local parks and school playgrounds, leaf blowers and gardening equipment, private parties, construction, and mechanical equipment (such as air condition units, exhaust systems, air compressors, and pool and spa filters) are perceptible in some neighborhoods. Ambient noise in the western half of the city tends to be higher than the eastern half, given the greater density, proximity to the I-580 freeway and presence of schools and other non-residential uses.

The General Plan Environmental Hazards Element includes noise contours that have been estimated using information about both 2009 and projected future land uses and traffic volumes throughout the city.[1] Figure 4.11-2 displays anticipated traffic noise contours for the Piedmont General Plan's horizon year of 2025. The contour lines follow the highest volume traffic arteries in narrow bands. Contours in the range of 65 dBA L_{dn} run along Grand, Moraga, and Highland avenues and along Park Boulevard. Contours in the range of 60 dBA L_{dn} run along Oakland and Linda avenues. An area with ambient noise levels in the vicinity of 60 dBA L_{dn} exists around the Piedmont Civic Center. Elsewhere in Piedmont, ambient noise levels are generally below 60 dBA L_{dn} and in most cases below 50 dBA L_{dn}. Noise levels diminish fairly dramatically away from major streets. This is due to both the normal reduction in noise level with distance from the source, and the absorption of noise by homes and trees adjacent to these streets. The hilly terrain and wooded character of Piedmont provide additional noise shielding.

[1] Noise contours consist of modeled areas of similar noise exposure that do not consider the presence of structures (e.g., buildings and solid walls) and natural topography (e.g., hills and berms) that obstruct the line-of-sight between a noise source and a receiver and further reduce noise levels.

Figure 4.11-2 City of Piedmont Noise Contours



Imagery provided by Microsoft Bing and its licensors © 2022.
Additional data provided by Piedmont General Plan, 2011.

Source: City of Piedmont 2009

Vibration Sources

Sources of vibration in the city, similar to that of the noise environment, are also primarily motor vehicles along roadways. Like mobile-source noises, vibration by vehicular movement generally affects numerous receivers along lengths of roadways and depends on pavement and type and weight of the vehicle. Vibration may also be generated by construction equipment (e.g., earth-moving equipment, jack-hammering, excavation of rocky conditions, and pile driving). However, these sources are temporary and vary on a project-by-project basis.

More permanent, but intermittent, vibration may also be generated by railroad and airport operations, which would affect communities adjacent to these facilities. There are no railroads or airports in Piedmont. Commercial or industrial activities may generate vibration from the use of heavy equipment (e.g., businesses that recycle construction debris). However, there are no industrial uses in Piedmont.

4.11.2 Regulatory Setting

a. Federal Regulations

Occupational Safety and Health Act of 1970

Under the Occupational Safety and Health Act of 1970, the Occupational Safety and Health Administration (OSHA) has adopted regulations designed to protect workers against the effects of occupational noise exposure. These regulations list permissible noise level exposure as a function of the amount of time during which the worker is exposed. The regulations further specify a hearing conservation program that involves monitoring noise to which workers are exposed, ensuring that workers are made aware of overexposure to noise, and periodically testing the workers' hearing to detect any degradation.

b. State Regulations

California Building Code, Title 24, Part 2, Section 1206.4

According to the 2022 California Building Code (CBC), Title 24, Part 2, Section 1206.4 (Allowable Interior Noise Levels) of the California Code of Regulations, interior noise levels attributable to exterior sources shall not exceed 45 CNEL in any habitable room. A habitable room is typically a residential room used for living, sleeping, eating, or cooking. Bathrooms, closets, hallways, utility spaces, and similar areas are not considered habitable rooms for this regulation.

California Department of Transportation

As discussed in the *Environmental Setting* of this section, Caltrans has developed limits for the assessment of vibration from transportation and construction sources, which are reflective of standard practice for analyzing vibration impacts. Table 4.11-1 presents the impact criteria for structural damage to buildings, and Table 4.11-2 presents the criteria for annoyance to humans. The State noise and vibration guidelines are to be used as guidance with respect to planning for noise, not standards and/or regulations to which the City of Piedmont must adhere.

c. Local Regulations

City of Piedmont General Plan

The General Plan Environmental Hazards Element is intended to identify sources of potential environmental hazards including noise and provide goals, objectives, and policies that ensure that noise from various sources, including transportation and stationary sources, does not create an unacceptable noise environment. As shown in Table 4.11-3, the City has adopted land use compatibility standards for use in assessing the compatibility of various land use types that are exposed to noise levels. According to the City's standards shown in Table 4.11-3, ambient noise up to 60 dBA L_{dn} is normally acceptable for low density residences whereas ambient noise up to 65 dBA L_{dn} is normally acceptable for medium density residences. These standards also establish maximum interior noise levels for new residential development, requiring that sufficient insulation be provided to reduce interior ambient noise levels to 45 dBA L_{dn}. Where exterior noise levels fall in the "conditionally acceptable" range, noise studies will typically be required before development is approved. Approval may be conditioned on mitigation measures which reduce interior noise to the standards in this table. This could include sound walls, tree planting, and other noise reduction measures on the part of the project sponsor (City of Piedmont 2009).

Table 4.11-3 Recommended Maximum Noise Levels

Land Use Category	Exterior Normally Acceptable[1] (dBA L_{dn})	Exterior Conditionally Acceptable[2] (dBA L_{dn})	Exterior Normally Unacceptable[3] (dBA L_{dn})	Interior Acceptable (dBA L_{dn})
Low Density Residential	Up to 60	60-70	70 and higher	45
Medium Density Residential	Up to 65	65-70	70 and higher	45
Office	Up to 65	65-75	75 and higher	55
Retail	Up to 65	65-75	75 and higher	60
Schools/Churches	Up to 60	60-70	70 and higher	45
Parks and Playgrounds	Up to 67	67-75	75 and higher	–

[1] Normally acceptable levels are those which would pose no threat to the specified use. Standard construction would reduce external noise so that the interior noise levels would not disrupt activities.

[2] Conditionally acceptable noise levels are those in which standard building construction would not be adequate to protect the use. Mitigation measures such as noise barriers, site design, or acoustical insulation could be employed to achieve acceptable sound levels.

[3] Normally unacceptable levels are those for which simple mitigation measures are not adequate. The specified land uses would not be appropriate in these areas without major noise attenuation measures.

Source: City of Piedmont 2009

Furthermore, the following goals, objectives, and policies from the General Plan Environmental Hazards Element are relative to the proposed project (City of Piedmont 2009):

Goal 22: Noise. Maintain the peace and quiet of Piedmont neighborhoods**.**

> **Policy 22.1: Noise Insulation for New Development.** Design new development, including residential additions and remodels, in a way that reduces the potential for residents to be exposed to high levels of noise. Development along busy streets such as Grand Avenue and Oakland Avenue should include effective noise insulation measures for interior spaces.

Policy 22.2: Noise Reduction Measures. Require new development with the potential to create long-term increases in noise volumes to mitigate potential impacts. Noise reduction techniques, such as sound muffling devices, building orientation, buffers, landscaping, and acoustical barriers, should be used as appropriate.

Policy 22.3: Transportation Noise. Support efforts to mitigate the sources of transportation noise in the city, especially AC Transit buses and other motor vehicles.

Policy 22.4: Domestic Noise Controls. Maintain and enforce ordinances to reduce sources of domestic noise in the city, including residential construction and gasoline-powered yard equipment.

Policy 22.5: Outdoor Activity Noise. Maintain limits on the hours and extent of scheduled events at parks and athletic fields to maintain a peaceful environment in the residential areas around these facilities.

Policy 22.6: Non-Piedmont Noise Sources. Seek to reduce noise emanating from outside the city limits when it detrimentally affects Piedmont residents. This policy applies to such sources as the Oakland Rose Garden, Interstate 580, and Oakland and San Francisco International Airports.

Piedmont City Code

Chapter 12: The City's noise standards, found in Chapter 12, Section 8 (Noise Declared Nuisances) of the Piedmont City Code (PCC), set forth hours of operation for certain activities and standards for determining when noise is deemed to be a disturbance.

PCC Section 12.8 declares that loud, unnecessary, and unusual noise is a nuisance and is unlawful. The criteria for determining whether a nuisance exists considers the ambient noise level, the sound level of the objectionable noise, the intensity of the noise, whether the noise is continuous or intermittent, the duration and tonal content of the noise, the proximity of the noise to sleeping facilities, the zoning of the area, and the nature of the source. The PCC specifically prohibits construction noise between 6:00 p.m. to 8:00 a.m. seven days a week, extending an extra hour (to 9:00 a.m.) on Sunday mornings. According to PCC Section 12.8.2, operating or causing the operation of any tools or equipment used in construction, drilling, repair, alteration, or demolition activities is prohibited between the hours of 6:00 p.m. and 8:00 a.m. each day, Sunday evening through Saturday morning, and between the hours of 6:00 p.m. and 9:00 a.m. Saturday evening through Sunday morning. Furthermore, it shall be unlawful for any person to operate a gasoline-powered device used to blow leaves, dirt or other debris off sidewalks, driveways, lawns, or other surfaces within any area of Piedmont, except that gasoline-powered leaf blowers may be used by public agencies on publicly owned or operated facilities.

The PCC continues to state that emergency work conducted by public service utilities or governmental agencies shall be exempt from the provisions of this ordinance; provided that in the case of such emergency work, the public service utilities or government agencies involved shall promptly contact the Piedmont Police Department prior to or within 30 minutes after commencing such emergency work, providing the Police Department with the exact location of the work, the time anticipated to complete the work, the nature of the work to be performed, and whether any assistance from the Police Department or other City services are anticipated in connection with such emergency work. In addition, the City Administrator may grant temporary written exceptions to the Noise Ordinance upon the showing of good cause by the applicant.

Chapter 8: PCC Chapter 8 adopts the applicable noise measures included in the 2022 California Residential Code. In addition, PCC Chapter 8 requires machinery that generates perceptible noise to include mitigating equipment which reduces the sound at the edge of the property to no more than 50 dBA. PCC Section 8.02.020 includes a section on Mechanically Generated Noise Sources which states that machines and other devices located on the exterior of structures which generate sounds perceptible outside the perimeters of the lot on which the machine or other device is located must be installed with such sound transmission control measures to adequately minimize or eliminate the transmission of the sound to a level not to exceed 50 dBA beyond property perimeters. This section is directed to and includes, but is not limited to, pool and spa filter systems, air conditioning units, generators, and exterior mounted blowers for exhaust systems.

4.11.3 Impact Analysis

a. Thresholds of Significance

In accordance with Appendix G of the CEQA Guidelines, the proposed Housing Element Implementation Project's noise and vibration impacts would be significant if it would:

1. Generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;
2. Generate excessive groundborne vibration or groundborne noise levels; or,
3. For a project located within the vicinity of a private airstrip or 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, expose people residing or working in the project area to excessive noise levels.

The following discussion identifies specific thresholds used to analyze the general CEQA thresholds listed above.

Construction Noise Thresholds

As described under Section 4.11.2, *Regulatory Framework*, PCC Section 12.8 restricts construction hours to the daytime hours between 8:00 a.m. and 6:00 p.m. Monday through Saturday, or between 9:00 a.m. and 6:00 p.m. on Sundays. The City of Piedmont does not establish construction noise level limits during these periods. In the absence of applicable local noise level limits, this analysis references guidance from the Federal Transit Administration's (FTA) *Transit Noise and Vibration Impact Assessment Manual* to establish a quantified threshold against which to assess the impact of construction noise (FTA 2018); FTA recommends that reasonable noise criteria may include those shown in Table 4.11-4. Construction noise would be significant if it exceeds these noise criteria.

Table 4.11-4 Construction Noise Criteria

Land Use	Daytime L_{eq} (8-hour)	Nighttime L_{eq} (8-hour)
Residential	80	70
Commercial	85	85
Industrial	90	90

Source: FTA 2018

Operational Noise Thresholds

The City of Piedmont has adopted noise standards in the PCC that regulate on-site operational noise sources in the city. The proposed project would result in a significant impact if the 1,048 housing units that could be facilitated by the proposed Housing Element Implementation project (consisting of the RHNA and potential additional units resulting from implementation of State law) generate noise from on-site sources in excess of PCC standards included in Chapters 8 and 12, (as described under Section 4.11.2, *Regulatory Framework*), which collectively regulate noise from operations that are typical to residential uses (e.g., sound-amplifying devices, HVAC equipment, lawn maintenance equipment, hand tools, wheeled equipment, outdoor activities).

Off-site operational noise (i.e., roadway noise) would result in a significant adverse impact if housing development accommodated under the proposed project would cause the ambient noise level measured at the property line of affected uses to increase by 3 dBA, which would be a barely perceptible increase in traffic noise.

Land Use Compatibility Thresholds

According to the city's land use compatibility standards shown in Table 4.11-3, ambient noise up to 60 dBA L_{dn} is normally acceptable for low density residences whereas ambient noise up to 65 dBA L_{dn} is normally acceptable for medium density residences. In addition, ambient noise up to 70 dBA L_{dn} is possibly acceptable for all residences. These city standards also establish maximum interior noise levels for new residential development, requiring that enough insulation be provided to reduce interior ambient noise levels to 45 dBA L_{dn} (City of Piedmont 2009).

Groundborne Vibration Thresholds

The City of Piedmont has not adopted a significance threshold to assess vibration impacts during construction and operation. Therefore, the Caltrans *Transportation and Construction Vibration Guidance Manual* (2020) is used to evaluate potential construction vibration impacts related to both potential building damage and human annoyance. Construction vibration impacts from housing development and other development pursuant to the proposed Housing Element Implementation project would be significant if vibration levels exceed the Caltrans criteria shown in Table 4.11-1 and Table 4.11-2. For example, impacts would be significant if vibration levels exceed 0.5 in./sec. PPV for residential structures and 2.0 in./sec. PPV for commercial structures, which is the limit where minor cosmetic (i.e., non-structural) damage may occur to these buildings. Construction vibration impacts would also be significant if vibration levels exceed 0.12 in./sec. PPV for extremely fragile historic buildings, as shown in Table 4.11-1. In addition, construction vibration impacts would cause significant human annoyance at nearby receivers if vibration levels exceeds 0.25 in./sec. PPV, which is the limit where vibration becomes distinctly perceptible from barely perceptible.

Airport Noise Thresholds

Exposure to airport noise would be significant if new housing development and other development are located within the noise contours of an airport that exceeds the City's land use compatibility standards shown in Table 4.11-3 (City of Piedmont 2009).

b. Methodology

As discussed in Section 2, *Project Description*, the proposed project involves implementation of the 2023-2031 Housing Element (including revisions to the General Plan Land Use Element, revisions to the PCC, and the new Moraga Canyon Specific Plan [MCSP]) as well as updates to the General Plan Transportation Element, Environmental Hazards Element, Natural Resources and Sustainability Element, Design and Preservation Element, Community Services and Facilities Element, and Parks, Recreation and Open Space Element. The following discussion describes the methodology, including models, used to evaluate the significance of potential noise and vibration impacts related to the estimated construction and operation of 1,048 housing units that could be built under the proposed Housing Element Implementation project, particularly for construction noise, on-site and off-site operational noise, and construction vibration.

Construction Noise

The primary source of temporary noise associated with the proposed Housing Element Implementation project would be construction activities associated with accommodated housing development. Construction equipment can be considered to operate in two modes: stationary and mobile. Stationary equipment operates in a single location for one or more days at a time, with either fixed-power operation (e.g., pumps, generators, and compressors) or variable-power operation (e.g., pile drivers, rock drills, and pavement breakers). Mobile equipment moves around a construction site with power applied in cyclic fashion, such as bulldozers, graders, and loaders (FTA 2018). Each phase of construction has its own noise characteristics due to specific equipment mixes. Some mixes will have higher continuous noise levels than others, and some may have high-impact intermittent noise levels (FTA 2018). Therefore, construction noise levels may fluctuate depending on the type of equipment being used, construction phase, or equipment location. In typical construction projects on vacant sites, grading activities typically generate the highest noise levels because grading involves the largest equipment and covers the greatest area. The foundation excavation and construction phase is often the second loudest phase, followed by paving and building construction.

Variation in power imposes additional complexity in characterizing the noise source level from construction equipment. Power variation is accounted for by describing the noise at a reference distance from the equipment operating at full power and adjusting it based on the duty cycle, or percent of operational time, of the activity to determine the L_{eq} of the operation (FTA 2018).

For assessment purposes, noise levels for common construction equipment provided in the FTA *Transit Noise and Vibration Impact Assessment* (2018) guidance document were used to analyze potential noise levels associated with future development under the proposed Housing Element Implementation project. The FTA provides typical noise levels at 50 feet from various types of equipment. Construction noise was also estimated using the FHWA's Roadway Construction Noise Model (RCNM) (2006). RCNM predicts construction noise levels for a variety of construction operations based on empirical data and the application of acoustical propagation formulas. Using RCNM, construction noise levels were estimated at a distance of 50 feet from future development. Model results are included in Appendix F to this EIR.

In general, smaller housing developments on urban infill sites facilitated by the proposed Housing Element Implementation project are not likely to result in substantial construction noise impacts because construction activities at these sites are inherently limited by the size of the site. The size of urban infill project sites typically limits the use of the largest (i.e., noisiest) pieces of heavy-duty equipment. The size of a project site also typically limits the size of the development and the related

duration of construction activities. Although some individuals may find construction noise of any kind or of any duration very disturbing, as a general matter, typical construction (including with the implementation of mitigation measures described in further detail in the following subsection) does not result in and would not be considered a significant impact under CEQA. Therefore, while urban infill housing developments that meet the following criteria could result in disturbance to residents and employees at adjacent properties, resulting noise levels typically would not result in significant construction noise impacts:

- One subterranean level or less (generally 20,000 cubic yards or less of excavated soil material);
- Construction durations of less than 18 months (excluding interior finishing);
- Use of equipment rated less than 300 horsepower, typically small and medium backhoes, bulldozers, etc.; and
- No potential for pile driving.

Larger projects constructed pursuant to the proposed Housing Element Implementation project that require extended construction or heavy-duty equipment could expose sensitive uses to more continuous and/or louder noise impacts and result in significant short-term noise exposure. When noise-sensitive land uses (e.g., residences, schools, libraries) are located within 500 feet of a project site, projects that meet one or more of the characteristics below may have the potential to result in significant impacts:

- Two subterranean levels or more (generally more than 20,000 cubic yards of excavated soil material);
- Construction durations of 18 months or more (excluding interior finishing);
- Use of large, heavy-duty equipment rated 300 horsepower or greater; or
- The potential for pile driving.

On-site Operational Noise

In general, the primary on-site noise sources associated with operation of housing developments, including in mixed use developments, and those discussed in this analysis, would include noise from stationary heating, ventilation, and air conditioning (HVAC) equipment, on-site vehicle movement (e.g., delivery and trash hauling), and outdoor activities. Analysis of outdoor activity considers the existing noise environment and refers to regulations included in the City of Piedmont noise ordinance (i.e., Chapter 8 and 12) and the General Plan Environmental Hazards Element.

Specific planning data for HVAC systems are not available at this stage of analysis. However, for a reasonable assessment, specification for a typical to larger-sized residential condenser was used in this EIR to determine project HVAC noise. The unit used for this analysis is a Carrier 38HDR060 split system condenser. The manufacturer's noise data lists the unit as having a sound power level of 72 dBA (Carrier 2011).

Off-site Operational Noise

Housing development facilitated by the proposed Housing Element Implementation project, including the MCSP, would generate motor vehicle trips, thereby increasing off-site traffic on area roadways. The project's off-site traffic noise impacts are analyzed based on data from the vehicle miles traveled (VMT) analysis completed by Fehr & Peers in 2023. The overall increase in traffic noise was estimated using VMT data for existing conditions (Year 2020), future without project conditions (i.e., Year 2031

without the proposed project), and future with project conditions (i.e., Year 2031 with the proposed project). Residential development under the proposed Housing Element Implementation project would generate vehicle trips, thereby increasing traffic on area roadways and increasing noise from traffic.

Groundborne Vibration

Operation of housing development facilitated by the proposed Housing Element Implementation project would not include substantial vibration sources (e.g., use of heavy equipment). Rather, construction activities would have the greatest potential to generate groundborne vibration affecting sensitive receivers, such as residences and schools, and/or structures adjacent to a construction site, especially during grading and when a site is located near a historic site or structure. As discussed in Section 4.4, *Cultural Resources*, the City of Piedmont possesses three known historical properties including the Wetmore House located at 342 Bonita Avenue, the Piedmont Community Church at 400 Highland Avenue and the Piedmont City Hall and Fire Station at 120 Vista Avenue, as well as properties included in the Centennial Houses inventory.

A quantitative assessment of potential vibration impacts from construction activities was conducted using equations developed by Caltrans (Caltrans 2020). Table 4.11-5 shows typical vibration levels for various pieces of construction equipment used in the construction vibration assessment.

Table 4.11-5 Typical Vibration Levels for Construction Equipment

Equipment	PPV (in./sec.) at 25 Feet
Pile Driver (Impact)	0.644
Pile Driver (Sonic)	0.170
Vibratory Roller	0.210
Hoe Ram	0.089
Large Bulldozer	0.089
Caisson Drilling	0.089
Loaded Truck	0.076
Jackhammer	0.035
Small Bulldozer	0.003

Sources: FTA 2018; Caltrans 2020

Because groundborne vibration could cause physical damage to structures and is measured in an instantaneous period, vibration impacts are typically modeled based on the distance from the location of vibration-intensive construction activities, which is conservatively assumed to be edge of a project site, to the edge of the nearest off-site structures. For assessment purposes, vibration levels for the construction equipment shown in Table 4.11-5 were modeled at various incremental distances between 25 feet and 100 feet to analyze potential vibration levels associated with future development under the proposed project. Vibration calculations are included in Appendix F to this EIR.

c. Project Impacts and Mitigation

The proposed project involves implementation of the 2023-2031 Housing Element (including revisions to the General Plan Land Use Element, revisions to the PCC, and the new MCSP) as well as updates to the General Plan Transportation Element, Environmental Hazards Element, Natural Resources and Sustainability Element, Design and Preservation Element, Community Services and Facilities Element, and Parks, Recreation and Open Space Element. The updates to the General Plan elements themselves would not result in physical changes to the environment such that substantial impacts related to noise could occur. Therefore, this analysis focuses on impacts associated with implementation of the Housing Element, which would facilitate housing development throughout Piedmont.

Threshold 1:	Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Impact NOI-1 **CONSTRUCTION ASSOCIATED WITH HOUSING DEVELOPMENT FACILITATED BY THE PROPOSED PROJECT WOULD BE REQUIRED TO COMPLY WITH THE ALLOWED DAYTIME CONSTRUCTION HOURS REGULATED BY THE PIEDMONT CITY CODE AND, THEREFORE, WOULD NOT OCCUR DURING NIGHTTIME HOURS WHEN PEOPLE ARE MORE SENSITIVE TO NOISE. HOWEVER, LARGER DEVELOPMENTS COULD INVOLVE CONSTRUCTION WITH LENGTHY DURATIONS, SUBSTANTIAL SOIL MOVEMENT, USE OF LARGE, HEAVY-DUTY EQUIPMENT, EXCAVATION OF ROCKY CONDITIONS, AND/OR PILE DRIVING NEAR NOISE-SENSITIVE LAND USES THAT COULD EXCEED THE APPLICABLE FTA DAYTIME NOISE LIMITS AND PIEDMONT GENERAL PLAN RECOMMENDED MAXIMUM NOISE LEVELS. THEREFORE, THIS IMPACT WOULD BE SIGNIFICANT AND UNAVOIDABLE.**

Citywide Housing Element Implementation

Future construction activity facilitated by the proposed Housing Element Implementation project would require the use of a variety of noise-generating equipment that would result in temporary increases in ambient noise levels on an intermittent basis. Noise levels would fluctuate depending on the construction phase, equipment type and duration of use, distance between the noise source and receiver, and presence or absence of noise attenuation barriers. Typical noise levels at 50 feet from various types of equipment that may be used during construction are listed in Table 4.11-6. The loudest noise levels are typically generated by impact equipment (e.g., pile drivers) and heavy-duty equipment (e.g., cranes, scrapers, and graders). Construction noise would occur intermittently throughout construction, and in some instances, multiple pieces of equipment may operate simultaneously, generating overall noise levels that are incrementally higher than what is shown in Table 4.11-6.

Table 4.11-6 Construction Equipment Noise Levels

Equipment	Typical Noise Level (dBA) at 50 Feet from Source
Air Compressor	80
Backhoe	80
Compactor	82
Concrete Mixer	85
Concrete Pump	82
Concrete Vibrator	76
Crane, Derrick	88
Crane, Mobile	83
Dozer	85
Generator	82
Grader	85
Jackhammer	88
Loader	80
Paver	85
Pile-driver (Impact)	101
Pile-driver (Sonic)	95
Pneumatic Tool	85
Pump	77
Roller	85
Saw	76
Scarifier	83
Scraper	85
Shovel	82
Truck	84

Sources: FTA 2018

Sensitive receivers are located throughout Piedmont and could be exposed to noise associated with construction activities from reasonably foreseeable development under the proposed project. As discussed in Section 4.11.1, *Environmental Setting*, sensitive receivers in Piedmont mainly consist of residences but also include parks, schools, and religious institutions. Because specific development projects have not yet been determined at individual sites, this EIR analysis assumes that construction activities would occur within 50 feet from sensitive receivers throughout the course of a typical construction day. As shown in Table 4.11-6, sensitive receivers would be exposed to noise levels ranging from 76 to 88 dBA at 50 feet from typical construction equipment and could reach as high as 101 dBA through the use of pile drivers. However, a typical construction day includes the operation of multiple pieces of equipment at once with noise levels averaged over the construction day. For assessment purposes, a construction noise level at 50 feet from the source was estimated using RCNM and was based on an excavator, dozer, and jackhammer operating simultaneously. These pieces of equipment generate some of the highest noise levels during demolition and grading phases of construction. The combined noise level (dBA L_{eq}) from these pieces of equipment is estimated at 84 dBA L_{eq} at 50 feet.

Construction noise levels would vary depending on the type of equipment, the duration of use, the distance to receivers, and the potential for pile driving. The PCC specifically prohibits construction noise between 6:00 p.m. to 8:00 a.m. seven days a week, extending an extra hour (to 9:00 a.m.) on Sunday mornings. Therefore, construction noise would not occur during the nighttime hours when people are more sensitive to noise.

Engine noise reduction technology, including silencers, continues to improve, but heavy construction equipment still generates noise exceeding ambient levels that could cause intermittent annoyance to nearby receivers. As previously discussed in *Methodology* of this section, construction associated with housing development pursuant to the proposed project could include large projects involving relatively lengthy construction durations (i.e., longer than 18 months), and associated construction noise. While these large projects are not considered typical in Piedmont, they could potentially result in significant noise impacts, particularly upon potentially adjacent residential zones, historic structures, or other nearby sensitive receivers, and temporarily increase ambient noise levels above FTA noise limits. Therefore, while noise associated with construction and development facilitated by the proposed project would be typical of residential construction and would be prohibited during nighttime hours, construction noise still could exceed the FTA's eight-hour 80 dBA L_{eq} daytime significance threshold at residences.

In addition, the proposed project involves amendments to the General Plan Environmental Hazards Element which include adding the following proposed new policy:

> **Construction Noise Reduction**. For projects within 500 feet of a noise sensitive land use and that involve subterranean parking, large excavation, construction over 18 months in duration, and/or the use of heavy-duty equipment, a Construction Noise Study prepared by a qualified noise expert shall be required. The Construction Noise Study shall characterize sources of construction noise, quantify noise levels at noise-sensitive uses, and identify feasible measures to reduce noise exposure. The project shall incorporate the feasible measures identified in the study. Noise reduction techniques may include, but are not limited to, shielding and silencing construction equipment, enclosing and screening outdoor fixed equipment, placing construction staging areas away from noise-sensitive uses, using smart adjusting back-up alarms for mobile construction equipment, controlling worker radio noise, installing temporary sound barriers, designating a noise complaint response protocol, shall be used as appropriate.

With adherence to this policy, construction noise levels associated with smaller housing development could be reduced below the eight-hour 80 dBA L_{eq} daytime residential noise limit per FTA guidelines.

However, the type of construction equipment, proximity of sensitive receivers to the site, and the overall duration of construction are key factors in determining whether construction-related noise would be significant at the project-level as opposed to determining construction noise impacts at the programmatic level. Based on typical construction equipment noise levels, the anticipated duration of construction activities, and type of equipment used for larger housing developments, the proposed project could exceed FTA noise limits and result in significant construction noise impacts on a project-specific basis at nearby sensitive receivers. Therefore, this impact is potentially significant.

Moraga Canyon Specific Plan

Construction activities in the MCSP Area would generate noise around the area in a similar manner as discussed above for citywide Housing Element Implementation. Due to the topography of the MCSP Area, construction associated with housing development under an adopted MCSP could include large projects involving relatively lengthy construction durations (i.e., longer than 18 months), and

associated construction noise. In addition, the MCSP Area is adjacent to noise-sensitive receivers including residences. Based on typical construction equipment noise levels, the anticipated duration of construction activities, and type of equipment used for larger housing developments, construction and development pursuant to an adopted MCSP could exceed FTA noise limits and result in significant construction noise impacts on a project-specific basis at nearby sensitive receivers. Therefore, this impact is potentially significant.

Mitigation Measures

The proposed project involves adding a new policy to the Piedmont General Plan which would require construction noise studies and incorporation of noise reduction measures for future development projects. No other feasible mitigation measures beyond this policy and what is required by other existing General Plan policies and the PCC have been identified.

Significance After Mitigation

It is anticipated that, with adherence to the proposed Construction Nosie Reduction General Plan policy, noise levels associated with future smaller housing development could be reduced below the eight-hour 80 dBA L_{eq} daytime residential noise limit per FTA guidelines. However, noise generated by larger projects, such as future development in the MCSP Area, may still exceed the FTA noise limit. Therefore, this impact would be significant and unavoidable.

Impact NOI-2 **FUTURE RESIDENTIAL DEVELOPMENT FACILITATED BY THE PROPOSED PROJECT COULD INCLUDE MECHANICAL EQUIPMENT (I.E., HVAC), DELIVERY AND TRASH TRUCKS, AND OTHER NOISE-GENERATING ACTIVITIES. HOWEVER, SUCH ACTIVITIES WOULD BE TYPICAL OF THE DEVELOPED AND URBANIZED ENVIRONMENT. IN ADDITION, ON-SITE ACTIVITIES WOULD BE REQUIRED TO COMPLY WITH APPLICABLE NOISE STANDARDS IN THE PIEDMONT CITY CODE. FURTHERMORE, WHILE HOUSING DEVELOPMENT WOULD GENERATE VEHICLE TRIPS IN THE CITY, THE INCREASE IN MOBILE NOISE WOULD NOT RESULT IN A PERCEPTIBLE 3-DBA INCREASE. THEREFORE, PERMANENT NOISE INCREASES DUE TO OPERATION OF THE DEVELOPMENT FACILITATED BY THE PROPOSED PROJECT WOULD BE LESS THAN SIGNIFICANT.**

Citywide Housing Element Implementation

Residential development facilitated by the proposed Housing Element Implementation project would include residential development at increased intensity and density throughout Piedmont that would generate on-site operational noise from stationary sources and off-site operational noise from vehicle trips. Typical noise sources associated with residential uses include stationary HVAC equipment, on-site vehicle movement (e.g., delivery and trash hauling), outdoor activities, and off-site traffic.

OPERATIONAL NOISE - HVAC EQUIPMENT

Based on manufacturer's specifications, a single Carrier 38HDR060 split-system with a sound power level of 72 dBA would generate a noise level of approximately 57 dBA at a distance of seven feet. As shown in Figure 4.11-2, an area with ambient noise levels in the vicinity of 60 dBA L_{dn} exists around the Piedmont Civic Center. Elsewhere in Piedmont, ambient noise levels in residential areas are generally below 60 dBA L_{dn} and in most cases below 50 dBA L_{dn}. Therefore, in the case where the actual ambient conditions are not known, noise from HVAC equipment could exceed the city's presumed ambient noise conditions when compared to a reference noise level 57 dBA at a distance of seven feet from the HVAC equipment source. However, noise levels from HVAC equipment associated with housing development pursuant to the proposed Housing Element Implementation project would be comparable to noise levels of HVAC equipment associated with the existing

developed and urbanized environment. Furthermore, the design and placement of new HVAC equipment would be required to comply with PCC Section 8.02.020, which states that machines and other devices located on the exterior of structures which generate sounds perceptible outside the perimeters of the lot on which the machine or other device is located must be installed with such sound transmission control measures to adequately minimize or eliminate the transmission of the sound to a level not to exceed 50 dBA beyond property perimeters. This section is directed to and includes, but is not limited to, pool and spa filter systems, air conditioning units, generators, and exterior mounted blowers for exhaust systems. Therefore, operation of HVAC equipment for development facilitated by the proposed Housing Element Implementation project would have a less than significant noise impact.

OPERATIONAL NOISE - VEHICLE ACTIVITY (DELIVERY AND TRASH HAULING)

Future residential development would increase the number of delivery and trash hauling trucks traveling through Piedmont to individual development sites. Increased delivery and trash hauling trucks could intermittently expose various sensitive receivers to increased truck noise. Section 23130 of the California Motor Vehicle Code establishes maximum sound levels of 86 dBA L_{eq} at 50 feet for trucks operating at speeds less than 35 miles per hour. While individual delivery truck and/or loading or trash pick-up operations would likely be audible at properties adjacent to individual development, such operations are already a common occurrence in the developed and urbanized environment in Piedmont. In addition, solid waste pick-up operations are typically scheduled during daytime hours when people tend to be less sensitive to noise. Furthermore, these noise events from trucks are typically transient and intermittent, and do not occur for a sustained period of time. Therefore, the project would not result in a substantial permanent increase in ambient noise levels from trash and delivery trucks due their existing prevalence in the city, resulting in a less than significant impact.

OPERATIONAL NOISE - OUTDOOR ACTIVITY AREAS

Housing developments would generate noise from conversations, music, television, or other outdoor sound-generating equipment (e.g., speakers, leaf blowers, parties, sports activities, pets), particularly in the event future residents maintain open windows or such activities take place on balconies or decks. However, these noise-generating activities would be similar to those of the existing developed and urbanized environment, including typical activities within city parks and recreation facilities. Moreover, PCC Section 12.8.2 prohibits any person from operating a gasoline-powered device used to blow leaves, dirt or other debris off sidewalks, driveways, lawns or other surfaces within any area of the city except that gasoline-powered leaf blowers may be used by public agencies on publicly owned or operated facilities. In addition, Chapter 8 of the PCC requires machinery that generates perceptible noise to include mitigating equipment which reduces the sound at the edge of the property to no more than 50 dBA. Required compliance with code enforcement would reduce operational noise impacts related to conversations, parties, pets, and sound-generating equipment to a less than significant level.

OPERATIONAL ROADWAY TRAFFIC NOISE

The overall increase in traffic noise from development facilitated by the proposed Housing Element Implementation project was estimated using VMT data from the VMT Summary prepared by Fehr & Peers for existing conditions (Year 2020) and future with project conditions (i.e., Year 2031 with the proposed project). These daily VMT scenarios are shown in Table 4.11-7.

Table 4.11-7 Daily Vehicle Trip Summary

	VMT
Baseline Conditions (2020)	200,082
Future with proposed project (2031)	228,329
Change in Vehicle Trips	**+28,247**
Percent Change in Vehicle Trips (%)	**14%**

Source: Fehr & Peers 2023

A doubling of traffic would result in a 3 dBA increase, which is considered a barely perceptible noise increase and thus the threshold of significance for traffic noise increases. As shown in Table 4.11-7, daily VMT would increase by approximately 14 percent over existing 2020 conditions by the year 2031 under the proposed project. A 14 percent increase in traffic on a roadway would equate to an increase of 0.6 dBA. Therefore, the proposed Housing Element Implementation project would not double the existing mobile noise source and would not increase noise levels by more than 3 dBA. Although a 14 percent or more increase in traffic may occur at local level in areas where substantial new housing is proposed, a doubling of traffic is still not anticipated to occur based on the citywide increase of 14 percent. Therefore, off-site traffic noise impacts would be an anticipated less than significant.

Moraga Canyon Specific Plan

Residential development facilitated by an adopted MCSP would generate on-site operational noise from stationary sources and off-site operational noise from vehicle trips similar to that discussed above. Typical noise sources associated with residential uses include stationary HVAC equipment, on-site vehicle movement (e.g., delivery and trash hauling), outdoor activities, and off-site traffic. For the same reasons as described above under Citywide Housing Element Implementation, impacts associated with operational noise for future development pursuant to an adopted MCSP would be less than significant. Development pursuant to the MCSP could also involve moving recreational uses, such as those associated with Coaches Field and Kennelly Skate Park, and Public Works Department operations, such as the operation of the Corporation Yard, to different locations within the MCSP Area. However, noise-generating activities associated with recreational uses and Public Works Department operations would be similar to those of Piedmont's developed and urbanized environment and, within the MCSP study area, would occur only during daytime hours (not during regular sleep hours). The programming and hours of operation of city recreation and Public Works operations would continue to be subject to City Council authority and would be subject to noise standards in the Piedmont General Plan and PCC. Therefore, impacts associated with operational noise in the MCSP Area would be less than significant.

The conditions of operational roadway traffic noise in the MCSP Area would be similar to those discussed for the Citywide Housing Element Implementation analysis, above. Traffic volumes on streets would not increase by 3 dBA CNEL or more, and, therefore, increases in traffic noise would be less than perceptible. Therefore, development facilitated by an adopted MCSP would not substantially add traffic volumes and would not increase associated traffic noise. Impacts related to increases in roadway noise would be less than significant.

Land Use Compatibility

In general, agencies subject to CEQA are not required to analyze the impact of existing environmental conditions on a project's future users or residents. In *California Building Industry Association v. Bay Area Air Quality Management District (2015) 62 Cal. 4th 369*, the California Supreme Court explained that an agency is only required to analyze the potential impacts to future residents, if the project would exacerbate those existing environmental hazards or conditions. CEQA analysis is therefore concerned with a proposed project's impact on the environment, rather than with the environment's impact on a project and its users or residents. Therefore, bringing a population into an area where noise currently exists is not a significant environmental impact under CEQA unless doing so would exacerbate noise conditions. Nonetheless, the following analysis of potential exposure to excessive noise is provided for informational purposes.

Implementation of the proposed project would expose future housing development and residents of the housing development to ambient noise levels that characterize the city, predominantly associated with vehicular traffic. According to the baseline noise contour map in the General Plan Environmental Hazards Element and shown in Figure 4.11-2, land uses along major arterial roadways are exposed to noise levels of 65 CNEL. Based on the City of Piedmont land use compatibility standards shown in Table 4.11-3, ambient noise up to 60 CNEL is normally acceptable for single-family residences whereas ambient noise up to 65 CNEL is normally acceptable for multi-family residences. Therefore, new housing development facilitated by the proposed Housing Element Implementation Project could be exposed to noise levels above the normally acceptable range for residences.

The City of Piedmont also has an interior noise standard of 45 CNEL for residences, which is consistent with the State's interior noise standard. According to the 2022 CBC, Title 24, Part 2, Section 1206.4, the proposed multi-family residences must be constructed and designed such that interior noise levels do not exceed 45 CNEL. Generally, any large structure blocking the line of sight (e.g., a concrete block wall on a property's boundary) will provide at least a 5-dBA reduction in source noise levels at the receiver (FHWA 2011). Building materials can also substantially reduce occupants' exposure to noise. The FHWA's guidelines indicate that modern building construction generally provides an exterior-to-interior noise level reduction of 20 to 35 dBA with closed windows (FHWA 2011). Modern residential buildings in California are typically constructed with storm windows, single- or double-glazed, that achieve the required energy saving on heating and cooling, which also provide an exterior-to-interior noise level reduction of at least 20 dBA. Based on a noise exposure level of approximately 65 CNEL and a noise attenuation of at least 20 dBA, the interior noise level within new housing development could be up to 50 CNEL. Nonetheless, housing development facilitated by the proposed Housing Element Implementation project would be required to comply with the General Plan Environmental Hazards Element policies and 2022 CBC, Title 24, Part 2, Section 1206.4, which would collectively govern excessive noise exposure and require that sensitive uses achieve an interior noise level of 45 dBA or less in any habitable room through appropriate sound insulation (e.g., dual-paned windows, exterior doors with solid core and perimeter weather stripping).

Mitigation Measures

This impact from development facilitated by the proposed Housing Element Implementation project, including development pursuant to an adopted MCSP, would be less than significant without mitigation. No mitigation measures are required.

Threshold 2:	Would the project result in generation of excessive groundborne vibration or groundborne noise levels?

Impact NOI-3 HOUSING DEVELOPMENT FACILITATED BY THE PROPOSED PROJECT IS NOT ANTICIPATED TO INVOLVE OPERATIONAL ACTIVITIES THAT WOULD RESULT IN SUBSTANTIAL VIBRATION LEVELS. HOWEVER, CONSTRUCTION ACTIVITIES UNDER THE PROPOSED PROJECT, SPECIFICALLY PILE DRIVING, COULD POTENTIALLY GENERATE VIBRATION EXCEEDING THRESHOLDS FOR BUILDINGS OR STRUCTURES SUSCEPTIBLE TO DAMAGE (E.G., HISTORIC STRUCTURES). NONETHELESS, WITH ADHERENCE TO THE PROPOSED NEW GENERAL PLAN VIBRATION REDUCTION POLICY, TEMPORARY CONSTRUCTION-RELATED VIBRATION IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Citywide Housing Element Implementation

It is not anticipated that operation of housing development facilitated by the proposed Housing Element Implementation project would involve activities that would result in substantial vibration levels, such as use of heavy equipment. Operational groundborne vibration in the vicinity of development facilitated by the proposed project would be primarily generated by vehicular travel on the local roadways. According to the FTA *Transit Noise and Vibration Impact Assessment* (2018) guidance document, rubber tires and suspension systems dampen vibration levels from trucks to a level that is rarely perceptible. Therefore, traffic vibration levels associated with the expected additional trips from the proposed project would not be perceptible by sensitive receivers. Impacts related to operational groundborne vibration from operation of development facilitated by the proposed project would be less than significant. The remainder of this analyses focuses on impacts relate to construction activities associated with future housing development.

Construction activities associated with housing development facilitated by the proposed project would result in varying degrees of groundborne vibration depending on the equipment and methods employed. Operation of construction equipment causes vibration that spreads through the ground and diminishes in strength with distance. Buildings with foundations in the soil in the vicinity of a construction site respond to these vibrations with varying results ranging from no perceptible effects at the lowest levels, low rumbling sounds and perceptible vibrations at moderate levels, and slight damage at the highest levels. Construction vibration is a localized event and is typically only perceptible to a receiver that is in close proximity to the vibration source. Construction for housing development would require heavy equipment, particularly development with certain geologic conditions that may require pile driving and excavation of rocky conditions. Such heavy equipment could potentially operate within 25 feet of nearby buildings when accounting for equipment setbacks. As shown in Table 4.11-8, general construction equipment such as a vibratory roller would generate vibration levels up to 0.21 in./sec. PPV at 25 feet, while more intensive equipment, such as pile driving, could generate a vibration level of approximately 0.64 in./sec. PPV at 25 feet. Vibration levels shown in bolded and underlined text exceed one or more of the Caltrans criteria shown in Table 4.11-1 and Table 4.11-2.

Table 4.11-8 Construction Equipment Vibration Levels

Equipment	PPV (in./sec.)				
	25 Feet	50 Feet	75 Feet	100 Feet	125 Feet
Pile Driver (Impact)	**0.644**[1,2,3,5]	**0.300**[1,5]	**0.192**[1]	**0.140**[1]	0.110
Pile Driver (Sonic)	**0.170**[1]	0.079	0.051	0.037	0.029
Vibratory Roller	**0.210**[1]	0.098	0.063	0.046	0.036
Hoe Ram	0.089	0.042	0.027	0.019	0.015
Large Bulldozer	0.089	0.042	0.027	0.019	0.015
Caisson Drilling	0.089	0.042	0.027	0.019	0.015
Loaded Truck	0.076	0.036	0.023	0.017	0.013
Jackhammer	0.035	0.016	0.011	0.008	0.006
Small Bulldozer	0.003	0.001	<0.001	<0.001	<0.001

Notes: Vibration levels shown in bolded and underlined text exceed one or more of the Caltrans criteria shown in Table 4.11-1 and Table 4.11-2. Superscripts specify the threshold exceeded by each piece of equipment.

[1] Exceeds the 0.12 in./sec. Caltrans damage threshold for historic sites (and other critical locations).

[2] Exceeds the 0.5 in./sec. Caltrans damage threshold for historic and other/similar old buildings.

[3] Exceeds the 0.5 in./sec. Caltrans damage threshold for older residential structures.

[4] Exceeds the 1.0 in./sec. Caltrans damage threshold for newer residential structures.

[5] Exceeds the 0.25 in./sec. Caltrans human annoyance threshold.

Sources: FTA 2018; Caltrans 2020

Groundborne vibration from hoe rams, bulldozers, caisson drilling, loaded trucks, and jackhammers would not exceed the 0.12 in./sec. PPV threshold for sensitive historic sites. Groundborne vibration from vibratory rollers would exceed the threshold for building damage for historic sites at 40 feet from the source, and vibratory rollers would not exceed the threshold for residential structures. Vibration levels from impact pile driving would exceed one or more of the building damage thresholds shown in Table 4.11-1 for historic sites, general older buildings, and older and newer residential structures. The distance that impact pile driving would exceed 0.12 in./sec. PPV for historic structures is 115 feet. Furthermore, vibration levels associated with impact pile driving would also exceed the threshold of 0.25 in./sec. PPV for human annoyance at various distances up to 60 feet. Vibration levels from sonic pile driving would only exceed the threshold for building damage for historic sites at 40 feet from the source, and would not exceed the threshold for residential structures.

As discussed in Section 4.4, *Cultural Resources*, the City of Piedmont possesses three known historical properties including the Wetmore House located at 342 Bonita Avenue, the Piedmont Community Church at 400 Highland Avenue and the Piedmont City Hall and Fire Station at 120 Vista Avenue, as well as properties included in the Centennial Houses inventory. Although all buildings would be subject to potential impacts from construction vibration, buildings with historic significance would each have varying degrees of susceptibility to groundborne vibration damage depending on the structural integrity of said buildings. Therefore, new residential development facilitated by the proposed project could result in a potentially significant impact related to construction vibration if a vibratory roller and sonic pile driver is used within 40 feet of these historic structures or if pile driving is used within 115 feet of these uses.

However, the proposed project would involve amendments to the General Plan Environmental Hazards Element, including the following proposed new vibration policy:

> **Vibration Control Plan.** For construction activities involving vibratory rollers and sonic pile drivers within 40 feet of a historic structure or impact pile drivers within 115 feet of a historic structure, or if an impact pile driver is used within 60 feet of an occupied structure, the applicant shall prepare a Vibration Control Plan prior to the commencement of construction activities. The Vibration Control Plan shall be prepared by a licensed structural engineer and shall include methods required to minimize vibration such as alternative installation methods for pile driving or vibration monitoring. The Vibration Control Plan shall also establish baseline conditions at potentially affected structures, provide shoring design to protect buildings and structures from damage, document damage at the conclusion of vibration generating activities, and include recommendations for repair if necessary.

Overall, although most construction activities located in Piedmont pursuant to the proposed project are not anticipated to have significant vibration impacts, it is possible that some development projects pursuant to the proposed project could have significant vibration impacts during construction. This would most commonly occur when a development project constructed using equipment that generates high vibration levels (e.g., pile driving or vibratory roller) would be located next to a historical resource constructed of fragile building materials, which is more sensitive to vibration damage, than structures that were built based on more recent building codes. However, adherence to the proposed Vibration Control Plan policy in the Environmental Hazards Element would reduce vibration impacts associated with construction activities involving vibratory rollers and sonic pile drivers within 40 feet of a historic structure or impact pile drivers within 115 feet of a historic structure, or if impact pile driving is used within 60 feet of an occupied structure. Therefore, implementation of this policy would substantially reduce/control construction such that vibration levels would not exceed the Caltrans vibration criteria for building damage. Therefore, the vibration impacts from construction activities related to the proposed project would be less than significant.

Moraga Canyon Specific Plan

Similar to the analysis under citywide Housing Element Implementation, development facilitated by an adopted MCSP would not involve substantial vibration sources associated with operation because residential, recreational, and public facilities developments are not significant sources of vibration. Operational ground borne vibration in the vicinity of development facilitated by the proposed Housing Element Implementation project, including an adopted MCSP, would be primarily generated by vehicular travel on the local roadways, and traffic vibration levels associated with the expected additional trips from subsequent development in the MCSP Area would not be perceptible by sensitive receivers. Therefore, operational vibration impacts of development facilitated by an adopted MCSP would be less than significant.

Construction activities associated with development facilitated by an adopted MCSP would result in varying degrees of groundborne vibration depending on the equipment and methods employed. Vibratory rollers and sonic pile drivers would exceed 0.12 in./sec. PPV for historic structures at 40 feet from the source; impact pile drivers would exceed this limit at 115 feet. Development within the MCSP Area would not occur within 115 feet of a historic structure as none are present in or adjacent to the MCSP Area (see Section 4.4, *Cultural Resources)*. Therefore, construction vibration would not exceed thresholds for potential damage to historic or other structures. the vibration impacts from construction activities related to development in the MCSP Area would be less than significant.

Mitigation Measure

This impact would be less than significant with implementation of the proposed Vibration Control Plan policy to the General Plan Environmental Hazards Element which is proposed as part of the project. Mitigation measures would not be required.

Threshold 3:	For a project located within the vicinity of a private airstrip or 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, would the project expose people residing or working in the project area to excessive noise levels?

Impact NOI-4 THE CLOSEST AIRPORT TO PIEDMONT IS THE OAKLAND INTERNATIONAL AIRPORT WHICH IS LOCATED APPROXIMATELY 7.8 MILES SOUTH OF THE CITY. HOUSING DEVELOPMENT FACILITATED UNDER THE PROPOSED PROJECT WOULD NOT BE WITHIN THE OAKLAND INTERNATIONAL AIRPORT'S NOISE CONTOURS. THEREFORE, DEVELOPMENT FACILITATED BY THE PROPOSED PROJECT WOULD NOT BE EXPOSED TO EXCESS NOISE LEVELS ASSOCIATED WITH AIRPORT OPERATIONS AND THIS IMPACT WOULD BE LESS THAN SIGNIFICANT.

Citywide Housing Element Implementation

As discussed in Section 4.8, *Hazards and Hazardous Materials*, the General Plan Environmental Hazards Element does not identify any airports in Piedmont. The nearest airport to the City of Piedmont is the Oakland International Airport which is located approximately 7.8 miles south of the city. According to the Oakland International Airport Land Use Compatibility Plan, the City of Piedmont is located outside of the airport's noise contours and the airport influence area illustrated in Figure 3-1 of the Airport Land Use Compatibility Plan (Alameda County 2010). Therefore, the proposed project would not expose people residing or working in the area to excessive noise levels from airport operations. This impact from development facilitated by the proposed Housing Element Implementation project would be less than significant.

Moraga Canyon Specific Plan

As discussed above, there are no public or private airports within Piedmont and the entire city, including the MCSP Area, is not within the airport's noise contours. Therefore, the development pursuant to an adopted MCSP would not expose people residing in the MCSP Area to excessive noise levels. This impact would be less than significant.

Mitigation Measures

This impact from development facilitated by the proposed Housing Element Implementation project, including development pursuant to an adopted MCSP, would be less than significant without mitigation. No mitigation measures are required.

d. Cumulative Impacts

The geographic area to analyze cumulatively considerable noise impacts includes Piedmont and immediately adjacent areas that could be indirectly affected by noise generated in the city.

Construction Noise

Construction of future development projects, facilitated by the proposed Housing Element Implementation project, in Piedmont would produce temporary noise impacts that would be localized

to a project site and sensitive receivers within the immediate vicinity. Therefore, only sensitive receivers located in close proximity to each construction site would be potentially affected by each activity. Nonetheless, construction activities associated with individual housing development projects facilitated by the proposed project may overlap for some time with construction activities for other development projects. Typically, if a development site is 500 feet or more away from another site then noise levels would have attenuated to a point that they would not combine to produce a cumulative noise impact. Therefore, construction noise levels would typically become cumulative only if two development sites were to have construction occurring within 500 feet of each other simultaneously. However, under a worst-case scenario, noise from construction activities for two projects within 1,000 feet of each other could contribute to a cumulative noise impact for sensitive receivers located equidistant between the two construction sites with concurrent on-site activities.

Construction activities associated with future development would be required to comply with PCC Section 12.8.2 and would not occur during nighttime hours between the hours of 6:00 p.m. and 8:00 a.m. each day, Sunday evening through Saturday morning, and between the hours of 6:00 p.m. and 9:00 a.m. Saturday evening through Sunday morning. It is anticipated that, with adherence to the proposed Construction Nosie Reduction General Plan policy, construction noise levels for most projects would be reduced to below applicable FTA noise limits. However, construction noise levels associated with some of the housing development proposed under the proposed project would not be reduced below the applicable FTA noise limits for construction noise on a case-by-case basis. Further, larger development projects could combine together, or combine with smaller development projects, to substantially increase noise levels at specific neighboring noise-sensitive receivers. Therefore, concurrent construction of development projects accommodated under the proposed project could result in cumulatively considerable impacts. This impact from development facilitated by the proposed Housing Element Implementation project could be cumulatively considerable and cumulative impacts would be significant and unavoidable.

On-site Operational Noise

On-site operational noise impacts are localized to an individual development site and sensitive receivers within the immediate vicinity. Future development, facilitated by the proposed Housing Element Implementation project, in Piedmont would include mechanical equipment, loading, trash pick-up, parties, sports activities, and other noise-generating activities. However, such activities would be typical of the developed and urbanized environment in Piedmont and on-site activities would be required to comply with applicable provisions of the PCC. The incremental effect of the proposed Housing Element Implementation Project, including development pursuant to an adopted MCSP with respect to on-site operational noise would not be cumulatively considerable, and cumulative impacts would be less than significant.

Off-site Operational Noise

Cumulative development facilitated by the proposed project through the year 2031 would generate vehicle trips, thereby increasing traffic on area roadways. As shown in Table 4.11-7, future daily VMT levels by the year 2031 with future development from the proposed project, which accounts for cumulative residential development in the city, would not double existing VMT levels or increase mobile noise by more than 3 dBA. Therefore, the effect of the proposed project, including residential and other development pursuant to an adopted MCSP, on off-site traffic noise would not be cumulatively considerable and cumulative impacts would be less than significant.

Groundborne Vibration

Operational groundborne vibration impacts are localized to a development project site and sensitive receivers within the immediate vicinity. However, it is not anticipated that new residential development and other development, facilitated by the proposed Housing Element Implementation project, within the City would include substantial sources of operational ground-borne vibration. Therefore, cumulative impacts related to operational ground-borne noise and vibration at any sensitive receiver would not be significant. Impacts related to operational groundborne vibration would not be cumulatively considerable and cumulative impacts would be less than significant.

Construction of future development projects, facilitated by the proposed project, in Piedmont would produce temporary vibration impacts that would be localized to a development project site and sensitive receivers in the immediate vicinity. Therefore, only sensitive receivers located in proximity to each construction site would be potentially affected by each individual activity. Nonetheless, construction activities associated with individual housing development projects facilitated by the proposed Housing Element Implementation project, including development pursuant to an adopted MCSP, may overlap for some time with construction activities for other development projects. For the combined vibration impact from simultaneous construction projects to reach cumulatively significant levels, intense construction from these projects would have to occur simultaneously in proximity to a sensitive receiver. As such, concurrent construction of development projects accommodated under the proposed project could be cumulatively considerable. However, with adherence to the proposed Vibration Control Plan policy in the Environmental Hazards Element, it is anticipated that each project would reduce construction vibration impacts such that a cumulative impact would not occur. Impacts related to construction groundborne vibration would not be cumulatively considerable and cumulative impacts would be less than significant.

Airport Noise

Aircraft-related noise impacts occur only in the vicinity of airports or airstrips. Although citywide growth facilitated by the proposed Housing Element Implementation project could increase the number of people who are exposed to aircraft-related noise impacts, such impacts would be localized in nature. In addition, new residential development and other development would not result in a direct increase to aircraft operations that would increase noise exposure to aircraft overflight patterns within and outside the city. The proposed project, including development pursuant to an adopted MCSP, would have no contribution to any cumulative impact related to airport hazards or noise. Impacts related to airport or airstrip noise would not be cumulatively considerable and cumulative impacts would be less than significant.

4.12 Population and Housing

This section analyzes impacts related to population and housing growth associated with development facilitated by the proposed Housing Element Implementation project.

4.12.1 Setting

a. City of Piedmont

Table 4.12-1 provides the California Department of Finance's 2023 estimates of population and housing for Piedmont. Piedmont has an estimated 2023 population of 10,793 and 3,979 housing units. As shown in Table 4.12-1, the average household size in Piedmont was an estimated 2.80 persons in 2023 (California Department of Finance 2023).

Table 4.12-1 Current Population and Housing Stock for Piedmont

	City of Piedmont	Alameda County
Population (#of people)	10,793	1,651,979
Average Household Size (persons/household)	2.80	2.66
Total Housing Units (# of units) [1]	3,979	633,198
Vacant Housing Units	127 (3.2%)	31,957 (5.0%)

Source: California Department of Finance 2023

b. Population, Housing, and Employment Projections

Table 4.12-2 shows the most recent regional long-range plan and regional growth forecast for the Bay Area provided by the Association of Bay Area Governments (ABAG) and the Metropolitan Transportation Commission (MTC) in Plan Bay Area 2050 (ABAG and MTC 2021). Though it does not include projections by city, it does include employment and housing projections for growth geographies, including North Alameda County which includes Piedmont, Alameda, and Oakland.

Table 4.12-2 2050 Plan Bay Area Housing and Employment Projections for North Alameda County

	2015	2050 (projected)	Projected Growth (Percent Change)
Housing (# of units)	181,000	287,000	+106,000 (58.6%)
Employment (# of jobs)	275,000	358,000	+83,000 (30.2%)

Source: ABAG and MTC 2021

4.12.2 Regulatory Setting

a. State Regulations

California Housing Law

California Housing Element law (Government Code Sections 65580 to 65589.8) requires that local jurisdictions outline the housing needs of their community, the barriers or constraints to providing that housing, and actions proposed to address these concerns over an eight-year planning period. In addition, Housing Element law requires each city and county to accommodate its "fair share" of the region's projected housing need over the Element planning period. Cities and counties must demonstrate that adequate sites are available to accommodate this need, and that the jurisdiction allows for development of a variety of housing types. This housing need requirement is known as the Regional Housing Needs Allocation (RHNA) and apportions to each jurisdiction part of the Bay Area's projected need.

The Sustainable Communities and Climate Protection Act of 2008 (SB 375, Steinberg)

Senate Bill (SB) 375 focuses on aligning transportation, housing, and other land uses to achieve regional greenhouse gas (GHG) emission reduction targets established under the California Global Warming Solutions Act, also known as Assembly Bill (AB) 32. SB 375 requires Metropolitan Planning Organizations (MPO) to develop a Sustainable Communities Strategy (SCS) as part of the Regional Transportation Plan (RTP), with the purpose of identifying policies and strategies to reduce per capita passenger vehicle-generated GHG emissions. As set forth in SB 375, the SCS must: (1) identify the general location of land uses, residential densities, and building intensities within the region; (2) identify areas within the region sufficient to house all the population of the region, including all economic segments of the population, over the course of the planning period; (3) identify areas within the region sufficient to house an eight-year projection of the regional housing need; (4) identify a transportation network to service the regional transportation needs; (5) gather and consider the best practically available scientific information regarding resource areas and farmland in the region; (6) consider the state housing goals; (7) establish the land use development pattern for the region that, when integrated with the transportation network and other transportation measures and policies, will reduce GHG emissions from automobiles and light-duty trucks to achieve GHG emission reduction targets set by the California Air Resources Board (CARB), if there is a feasible way to do so; and (8) comply with air quality requirements established under the Clean Air Act.

The City of Piedmont is located in the jurisdiction of ABAG/MTC, a Joint Powers Agency established under California Government Code Section 6502 et seq. Pursuant to federal and State law, ABAG/MTC serves as a Council of Governments, a Regional Transportation Planning Agency, and the MPO for the counties of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, and Sonoma and contains 101 jurisdictions. ABAG/MTC is responsible for preparing the RTP/SCS and RHNA in coordination with other State and local agencies. These documents include population, employment, and housing projections for the region.

Existing law requires local governments to adopt a Housing Element as part of their General Plan and update the Housing Element every four to eight years. SB 375 requires the RHNA methodology to allocate housing units within the region in a manner consistent with the development pattern adopted by the SCS.

AB 1763

AB 1763, effective January 1, 2020, amends the State Density Bonus Law (Section 65915) to allow for taller and denser 100 percent affordable housing developments, especially those near transit, through the creation of an enhanced affordable housing density bonus.

California Housing Affordability Act

This State law, originally enacted in 1982 and last amended in 2017, prevents localities from disapproving proposed developments that comply with "all applicable, objective general plan, zoning, and subdivision standards and criteria," unless they find that the development would have an unavoidable impact on public health or safety that can only be mitigated by rejecting the project or reducing its size (Hernandez and Golub 2017). Compliance with objective standards and criteria is defined as "substantial evidence that would allow a reasonable person to conclude" that a project complies. The Housing Affordability Act also prevents localities from disapproving or reducing the size of developments that have a minimum amount of affordable housing (either 20 percent of units for lower-income households or 100 percent of units for moderate-income households), except under specific circumstances. Mixed-use developments with at least two-thirds of their square footage devoted to residential use also qualify for this protection.

Senate Bill 35

In 2017, California enacted Senate Bill (SB) 35 to streamline the approval of affordable housing projects. This law applies in localities that are not meeting their RHNA goals for construction of above-moderate income housing units or units for households below 80 percent of the area median income (AMI) (California Legislative Information 2017). Applicable localities, such as Piedmont, are required to streamline the approval of eligible housing projects by providing a ministerial approval process. To qualify for streamlining, a project must meet all of a range of criteria related to affordability, including but not limited to the number of units, residential zoning, floor area dedicated to residential uses, environmental constraints, demolition of residential units, historic buildings, and consistency with objective zoning standards. CEQA review is not required for eligible projects because they are subject to a ministerial approval process.

Housing Crisis Act

The Housing Crisis Act of 2019 (SB 330) seeks to speed up housing production in the next half decade by eliminating some of the most common entitlement impediments to the creation of new housing, including delays in the local permitting process and cities enacting new requirements after an application is complete and undergoing local review—both of which can exacerbate the cost and uncertainty that sponsors of housing projects face. In addition to speeding up the timeline to obtain building permits, the bill prohibits local governments from reducing the number of homes that can be built through down-planning or down-zoning or the introduction of new discretionary design guidelines. The bill is in effect as of January 1, 2020 and expires on January 1, 2030.

SB 330 also regulates demolition of existing housing. It prohibits urbanized jurisdictions from approving a housing development that requires demolition of residential units unless the project creates at least as many units as would be demolished. Local jurisdictions also are prohibited from approving a project that would demolish occupied or vacant "protected units," unless the project meets several criteria (e.g., replacing all protected units, providing relocation benefits, and giving a right of first refusal to displaced residents for comparable units in the new development). Protected

units are defined as subject to a covenant, ordinance, or law that restricts rent to levels affordable to persons and families of low or very low income; subject to rent control; or occupied by low or very low income households; among other factors. These requirements for demolition do not supersede local demolition controls that are more protective of lower income households.

b. Regional

Regional Housing Needs Assessment (RHNA)

The Association of Bay Area Governments/Metropolitan Transportation Commission (ABAG/MTC) prepares the RHNA mandated by State law so that local jurisdictions can use this information during their periodic updates of the General Plan Housing Element. The RHNA identifies the housing needs for very low income, low income, moderate income, and above moderate-income groups, and allocates these targets among the local jurisdictions that comprise ABAG/MTC. The RHNA addresses existing and future housing needs based on the most recent U.S. Census, data on forecasted household growth, historical growth patterns, job creation, household formation rates, proximity to high resource areas, proximity to job centers, and other factors.

The most recent RHNA allocation, the 6th Cycle Final RHNA Plan, was adopted by ABAG's Executive Board on December 16, 2021. The City of Piedmont was assigned a RHNA of 587 units for the 2023 to 2031 planning period. Local jurisdictions are required by State law to update their General Plan Housing Elements based on the most recently adopted RHNA allocation.

Association of Bay Area Governments

ABAG produces growth forecasts in four-year cycles so that regional agencies, including the MTC and the Bay Area Air Quality Management District (BAAQMD), can use the forecasts to make funding and regulatory decisions. The ABAG projections are the basis for the Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), regional Ozone Attainment Plan, the BAAQMD's Clean Air Plan, and the EBMUD's Urban Water Management Plan. In this way, ABAG projections have practical consequences that shape growth and environmental quality. General Plans, zoning regulations, and growth management programs of local jurisdictions inform the ABAG 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 the region. ABAG calculates the RHNA for individual jurisdictions within Alameda County, including Piedmont.

Plan Bay Area

Plan Bay Area 2050 was adopted on October 21, 2021. Plan Bay Area 2050 is a limited and focused update of the region's previous integrated RTP/SCS, Plan Bay Area, adopted in 2013. Plan Bay Area 2050 builds upon the growth pattern and strategies developed in the original Plan Bay Area but with updated planning assumptions that incorporate key economic, demographic and financial trends from the last four years (ABAG and MTC 2021).

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 for opportunities for development of transit-oriented development, infill development within

existing communities that are expected to take in most of the future development. Overall, over two-thirds of all regional growth by 2040 is allocated within PDAs. The PDAs throughout the Bay Area are expected to accommodate 78 percent (or over 509,000 units) of new housing and 62 percent (or 690,000) of new jobs. The City of Piedmont has two PDAs in Moraga Canyon and along Grand and Linda Avenues, adopted by ABAG/MTC on September 8, 2023.

c. Local

City of Piedmont Housing Element

The Housing Element is one of the required elements of the Piedmont General Plan, and the most recent version was adopted in March 2023 for a span of 8 years (until 2031). As described in Section 2, *Project Description*, the proposed project includes implementation of Piedmont's Housing Element for the years 2023 to 2031.

4.12.3 Impact Analysis

a. Methodology and Significance Thresholds

The proposed project does not involve specific development projects and so the project itself would not result in direct physical changes to population or housing. However, effects on population and housing could occur as a result of development facilitated by the proposed zoning changes and through the implementation of other programs throughout Piedmont. Future development projects could replace existing housing units or add new units, increasing Piedmont's population. Population growth could result in physical changes related to transportation, air quality, noise, and public services and utilities, as well as other environmental topics and resource areas. Population growth and housing are studied in this section. Other physical impacts are analyzed under the other chapters analyzing environmental topics in this EIR.

In accordance with Appendix G of the *CEQA Guidelines*, the proposed project would result in a significant impact on the environment related to population and housing if it would:

1. Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure); or
2. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.

Although CEQA requires an EIR to consider a project's growth-inducing impacts, CEQA provides that the EIR "should not assume that growth is necessarily beneficial, detrimental, or of little significance." The underlying purpose of the proposed Housing Element Implementation project is to accommodate housing needs, which includes needs as a result of population growth and existing growth in Piedmont. Even substantial growth is not a significant impact if it accommodates growth projections for the city that can be accommodated by existing or planned facilities and services, and is consistent with the Piedmont General Plan, as well as State and regional policies and regulations. As such, a significant impact for purposes of this threshold is whether the updates to the Housing Element will induce unplanned growth.

b. Project Impacts and Mitigation

The proposed project involves implementation of the 2023-2031 Housing Element (including revisions to the General Plan Land Use Element, revisions to the PCC, and the Moraga Canyon Specific Plan) as well as an updates to the General Plan Transportation Element, Environmental Hazards Element, Natural Resources and Sustainability Element, Design and Preservation Element, Community Services and Facilities Element, and Parks, Recreation and Open Space Element. The updates to the General Plan elements would not result in physical changes to the environment or direct population growth such that impacts related to population and housing would occur. Therefore, this analysis focuses on impacts associated with implementation of the Housing Element, which would facilitate housing development throughout Piedmont.

Threshold 1:	Would the project induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

Impact POP-1 IMPLEMENTATION OF THE PROPOSED PROJECT WOULD FACILITATE DEVELOPMENT OF UP TO 1,048 ADDITIONAL HOUSING UNITS IN THE CITY AND ADD AN ESTIMATED 2,934 RESIDENTS. GROWTH RESULTING FROM THE PROJECT WOULD BE ANTICIPATED AND WOULD NOT INVOLVE UNPLANNED POPULATION GROWTH. THIS IMPACT WOULD BE LESS THAN SIGNIFICANT.

Citywide Housing Element Implementation

Development under the proposed project could add an estimated (up to) 1,048 additional residential units in the city by the year 2031 compared to existing conditions (see Section 2, *Project Description*). The increase in housing units would be a result of implementation programs in the 2023-2031 Housing Element to facilitate housing development in the city consistent with the city's RHNA allocation, which includes additional units that may be created under Land Use Element policies to increase permitted densities in Zones A, B, C, D, and E. This EIR takes a conservative approach to analyze and disclose potential impacts related to population growth and housing by estimating growth in excess of the RHNA target alone. This additional housing would lead to an estimated increase of approximately 2,934 residents in the city from 2023 to 2031 (1,048 housing units x average household size of 2.80 people =2,934).

In the unlikely event that all potential buildout occurs, and assuming the growth is all new and not already accounted for under existing projections, the total population of the city in 2031 would be 13,727 (10,793 current population + 2,934 new residents), or a population increase of approximately 27 percent. In addition, the total housing units in Piedmont would be an estimated 5,027 (3,979 current housing units + 1,048 units), or a housing increase of approximately 26 percent. The proposed project would be consistent with State requirements for the RHNA and would be within the growth forecasts for North Alameda County in Plan Bay Area 2050, which projects a 58.6 percent increase in housing for North Alameda County.

Further, growth anticipated under the proposed project is intended in part to meet regional housing needs over the long term, as the project would implement the City of Piedmont's adopted 2023-2031 Housing Element. The proposed project would be consistent with State requirements for the RHNA. The State requires that all local governments adequately plan to meet the housing needs of their communities (HCD 2021). Given that the State is currently in an ongoing housing crisis due to an insufficient housing supply, the additional units under the proposed project would further assist in addressing the existing crisis and meeting the housing needs of the city.

Lastly, this analysis is conservative because it assumes a maximum buildout scenario and includes sites already planned for development and maximum buildout under the proposed General Plan and zoning amendments. The project's actual contribution to population growth may be less than estimated. In addition, the project would not involve the extension of roads or other major infrastructure systems that could indirectly lead to population growth. As discussed in Section 4.13, *Public Services and Recreation,* and Section 4.16, *Utilities and Service Systems,* the city is mostly developed and is generally supported by existing public services and infrastructure which are sufficient to serve the additional housing units. Any new roads proposed for development facilitated by the proposed Housing Element Implementation project would be local collector or access roads within existing urban infill areas.

Therefore, the proposed project would not result in substantial unplanned population growth, either directly or indirectly. This impact would be less than significant.

Moraga Canyon Specific Plan

It is anticipated that buildout in the Moraga Canyon Specific Plan (MCSP) Area would include 132 dwelling units, plus 67 additional units from possible SB 9, ADU, and/or density bonus development in the area. This would result in an increase of approximately 370-557 residents in or near the MCSP Area based on an assumed per household population of 2.80. These potential residents are included in the additional 1,048 residents discussed above. This development is within the population and housing growth assumptions explained above for the whole of the project and would be within regional growth forecasts. Development in this area, like all other development facilitated by the proposed Housing Element Implementation project, would allow the City to meet its RHNA requirement. The anticipated growth in this area would be planned for through the MCSP, which will be prepared in order to accommodate housing needs, incorporate existing amenities, plan for site circulation and access, and modernize current city functions in the MCSP Area for efficiency. Therefore, the project would not result in substantial unplanned population growth, either directly or indirectly in the MCSP Area. This impact would be less than significant.

Mitigation Measures

The impact from development facilitated by the proposed Housing Element Implementation project, including development pursuant to an adopted MCSP, would be less than significant. No mitigation measures are required.

Threshold 2:	Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

Impact POP-2 IMPLEMENTATION OF PROPOSED PROJECT WOULD NOT RESULT IN THE DISPLACEMENT OF SUBSTANTIAL NUMBERS OF PEOPLE OR HOUSING. THE PROPOSED PROJECT WOULD FACILITATE THE DEVELOPMENT OF NEW HOUSING IN ACCORDANCE WITH STATE AND LOCAL HOUSING REQUIREMENTS. THIS IMPACT WOULD BE LESS THAN SIGNIFICANT.

Citywide Housing Element Implementation

"Substantial" displacement would occur if the proposed project would displace more residences than would be accommodated through growth facilitated by the project. The goal of the proposed project is to accommodate and encourage new residential development in Piedmont. The proposed project addresses the need for future housing development by implementing the 2023-2031 Housing

Element. A portion of the housing units would be developed at a density range that could accommodate low and very-income housing as required to meet the RHNA 6th Cycle allocation. Development under the proposed project could result in up to an estimated 1,048 new housing units developed by 2031. The types of housing units anticipated under the proposed project would generally fall into the following categories of development projects: single-family, multi-family residential, and/or mixed-use development on vacant sites, redevelopment of existing nonresidential and residential sites that would allow residential use or higher density residential use. Therefore, overall, the proposed project would add to the city's housing stock to meet housing goals.

On an individual site basis, it is possible that some redevelopment projects could result in displacement of current housing. However, the 2023-2031 Housing Element includes policies to reduce displacement impacts. For example, Policy 2.6 seeks to promote the conservation of multi-family housing units. Policies 5.4 and 5.5 seek to meet the needs of extremely low-income residents and to address homelessness in Piedmont.

In summary, the proposed project would facilitate the development of up to 1,048 additional dwelling units throughout Piedmont. Proposed residential units would provide additional housing opportunities for residents if residents were displaced during buildout of the proposed project. Therefore, the proposed project would not result in the net loss or displacement of housing, necessitating the construction of replacement housing elsewhere. This impact would be less than significant.

Moraga Canyon Specific Plan

The MCSP Area currently does not include any residential units; therefore, no displacement of people would occur with implementation of this proposed specific plan. There would be no impact.

Mitigation Measures

The impact from development facilitated by the proposed Housing Element Implementation project, including development pursuant to an adopted MCSP, would be less than significant. No mitigation measures are required.

c. Cumulative Impacts

Inducement of Substantial Population Growth

As discussed in Section 3, *Environmental Setting*, the topic of population and housing has cumulative implications on the entire Bay Area region, not just on the City of Piedmont. Therefore, this cumulative impact analysis is based on Plan Bay Area 2050, the Bay Area's most recent RTP/SCS. The proposed Housing Element Implementation project would accommodate projected citywide population and housing growth through 2031. By its nature, the impact analysis under Impact POP-1, discussed above, considers cumulative impacts associated with population growth throughout the city and consistent with the Plan Bay Area. The proposed project incorporates regional growth anticipated by ABAG's RHNA projections and thus considers cumulative growth. The proposed project would not considerably contribute to a significant impact associated with unplanned population growth.

Displacement of People and Housing

Implementation of the proposed project would accommodate the City's forecasted population and housing demand through 2031. The proposed project would result in an overall net increase of housing units in the city, including affordable housing, and would not result in substantial displacement of people or housing. Other jurisdictions in the region are updating their respective Housing Elements and have similar impacts related to displacement, but each jurisdiction's Housing Element would contain programs and policies to provide housing for lower income and special needs populations. The proposed project could result in the demolition of some existing housing units within Piedmont. However, the proposed project includes policies to minimize the loss of existing housing and to promote the growth of affordable housing. Continued implementation of existing city regulations, policies, and programs also would preserve existing housing stock and assist those at risk of displacement. As a result, implementation of the proposed project would not considerably contribute to a significant cumulative impact from the displacement of substantial numbers of existing housing units or people.

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4.13 Public Services and Recreation

This section assesses potential impacts related to public services, including fire and police protection, public schools, and parks and recreation facilities from development facilitated by the proposed Housing Element Implementation project, including development from an adopted Moraga Canyon Specific Plan (MCSP). Impacts related to water and wastewater infrastructure and solid waste collection and disposal are discussed in Section 4.16, *Utilities and Service Systems.*

4.13.1 Setting

a. Fire Services and EMS

The Piedmont Fire Department (PFD) provides fire protection and emergency medical services for the City of Piedmont. This existing service area represents 1.7 square miles and approximately 11,000 residents. The PFD operates a single fire station including two Type 1 engines, one Type 6 engine, one 65-foot aerial ladder truck, two ambulances, one utility truck, and one command vehicle. The PFD is organized into two divisions: Fire Prevention Bureau and Operations and Training. Both divisions are under the Office of the Fire Chief. The PFD's only fire station is located at 120 Vista Avenue and is shown on Figure 4.13-1.

The Piedmont General Plan Community Services and Facilities Element indicates the PFD has a response time goal of three minutes or less for ninety percent of calls.

b. Police Services

The Piedmont Police Department (PPD) provides police protection services to Piedmont. The department is comprised of twenty sworn officers and ten professional personnel, as well as three part-time community service officers, one per-diem dispatcher, and reserve officers (City of Piedmont 2022a). The PPD's only police station is located at 403 Highland Avenue and is shown on Figure 4.13-1.

The Piedmont General Plan Community Services and Facilities Element indicates the PPD has a response time goal of three minutes or less for ninety percent of calls.

c. Schools

The Piedmont Unified School District (PUSD) operates three elementary schools (grades K-5), one middle school (grades 6-8), one traditional high school, one alternative high school, and one adult education school (PUSD 2022). The locations of these schools are shown on Figure 4.13-2.

Table 4.13-1 shows the 2022 enrollment, number of classrooms, and overall square footage, and school capacity for the public schools in Piedmont. There is no current data available for the alternative high school in Piedmont, therefore it is not included in the table below. As shown in the table, PUSD's overall enrollment in 2022 based on information provided by PUSD was 2,349 students. The district has an overall capacity for 3,200 students with an excess capacity of 847 students. The capacity information is based on square feet and potential number of students in each classroom and does not take into consideration potential programmatic adjustments (converting some classrooms that are used as programs and not for daily use by students) that would be needed if students were in every available classroom (Ruth Alahydoian 2023).

Figure 4.13-1 Police and Fire Station Locations in Piedmont

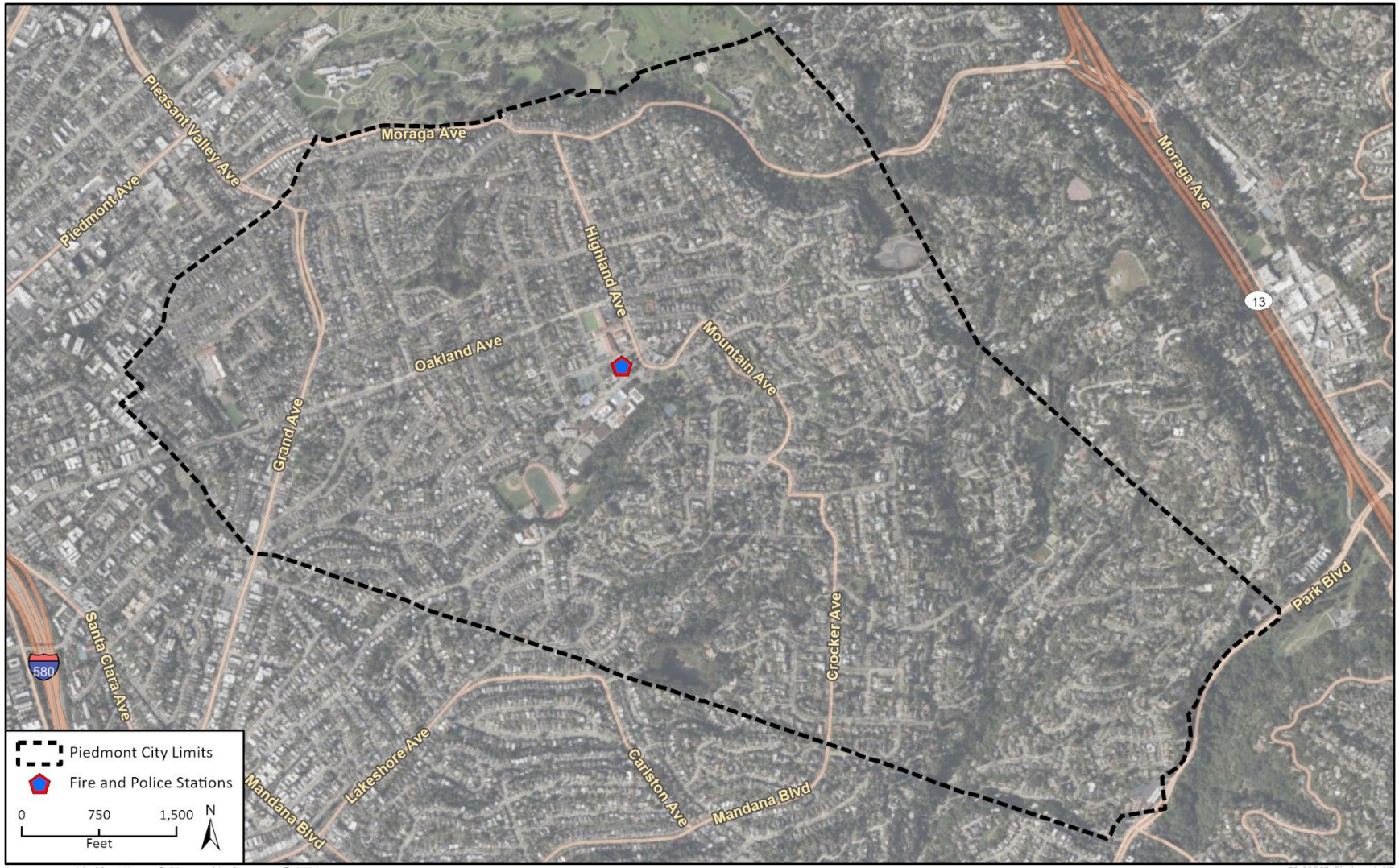

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Figure 4.13-2 Piedmont Public Schools Locations

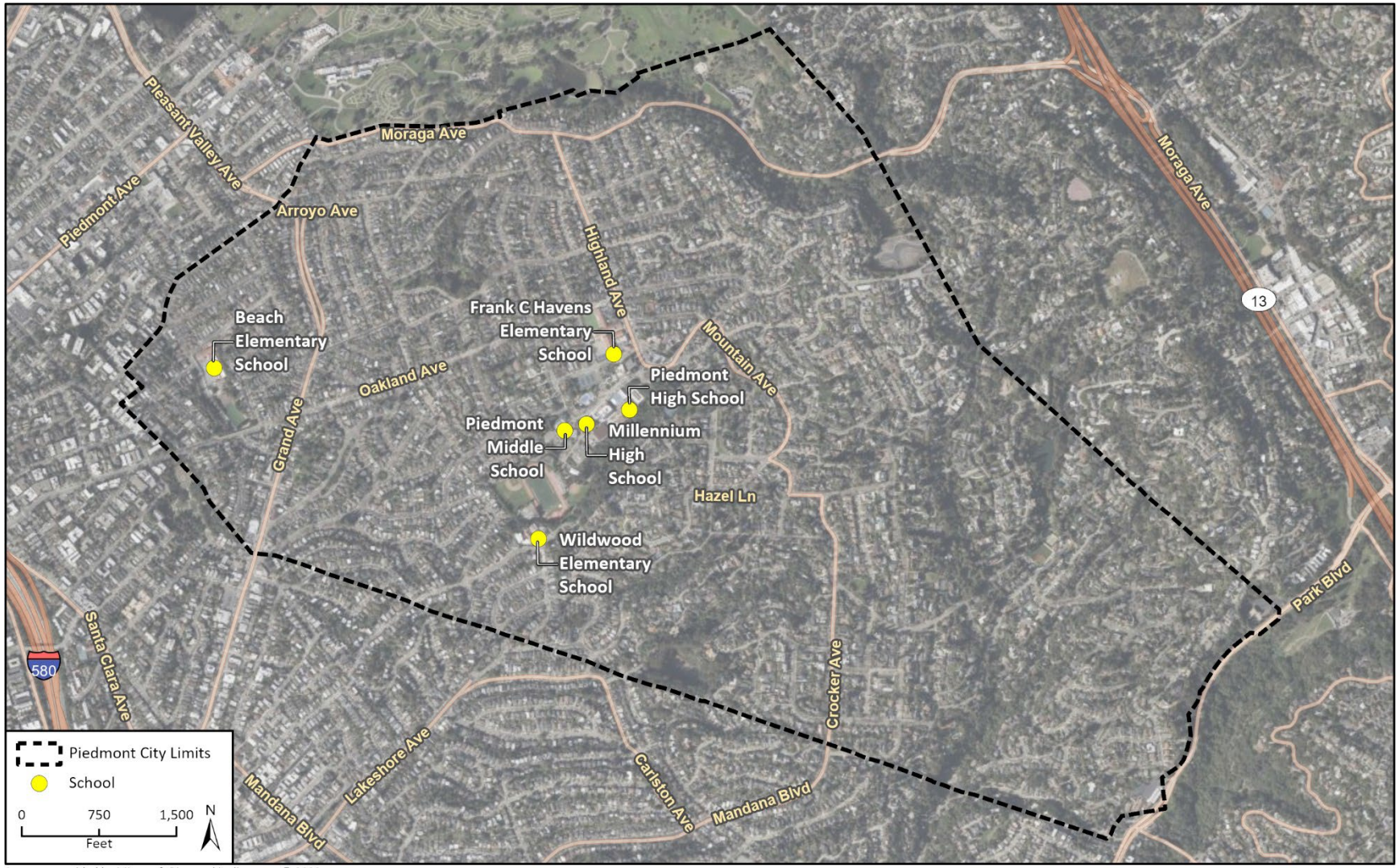

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Table 4.13-1 Schools in Piedmont

School Name	Number of Classrooms	Building Square Footage (sf)	2022 Enrollment (Number of Students)	School Capacity (Number of Students)	Available Capacity (Number of Students)
Wildwood Elementary School	13	21,703	264	325	61
Havens Elementary School	22	35,260	450	550	100
Beach Elementary School	15	22,774	289	375	86
Piedmont Middle School	32	22,926	513	800	287
Piedmont High School	46	94,342	837	1,150	313
Total	128	197,005	2,353	3,200	847

Source: Ruth Alahydoian 2023. Enrollment numbers provided as of October 5, 2022.

d. Parks and Recreational Facilities

The City of Piedmont Recreation Department (PRD) administers recreation centers and programs and maintains some of the parks within city limits. According to the General Plan Parks, Recreation, and Open Space Element, Piedmont has approximately 59 acres of parkland, of which approximately 44 acres are city-owned and operated parks, approximately 6 acres are operated by the City of Oakland but are within the city limits, and approximately 8.5 acres are school recreational facilities (City of Piedmont 2009). PRD staff has confirmed that park acreages remain the same as was described in the 2009 General Plan.

Locations of public parks within Piedmont are shown on Figure 4.13-3. Parks and recreational facilities in Piedmont operated by PRD include Blair Park, Coaches Field, Kennelly Skate Park, Crocker Park, Dracena Quarry Park, Hall Fenway (linear park), Linda Park, Linda / Beach Playfield, Piedmont Sports Field (Hampton Field) and Piedmont Park. PRD also operates the Piedmont Community Pool, for which a pool replacement project is currently underway, and a new pool facility is under construction. Davie Tennis Stadium and a portion of Morcom Rose Garden, which are managed by the City of Oakland, are also within the Piedmont city limits.

There are no regional parks within Piedmont. However, Piedmont is within the East Bay Regional Parks District (EBRPD), a special district that owns and manages 55 parks encompassing 91,000 acres in Alameda and Contra Costa Counties. The EBRPD facilities in the vicinity of Piedmont include Lake Temescal, Anthony Chabot Regional Park and Redwood Regional Park (in Oakland), and Tilden Regional Park (in Berkeley). In addition, Piedmont residents may also recreate at Lake Merritt, Joaquin Miller, and Knowland parks, which are facilities owned and operated by the City of Oakland (City of Piedmont 2009).

The City of Piedmont currently does not have an adopted park acreage goal. The General Plan Parks, Recreation, and Open Space Element references a National Recreation and Park Association (NRPA) standard of 10 acres per 1,000 residents, although the national standard includes large regional parks. However, as of 2019, the NRPA no longer recommends this standard and acknowledges there is not a single set of national standards for parks and recreation that could encompass the size, needs, and preferences of every community (NRPA 2019). The California Department Parks and Recreation (State Parks) recommends of standard baseline of three acres per 1,000 residents in accordance with the Statewide Park Development and Community Revitalization Act (Assembly Bill 31), which sets measurable and specific goals for funding park projects in underserved communities (State Parks 2023).

Figure 4.13-3 Parks in Piedmont

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Fig 4.13-2 Parks in Piedmont

Moraga Canyon Specific Plan Area

The MCSP Area includes open space and recreational facilities including Blair Park, Coaches Field, and the Kennelly Skate Park. Coaches Field includes a playfield and associated facilities with natural turf, a backstop, restrooms, and bleachers. Blair Park is an unimproved open space area with an unimproved pedestrian trail travels through the park. The City of Piedmont Corporation Yard is also located within the MCSP Area.

4.13.2 Regulatory Setting

a. Federal

There are no federal regulations pertaining to public services to serve the population growth related to development facilitated by the proposed Housing Element Implementation project that are applicable to this analysis. Applicable State and local regulations are described below.

b. State

California Fire and Building Code

The State of California provides minimum standards for building design through the California Building Code (CBC), which is located in Part 2 of Title 24, California Building Standards Code, of the California Code of Regulations (CCR). The CBC is based on the International Building Code but has been amended for California conditions. It is generally adopted on a jurisdiction-by-jurisdiction basis, subject to further modification based on local conditions. In general, commercial and residential buildings are plan-checked by local building officials for compliance with the CBC. Typical fire safety requirements of the CBC include: 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 wildfire hazard areas.

California Code of Regulations

The California Code of Regulations, Title 5 Education Code, governs all aspects of education within the State. California State Assembly Bill 2926 (AB 2926) – School Facilities Act of 1986 – was enacted by the State of California in 1986 and added to the California Government Code (Section 65995). It authorizes school districts to collect development fees, based on demonstrated need, and generate revenue for school districts for capital acquisitions and improvements. It also established that the maximum fees which may be collected under this and any other school fee authorization are $1.50 per square foot ($1.50/ft^2) for residential development and $0.25/ft^2 for commercial and industrial development.

AB 2926 was expanded and revised in 1987 through the passage of AB 1600, which added Section 66000 et seq. of the Government Code. Under this statute, payment of statutory fees by developers serves as total mitigation under CEQA to satisfy the impact of development on school facilities. However, subsequent legislative actions have alternatively expanded and contracted the limits placed on school fees by AB 2926.

As part of the further refinement of the legislation enacted under AB 2926, the passage of Senate Bill (SB) 50 in 1998 defined the Needs Analysis process in Government Code sections 65995.5-65998. Under the provisions of SB 50, school districts may collect fees to offset the costs associated with

increasing school capacity as a result of development. SB 50 generally provides for a 50/50 State and local school facilities 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 schools, and the percentage of moveable classrooms in use.

California Government Code sections 65995-65998 sets forth provisions to implement SB 50. Specifically, in accordance with section 65995(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.

California Education Code section 17620(a)(1) states that the governing board of any school district is authorized to levy a fee, charge, dedication, or other requirement against any construction within the boundaries of the district, for the purpose of funding the construction or reconstruction of school facilities.

PUSD does not currently require developers to pay school development fees.

State Public Park Preservation Act (California Public Resource Code Section 5400 – 5409)

The State Public Park Preservation Act is the primary instrument for protecting and preserving parkland in California. The Act sets forth certain requirements for the transfer of property in use as a public park for any non-park use.

Quimby Act (California Government Code Section 66477)

The Quimby Act allows cities and counties to adopt park dedication standards/ordinances requiring developers to set aside land, donate conservation easements, or pay fees towards parkland when property is subdivided.

c. Local

City of Piedmont General Plan

Fire and Police Protection Goals and Policies

The Community Services and Facilities Element of the City's General Plan contains the following goal and policies related to fire and police protection.

Goal 34: Public Safety Services. Maintain high-quality law enforcement, fire protection, and emergency medical services.

Policy 34.5: Fire Protection Facilities. Regularly inspect fire protection facilities (such as hydrants) and monitor water pressure, fire flow, and supply to ensure that the system is adequate to meet City needs.

Policy 34.7: Defensible Space and Emergency Access. Encourage new development (including additions and alterations) to incorporate lighting, landscaping, and design features that reduce the potential for crime and that facilitate rapid response to emergency calls. Prohibit home alterations that would impede emergency access.

The updated Environmental Hazards Element of Piedmont General Plan includes the following policies related to public services:

Policy 19.8: Fire Protection. Require that new development have adequate fire protection, including proximity to adequate emergency services, adequate provisions for fire flow and emergency vehicle access and fire hardened communication, including high speed internet service.

Policy 19.9: Fire Protection Plans for New Development. Require fire protection plans for all new development.

Policy 19.19: Ensure Adequate Emergency Evacuation Routes. Ensure that all new residential development has at least two emergency routes.

Policy 19.20: Emergency Access. Ensure that the Piedmont Fire Department has complete access to all locations in the City, including gated residential communities and critical infrastructure.

Schools Goal and Policies

The Community Services and Facilities Element of the City's General Plan contains the following goal and policy related to schools.

Goal 35: Education and Lifelong Learning. Encourage and support an exceptional school system and life-long learning opportunities for all Piedmont residents.

Policy 35.2: Development Impacts on Schools. Involve PUSD in the review of development proposals with the potential to generate new students. Conversely, stay abreast of PUSD enrollment trends and projections so that the potential impacts of student forecasts on land use and transportation can be evaluated.

Parks Goals and Policies

The Parks, Recreation, and Open Space Element of the City's General Plan contain the following goal and policies related to parks.

Goal 24: Park Operations. Maintain the City's parks in excellent condition, and ensure that park operations are as efficient and sustainable as possible.

Policy 24.1: Park Inspection and Maintenance. Regularly inspect, maintain, and upgrade park facilities to prolong the life of equipment, ensure safety and accessibility, and enhance the enjoyment of park users.

Policy 24.2: Funding Adequacy for Maintenance and Operation. Ensure that sufficient funding is available to maintain and operate recreational facilities.

Piedmont City Code

Chapter 8, Building, Construction, and Fire Prevention, of the Piedmont City Code (PCC) adopts the 2022 California Fire Code as the city's Fire Code and provides city-specific amendments, as necessary. This chapter regulates the use of construction materials and requires the installation of specific fire

safety features in new construction in the city. Additionally, this chapter requires the coordination of the review of development applications between the city and the PFD and regulates building design, siting, and vegetation management to enhance maximum fire prevention and protection.

Piedmont Local Hazard Mitigation Plan

The City of Piedmont adopted its Local Hazard Mitigation Plan in 2019 and amended the Natural Hazards and Sustainability Element of the General Plan. The mitigation goals and priorities of the city's LHMP are to increase Piedmont's level of preparation for potential disasters and to minimize the impacts associated with natural and man-made hazards; identify strategies and tools to facilitate community disaster and hazards awareness and education; provide for the safety of Piedmont residents by maintaining efficient, well-trained, and adequately equipped City personnel; encourage a disaster-resistant city and surrounding area by reducing the potential for loss of life, property damage, and environmental degradation from disasters and hazards; reduce the vulnerability of public and private facilities and infrastructure to the effects of earthquakes, fire, and landslides; and promote conditions and strategies that will accelerate the capacity for physical and economic recovery from disasters and hazards (City of Piedmont 2019). The PFD and PPD are designated to respond to hazards and emergencies in the city.

4.13.3 Impact Analysis

a. Significance Thresholds and Methodology

The proposed project involves implementation of the 2023-2031 Housing Element (including revisions to the General Plan Land Use Element, revisions to the PCC, and the new MCSP) as well as updates to the General Plan Transportation Element, Environmental Hazards Element, Natural Resources and Sustainability Element, Design and Preservation Element, Community Services and Facilities Element, and Parks, Recreation and Open Space Element. The following discussion describes the methodology used to evaluate the significance of impacts to public services and recreation from population growth facilitated by the proposed Housing Element Implementation project, including population growth pursuant to an adopted MCSP (Housing Element Program 1.L). According to Appendix G of the *CEQA Guidelines*, impacts related to public services and recreation from implementation of the proposed project would be significant if it would:

1. Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other objectives for any of the public services:

   a. Fire protection;

   b. Police protection;

   c. Schools;

   d. Parks; or

   e. Other public facilities;

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; or

3. Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

Impacts related to thresholds 1(a), 1(b), 1(c), 1(d), 2 and 3 are analyzed below. Impacts related to other public facilities (Threshold 1(e)) such as water, wastewater and landfills are addressed in Section 4.16, *Utilities and Service Systems*.

This analysis considers the *CEQA Guidelines* Appendix G thresholds, as described above, in determining whether the proposed Housing Element Implementation project, including future development accommodated by the proposed project, would result in impacts related to the provision of public services and recreation. Public services information was acquired through review of relevant documents and communications with city staff, PFD, PPD, and PUSD. The determination that the proposed project would or would not result in substantial adverse effects concerning public services considers the relevant policies and regulations established by State, local, and regional agencies, the proposed projects' compliance with such policies, and whether the proposed project would create the need for new or expanded facilities, the construction of which could result in environmental impacts.

In *City of Hayward v. Trustees of California State University* (2015) 242 Cal.App.4th 833, the Court of Appeal held that significant impacts under CEQA consist of adverse changes in any of the physical conditions within the area of a project and potential impacts on public safety services are not an environmental impact that CEQA requires a project applicant to mitigate: "[T]he obligation to provide adequate fire and emergency medical services is the responsibility of the city. (Cal. Const., art. XIII, § 35, subd. (a)(2) ["The protection of the public safety is the first responsibility of local government and local officials have an obligation to give priority to the provision of adequate public safety services."].) Thus, the need for additional fire and police protection services is not an environmental impact that CEQA requires a project proponent to mitigate, but may require a city to address.

b. Impact Analysis and Mitigation

Threshold 1a:	Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered fire protection facilities, or the need for new or physically altered fire protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives?

Impact PS-1 **DEVELOPMENT FACILITATED BY THE PROPOSED PROJECT WOULD RESULT IN AN INCREASE OF POPULATION AND BUILDINGS WITHIN PIEDMONT. THIS WOULD INCREASE DEMAND FOR FIRE PROTECTION SERVICES, WHICH COULD RESULT IN THE NEED FOR NEW OR EXPANDED FIRE PROTECTION FACILITIES. NONETHELESS, THIS IMPACT WOULD BE LESS THAN SIGNIFICANT.**

Citywide Housing Element Implementation

Fire protection services in Piedmont are provided by PFD which operates out of one fire station. The proposed Housing Element Implementation project would not expand the current service area but would result in an increased population within the existing service area. The increase in residents associated with the project could increase demand for fire protection and emergency medical services such that additional staff, equipment, or facilities would be needed to meet this goal.

Development facilitated by the proposed Housing Element Implementation project would increase calls for service for issues including, but not limited to, emergency medical service, structure or vegetation fires, and traffic collisions. The direct effect on PFD would include evaluation of staffing and resource deployment to accommodate the increase in call volume throughout the community. In 2021, PFD responded to 870 incidents annually for approximately 7,884 residents which is approximately 0.1 incidents per resident (870/ 7,884 = 0.11) (City of Piedmont 2022b). Therefore, development facilitated by the proposed project is estimated to induce an estimated 294 additional annual incidents (2,934 residents x 0.1 incidents per resident = 293.4).

Development facilitated by the proposed project would be required to comply with applicable Fire Code and ordinances for construction, emergency/fire access, water mains, fire flows, and hydrants, and would be subject to review and approval by the PFD prior to building permit and final building permit inspection approval. In addition, new development would be required to meet current Building Code standards for ember resistant construction. Further, in many cases the proposed project would promote infill development which would replace older buildings with newer structures built to current Fire Code standards that would be more fire resilient. The entire City of Piedmont has been designated as a Wildland Urban Interface (WUI) area by the Piedmont Fire Marshal.

Additionally, the continued implementation of policies and actions in the Piedmont General Plan would allow the fire protection facilities to serve future development. The Community Service and Facilities Element includes Policy 34.5 which ensures fire facilities are regularly inspected to provide adequate fire protection services to the city, Policy 34.7 which encourages new development to incorporate lighting, landscaping, and design features that reduce the potential for crime and that facilitate rapid response to emergency calls, and Policy 34.9 which encourages public safety personnel to participate in training and continuing education activities.

Further, under the proposed project, future development would be required to comply with Chapter 8 of the Piedmont City Code, which includes minimum fire safety and fire prevention standards. Future development under the proposed project would also be required to comply with abatement of fire-related hazards and pre-fire management prescriptions as outlined under the California Health and Safety Code and the California Fire Plan. A list of fire-related requirements included in these codes and that would apply to typical residential development and other development projects facilitated by the proposed project includes:

a. Adequate marking of exterior building openings
b. Openings and fire escape stairs and balconies
c. Internal access, including via hallways and doorways
d. Manual and automatic fire alarm systems
e. Fire Fighter Air Replenishment Systems
f. Internal building sprinkler systems
g. New fire hydrants
h. External fire protection (setbacks, fire-resistant materials, etc.)

Compliance with these safety standards would reduce the demand from development and population growth related to the proposed Housing Element Implementation project for fire protection services and thereby reduce the need for new fire stations.

In addition, the proposed project involves amendments to the General Plan Community Services and Facilities Element, including to add new Program 34.D:

> **Action 34.D: Prepare for Increased Demand.** Study the nexus between the impacts of new multifamily development on City services and infrastructure and the costs to provide the services and infrastructure (see program Housing Element program 4.D). Enact a new city services impact fee levied against new multifamily development to address the additional costs (see Housing Element program 1.K). Study the local municipal services tax to determine if the tax could be structured to collect annual tax from each new housing unit built in Piedmont (see Housing Element program 1.N). Establish a Piedmont Affordable Housing fund (see Housing Element programs 3.E).

With implementation of this action program, the City of Piedmont would study options for impact fees that could go towards funding any needed PFD facility improvements.

Should the City of Piedmont determine that new or expanded facilities are needed to provide fire protection services to Piedmont, it is not known where such facilities would be located. No location has been identified for a new fire station as part of the proposed Housing Element Implementation project. However, it is likely that new or improved fire facilities would remain at the current fire station site, which is centrally located and served by all public utilities and roadways. As infill development, it is not anticipated that the construction of a new fire station would cause additional significant environmental impacts beyond those identified in this EIR. The environmental effects of constructing a fire station would be consistent with the impacts determined in other sections of this EIR for overall buildout of the project. When and if the PFD proposes a new station and identifies an appropriate site and funding, the city will analyze the fire station's environmental impacts under CEQA, evaluate the proposal's compliance with this EIR, and mitigate potential impacts as necessary. Therefore, the proposed Housing Element Implementation project would not result in substantial adverse physical environmental impacts associated with the provision of new or physically altered fire protection facilities. This impact would be less than significant.

Moraga Canyon Specific Plan

The Piedmont Fire Station is approximately one mile from the MCSP Area, with access from arterial roadways including Highland Avenue and Moraga Avenue. As discussed in Section 4.12, *Population and Housing,* development facilitated by an adopted MCSP would include an increase in 132 housing units plus a possible 67 additional units allowed under State law. This would result in approximately 370 to 557 new residents in the MCSP Area and approximately 37 to 56 additional annual incidents (e.g., 370 new residents x 0.1 incidents per resident = 37). This increase in population and subsequent increase in annual incidents could increase demand for fire protection and emergency medical services such that additional staff, equipment, or facilities would be needed to meet the PDF's response time goal of three minutes. As discussed above in relation to citywide Housing Element implementation, development in the MCSP would be required to comply with policies in the City of Piedmont General Plan and with the PCC which would reduce demand from development and population growth related to the proposed project for fire protection services and thereby reduce the need for new fire stations. With implementation of the General Plan policies described above and adherence to the CBC and PCC, impacts of development pursuant to an adopted MCSP would be less than significant. Furthermore, as discussed above in relation to the citywide housing element implementation, a potential future fire station facility would likely be developed on the same site as the current fire station (120 Vista Avenue) or as infill development on one of the inventory sites. As infill development, it is not anticipated that the construction of a new fire station would cause

additional significant environmental impacts beyond those identified in this EIR. The environmental effects of constructing a fire station would be consistent with the impacts determined in other sections of this EIR for overall buildout of the project. When and if the PFD proposes a new station and identifies an appropriate site and funding, the city will analyze the fire station's environmental impacts under CEQA, evaluate the proposal's compliance with this EIR, and mitigate potential impacts as necessary. Therefore, this impact would be less than significant.

Mitigation Measures

This impact of development facilitated by the proposed Housing Element Implementation project, including development pursuant to an adopted MCSP, would be less than significant without mitigation. No mitigation measures are required.

Threshold 1b: Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered police protection facilities, or the need for new or physically altered police protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives?

Impact PS-2 DEVELOPMENT FACILITATED BY THE PROPOSED PROJECT WOULD RESULT IN AN INCREASE OF POPULATION WITHIN PIEDMONT. THIS WOULD INCREASE DEMAND FOR POLICE PROTECTION SERVICES, WHICH COULD RESULT IN THE NEED FOR NEW OR EXPANDED POLICE FACILITIES. NONETHELESS, THIS IMPACT WOULD BE LESS THAN SIGNIFICANT.

Citywide Housing Element Implementation

Police protection services for the City of Piedmont are provided by the PPD, headquartered at 403 Highland Avenue. The Department has 20 sworn officers and ten professional personnel, as well as three part-time community service officers, one per-diem dispatcher, and reserve officers (City of Piedmont 2022a). The PPD currently does not have a citizen to officer ratio goal, but it does set a response time goal of three minutes or less for ninety percent of calls.

The increase in residents associated with the proposed project could increase demand for police protection and emergency medical services such that additional staff, equipment, or facilities would be needed to meet this goal.

The Piedmont General Plan includes Policy 34.3 which encourages cooperation and coordination with the City of Oakland and the Alameda County Sheriff's Department to respond to crime and enhance the ability to respond to fires, disasters, and medical emergencies. Police protection service levels would continue to be evaluated and maintained by Piedmont PD in accordance with existing policies, procedures and practices as development occurs over the lifetime of the Housing Element Implementation project. Further, as listed above under Impact PS-1, the proposed project involves amendments to the General Plan Community Services and Facilities Element to add new program 34.D which involves studying options for impact fees that could go towards funding PPD facility improvements.

Police protection services are not typically "facility-driven," meaning such services are not as reliant on facilities in order to effectively patrol a beat. Should the City of Piedmont determine that new or expanded facilities are needed to provide police services to Piedmont, it is not known where such facilities would be located. No location has been identified for a new police station as part of the proposed project. When and if the PPD proposes a new police station and identifies an appropriate

site and funding, the city will analyze the proposed police station's environmental impacts under CEQA, evaluate the proposal's compliance with this EIR, and mitigate potential impacts as necessary. Therefore, the proposed Housing Element Implementation project would not result in substantial adverse physical environmental impacts associated with the provision of new or physically altered police protection facilities. This impact would be less than significant.

Moraga Canyon Specific Plan

The Piedmont Police Station is approximately one mile from the MCSP Area, with access from arterial roadways including Highland Avenue and Moraga Avenue. As discussed in Section 4.12, *Population and Housing,* development facilitated by an adopted MCSP would include an increase in 132 housing units plus a possible 67 additional units allowed pursuant to State law. This would result in approximately 370 to 557 new residents in the MCSP Area. This increase in population could increase demand for police protection services such that additional staff, equipment, or facilities would be needed to meet the Department's response time goal of three minutes. As discussed above with regards to the citywide housing implementation, when and if the PPD proposes a new police station and identifies an appropriate site and funding, the city will analyze the proposed police station's environmental impacts under CEQA, evaluate the proposal's compliance with this EIR, and mitigate potential impacts as necessary. With implementation of the General Plan policies described above and due to the fact that no location for a new police station is proposed as part of the Housing Element Implementation project or known at this time, impacts related to development in the MCSP Area would be less than significant.

Mitigation Measures

This impact from development facilitated by the proposed Housing Element Implementation project, including development pursuant to an adopted MCSP, would be less than significant without mitigation. No mitigation measures are required.

Threshold 1c:	Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered schools, or the need for new or physically altered schools, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives?

Impact PS-3 DEVELOPMENT FACILITATED BY THE PROPOSED PROJECT WOULD RESULT IN AN INCREASE IN POPULATION, INCLUDING SCHOOL-AGED CHILDREN SERVED BY PIEDMONT UNIFIED SCHOOL DISTRICT. NONETHELESS, THE PROPOSED PROJECT WOULD NOT RESULT IN THE NEED FOR NEW OR PHYSICALLY ALTERED SCHOOL FACILITIES. THIS IMPACT WOULD BE LESS THAN SIGNIFICANT.

Citywide Housing Element Implementation

Development under the proposed Housing Element Implementation project could generate new students entering PUSD. These students would be distributed throughout the schools that serve Piedmont depending on their grade level. Although the proposed project would result in an increase in enrollment at schools that serve the city, the district as a whole has seen declines in total enrollment each year since the 2019-2020 school year (EdData 2022).

The proposed project would result in a citywide increase of up to 1,048 dwelling units and 2,934 residents compared to existing conditions. As of 2022, Piedmont's population was made up of approximately 27.2 percent individuals under the age of 18 (U.S. Census Bureau 2022). (For

comparison, in 2022, Alameda County's population was made up of approximately 19 percent individuals under the age of 18 according to the U.S. Census Bureau). Applying this ratio to the maximum addition of residents facilitated by the proposed project, the project would add approximately 798 (2,934 * 0.272 = 798) school-aged (under age 18) residents to Piedmont in a maximum population increase scenario.

The Piedmont Unified School District would be able to accommodate this increase in students as all schools within the district are under capacity, as described in the setting section above. As shown on Table 4.13-1, across all schools there is capacity for an additional 847 students. In order to accommodate the increase in students, programmatic adjustments and additional auxiliary facilities (such as restrooms, etc.) may be required. However, overall, the proposed Housing Element Implementation project would not result in the need for new or substantially physically altered school facilities the construction of which could cause significant environmental impacts. This impact would be less than significant.

Moraga Canyon Specific Plan

Development under the MCSP would result in up to 132 new dwelling units, plus a possible 67 additional units pursuant to State law, and 370 to 557 new residents compared to existing conditions. Applying the same ratio as above, it is assumed 27.2 percent of this population would be individuals under the age of 18, and there would be an additional 101 to 152 students in the MCSP Area. These students are already factored into the calculations above which resulted in 798 additional students citywide. Students in the MCSP Area would attend the same schools as the rest of Piedmont residents. As discussed above, across all schools there is remaining capacity for 847 students. Therefore, the addition of 101 to 152 new students from development built pursuant to an adopted MCSP would not necessitate the construction of new school facilities. This impact would be less than significant.

Mitigation Measures

This impact from development facilitated by the proposed Housing Element Implementation project, including development pursuant to an adopted MCSP, would be less than significant without mitigation. No mitigation measures are required.

Threshold 1d:	Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered parks, or the need for new or physically altered parks, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives?
Threshold 2:	Would the project 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?
Threshold 3:	Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

Impact PS-4 **DEVELOPMENT FACILITATED BY THE PROPOSED PROJECT WOULD INCREASE THE POPULATION OF PIEDMONT AND THE USE OF EXISTING PARKS AND RECREATIONAL FACILITIES. FURTHER, THE MORAGA CANYON SPECIFIC PLAN WOULD INVOLVE THE DESIGNATION OF SITES FOR NEW HOUSING AND THE RECONFIGURATION AND/OR RELOCATION OF THE CITY'S CORPORATION YARD FACILITIES, RECREATION FACILITIES, OPEN SPACE AND PARKLAND, WHICH MAY REDUCE THE CITY'S OVERALL PARK ACREAGE. NONETHELESS, PARK ACREAGE IN PIEDMONT WOULD CONTINUE TO EXCEED STATE STANDARDS. THEREFORE, THIS IMPACT WOULD BE LESS THAN SIGNIFICANT.**

Citywide Housing Element Implementation

As discussed in the setting section above, Piedmont has approximately 59 acres of parkland and is served by regional parks managed by the EBRPD. Piedmont is located within the Parks District, and taxes paid by Piedmont residents help fund the operation of EBRPD. As described in Section 4.12, *Population and Housing*, full buildout under the proposed project would increase the population in Piedmont by 2,934 new residents by 2031, which would increase the demand and use of parks and recreational facilities.

The City of Piedmont currently does not have an adopted service ratio goal for park and recreation facilities. However, California State Parks recommends a standard baseline of three acres per 1,000 residents. Piedmont currently has a ratio of approximately 5.5 acres of parks per 1,000 residents (59 acres of parks for current population of 10,793). Therefore, Piedmont is currently exceeding this standard. Accounting for the additional 2,934 residents that could be added to the Piedmont population as a result of the proposed project, the ratio would be approximately 4.3 acres of parks per 1,000 residents (59 acres of parks for projected 2031 population of 13,727) and therefore Piedmont would continue to exceed the State standard.

The proposed MCSP would involve the designation of land within the MCSP Area for new housing and the reconfiguration and/or relocation of the Corporation Yard and existing recreation facilities, open space, and parkland in the MCSP Area. The exact land use configuration in the MCSP Area has not yet been determined. However, it is conservatively assumed that the acreage of parks and recreational facilities in the MCSP Area could be reduced with implementation of the MCSP. Assuming the reduction in park space, the park to resident ratio in Piedmont could decrease to approximately 3.7 acres per 1,000 residents (51.5 remaining acres of parkland for a projected 2031 population of Piedmont is 13,727), which is still above the State standard.

Further, policies and actions in Piedmont's Parks, Recreation, and Open Space Element are designed to ensure that adequate parks and recreational facilities are provided to accommodate increases in new residents. In accordance with General Plan policies, the city continually evaluates and plans for

expansion or renovations of parks and recreation facilities as needed to accommodate demand. Policy 24.1 of the General Plan ensures the city regularly inspects, maintains, and upgrades park facilities to prolong the life of equipment, ensure safety and accessibility, and enhance the enjoyment of park users. Policy 24.2 of the General Plan ensures adequate funding for maintenance and operation of park facilities. Policy 24.3 of the General Plan promotes pride of ownership in local parks by involving local residents and neighborhood groups in park maintenance and improvement, community outreach, and special events. The Piedmont Recreation Department, along with the Park Commission and Public Works Department, are responsible for programming, development, operation, and maintenance of all city park facilities.

Adherence to Piedmont General Plan policies would ensure that substantial physical deterioration of the city's parks and recreational facilities would not occur or be accelerated. Therefore, the proposed Housing Element Implementation project would not result in substantial adverse physical environmental impacts associated with the provision of new or physically altered police protection facilities. This impact would be less than significant.

Moraga Canyon Specific Plan

As discussed in Section 4.12, *Population and Housing,* development facilitated in the MCSP Area would include an increase in 132 housing units, plus an additional 67 possible units pursuant to State law. This would result in approximately 370 to 557 new residents which is within the population increase discussed above in the impact analysis under "Citywide Housing Element Implementation." As discussed above, accounting for the additional 2,934 residents that could be added to the Piedmont population as a result of the proposed project, including the additional 370 to 557 residents facilitated by an adopted MCSP.

In addition, as discussed above, future development in the MCSP Area could result in a reduction of acreage of the parks and recreational facilities in the MCSP Area. Conservatively assuming the facilities are removed and replaced with housing, the removal of these two facilities would result in a decrease of approximately 7.5 acres of parkland within the city. Piedmont would retain approximately 51.5 acres of parkland. With this change, the park to resident ratio in Piedmont would decrease to approximately 3.7 acres per 1,000 residents (51.5 remaining acres of parkland for a projected 2031 population of Piedmont is 13,727), which is still above the State standard. In addition, when the details of the MCSP have been determined, should a reduction in parkland space occur, the City of Piedmont would comply with State Public Park Preservation Act requirements for the transfer of property in use as a public park for any non-park use.

In addition, EBRPD provides parks and recreation facilities in close proximity to Piedmont and continued adherence to Piedmont General Plan policies would ensure that substantial physical deterioration of the city's parks and recreational facilities would not occur or be accelerated. Therefore, development facilitated by an adopted MCSP would not result in substantial adverse physical environmental impacts associated with the provision of new or physically altered parks and recreation facilities. This impact would be less than significant.

Mitigation Measures

This impact from development facilitated by the proposed Housing Element Implementation project, including development pursuant to an adopted MCSP, would be less than significant without mitigation. No mitigation measures are required.

c. Cumulative Impacts

Cumulative development in Piedmont could increase demand for public services provided by the City of Piedmont or PUSD, including fire and police protection services, schools, and parks. As described in Section 3, *Environmental Setting*, for issue areas that would have neighborhood or citywide impacts, such as the provision of public services, the cumulative impact analysis includes development proposed under the proposed Housing Element Implementation project, including development pursuant to an adopted MCSP in coordination with development under the General Plan. The analysis presented in this EIR generally represents a cumulative analysis of development in the city and the surrounding region over the Housing Element planning horizon of 2031. As discussed under Impacts PS-1 though PS-4, the proposed project would not result in significant impacts related to the provision of public services or recreation. Continued implementation of existing City of Piedmont regulations, policies, and programs would ensure that impacts to fire services, police services, schools, and parks and recreational facilities remain less than significant. As a result, development facilitated by the proposed Housing Element Implementation project would not considerably contribute to a significant cumulative impact to public services or recreational facilities.

4.14 Transportation

This section evaluates the transportation-related impacts of the proposed Housing Element Implementation Project, including impacts from development facilitated by the Moraga Canyon Specific Plan, which is referred to as the proposed project throughout this section, including impacts related to vehicle miles traveled (VMT).

4.14.1 Setting

The City of Piedmont is in northwest Alameda County. The city has a land area of about 1.7 square miles with mostly hilly terrain throughout. The City of Piedmont is entirely surrounded by the City of Oakland and is generally bounded by Moraga Avenue to the northwest and Park Boulevard to the southeast, the Montclair neighborhood of Oakland to the north, and the Lakeshore neighborhood of Oakland to the south. The following section generally describes the existing transportation system in Piedmont, including travel characteristics, and the street, transit, pedestrian, and bicycle networks.

In the last three years, travel behavior has changed at a global level due to the COVID-19 pandemic. Within the City of Piedmont and the surrounding areas, travel patterns (both amount/traffic volume and mode of trips) have changed significantly since the first shelter-in-place order was issued on March 17, 2020, and subsequently modified. Unless otherwise noted, the existing conditions presented in this section, such as transit ridership and VMT, are based on data collection or observations prior to the start of the pandemic. The impact analysis presented in this section is generally based on the assumption that long-term travel behavior characteristics would be similar to trends and conditions prior to the start of the pandemic, because, at present, the medium- or long-term effects of the COVID-19 pandemic on travel behavior are uncertain, and it would be speculative to estimate long-term or permanent changes or whether long-term conditions would be different from conditions prior to the start of the pandemic.

a. Travel Characteristics

The City of Piedmont is primarily comprised of single-family residential uses (about 68 percent of the city) with the remainder consisting of commercial uses, civic and school uses, parks, and open space. Based on the latest available Census data (American Community Survey 2021 5-year Estimates), Piedmont has a population of about 11,400 residents.

Table 4.14-1 compares the commute to work mode split of Piedmont's employed residents to those of Alameda County, the State of California, and the United States (U.S.) as a whole. Based on 2019 data, which represents conditions prior to the COVID-19 pandemic, approximately 53 percent of the employed residents drive alone, which is lower than Alameda County, the State, and U.S. estimated averages. About 13 percent commute by carpool, which is higher than the County, the State, and the U.S. About 15 percent of Piedmont's employed residents use public transit, which is similar to the County and higher than the State and the U.S. Less than 2 percent of the employed residents commute by walking, biking, or other modes, each, which is similar or lower than the County, the State, and the U.S. About 24 percent of Piedmont's employed residents worked from home in 2019, which is more than double the County, the State, and the U.S.

Table 4.14-1 Employed Residents' Commute to Work Mode Split

Travel Characteristics	City of Piedmont	Alameda County	California	United States
Drive Alone	53%	61%	74%	76%
Carpool	13%	10%	10%	9%
Public Transit	15%	16%	5%	5%
Bike	1%	2%	1%	1%
Walk	2%	4%	3%	3%
Other	2%	2%	2%	1%
Work from Home	14%	6%	6%	5%
Total	**100%**	**100%**	**100%**	**100%**

Source: US Census Bureau, 2015-2019 American Community Survey 5-Year Estimates, Table B08006; summarized by Fehr & Peers, 2023.

b. Existing Street Network

The street network in the project area is described below and shown on Figure 4.14-1.

Regional

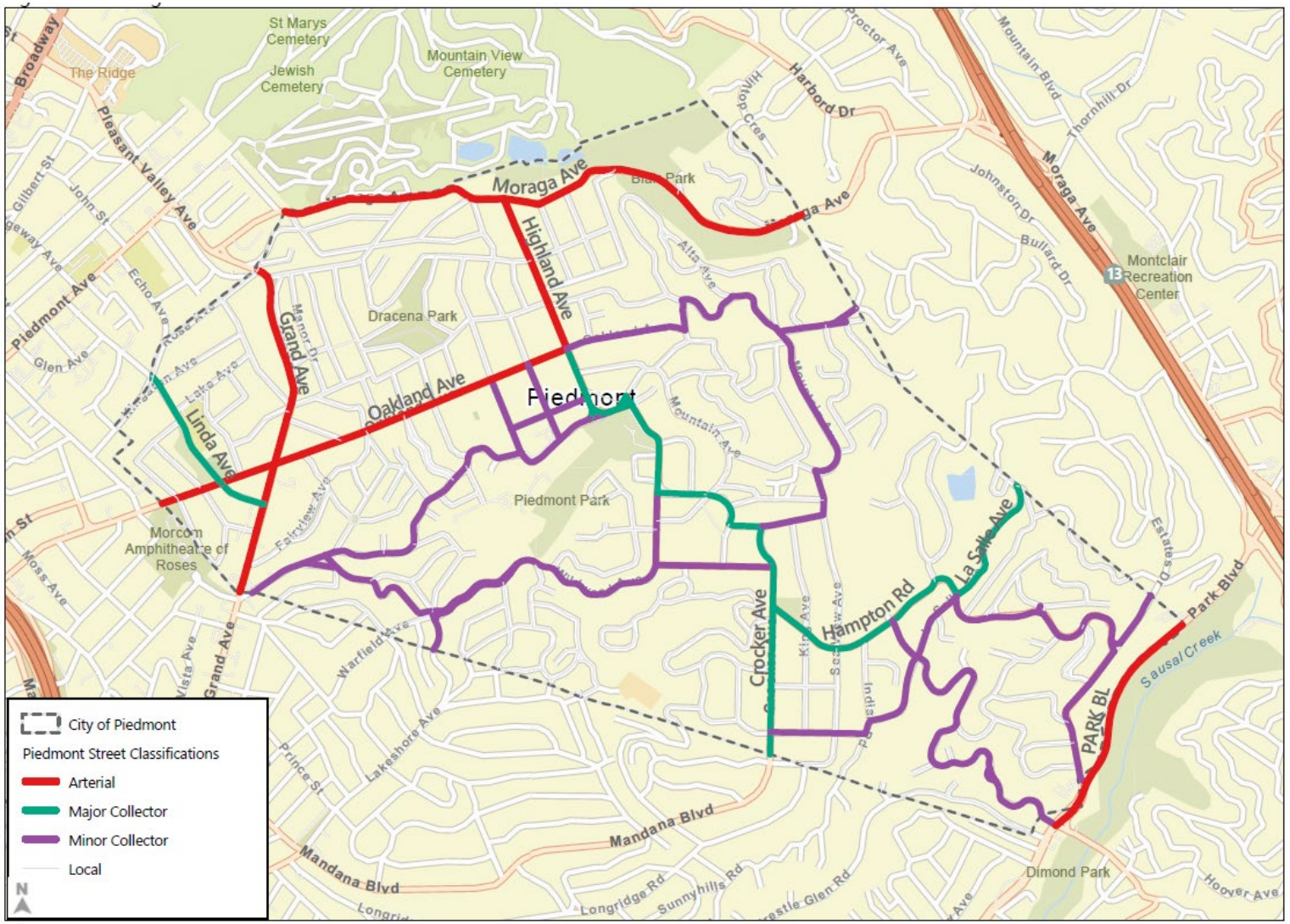
Regional access to the City of Piedmont is provided through the following freeways:

Interstate 580 (I-580) is a generally east-west freeway that extends between US-101 in Marin County in the west and I-5 in San Joaquin County in the east. In the project vicinity, I-580 generally has a northwest-southeast orientation, is less than 1 mile south of the City of Piedmont, and generally provides 4 to 5 lanes in each direction. Interchanges at Harrison Street/Oakland Avenue, Grand Avenue/Lakeshore Avenue, and Park Boulevard connect I-580 and the City of Piedmont. I-580 between the Grand Avenue/Lakeshore Avenue and Park Boulevard interchanges has an average daily traffic volume (AADT) of approximately 177,000 vehicles per day based on 2019 Caltrans data.

State Route 13 (SR-13) is a north-south freeway in the project vicinity. It extends between I-580 in the south and the City of Berkeley in the north, where SR-13 becomes a surface street also called Tunnel Road and Ashby Avenue and extends to I-580/I-80. SR-13 is less than 0.5 mile east of the City of Piedmont and provides 2 lanes in each direction. Interchanges at Moraga Avenue and Park Boulevard connect SR-13 and the City of Piedmont. SR-13 between the Moraga Avenue and Park Boulevard interchanges has an AADT of approximately 66,600 vehicles per day based on 2019 Caltrans data.

State Route 24 (SR-24) is an east–west freeway that extends between I-580/I-980 Interchange in Oakland to I-680 in Walnut Creek, crossing under the Berkeley Hills via the Caldecott Tunnel. SR-24 is about one mile north of the City of Piedmont and generally provides four lanes in each direction in the project vicinity. Interchanges at 51st Street, Telegraph Avenue, and Broadway connect SR-24 and the City of Piedmont. SR-24 between the Telegraph Avenue and Broadway interchanges has an AADT of approximately 151,000 vehicles per day based on 2019 Caltrans data.

Figure 4.14-1 Existing Street Network



Source:
Piedmont General Plan, 2014

Local

The City of Piedmont is generally composed of a rectangular street grid with a few gently curving streets on the western part, north of Oakland Avenue. In the eastern part of the city, most streets follow the natural contours and steep grades. The Piedmont General Plan identifies the following functional classifications:

- **Arterials** – The General Plan classifies arterials as roadways that carry traffic between freeways, major collectors, and other arterials. The city's arterials include Oakland Avenue, Grand Avenue, Highland Avenue, Park Boulevard, and Moraga Avenue. These five streets connect Piedmont with I-580 and SR-13. They are located either on the northwestern side of the city or along the south boundary of the city and have all of Piedmont's signalized intersections.
- **Collectors** – The General Plan divides collectors into major and minor collectors. Major collectors carry traffic between arterials, other major collectors, and minor collectors, while minor collectors carry traffic between major collectors, other minor collectors, and local streets. Both collectors serve as local traffic generators, but minor collectors typically have less traffic volumes and fewer vehicle lanes.
- **Local** – The remainder of streets in the City of Piedmont are classified as local streets. They provide access to residential areas and abutting properties with generally low volumes.

The arterials and major collectors in the City of Piedmont are described below.

Arterials

Oakland Avenue is a generally two-lane, two-way, east-west street that extends between Olive Avenue (at the city boundary with Oakland) in the west to Scenic Avenue in the east. Oakland Avenue is classified as an arterial west of Highland Avenue and a minor collector east of Highland Avenue. Oakland Avenue provides on-street parking and sidewalks on both sides of the street.

Grand Avenue is a two-lane, two-way north-south arterial on the west side of the city that extends into the City of Oakland in both directions. Grand Avenue provides a center two-way left-turn lane between the south city limits and Greenbank Avenue. Grand Avenue provides on-street parking and sidewalks on both sides of the street south of the Grand Avenue/Lower Grand Avenue split, and on-street parking and sidewalk only on the west side of the street north of the split. Grand Avenue provides Class II bicycle lanes in both directions along the entire street.

Highland Avenue is a two to four-lane, two-way north-south street that extends between Moraga Avenue in the north and Wildwood Avenue in the south. Highland Avenue is classified as an arterial north of Oakland Avenue, a major collector between Oakland and Sheridan Avenues, and a minor collector south of Sheridan Avenue. Highland Avenue provides on-street parking and sidewalks on both sides of the street. Highland Avenue has few segments of designated basic bicycle routes. Highland Avenue at Piedmont Court has an AADT of approximately 4,900 vehicles per day based on 2023 data.

Moraga Avenue is a two-lane, two-way east-west arterial that extends between Pleasant Valley Avenue in the west and SR-13 and Montclair District of Oakland in the east. Within the City of Piedmont, Moraga Avenue provides on-street parking and a sidewalk just on the south side of the street between the western city limits and Estrella Avenue, on-street parking and a sidewalk on both sides of the street between Estrella and Monte Avenues. Bicycle facilities on Moraga Avenue consist of an eastbound Class II bicycle lane starting from Ramona Avenue up to Bonita Avenue and east of

Red Rock Road, a basic bicycle route with sharrows westbound from Bonita to Ramona Avenues, and a basic bike route with sharrows between Bonita Avenue and Red Rock Road. Moraga Avenue just east of Highland Avenue has an AADT of approximately 8,000 vehicles per day based on 2023 data.

Park Boulevard is a two-way east-west arterial that extends between Oakland's East 18th Street in the west and SR-13 and Montclair District of Oakland in the east and forms part of the southern boundary of the City of Piedmont. Between I-580 and Leimert Boulevard, Park Boulevard generally provides two lanes in each direction, a center raised median, on-street parking and sidewalks on both sides of the street. Between Leimert Boulevard and SR-13, Park Boulevard generally provides two lanes in each direction, and no center raised median, on-street parking or sidewalks; however, a dirt path is provided along the south side of the street.

Major Collectors

Sheridan Avenue is a two-lane, two-way street that extends between Highland Avenue in the west to Lincoln Avenue in the east as an east-west major collector. South of Lincoln Avenue, Sheridan Avenue continues as a north-south local street and connects to Wildwood Avenue. Sheridan Avenue provides on-street parking and sidewalks on both sides of the street.

Lincoln Avenue is a two-lane, two-way east-west street that extends between Sheridan Avenue in the west and Sea View Avenue in the east. It is classified as a major collector west of Crocker Avenue and a minor collector east of Crocker Avenue. Lincoln Avenue provides on-street parking and sidewalks on both sides of the street.

Crocker Avenue is a two-lane, two-way north-south major collector that extends between Lincoln Avenue in the north and continues south into the City of Oakland, connecting to Mandana Boulevard. Crocker Avenue generally provides on-street parking and sidewalks on both sides of the street.

Hampton Road is a two-lane, two way, generally east-west street extending between Crocker Avenue in the west and Hampton Terrace in the east. Hampton Road is classified as a major collector west of La Salle Avenue, and a minor collector east of La Salle Avenue. Hampton Road provides on-street parking and sidewalks on both sides of the street.

La Salle Avenue is a two-lane, two-way meandering street that extends between the Montclair District in the City of Oakland east of SR-13 in the northeast and Hampton Road in the southwest as a major collector. Most of La Salle Avenue does not have on-street parking or sidewalks, except on the north side of the street adjacent to Hampton Field. South of Hampton Road, La Salle Avenue continues as a minor collector extending to Crocker Avenue. West of Crocker Avenue, La Salle Avenue continues as a local street for about 0.25 miles.

Linda Avenue is a two-lane, two-way north-south major collector that extends between Piedmont Avenue in the City of Oakland in the north and Grand Avenue in the south. Linda Avenue provides on-street parking and sidewalks on both sides of the street, and a Class II bicycle lane on the northbound side of the street only. Linda Avenue near Lake Avenue has an AADT of approximately 4,300 vehicles per day based on 2023 data.

c. Transit Access and Circulation

Transit service in the Piedmont area is provided by the Alameda-Contra Costa Transit District (AC Transit). AC Transit operates several bus lines providing local and Transbay connections to the Salesforce Transit Center in San Francisco, as well as school bus service on school days. AC Transit service is described below.

Piedmont is also located near several Bay Area Rapid Transit (BART) stations although they are not directly located in the city. There are four BART stations within three miles of Piedmont's borders. The stations, and their approximate distances from Piedmont City Hall, are:

- Rockridge BART Station (2.3 miles)
- 19th Street/Oakland BART Station (2.6 miles)
- MacArthur BART Station (2.7 miles)
- 12th Street/Oakland City Center BART Station (3.0 miles)

AC Transit

AC Transit is the primary bus service provider in 13 cities and adjacent unincorporated areas in Alameda and Contra Costa Counties, with Transbay service to destinations in San Francisco, San Mateo, and Santa Clara Counties. Table 4.14-2 summarizes the characteristics of the AC Transit routes operating in Piedmont and the vicinity. Five bus lines, comprised of two local, two Transbay, and one school line, operate in/near the vicinity of Piedmont.

The busiest bus stops in Piedmont by bus line as of winter 2019 are:

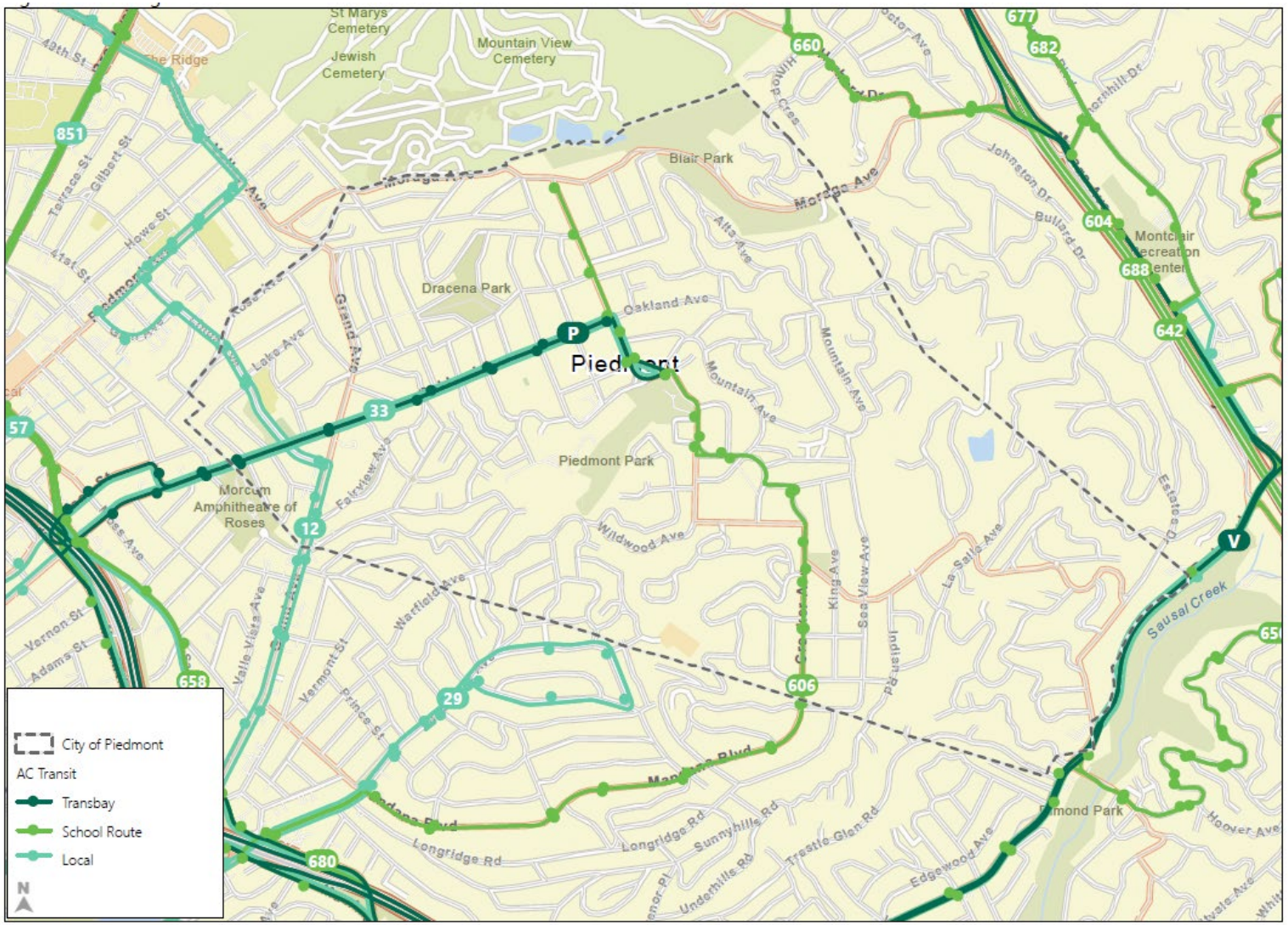
- Local Line 33 on Highland Way at Highland Avenue (208 daily passengers on/offs)
- Transbay Line P on Highland Way at Highland Avenue (87 daily passengers on/offs)
- Transbay Line P on Oakland Avenue at Hillside Avenue (69 daily passengers on/offs)

Figure 4.14-2 shows the existing transit services in Piedmont.

Major transit stops and high-quality transit corridors could exist in Piedmont only along bus lines. Public Resources Code (PRC) section 21064.3 defines "Major transit stop" as a site containing an existing rail or bus rapid transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods. PRC section 21155 defines "High-quality transit corridor" as a corridor with fixed-route bus service with service intervals no longer than 15 minutes during peak commute hours. For purposes of this section, the service intervals must be no longer than 15 minutes during peak commute times for at least one individual transit route in order to qualify as a high-quality transit corridor.

No area within the City of Piedmont is within 0.5 mile of an existing major transit stop. As shown in Table 4.14-2 and as of June 2023, AC Transit Local Line 33 operates at 15-minute intervals during the weekday peak commute hours. Therefore, Highland Way, Highland Avenue between Highland Way and Oakland Avenue, Oakland Avenue between Highland Avenue and City of Oakland boundary, and Park Boulevard along the City boundary, where Line 33 operates with 15-minute intervals during the weekday peak commute hours, are currently considered high-quality transit corridors serving the City of Piedmont; however, the high-quality transit corridors may change since bus routes and schedules can change over time.

Figure 4.14-2 Existing Transit Services



Source:
AC Transit, July 2022

Table 4.14-2 AC Transit Bus Service in Piedmont

Line	Service Frequency	Hours of Operation	Neighborhoods Served by Route	Stop Locations	Total Weekday On/Offs by Route within Piedmont
Local Lines					
12	20 to 30 minutes Monday – Sunday	6:00 AM to 11:00 PM Monday – Sunday	Oakland – Piedmont – Berkeley	Along Linda Avenue and Grand Avenue	104
33	15 minutes during weekday peak and 20 minutes at other times Monday – Sunday	5:45 AM to 11:00 PM Monday – Sunday	Montclair Oakland – Downtown Oakland – Piedmont	Along Oakland Avenue, Highland Avenue, and Park Boulevard	431
Transbay Lines					
P	20-40 minutes morning peak, 15-40 minutes evening peak Monday – Friday	7:30 AM to 9:10 AM and 4:45 PM to 7:00 PM Monday – Friday	Piedmont – San Francisco	Along Oakland Avenue and Highland Avenue	469
V	1-hour morning peak, 15-40 minutes evening peak Monday – Friday	6:45 AM to 8:00 AM and 4:30 PM to 6:30 PM Monday – Friday	Oakland – San Francisco	Along Park Boulevard	46
School Lines					
606	One morning trip to Head Royce School; One afternoon trip to Piedmont	Morning trip at 7:36 AM to Head Royce School, Afternoon trip at 3:30 PM to Piedmont School days only	Head Royce School – Oakland – Piedmont	Along Highland Avenue and Crocker Avenue	22

Source: Schedule, AC Transit, June 2023; Ridership data, AC Transit, Winter 2019; prepared by Fehr & Peers, 2023.

d. Pedestrian Conditions

Almost all arterials and collectors in the City of Piedmont have sidewalks on at least one side of the street and most have marked crosswalks at key intersections. Many of the local streets also have sidewalks, but few have marked crosswalks, except at crossings with arterials and collectors. Intersections at arterials are signalized and all but three major arterial intersections have pedestrian countdown signals. Based on the City of Piedmont's *Safer Streets (PSS) Plan* (City of Piedmont 2021), the city plans to install new accessible pedestrian countdown signals at the remaining signalized intersections including the Moraga Avenue/Highland Avenue, Grand Avenue/Rose Avenue, and Grand Avenue/Oakland Avenue intersections. In addition to sidewalks, Piedmont has a system of footpaths and stairways throughout the city serving as pedestrian shortcuts between streets.

In recent years, the city has been installing curb ramps at key crosswalks to improve access for persons with disabilities. Striping and signage crossing improvements have been made at various intersections in the past few years consistent with the 2021 PSS Plan. Recent improvements in the city include mid-block crossings, bulbouts, flashing beacons (Linda Avenue at Beach School), enhanced crosswalks, and intersection narrowing (Grand Avenue/Fairview Avenue intersection). In 2017 the City of Piedmont adopted a crosswalk policy to ensure consistent and objective review of residential requests for the installation of crosswalk markings and "Stop" and "Yield" signs.

Sidewalks are generally in good condition. The city has two main tools to ensure sidewalks are maintained and repaired. The city requires a sidewalk inspection every time a residence is sold; when a building permit is issued for a project valued at more than $5,000; and/or the City repairs or replaces sidewalks when they are adjacent to roadway repaving projects and when sidewalks are damaged by street trees.

e. Bicycle Conditions

The 2021 PSS Plan define the following bicycle facility types:

- Class I Multi-Use Paths – Provide a completely separated, exclusive right-of-way for bicycling, walking, and other non-motorized uses.
- Class II Bicycle Lanes – Are on-street facilities marked by parallel white stripes several feet apart, stenciled bicycle symbols, and street signage.
- Class III Basic Bicycle Routes – Are marked with "bicycle route" plaques and signs reminding drivers and cyclists that bicycles may use the full lane.
- Class III Enhanced Bicycle Routes – Similar to the standard bicycle routes listed above, these feature sharrow stencils in the middle of a travel lane. They suggest to cyclists where in the lane to ride, reinforce the idea that a cyclist may use the full lane, and encourage drivers to share the road. Enhanced bicycle routes are recommended particularly for streets where the speed differential between cars and cyclists is not significant—for example, on slower-speed streets or on downhill slopes.

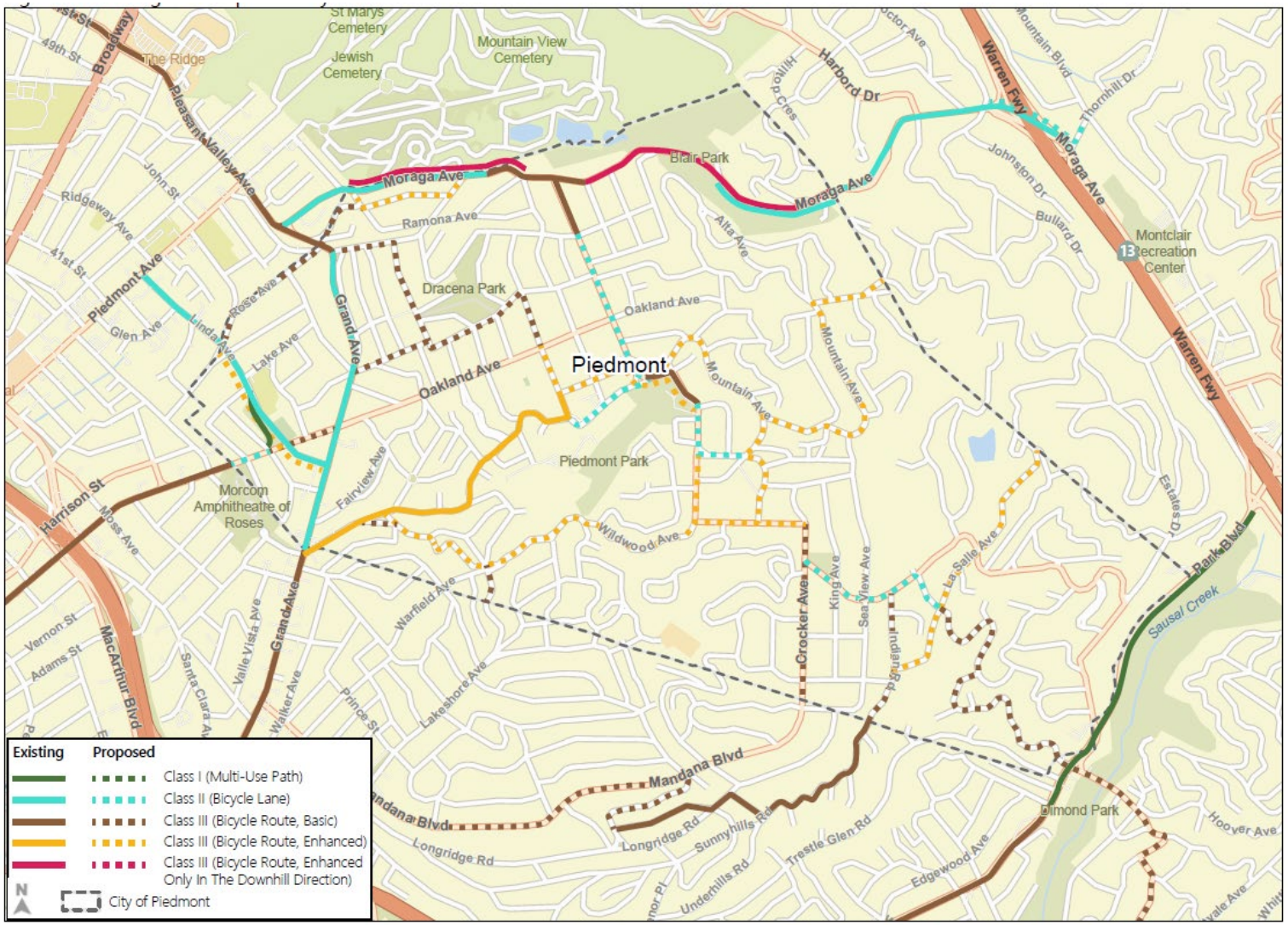
Figure 4.14-3 shows the existing and proposed bicycle facilities in the City of Piedmont. Existing facilities include:

- Class I multi-use path through Linda Avenue Dog Park and along Park Boulevard at the southeast city limits
- Class II bicycle lanes on segments of Moraga Avenue, all of Grand Avenue, and one direction of Linda Avenue
- Class III basic bicycle routes on segments of Moraga Avenue, and the north end of and adjacent to Piedmont Park on Highland Avenue
- Class III Enhanced Bicycle Routes on Magnolia Avenue
- Class III Enhanced Bicycle Route in the downhill direction on the east end of Moraga Avenue

The PSS Plan proposes the following bicycle facilities to complete the bicycle network:

- Class II bicycle lanes on segments of Highland Avenue, Magnolia Avenue, Sierra Avenue, and Hampton Road
- Class III basic bicycle routes on Crocker Avenue, St James Drive, Arroyo Avenue, Ricardo Avenue, and the north segment of Hillside Avenue
- Class III enhanced bicycle routes connecting Hillside Avenue to Vista Avenue, segments of Highland Avenue, Wildwood Avenue, La Salle Avenue, and Mountain Avenue

Figure 4.14-3 Existing and Proposed Bicycle Facilities



Source:
Piedmont Safer Streets Plan, 2021.

Notes:
- Some existing and proposed Class II Bike Lanes are only on one side of the street.
- Outside Piedmont, only connecting bike facilities shown.

f. Rideshares and Carpools

As shown in Table 4.14-1, about 13 percent of the employed residents in Piedmont commuted to work by carpool in 2019, prior to the COVID-19 pandemic. This is a higher percentage of employed residents than in Alameda County, the State, or the U.S. It is expected that some of the carpools involved multiple members of the same household or were organized by residents with common destinations. It is estimated that much of the carpooling activity consisted of "casual" carpooling, where drivers pick up passengers going to downtown San Francisco at designated pick-up locations during the weekday morning peak commute periods. "Casual" carpooling allows commuters to San Francisco to use the Bay Bridge carpool facilities which reduces travel time and bridge tolls. The designated pick-up location in Piedmont is on westbound Oakland Avenue at Hillside Avenue. Nearby designated pick-up locations in Oakland are on westbound Oakland Avenue at Monte Vista Avenue and on westbound Park Boulevard at Trestle Glen Road.

g. Vehicle Miles Traveled

One performance measure used to quantify automobile travel is VMT, which refers to the amount of automobile travel attributable to a project, as well as the distance traveled. In 2013, Governor Brown signed Senate Bill (SB) 743, which added PRC Section 21099 to the California Environmental Quality Act (CEQA). PRC Section 21099 changes the way transportation impacts are analyzed and aligns local environmental review methodologies with statewide objectives to reduce greenhouse gas (GHG) emissions, encourage infill mixed-use development in designated priority development areas, reduce regional sprawl, and reduce VMT in California (see Section 4.14.2., *Regulatory Setting,* for a more detailed description of SB 743 regulatory requirements).

Increased VMT leads to various direct and indirect impacts on the environment and human health. Among other effects, increased VMT on the roadway network leads to increased emissions of air pollutants, including GHGs, and increased energy consumption. The transportation sector is associated with more GHG emissions than any other sector in California. As documented in the City's 2020 GHG Inventory, about 50 percent of GHG emissions within Piedmont's boundaries are produced by local gas and diesel vehicles. Reducing VMT is one of the most effective means for reducing the city's GHG emissions.

VMT is typically an output from travel demand models, calculated as the estimated number of vehicles multiplied by the distance traveled by each vehicle. This analysis uses home-based VMT per resident, which measures all the trips by motor vehicle on a typical weekday associated with residential uses, such as trips to work, school, or shop, and divides that distance by the number of residents in the project area.

This analysis uses the Alameda County Transportation Commission (CTC) Countywide Travel Demand Model (Alameda CTC Model) to estimate VMT. The Alameda CTC Model includes data from 2020, which represents pre-pandemic conditions; therefore, the model approximates existing conditions. The VMT estimate in the Alameda CTC Model accounts for all the VMT generated by the City of Piedmont within the nine county Bay Area region. Table 4.14-3 compares the existing VMT per resident for the City of Piedmont, Alameda County, and the Bay Area region as a whole. The existing average home-based VMT per resident for the City of Piedmont is about three percent lower than the average for Alameda County and about five percent lower than the average for the Bay Area Region. The City of Piedmont's slightly lower than average home-based VMT per resident can be due to the City's somewhat central location in the East Bay and proximity to the major regional job centers and regional transit service.

Table 4.14-3 Existing (2020) VMT Summary

Geographic Area	Home-Based VMT per Resident
City of Piedmont	18.8
Alameda County	19.4
Bay Area Region	19.8

Source: Fehr & Peers based on the results of the Alameda CTC Travel Demand Model for 2020.

4.14.2 Regulatory Setting

a. State

Assembly Bill 1358

Assembly Bill 1358, also known as the California Complete Streets Act of 2008, requires cities and counties to include "Complete Streets" policies in their general plans. These policies address the safe accommodation of all users, including bicyclists, pedestrians, motorists, public transit vehicles and riders, children, the elderly, and the disabled. These policies can apply to new streets, as well as the redesign of transportation corridors.

The City of Piedmont adopted its Complete Streets policy, which is described below, in November 2012.

Senate Bill 375

Senate Bill (SB) 375 provides guidance regarding curbing emissions from cars and light trucks, and has the following four major components:

- Establishing regional greenhouse gas emission targets are required. These targets must be updated every 8 years in conjunction with the revision schedule of the housing and transportation elements of local general plans.
- Metropolitan Planning Organizations (MPO) are required to create a Sustainable Communities Strategy (SCS) that provides a plan for meeting regional targets.
- Housing elements and transportation plans are required to be synchronized on 8-year schedules.
- MPOs must use transportation and air emissions modeling techniques that are consistent with the guidelines prepared by the California Transportation Commission.

The City of Piedmont is a member of the Association of Bay Area Governments (ABAG) which was merged with the region's Metropolitan Transportation Commission (MTC). ABAG/MTC have developed the region's SCS and established GHG emission reduction targets.

Senate Bill 743

On September 27, 2013, California Governor Jerry Brown signed SB 743 into law and started a process that changed the way transportation impact analysis is conducted as part of CEQA compliance. These changes include elimination of automobile delay, level of service (LOS), and other similar measures of vehicular capacity or traffic congestion as a basis for determining significant impacts under CEQA. According to SB 743, these changes are intended to "more appropriately balance the needs of congestion management with statewide goals related to infill development, promotion of public health through active transportation, and reduction of greenhouse gas emissions."

In December 2018, the Natural Resources Agency finalized updates to Section 15064.3 of the CEQA Guidelines, including the incorporation of SB 743 modifications. The Guidelines' changes were approved by the Office of Administrative Law and, as of July 1, 2020, are in effect statewide.

To help aid lead agencies with SB 743 implementation, the Governor's Office of Planning and Research (OPR) published the *Technical Advisory on Evaluating Transportation Impacts in CEQA* that provides guidance on a variety of implementation questions with respect to shifting to a VMT metric. Key guidance from this document includes:

- VMT is the most appropriate metric to evaluate a project's transportation impact.
- OPR recommends tour- and trip-based travel models to estimate VMT, but ultimately defers to local agencies to determine the appropriate tools.
- OPR recommends measuring VMT for residential and office projects on a "per rate" basis.
- OPR recommends that a per capita or per employee VMT that is fifteen percent below that of existing regional development may be a reasonable threshold. In other words, a residential project that generates VMT per capita that is not more than 15 percent below the regional VMT per resident could result in a significant impact. OPR notes that this threshold is supported by evidence that connects this level of reduction to the State's emissions goals.
- OPR recommends that where a project replaces existing VMT-generating land uses, if the replacement leads to a net overall decrease in VMT, the project would lead to a less than significant transportation impact. If the project leads to a net overall increase in VMT, then the thresholds described above should apply.
- Lead agencies have the discretion to set or apply their own significance thresholds.

b. Regional

Metropolitan Transportation Commission (MTC)

Most federal, State, and local financing available for transportation projects are allocated at the regional level by MTC, the transportation planning, coordinating, and financing agency for the nine-county Bay Area region. Integrated with the Association of Bay Area Government's (ABAG's) regional land use plan, the current regional transportation plan, *Plan Bay Area 2050*, was adopted by MTC and ABAG in October 2021. *Plan Bay Area 2050* specifies a detailed set of investments and 35 strategies throughout the region through the year 2050 to maintain, manage, and improve the surface transportation system and to integrate transportation investments with projected housing and job growth. *Plan Bay Area 2050* also specifies how strategies will be implemented and how to secure revenue sources. *Plan Bay Area 2050* serves as the Bay Area's Regional Transportation Plan (RTP) and the Bay Area's Sustainable Communities Strategy (SCS) (MTC.ca.gov).

Alameda County Transportation Commission (Alameda CTC)

The Alameda CTC is a joint powers authority governed by a 22-member commission that comprises elected offices from each of the 14 cities in Alameda County, the Alameda County Board of Supervisors, and elected representatives for AC Transit and BART. The Alameda CTC coordinates countywide transportation planning efforts and delivers projects and programs.

Alameda CTC also serves as the County of Alameda's congestion management agency. The Alameda CTC administers a Land Use Analysis Program, which is one of the legislatively required elements of

the Alameda CTC Congestion Management Program.[1] Alameda CTC reviews local land use plans and projects with the potential to cause countywide or regional impacts. The Alameda CTC's threshold for review is a determination of whether the project would cause a net increase amounting to 100 or more evening peak-hour vehicle trips, which allows coordination and planning between the member jurisdictions and the congestion management agency. The CMP analysis is outside of the CEQA process because it is based on traffic congestion, which cannot be used to identify transportation impacts in CEQA documents per PRC section 21099(b)(2). Thus, the results of the CMP analysis for the proposed project, which is outside of the CEQA process, is provided in Appendix G.

The purpose of the Alameda CTC's review is to assess impacts of individual development actions on the regional transportation system and ensure that significant impacts are appropriately addressed. Alameda CTC guidelines state that impacts on all modes should be considered, as follows.

- **Transit—**Effects of vehicle traffic on mixed-flow transit operations, transit capacity, transit access/egress, the need for future transit service, consistency with adopted plans, and circulation element needs.
- **Bicycles—**Effects of vehicle traffic on bicyclist conditions, site development and roadway improvements, and consistency with adopted plans.
- **Pedestrians—**Effects of vehicle traffic on pedestrian conditions, site development and roadway improvements, and consistency with adopted plans.
- **Other Impacts and Opportunities—**Noise impacts for projects near State highway facilities and opportunities to clear access improvements environmentally for transit-oriented development projects.

c. Local

City of Piedmont General Plan

The Transportation Element of the Piedmont General Plan (2009) recognizes the relationship between transportation and the city's land use pattern, the effects of transportation infrastructure on the city's environment and quality of life, and the importance of providing transportation choices for Piedmont residents. The Transportation Element contains goals, policies, and actions focused on the following major topics:

- Mobility and transportation choice
- Traffic flow
- Public transit and carpooling
- Walking and bicycling
- Parking
- Traffic safety

[1] Alameda County Transportation Commission. 2019. *Congestion Management Program*. September. Available: https://www.alamedactc.org/wp-content/uploads/2019/11/2019_Alameda_County_CMP_FINAL.pdf; Chapter 6 Land Use Analysis Chapter Amendment, 2021.
Available: https://www.alamedactc.org/wp-content/uploads/2021/12/Amendment_Land_Use_Analysis_Program_SB743.pdf. Accessed: July 2022.

The following goals, policies, and actions are relevant to land use and transportation:

Goal 7: Mobility and Choice. Provide a balanced transportation system that maximizes mobility and choice for all Piedmont residents.

Policy 7.1: Balancing Travel Modes. Ensure that transportation planning balances the needs of motorists, transit users, pedestrians, and bicycles. Where feasible, future land use and transportation decisions should discourage driving in single passenger autos and instead encourage alternative modes of travel.

Policy 7.3: Reducing Vehicle Miles Traveled. Support changes that would reduce the number of vehicle miles traveled (VMT) by Piedmont residents, including enabling residents to conduct business with City Hall on the Internet, allowing home-based businesses, supporting telecommuting, encouraging carpooling, improving public transit, and upgrading facilities for bicycles and pedestrians.

Policy 7.4: Synchronizing Land Use and Transportation Decisions. Ensure that Piedmont's transportation system complements the city's land use pattern, and that land use decisions complement and make the most efficient use of the city's transportation system.

Policy 7.6: Regional Perspective. Recognize the relationship of local transportation decisions to broader regional issues such as congestion management and environmental sustainability.

Action 7.A: Participation in Regional Planning. Actively participate in regional transportation planning programs, including programs coordinated by the Metropolitan Transportation Commission and the Alameda County Congestion Management Agency.

Action 7.B: Intergovernmental Coordination. Coordinate local transportation improvements with the City of Oakland, Alameda County, Caltrans, and local transit agencies.

Goal 8: Traffic Flow. Maintain a road network that allows convenient, safe travel in and around Piedmont while minimizing negative impacts on adjacent uses.

Policy 8.2: Development-Related Improvements. When new development is proposed, require the improvements necessary to ensure that satisfactory operating conditions are maintained on adjacent roads. However, widening roads to increase their capacity is generally discouraged.

Policy 8.8: Traffic Planning With Oakland. Work collaboratively with the City of Oakland to address projected 25-year increases in congestion on Grand, Moraga, and Oakland Avenues, and to coordinate any planned improvements or changes to these streets.

Action 8C: Traffic Studies for New Development. Require traffic studies for development (including changes in the use of an existing structure) that may generate substantial increases in traffic volumes or otherwise impact traffic patterns.

Goal 9: Public Transit and Carpooling. Provide safe, reliable, convenient alternatives to driving as a means of travel to other Bay Area cities.

Policy 9.1: Accessible Transit. Strongly support the provision of safe, reliable, convenient public transportation service that is accessible to all Piedmont neighborhoods. AC Transit should be responsive to input from Piedmont residents and should increase service frequency to Piedmont as funds permit.

Policy 9.5: Transit Amenities Encourage amenities that make bus travel a more appealing alternative to driving. These could include bus shelters and bus stops with real-time information on bus arrival times.

Goal 10: Walking and Bicycling. Encourage walking and bicycling as viable modes of transportation for traveling within Piedmont.

Policy 10.1: Sidewalks. Maintain a system of well-maintained and connected sidewalks to accommodate safe pedestrian travel in and around Piedmont.

Policy 10.5: Bicycle Infrastructure. Expand the "infrastructure" necessary to accommodate bicycle travel, including bike racks in parks, at schools, and at public buildings, and adequate space for bicycle storage in residential garages.

Goal 11: Parking. Minimize parking conflicts on Piedmont streets.

Policy 11.1: Off-Street Parking Standards. Maintain off-street parking requirements for new development—including the addition of bedrooms to existing residences—that minimize increases in on-street parking. At the same time, consider modifications to the parking standards which recognize factors such as proximity to major bus lines, incentives for hybrid or electric vehicles, allowances for bicycles, and other measures which discourage driving. These modifications could include allowing smaller parking spaces under appropriate conditions.

Policy 11.2: Residential Permit Parking. Use residential permit parking as needed in areas where parking demand exceeds supply, such as the Piedmont Civic Center and the casual carpool areas.

Policy 11.4: Shared Parking. Encourage the use of shared parking facilities that accommodate different uses at different times of day.

Goal 12: Safe Streets. Ensure the safety of pedestrians, bicyclists, and motorists on Piedmont streets.

Policy 12.2: Maintaining Sight Lines. Maintain visibility and clear sight lines at intersections and driveways. Trim vegetation and remove other obstructions as needed to ensure roadway safety.

Policy 12.3: Emergency Vehicle Access. Provide adequate access for emergency vehicles on Piedmont streets.

Piedmont Safer Streets Plan

The PSS Plan is the update to the City of Piedmont's 2014 *Piedmont Pedestrian and Bicycle Master Plan* (PBMP). The PSS Plan has an additional focus on general traffic safety.

The objectives of the PSS Plan include determining changes in the community's needs and concerns regarding walking, bicycling and general traffic safety. Top recommended projects include:

- Enhanced street crossings at key locations
- Designated citywide bikeway network
- Highland Avenue reconfiguration study
- Neighborhood traffic calming program

Additional recommendations from the PSS Plan include:

- Adopting a Vision Zero policy
- Promoting and supporting community-based traffic safety campaigns
- Creating an online "fix-it" request form
- Creating a GIS data portal
- Adopting a transportation demand management program (TDM)
- Updating the Piedmont Safer Streets Plan every five years

Piedmont Complete Streets Policy

The Piedmont City Council adopted a Complete Streets policy (Resolution 106-12) in November 2012, to guide future street planning, funding, design, and maintenance. "Complete Streets" describes a comprehensive, integrated transportation network with infrastructure and design that allows safe, attractive, and convenient travel along and across streets for all users, including pedestrians, bicyclists, persons with disabilities, motorists, movers of commercial goods, users and operators of public transportation, emergency vehicles, seniors, children, youth, and families. According to the Policy, the City's is committed to "fund, design, construct, operate, and maintain its transportation system and facilities so that they are safe and convenient for all users and modes, as appropriate to the function and context of each facility, and in ways that reflect local conditions and community values." The City intends to implement the policy by training staff; reviewing and, as necessary, updating street-design standards and other practices; developing implementation tools (such as designating a network of bicycle facilities); monitoring progress; and engaging the public and other stakeholders.

Piedmont Policy for Analyzing VMT Impact under CEQA

The Piedmont City Council adopted the Policy for Analyzing VMT Impact under CEQA (Resolution 33-2023) in May 2023, to address the following consist with SB 743 and OPR's *Technical Advisory on Evaluating Transportation Impacts in CEQA*:

1. Criteria for screening to identify projects that can be expected to cause a less than significant impact without conducting a detailed evaluation
2. The methodology for estimating the VMT for projects that do not meet any of the screening criteria
3. VMT-based transportation thresholds of significance
4. Options for identifying mitigation measures and quantifying their effectiveness

These items, as they apply to the proposed project, are described below.

4.14.3 Impact Analysis

a. Methodology and Significance Thresholds

Traffic Impact Assessment under CEQA

State law has changed with respect to how transportation-related impacts may be addressed under CEQA. Traditionally, lead agencies used Level of Service (LOS) to assess the significance of such

impacts, with greater levels of congestion considered to be more significant than lesser levels. Mitigation measures typically took the form of capacity-increasing improvements, which often had their own secondary environmental impacts (e.g., to biological and cultural resources). Depending on circumstances, and an agency's tolerance for congestion (e.g., as reflected in its general plan), LOS D, E, or F often represented significant environmental effects. As described above, in 2013, however, the Legislature passed legislation to ultimately do away with LOS in most instances as a basis for environmental analysis under CEQA.

As introduced in Section 4.14.2., *Regulatory Setting*, above, PRC section 21099(b)(1) enacted as part of SB 743, directed OPR to prepare, develop, and transmit to the Secretary of the Natural Resources Agency for certification and adoption proposed CEQA Guidelines addressing "criteria for determining the significance of transportation impacts of projects within transit priority areas. Those criteria shall promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses. In developing the criteria, [OPR] shall recommend potential metrics to measure transportation impacts that may include, but are not limited to, vehicle miles traveled, vehicle miles traveled per capita, automobile trip generation rates, or automobile trips generated. The office may also establish criteria for models used to analyze transportation impacts to ensure the models are accurate, reliable, and consistent with the intent of this section."

PRC section 21099(b)(2) further provides that "[u]pon certification of the guidelines by the Secretary of the Natural Resources Agency pursuant to this section, automobile delay, as described solely by level of service or similar measures of vehicular capacity or traffic congestion, shall not be considered a significant impact on the environment pursuant to [CEQA], except in locations specifically identified in the guidelines, if any."

Pursuant to SB 743, the Natural Resources Agency promulgated CEQA Guidelines section 15064.3 in late 2018. It became effective in early 2019. Subdivision (a) of that section provides that "[g]enerally, vehicle miles traveled is the most appropriate measure of transportation impacts. For the purposes of this section, 'vehicle miles traveled' refers to the amount and distance of automobile travel attributable to a project. Other relevant considerations may include the effects of the project on transit and non-motorized travel. Except as provided in subdivision (b)(2) [regarding roadway capacity], a project's effect on automobile delay shall not constitute a significant environmental impact." Therefore, lead agencies can no longer rely on LOS or similar measures of delay or congestion to identify significant impacts on transportation in CEQA documents. The Policy for Analyzing VMT Impact under CEQA, adopted in May 2023 by the Piedmont City Council, is consistent with SB 743 and CEQA Guidelines section 15064.3 in establishing the City's methodology and thresholds in using VMT to identify impacts on transportation in CEQA documents.

Significance Thresholds

Consistent with the State CEQA Guidelines, impacts related to transportation and circulation would be considered potentially significant if development facilitated by the proposed Housing Element Implementation project, including development pursuant to a Moraga Canyon Specific Plan (Housing Element Implementation Program 1.L), would result in any of the following:

1. Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, and bicycle and pedestrian facilities;

2. Conflict or be inconsistent with CEQA Guidelines Section 15064.3, Subdivision (b)[2];
3. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment); or,
4. Result in inadequate emergency access.

Significance Criteria

Consistent with the City of Piedmont's adopted Policy for Analyzing VMT Impact under CEQA (Policy), the following threshold is used to determine if the proposed project would have a significant impact on VMT (Significance threshold #2):

- A residential project's VMT impact is considered less than significant if its home-based VMT per resident is at least 15 percent below the regional average home-based VMT per resident.

The City of Piedmont's adopted Policy also provides the following screening thresholds applicable to residential developments that can be used to identify projects that can be expected to cause a less than significant impact without conducting a detailed evaluation:

- **Small Projects**: Projects expected to generate or attract fewer than 110 car trips per day.
- **High-Quality Transit Corridor:** Projects proposed within 0.25 mile of a bus stop serving a bus line with service intervals generally no longer than 15 minutes during typical peak commute hours. (As of June 2023, the only such line serving Piedmont and surrounding areas is AC Transit Local Line 33 operating along Highland Way, Highland Avenue between Highland Way and Oakland Avenue, Oakland Avenue between Highland Avenue and City of Oakland boundary, and Park Boulevard along the City boundary; however, bus routes and schedules may change over time.)
- **Affordable Residential Development**: Residential projects that contain 100 percent affordable housing.

b. Project Impacts and Mitigation

Threshold 1:	Would the project conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, and bicycle and pedestrian facilities?

Impact T-1 THE PROPOSED PROJECT WOULD NOT CONFLICT WITH A PROGRAM, PLAN, ORDINANCE, OR POLICY ADDRESSING THE CIRCULATION SYSTEM, INCLUDING TRANSIT, ROADWAY, AND BICYCLE AND PEDESTRIAN FACILITIES. THIS IMPACT WOULD BE LESS THAN SIGNIFICANT.

Citywide Housing Element Implementation

Implementation of the proposed project would be subject to and required to implement the existing and proposed General Plan policies applicable to the circulation system including transit, roadway, bicycle, and pedestrian facilities. Additionally, development projects facilitated by the proposed project would be subject to applicable existing and proposed City guidelines, standards, and specifications related to transit, roadway, bicycle, or pedestrian facilities.

Modifications to or new transit, roadway, bicycle, and pedestrian facilities would be subject to and designed in accordance with applicable General Plan policies, including new General Plan

[2] CEQA Guidelines Section 15064.3, subdivision (b) refers to the discontinuation of vehicle LOS as an impact metric for transportation analysis and instead recommends the use of VMT; this section gives lead agencies discretion to choose the most appropriate methodology to evaluate a project's VMT.

transportation policies developed as part of the proposed project. In particular, General Plan Policy 7.1 (Balancing Travel Modes) encourages balancing the needs of various travel modes, discouraging the use of single-passenger autos, and encouraging other modes of travel. Policy 7.4 (Synchronizing Land Use and Transportation Decisions) ensures the coordination of City of Piedmont's land use decisions with the most efficient use of the city's transportation system. Policy 8.2 (Development-Related Improvements) requires improvements necessary for operations and maintenance of adjacent roadways, while discouraging roadway widenings. Policy 8.8 (Traffic Planning with Oakland) requires collaboration with the City of Oakland to address congestion increases on the streets that connect the two Cities. Action 8C (Traffic Studies for New Development) requires traffic studies for new developments that increase traffic volumes. Policy 9.1 (Accessible Transit) calls for provision of safe, reliable, and convenient public transportation service that is accessible to all Piedmont neighborhoods. Policy 9.5 (Transit Amenities) calls for the provision of bus shelters and other amenities as part of development in order to make transit accessible and comfortable. Policy 10.1 (Sidewalks) calls for a system of connected and well-maintained sidewalks, and Policy 10.5 (Bicycle Infrastructure) calls for expanding the infrastructure necessary to accommodate bicycle travel, including bicycle parking. Policy 11.1 (Off-Street Parking Standards) encourages off-street parking requirements for new developments that minimize on-street parking while allowing fewer off-street parking spaces or smaller parking spaces where appropriate. Finally, Policy 12.2 (Maintaining Sight Lines) requires maintaining appropriate sight lines at intersections and driveways.

Based on the identified sites list, which is described in Section 2, *Project Description*, and shown on Figure 2-4, about 82 percent of the identified new housing units facilitated by the proposed Housing Element Implementation project can be accommodated in parcels along the City's arterials and collectors. Thus, the proposed project is consistent with the General Plan policies described above by facilitating the development of new housing with relatively higher densities mostly along the City's arterials and collectors, which provide better access to existing and proposed transit service, as well pedestrian and bicycle facilities, than the rest of the City. In addition to sites identified in the sites list, 200 accessory dwelling units (ADUs) throughout Piedmont. ADU development is statutorily exempt from CEQA pursuant to State law.

The proposed project is also consistent with Policy 7.3 (Reducing Vehicle Miles Traveled), which supports changes that reduce VMT, by reducing the average home-based VMT per resident in the City of Piedmont as described under Impact T-2 discussion below.

The proposed project is also consistent with the 2021 *PSS Plan* because the proposed project does not include modifications to the public right-of-way, and therefore, would not preclude the installation of the planned or proposed pedestrian, bicycle, and safety improvements on the streets within the City of Piedmont.

The proposed project is also consistent with the 2021 *Piedmont Climate Action Plan* because the proposed project is estimated to reduce the home-based VMT per resident and the associated GHG emissions in the City of Piedmont, as described later in this section.

Therefore, the proposed Housing Element Implementation project, including development pursuant to an adopted Moraga Canyon Specific Plan, would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, and bicycle and pedestrian facilities.

Moraga Canyon Specific Plan

The analysis for the proposed citywide Housing Element Implementation above applies to the Moraga Canyon Specific Plan (MCSP) Area. The MCSP would not conflict with policies applicable to transit, roadway, bicycle, and pedestrian facilities and service. Currently, no bus transit service is provided along the segment of Moraga Avenue within the MCSP. Provision of additional residential development along the Moraga Avenue corridor would not conflict with policies applicable to transit but could also incentivize future bus service along the corridor because higher density development can increase bus ridership and make provision of bus service along the corridor more attractive. Existing pedestrian and bicycle facilities in the MCSP consist of a sidewalk on the north side of the corridor west of Red Rock Road, a bike lane on eastbound Moraga Avenue east of Red Rock Road, and an informal path through Blair Park. One of the goals of the MCSP is to improve bicycle and pedestrian connectivity in the plan area. Thus, potential modifications in the public right-of-way would benefit bicyclists and pedestrians and would therefore not conflict with policies applicable to bicycle and pedestrian facilities and service. Additionally, the MCSP would be designed not to conflict with applicable City of Piedmont guidelines, standards, and specifications related to transit, roadway, bicycle, or pedestrian facilities. Therefore, the proposed MCSP would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, and bicycle and pedestrian facilities.

Mitigation Measures

This impact from development facilitated by the proposed Housing Element Implementation project, including development pursuant to an adopted MCSP, would be less than significant without mitigation. No mitigation measures are required.

Threshold 2:	Would the project conflict or be inconsistent with CEQA Guidelines Section 15064.3, Subdivision (b)?

Impact T-2 THE PROPOSED PROJECT WOULD RESULT IN HOME-BASED VMT PER RESIDENT FOR THE CITY OF PIEDMONT THAT IS HIGHER THAN 15 PERCENT BELOW THE REGIONAL AVERAGE HOME-BASED VMT PER RESIDENT. THIS IMPACT WOULD BE SIGNIFICANT AND UNAVOIDABLE.

Citywide Housing Element Implementation

A discussion of applicability of screening thresholds to the proposed project, followed by an estimation of the VMT generated by the proposed project, is provided below.

Screening Thresholds

The applicability of the City of Piedmont's screening thresholds to the proposed project are described below.

- **Small Projects**: Although it is possible that particular housing developments completed under the proposed project would generate fewer than 110 automobile trips per day (corresponding to approximately 15 to 20 multi-family residential units), this screening threshold would be applied as a part of the individual project review and is not applicable to the proposed project (i.e., the Housing Element Implementation Project) as a whole.

- **High-Quality Transit Corridor*:*** As of June 2023, AC Transit Local Line 33 operating along Highland Way, Highland Avenue between Highland Way and Oakland Avenue, Oakland Avenue between Highland Avenue and City of Oakland boundary, and Park Boulevard along the City boundary is the only High-Quality Transit Corridor in the City of Piedmont. The Housing Element Sites Inventory, as described in Section 2, *Project Description*, identifies several potential development sites within 0.25 mile of the existing bus stops along this corridor. Thus, it is possible that individual housing developments completed under the proposed project would satisfy this screening test. However, this screening threshold would be applied as part of the individual project review and is not applicable to the proposed project (i.e., the Housing Element Implementation Project) as a whole.
- **Affordable Residential Development**: The particular housing developments completed under the proposed project can be 100 percent affordable housing, which may satisfy this screening test. However, since the proposed project also facilitates market-rate housing, this screening threshold is not applicable to the proposed project as a whole.

Although individual housing developments built pursuant to the proposed project may meet one or more of the screening thresholds described above, the proposed project as a whole would not meet any of these screening thresholds. Therefore, a detailed analysis of VMT is required, which is described below.

Detailed VMT Estimation

Consistent with the guidance provided in the City of Piedmont's adopted Policy for Analyzing VMT Impact under CEQA (Policy), the following analysis uses the Alameda CTC Model to estimate the home-based VMT per resident generated by the development facilitated by the proposed project under 2031 (project buildout) and 2040 (cumulative) conditions.

Travel demand models represent neighborhoods in TAZs. The Alameda CTC Model includes 6 TAZs in the City of Piedmont. TAZs are used in transportation planning models for transportation analysis and other planning purposes.

The Alameda CTC Model uses various socio-economic variables, such as number of households and residents by household type and income, as well as number of jobs by employment category at a TAZ level, and transportation system assumptions such as roadway type, number of lanes, major bicycle and pedestrian facilities, and transit service capacity and frequency, to forecast various travel characteristics, such as daily and peak-hour travel volumes and VMT.

The Alameda CTC Model uses a four-step modeling process that consists of trip generation, trip distribution, mode split, and trip assignment. This process accounts for changes in travel patterns due to future growth and expected changes in the transportation network.

The Alameda CTC Model assigns all predicted trips within, across, to, or from the nine-county San Francisco Bay Area region to the roadway network and transit system by mode (i.e., single-occupant or carpool vehicle, biking, walking, or transit) and transit carrier (i.e., bus or rail) for a given scenario. The VMT generated by each TAZ can be estimated by tracking the number of trips and the length of each trip generated by the TAZ. The home-based VMT per resident can be estimated by dividing the total VMT generated by the residential uses in a TAZ by the number of residents in that TAZ.

The Alameda CTC Model version released in May 2019, which is the latest version of the Model and incorporates land use data and transportation network improvements consistent with *Plan Bay Area 2040* (i.e., the region's prior Sustainable Communities Strategy), is used for this EIR. Although MTC

adopted Plan Bay Area 2050 in October 2021, this EIR relies on the version of the Model consistent with Plan Bay Area 2040 because the Alameda CTC has not yet updated the Alameda CTC Model to be consistent with Plan Bay Area 2050.

The Alameda CTC Model is used to develop VMT estimates for the following scenarios:

- **Baseline (2020) Conditions –** This scenario represents the land uses and transportation network within and outside of the City of Piedmont under 2020 conditions.
- **2040 Plus Project Conditions –** This scenario includes the buildout of the proposed project within the City of Piedmont as described in the Project Description chapter of this EIR and the Plan Bay Area 2040 assumptions for land use growth as incorporated in the Alameda CTC Model for the year 2040 outside of the City of Piedmont. Planned transportation improvements include funded and approved transportation improvements as documented in the Plan Bay Area 2040 and included in the Alameda CTC Travel Demand Model.
- **2031 Plus Project Conditions –** This scenario represents the buildout of the proposed project in the year 2031, which is the established buildout of the proposed Housing Element Implementation project. Since the Alameda CTC Model does not include a year 2031 scenario, the results for the year 2031 are extrapolated based on the Baseline and the 2040 Plus Project conditions.

As a regional planning tool, the Alameda CTC Model was developed through an extensive model validation process. The model is intended to replicate existing vehicular travel behavior (prior to the start of the COVID-19 pandemic) and can provide a reasonable estimate of VMT generated in various geographic areas on a typical weekday. It can also estimate future VMT that reflects planned local and regional land use and transportation system changes. Thus, the Alameda CTC Model was used to estimate the home-based VMT per resident generated by development under the proposed project under 2040 conditions and extrapolated for year 2031.

Table 4.14-4 summarizes the home-based VMT per resident for the City of Piedmont and the Bay Area region for 2020, 2031, and 2040. The table also includes the threshold used to determine the significance of the VMT impact, defined as 15 percent below the Bay Area regional baseline average, which is the threshold used to determine the significance of the VMT impact.

Table 4.14-4 Vehicle Miles Traveled (VMT) Analysis Summary

	Home-Based VMT Per Resident[1]		
Geographic Area	**2020 No Project**	**2031 Plus Project**	**2040 Plus Project**
City of Piedmont [2]	18.8	17.8	17.1
Bay Area Regional Baseline (2020) Average	19.8	19.8	19.8
15% below the Bay Area Regional Baseline Average (i.e., threshold of significance)	16.8	16.8	16.8
Significant Impact?		**Yes**	**Yes**

[1.] Total home-based VMT per resident based on the results of the Alameda CTC Countywide Travel Demand Model for the year 2020 and 2040 and extrapolated for the year 2031.

[2.] City of Piedmont consists of TAZs 455 thru 460.

Source: Fehr & Peers based on the results of the Alameda CTC Travel Demand Model, 2023.

As shown in Table 4.14-4, the proposed project is estimated to reduce the home-based VMT per resident in the City of Piedmont by about 5 percent to 17.8 in 2031 and 9 percent to 17.1 in 2040 compared to the Baseline (2020 No Project scenario) home-based VMT per resident of 18.8. Although reducing VMT per capita is generally beneficial, the citywide home-based VMT per resident in 2031 and 2040 plus the proposed project would remain above the threshold of significance of 16.8 (i.e., 15 percent below the Bay Area Regional Baseline (2020) average home-based VMT per resident). Therefore, this impact is potentially significant.

The proposed project involves amendments to the City's General Plan Transportation Element to add the following new proposed policy:

> **Vehicle Miles Traveled (VMT) Analysis and Transportation Demand Management.** Individual housing project developments that do not screen out from VMT impact analysis shall provide a quantitative VMT analysis consistent with the City's adopted Policy for Analyzing VMT Impact under CEQA, and modified as necessary to be consistent with local, regional and/or State thresholds and methodologies.

Development projects that result in significant VMT impacts shall include one-time physical and on-going operational travel demand management (TDM) measures to reduce VMT, including but not limited to the following:

- Limit parking supply.
- Unbundle parking costs (i.e., sell or lease parking separately from the housing unit).
- Provide car sharing, bike sharing, and/or scooter sharing programs.
- Subsidize transit passes.
- Contribution to a VMT mitigation fee program, bank, or exchange.

Adherence to this policy has been identified as potentially VMT reducing in the CAPCOA Handbook and implemented in the Alameda CTC VMT Reduction Calculator Tool.[3] The range of potential VMT reduction are estimated to be:

- **Limit parking supply**. Effectiveness of up to 13.7 percent reduction in GHG from VMT per the CAPCOA Handbook.
- **Unbundle parking costs** (i.e., sell or lease parking separately from the housing unit). Effectiveness of up to 15.7 percent reduction in GHG from VMT per the CAPCOA Handbook.
- **Provide car sharing, bike sharing, and/or scooter sharing programs**. Effectiveness of up to 0.15 to 0.18 percent reduction in GHG from VMT for car share, 0.02 to 0.06 percent for bike share, and 0.07 percent for scooter share, per the CAPCOA Handbook. The higher car share and bike share values are for electric car and bike share programs.
- **Subsidize transit passes**. Effectiveness of up to 5.5 percent reduction in GHG from VMT per the CAPCOA Handbook.

Detailed requirements, calculation steps, and limitations are documented in the CAPCOA Handbook. In addition to the on-site measures noted in the proposed new General Plan policy, individual housing development proposals that are above the VMT threshold could potentially contribute to future VMT mitigation fee programs, banks, or exchanges to decrease overall VMT. No regional, countywide, or local VMT mitigation programs currently exist. If VMT mitigation fee programs are created,

[3] See https://www.alamedactc.org/planning/sb743-vmt/ for more information.

development projects could potentially pay into a fee program or purchase mitigation credits to achieve the needed VMT mitigation instead of, or in addition to, the onsite TDM measures listed in the proposed new General Plan policy.

The application of the proposed new General Plan policy would result in a net VMT reduction of up to 10 percent for development projects in urban-suburban settings such as Piedmont. Thus, it is possible that the implementation of the proposed General Plan policy would reduce the VMT impacts for future developments to a less than significant level. However, since the location, size, and characteristics of individual development projects that would be facilitated by the proposed Housing Element Implementation project, as well as the specific mitigation measures that would be implemented at each of these future developments cannot be known at this time, this analysis cannot determine the effectiveness of the above measures in reducing the proposed project's VMT impact to a less than significant level. Thus, the impact is still potentially significant.

Infill Residential Developments Screening

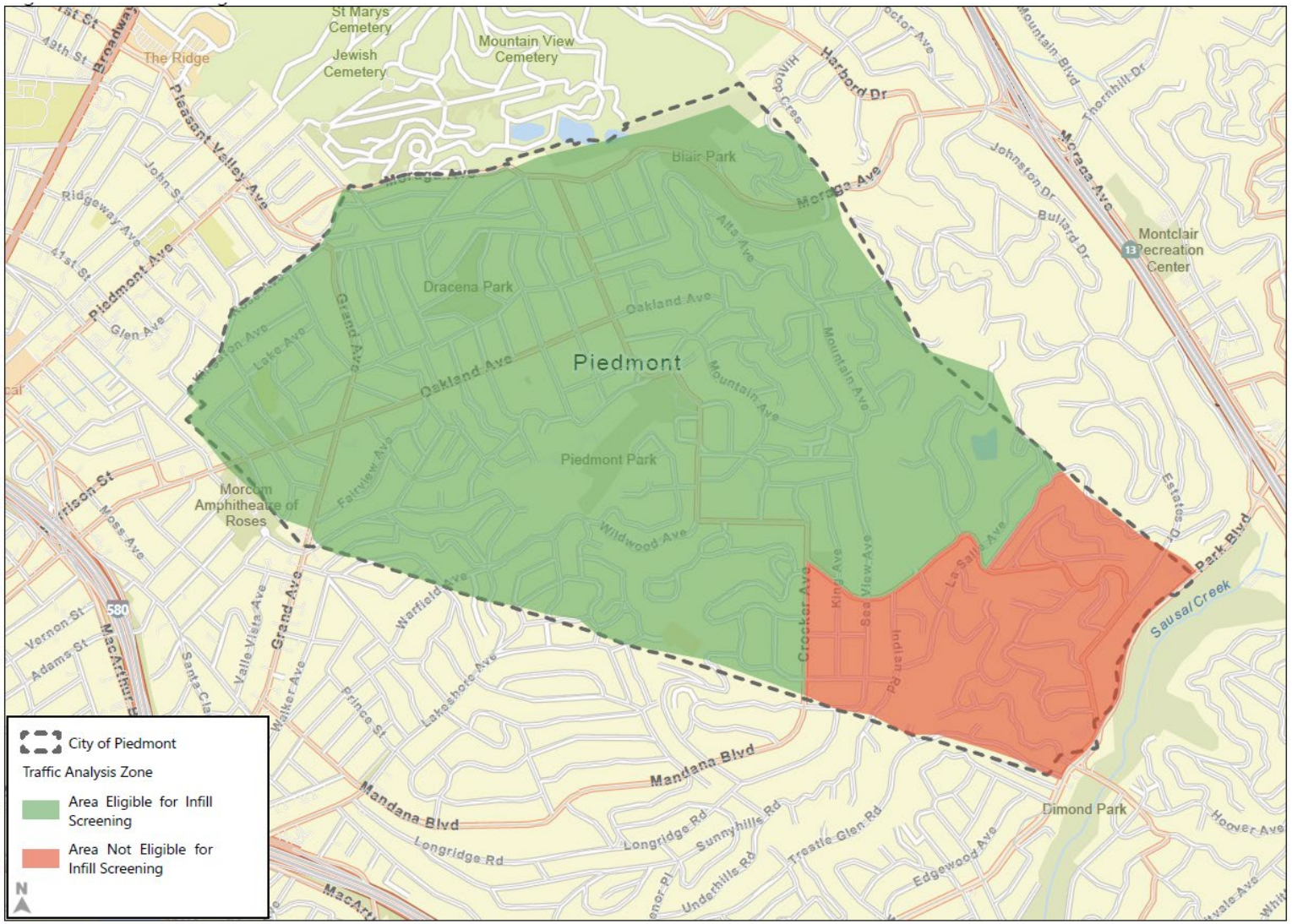
In addition to the screening criteria in the City of Piedmont VMT Policy, the California Air Pollution Control Officers Association (CAPCOA) *Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity* (CAPCOA 2021) is a resource for local agencies to quantify the benefit, in terms of reduced vehicle travel demand, of modifying physical features of the built environment and implementing various operational strategies such as TDM programs. One of the more effective strategies to reduce the VMT generated by developments included in the CAPCOA Handbook is increasing residential densities (Strategy T-1). According to the CAPCOA Handbook, the elasticity of VMT with respect to residential density is -0.22, meaning that a 1 percent increase in development density would reduce VMT by about 0.22 percent. The CAPCOA Handbook also sets a maximum VMT reduction of 30 percent from baseline conditions for this strategy.

As previously described, the Alameda CTC Model includes 6 TAZs in the City of Piedmont. Based on the results of the Alameda CTC Model, and applying the CAPCOA Handbook's increasing residential densities strategy, residential developments with a density of 20 units per acre or higher in 5 of the 6 TAZs in the City of Piedmont would have a home-based VMT per resident below the threshold of significance (i.e., 15 percent below the Bay Area Regional Baseline Average), and therefore, these developments would have a less than significant impact on VMT. Figure 4.14-4 shows the areas of the City where future housing developments with a minimum density of 20 units per acre would have a less than significant impact on VMT.

As shown in Figure 4.14-4, future developments in the southeast area of the City would not meet this criterion because the baseline VMT in this area is more than 30 percent above the threshold of significance and increasing the development density would not reduce VMT to a less than significant level.

Based on the analysis summarized above, this Draft EIR establishes an additional screening threshold that housing developments completed under the proposed project with a density of 20 units per acre or higher in the eligible areas of the City of Piedmont, as shown on Figure 4.14-4, can be assumed to have a less than significant impact on VMT.

Figure 4.14-4 Areas Eligible for Infill Screening



Source:
Fehr & Peers, 2023

VMT Analysis Summary

Although the proposed project as a whole would result in a potentially significant impact, it is likely that some housing developments facilitated by the proposed project would meet one or more of the screening thresholds, such as Small Projects, High-Quality Transit Corridor, Affordable Residential Developments thresholds, and/or Infill Residential Developments as described above. These future housing developments can be presumed to have a less than significant impact on VMT. Other housing developments facilitated by the proposed Housing Element Implementation project would likely require a more detailed analysis of VMT and the results of that analysis may exceed the VMT thresholds. Therefore, the impact of the proposed project as a whole is potentially significant.

Moraga Canyon Specific Plan

The analysis for the proposed citywide Housing Element Implementation above applies to the MCSP Area because the VMT analysis considered the proposed project as a whole, including the MCSP. Likewise, future development projects that would occur within the MCSP area may meet one or more of the screening thresholds if they are 100 percent affordable housing or if they have a minimum density of 20 units per acre. These developments would have a less than significant impact on VMT. However, future development within the MCSP Area may exceed the VMT criteria if they do not meet any of the screening thresholds, because the MCSP Area is one of the areas envisioned for housing that could have high VMT per resident. Therefore, the development pursuant to an adopted MCSP could result in a significant impact related to VMT.

Mitigation Measures

The proposed project involves adding a new policy to the Piedmont General Plan which would require VMT analyses and incorporation of TDM programs for future development projects to reduce VMT. No other feasible mitigation measures beyond these policies and what is required by other existing General Plan policies have been identified.

Significance After Mitigation

It is anticipated that, with adherence to the proposed VMT Analysis and Transportation Demand Management General Transportation Element policy, impacts would be reduced as described under "Citywide Housing Element Implementation." The application of the policy would result in a net VMT reduction of up to 10 percent for development projects in urban-suburban settings such as Piedmont. Thus, it is possible that the implementation of this policy would reduce the VMT impacts for future developments to a less than significant level. However, since the location, size, and characteristics of individual development projects that would be facilitated by the proposed Housing Element Implementation project (including the MCSP), as well as the specific mitigation measures that would be implemented at each of these future developments cannot be known at this time, this analysis cannot determine the effectiveness of the above measures in reducing the proposed project's VMT impact to a less than significant level. Thus, the impact would be significant and unavoidable.

Threshold 3:	**Would the project substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?**

Impact T-3 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). THIS IMPACT WOULD BE LESS THAN SIGNIFICANT.

Citywide Housing Element Implementation

The proposed project does not include modifications to the public right-of-way on streets within the City of Piedmont and would not substantially increase hazards due to a design feature.

The particular location and/or design elements of individual future developments facilitated by the proposed project are not known. Individual future developments would include design elements, such as automobile driveways or sidewalk improvements along project frontage, that may modify the public right-of-way. Each development project would be reviewed and required to be consistent with appropriate regulations and design standards in effect at the time, such as adequate sight lines at new driveways between vehicles entering and exiting the driveways and pedestrians on the adjacent sidewalk, as well as motor vehicles and bicycles on the adjacent street, as required by General Plan Policy 12.2 (Maintaining Sight Lines) and Public Works Standard Details for construction in the public right-of-way.

The proposed project consists of additional residential uses in an area that currently primarily consists of residential uses and related services, such as schools and parks, within the City of Piedmont. Thus, the proposed project would be consistent with the existing uses in the area and would not introduce incompatible uses in the City of Piedmont. Therefore, the proposed Housing Element Implementation project would not cause a significant impact on hazards due to design features or incompatible uses.

Moraga Canyon Specific Plan

The analysis for the citywide Housing Element Implementation above applies to the MCSP Area. Future development pursuant to an adopted MCSP, including new roadway, bicycle, pedestrian, and transit infrastructure improvements, would be subject to, and designed in accordance with City standards and specifications which address potential design hazards including sight distance, driveway placement, and signage and striping. Considering that one of the main goals of the MCSP program is to improve bicycle, pedestrian, and traffic safety, new transportation facilities, or improvements to existing facilities associated with projects, such as new or enhanced pedestrian and bicycle facilities along Morage Avenue, would be constructed based on industry design standards and best practices consistent with the Piedmont City Code (PCC), Public Works Standard Details, and building design and inspection requirements. The PCC's evaluation of projects' access and circulation would incorporate analysis with respect to City standards for service to pedestrians, bicyclists, and transit users. For example, potential new driveways on Moraga Avenue or existing driveways or streets that would serve new development would provide adequate sight distance as required by General Plan Policy 12.2 (Maintaining Sight Lines). Therefore, the MCSP would result in a less than significant impact to transportation hazards.

Mitigation Measures

This impact from development facilitated by the proposed Housing Element Implementation project, including development pursuant to an adopted MCSP, would be less than significant without mitigation. No mitigation measures are required.

Threshold 4: Would the project result in inadequate emergency access?

Impact T-4 THE PROPOSED PROJECT WOULD NOT RESULT IN INADEQUATE EMERGENCY ACCESS. THIS IMPACT WOULD BE LESS THAN SIGNIFICANT.

Citywide Housing Element Implementation

The proposed project does not include modifications to the public right-of-way on the streets within Piedmont and would not affect emergency access in Piedmont. The streets within Piedmont would continue to accommodate fire apparatus and other emergency response vehicles. Thus, existing and future developments in Piedmont would continue to have access from multiple access points. As a result, if one access point were blocked, emergency vehicles can use other access point(s) to reach locations within Piedmont and the surrounding areas. The sites identified in the sites inventory in Chapter 2 and the object of the zoning ordinance changes specified in the amendments to the Land Use Element and other General Plan elements, are primarily located on arterial and collector streets with more than one point of access.

Since the location and design of specific developments facilitated by the proposed project are not known at this time, the individual housing sites cannot be evaluated for adequacy of emergency access at this time. However, the City maintains the roadway network which would provide access to new development sites in accordance with industry design standards, which ensures that the physical network would be free of obstructions to emergency responders. Emergency access to new development sites facilitated by the proposed project would be subject to review by the City of Piedmont and responsible emergency service agencies, thus ensuring that future projects would be designed to meet all emergency access and design standards.

Additional vehicles associated with new development sites could increase delays for emergency response vehicles during peak commute hours. However, emergency responders maintain response plans which include use of alternate routes, sirens, and other methods to bypass congestion and minimize response times. In addition, California law requires drivers to yield the right-of-way to emergency vehicles and remain stopped until the emergency vehicle passes to ensure the safe and timely passage of emergency vehicles.

Additionally, the proposed project includes updates to the General Plan Environmental Hazards Element, including the following proposed new policies:

> **Policy 19.20**: **Emergency Access.** Ensure that the Piedmont Fire Department has complete access to all locations in the City, including gated residential communities and critical infrastructure.
>
> **Policy 19.21**: **Emergency Roadways.** Maintain emergency roadways and improve them as necessary and appropriate to ensure they stay in operation during hazardous events.

With implementation of the updated Environmental Hazards Element policies above, as well as compliance with the applicable emergency access regulations, there would be adequate emergency service and access throughout the City of Piedmont, and the proposed project would not cause a significant impact on emergency access. Note that impacts of the proposed project on emergency evacuations caused by wildfires or other emergencies is addressed in Section 4.17, *Wildfire*, and Appendix I, Emergency Evacuation Time Assessment.

Moraga Canyon Specific Plan

The analysis for the citywide Housing Element Implementation above applies to the MCSP area. Emergency access to new development sites proposed pursuant to an adopted MCSP would be subject to review by the City and responsible emergency service agencies, thus ensuring the projects would be designed to meet all emergency access and design standards. Based on the above considerations, adequate emergency access would be provided to new development sites, and the impact would be less than significant.

Mitigation Measures

This impact from development facilitated by the proposed Housing Element Implementation project, including development pursuant to an adopted MCSP, would be less than significant without mitigation. No mitigation measures are required.

c. Cumulative Impacts

CEQA Guidelines 15130(a) require that the cumulative effect of implementing a project be assessed to determine if the project's incremental effect - together with that of other- would be cumulatively considerable. For the purposes of this analysis, the cumulative setting for thresholds 1, 3, and 4 includes the City of Piedmont, as effects associated with those thresholds tend to occur more locally or citywide, while the cumulative setting for Threshold 2, VMT impacts, includes development associated with the project and Plan Bay Area 2050, the Bay Area's RTP/SCS.

As discussed under Impact T-2, the proposed project would result in a decrease in the average home-based VMT per resident in the years 2031 and 2040 compared to the Baseline (2020) conditions but would exceed the significance threshold of 15 percent below the Bay Area Regional Baseline Average. Therefore, the home-based VMT per resident is also a cumulative impact. The cumulative impact would remain significant and unavoidable.

For Threshold 1, development under the proposed project accounts for cumulative growth in the city during the 2023-2031 Housing Element cycle. Future development would increase transit ridership for AC Transit and BART. However, as described above, based on OPR guidance, when evaluating impacts to multimodal transportation networks, lead agencies generally should not treat the addition to new transit users as an adverse impact. It is also assumed that planned development would follow applicable standards for bicycle and pedestrian access and circulation and bicycle parking such that no cumulative impact with respect to bicycle and pedestrian plans or policies would occur. For thresholds 3 and 4, it is also assumed that development in Piedmont would follow applicable standards and regulations to ensure emergency access and avoid dangerous conditions. Overall, cumulative impacts would be less than significant.

4.15 Tribal Cultural Resources

This section analyzes the potential impacts of the development facilitated by the proposed Housing Element Implementation Project on tribal cultural resources. Tribal cultural resources are those resources identified by California Native American tribes in consultation with lead agencies during tribal consultation (also referred to as Assembly Bill (AB) 52 and Senate Bill (SB) 18 consultation). See Section 4.15.2, *Regulatory Setting*, for a description of AB 52 and its requirements.

4.15.1 Setting

a. Ethnographic Context

The proposed Housing Element Implementation project area lies within the traditional tribal territory of the Ohlone (or Costanoan) people. Ohlone territory extends along the California coast from the point where the San Joaquin and Sacramento Rivers merge into the San Francisco Bay extending to Point Sur. Their inland boundary was limited to the interior Coast Ranges (Kroeber 1925:462). The Ohlone language belongs to the Penutian family, with several distinct dialects throughout the region (Kroeber 1925:462). It is divided into eight regional dialects: Karkin, Chochenyo, Ramaytush, Awaswas, Taymen, Mutsun, Rumsen, and Chalon (Jones 2015)

The pre-contact Ohlone were semi-sedentary, with a settlement system characterized by base camps and seasonal reserve camps composed of tule reed houses with thatched roofs made of matted grass (Schick 1994; Skowronek 1998). Just outside base camps, large sweat houses were built into the ground near stream banks used for spiritual ceremonies and possibly hygiene (Schick 1994, Jones 2015). Villages were divided into small polities, each of which was governed by a chief responsible for settling disputes, acting as a war leader during times of conflict, and supervising economic and ceremonial activities (Skowronek 1998; Kroeber 1925:468). Social organization appeared flexible to ethnographers and any sort of social hierarchy was not apparent to mission priests (Skowronek 1998).

Archaeological investigations inform Ohlone mortuary rituals. Cemeteries were set away from villages and visited during the annual Mourning Anniversary (Leventhal and DiGiuseppe 2009). Ceremonial human grave offerings might include Olivella beads, as well as tools like drills, mortars, pestles, hammerstones, bone awls, and utilized flakes (Leventhal and DiGiuseppe 2009). Ohlone mythology included animal characterization and animism, which was the basis for several creation narratives. Ritually burying of animals, such as a wolf, squirrel, deer, mountain lion, gray fox, elk, badger, grizzly bear, blue goose, and bat ray, was commonly practiced. Similar to human burials, ceremonial offerings were added to ritual animal graves like shell beads, ornaments, and exotic goods (Kroeber 1925; Field and Leventhal 2003; Jones 2010).

Ohlone subsistence strategies were based on hunting, gathering, and fishing (Kroeber 1925:467, Skowronek 1998). Larger animals, like bears, might be avoided, but smaller game was hunted and snared on a regular basis (Schick 1944:17). Like it was for Tribal societies throughout California, the acorn was an important staple and was prepared by leaching acorn meal in openwork baskets and in holes dug into the sand (Kroeber 1925:467). The Ohlone also practiced controlled burning to facilitate plant growth (Kroeber 1925:467, Skowronek 1998). During specific seasons or in times of drought, the reserve camps would be utilized for gathering seasonal food and accessing food storage (Schick 1994). Fishing would be done with nets and gorge hooks out of tule reed canoes (Schick 1994:16-17). Mussels were a particularly important food resource. Sea mammals such as sea lions and seals were hunted and beached whales were exploited (Kroeber 1925:467).

Seven Franciscan missions were built within Ohlone territory in the late 1700s, and all members of the Ohlone group were eventually brought into the mission system (Kroeber 1925:462, Skowronek 1998). After the establishment of the missions, Ohlone population dwindled from roughly 10,000 people in 1770 to 1,300 by 1814 (Skowronek 1998). In 1973, the population of people with Ohlone descent was estimated at fewer than 300. The descendants of the Ohlone united in 1971 and have since arranged political and cultural organizations to revitalize aspects of their culture (Skowronek 1998). Today, the descendant communities of the Ohlone can be found in multiple tribes throughout Northern and Central California.

b. Existing Conditions

The City of Piedmont is responsible for AB 52 and SB 18 consultation as the lead agency. The city sent notification letters on December 9, 2021 to twelve Native American organizations (Amah Mutsun Tribal Band of Mission San Juan Bautista, Costanoan Rumsen Carmel Tribe, Guidiville Indian Rancheria, Indian Canyon Mutsun Band of Costanoan, Muwekma Ohlone Indian Tribe of the SF Bay Area, North Valley Yokuts, Tamien Nation, the Confederated Villages of Lisjan, the Ohlone Indian Tribe, Tule River Indian Tribe, Wilton Rancheria, and the Wuksache Indian Tribe/Eshom Valley Band) who had previously requested formal notice to consult (Tribe or Tribes). The City did not receive any requests for consultation. AB 52 and SB 18 correspondence is included in Appendix H.

4.15.2 Regulatory Setting

a. Federal Regulations

Tribal cultural resources are a category of resource identified by State law; there are no federal regulations pertaining to tribal cultural resources.

b. State Regulations

Assembly Bill 52 of 2014

AB 52 expanded CEQA by defining a new resource category, "Tribal Cultural Resources." AB 52 establishes that "a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment" (Public Resources Code [PRC] Section 21084.2). AB 52 further states when feasible, the lead agency shall establish measures to avoid impacts that would alter the significant characteristics of a tribal cultural resource (PRC Section 21084.3). PRC Section 21074 (a)(1)(A) and (B) defines tribal cultural resources as "sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American Tribe," and meets either of the following criteria:

a. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in PRC Section 5020.1(k).
b. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC Section 5024.1. In applying the criteria set forth in subdivision (c) of PRC Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American Tribe.

In recognition of California Native American sovereignty and the unique relationship of California local governments and public agencies with California Native American tribal governments and with respect to the interests and roles of project proponents, it is the intent AB 52 to accomplish all of the following:

1. Recognize that California Native American prehistoric, historic, archaeological, cultural, and sacred places are essential elements in tribal cultural traditions, heritages, and identities.
2. Establish a new category of resources in CEQA called "tribal cultural resources" that considers the tribal cultural values in addition to the scientific and archaeological values when determining impacts and mitigation.
3. Establish examples of mitigation measures for tribal cultural resources that uphold the existing mitigation preference for historical and archaeological resources of preservation in place, if feasible.
4. Recognize that California Native American Tribes may have expertise with regard to their tribal history and practices, which concern the tribal cultural resources with which they are traditionally and culturally affiliated (because CEQA calls for a sufficient degree of analysis, tribal knowledge about the land and tribal cultural resources at issue should be included in environmental assessments for projects that may have a significant impact on those resources).
5. In recognition of their governmental status, establish a meaningful consultation process between California Native American tribal governments and lead agencies, respecting the interests and roles of all California Native American tribes and project proponents, and the level of required confidentiality concerning tribal cultural resources, early in the CEQA environmental review process, so that tribal cultural resources can be identified, and culturally appropriate mitigation and mitigation monitoring programs can be considered by the decision-making body of the lead agency.
6. Recognize the unique history of California Native American Tribes and uphold existing rights of all California Native American Tribes to participate in, and contribute their knowledge to, the environmental review process pursuant to CEQA.
7. Ensure that local and tribal governments, public agencies, and project proponents have information available, early in CEQA environmental review process, for purposes of identifying and addressing potential adverse impacts to tribal cultural resources and to reduce the potential for delay and conflicts in the environmental review process.
8. Enable California Native American Tribes to manage and accept conveyances of, and act as caretakers of, tribal cultural resources.
9. Establish that a substantial adverse change to a tribal cultural resource has a significant effect on the environment.

AB 52 also establishes a formal consultation process for California Tribes regarding those resources. The consultation process must be completed before a CEQA document can be certified or adopted. AB 52 requires that lead agencies "begin consultation with a California Native American Tribe that is traditionally and culturally affiliated with the geographic area of the proposed project." Native American Tribes to be included in the process are those that have requested notice of projects proposed in the jurisdiction of the lead agency.

Senate Bill 18

SB 18 of 2004 (California Government Code §65352.3) requires local governments to contact, refer plans to, and consult with tribal organizations prior to making a decision to adopt or amend a General Plan or specific plan. The tribal organizations eligible to consult have traditional lands in a local government's jurisdiction and are identified, upon request, by the Native American Heritage Commission (NAHC). As noted in the California Office of Planning and Research's Tribal Consultation Guidelines (2005), "The intent of SB 18 is to provide California Native American Tribes an opportunity to participate in local land use decisions at an early planning stage, for the purpose of protecting, or mitigating impacts to, cultural places."

Senate Bill 35 and Assembly Bill 168

Enacted on September 29, 2017, SB 35 (California Government Code Section 65913.41) grants a ministerial approval process that expedites and facilitates construction of affordable housing projects without normal CEQA documentation. However, in May 2021, Assembly Bill 168 (AB 168), an act to amend Sections 65400, 65913.4, and 65941.1 of SB 35, was passed. AB 168 requires a pre-consultation process with Native American Tribes to identify and protect tribal cultural resources prior to the submission of an SB 35 permit for a housing development.

4.15.3 Impact Analysis

a. Significance Thresholds

Appendix G of the *CEQA Guidelines* identifies the following criteria for determining whether a project's impacts would have a significant impact to tribal cultural resources:

1. Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe, and that is:
    a. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or
    b. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code section 5024.1, the lead agency shall consider the significance of the resource to a California Native American Tribe.

b. Project Impacts and Mitigation

The proposed project involves implementation of the 2023-2031 Housing Element (including revisions to the General Plan Land Use Element, revisions to the PCC, and the Moraga Canyon Specific Plan) as well as an updates to the General Plan Transportation Element, Environmental Hazards Element, Natural Resources and Sustainability Element, Design and Preservation Element, Community Services and Facilities Element, and Parks, Recreation and Open Space Element. The updates to the General Plan elements themselves would not result in physical changes to the environment such that impacts related to tribal cultural resources would occur. Therefore, this analysis focuses on impacts associated

with development facilitated by the implementation of the proposed Housing Element and revisions to the PCC and MCSP.

Threshold 1a:	Would the project cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code Section 21074 that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)?
Threshold 1b:	Would the project cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code Section 21074 that is a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1?

Impact TCR-1 FUTURE DEVELOPMENT FACILITATED BY THE PROPOSED PROJECT COULD SIGNIFICANTLY IMPACT PREVIOUSLY UNIDENTIFIED TRIBAL CULTURAL RESOURCES. HOWEVER, WITH ADHERENCE TO EXISTING REGULATIONS AND THE PROPOSED NEW GENERAL PLAN DESIGN AND PRESERVATION ELEMENT POLICY REGARDING THE TREATMENT OF TRIBAL CULTURAL RESOURCES, IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Citywide Housing Element Implementation

As part of its tribal cultural resources identification process under AB 52 and SB 18, the City of Piedmont sent letters via certified mail to twelve Native American Tribes that had previously requested to be informed through formal notification of proposed projects in the geographic area that is traditionally and culturally affiliated with the Tribes. The Tribal Chair of the Confederated Villages of Lisjan Tribe reached out to request more information on the project site and the Sacred Land File (SLF) results, and the information was provided. However, to date, the City has not received responses requesting additional consultation under AB 52 or SB 18. The City of Piedmont also requested a review of the SLF by the NAHC and received a response on November 21, 2021, indicating that the search of the SLF was negative.

AB 52 consultation has not identified known tribal cultural resources in the proposed project area as part of this analysis and the SLF results received from the NAHC were negative for Sacred Lands. Nonetheless, ground-disturbing activities associated with individual development projects facilitated by the proposed Housing Element Implementation project could expose previously unidentified subsurface archaeological resources that may qualify as tribal cultural resources and could be adversely affected by construction.

Adherence to the requirements of AB 52 would require Tribal consultation with local California Native American Tribes prior to implementation of project activities subject to CEQA or SB 35. In compliance with AB 52, a determination of whether project-specific substantial adverse effects on tribal cultural resources would occur along with identification of appropriate project-specific avoidance, minimization, or mitigation measures would be required. Although no tribal cultural resources were identified during consultation for the proposed project, due to the programmatic nature of the proposed project it is not possible to fully determine impacts of specific projects on specific future development sites. Effects on tribal cultural resources can only be known once a specific project has been proposed, because the effects are dependent on both the individual project site conditions and the characteristics of the proposed activity.

Future development associated with the proposed project would adhere to the current goals and policies listed in the Piedmont General Plan. In addition, as part of the proposed Housing Element Implementation project, the Design and Preservation Element of the Piedmont General Plan would be amended to include new a new policy that specifically address the protection of tribal cultural resources. The proposed policy includes:

> **Tribal Cultural Resources.** For future projects that are determined through tribal consultation to potentially affect tribal cultural resources, in order to mitigate potential adverse impacts to Native American cultural objects and human remains discovered during construction, project proponents shall retain tribal cultural monitors to monitor work done in areas of Tribal concern, as determined through tribal consultation. In the event that Native American cultural objects and/or human remains are discovered during construction, all earth-disturbing work in the vicinity of the find shall be temporarily suspended or redirected until an archaeologist meeting the Professional Qualifications Standards of the Secretary of the Interior (36 CFR Part 61) has evaluated the nature and significance of the find as a cultural resource and an appropriate local Native American representative is consulted.
>
> If the City, in consultation with local Native Americans, determines that the resource is a tribal cultural resource and thus significant under CEQA, a mitigation plan shall be prepared and implemented in accordance with State guidelines and in consultation with local Native American Tribes and group(s). The mitigation plan shall include avoidance of the resource or, if avoidance of the resource is infeasible, the plan shall outline the appropriate treatment of the resource in coordination with the appropriate local Native American Tribe and tribal representative and, if applicable, a qualified archaeologist.

Future projects subject to CEQA and SB 35 would require project-specific tribal cultural resource identification and consultation, and the appropriate avoidance, minimization, or mitigation would be incorporated. In addition, future development would be subject to the proposed new General Plan policy listed above, as well as the proposed General Plan policy for the treatment of other cultural resources as discussed in Section 4.4, *Cultural Resources,* Therefore, this impact would be less than significant.

Moraga Canyon Specific Plan

Similar to the analysis above, no tribal cultural resources were identified during AB 52 or SB 18 consultation for the proposed Housing Element Implementation project, which includes the MCSP Area. Future adoption of the proposed MCSP would be subject to SB 18 and likely would be subject to AB 52. Therefore, the City would also comply with tribal cultural resource consultation requirements when the MCSP is considered for adoption and implemented. In addition, future development under the MCSP would be required to adhere to existing and proposed General Plan policies regarding the treatment of cultural resources and tribal cultural resources. Therefore, this impact would be less than significant.

Mitigation Measures

This impact would be less than significant with implementation of the proposed new policy in the General Plan Design and Preservation Element which is proposed as part of the project. Mitigation measures would not be required.

c. Cumulative Impacts

Cumulative development in the region would continue to disturb areas with the potential to contain tribal cultural resources. Impacts to these resources would most likely be mitigated on a project-by-project basis. However, permanent losses of tribal cultural resources would have a potentially significant cumulative impact. As described under Impact TCR-1, adoption of amendments to the Design and Preservation Element of the General Plan and implementation a new Tribal Cultural Resources policy would avoid the potential of the proposed project to impact previously unidentified tribal cultural resources located in the city. Amendments to the Design and Preservation Element described in the Impact TCR-1, above, would ensure that project-level impacts to unknown tribal cultural resources are adequately mitigated. Therefore, the project's contribution to cumulative impacts to tribal cultural resources would not be cumulatively considerable.

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4.16 Utilities and Service Systems

This section analyzes the effects of the proposed Housing Element Implementation project, including the Moraga Canyon Specific Plan (MCSP), on utilities and service systems. It considers potential impacts with respect to water supply and infrastructure, wastewater conveyance and treatment facilities, stormwater and drainage facilities, solid waste disposal, and electricity, natural gas, and telecommunications facilities.

4.16.1 Setting

The following section describes the existing setting with respect to water suppliers, wastewater treatment providers, stormwater drainage facilities, solid waste facilities, electricity and natural gas providers, and telecommunications facilities serving Piedmont.

a. Water Supply

Water Service

Water service to the City of Piedmont is provided by the East Bay Municipal Utility District (EBMUD), a privately owned utility. EBMUD is responsible for service connections and water delivery to most of Alameda County and much of Contra Costa County. Approximately 1.4 million people are currently served by EBMUD's water system in a 332-square mile area extending from Crockett on the north, southward to San Lorenzo and portions of Hayward (encompassing the major cities of Oakland and Berkeley), eastward from San Francisco Bay to Walnut Creek, and south through the San Ramon Valley (including Alamo, Danville, and San Ramon).

Approximately 90 percent of the EBMUD water supply originates from the melting snowpack of the Sierra Nevada. The principal water source is the Mokelumne River watershed, a 575-square mile area located in Alpine, Amador, and Calaveras Counties. Water is stored in reservoirs in the Sierra foothills and is transported by aqueduct to filter plants and reservoirs in the East Bay Hills. The other 10 percent of the EBMUD's water comes from runoff on protected East Bay Area watershed lands (EBMUD 2020a). The water is treated at one of six water treatment plants (WTP) before delivery to customers.

EBMUD has water rights to 325 million gallons per day (MGD) from the Mokelumne River, subject to the availability of Mokelumne River runoff and numerous flow release obligations. EBMUD's Mokelumne River flow commitments are determined by hydrology, water right priorities, agreements with state and federal regulatory agencies, California State Water Resources Control Board (SWRCB) orders and decisions, federal directives, court decrees, and numerous agreements between EBMUD and other Mokelumne River users, both upstream and downstream of EBMUD's Mokelumne River facilities (EBMUD 2020a).

EBMUD's secondary water supply comes from local runoff from the East Bay area watersheds, which is stored in the terminal reservoirs within EBMUD's service area. Water from local runoff is dependent on hydrologic conditions and terminal reservoir storage availability. Local runoff supplies the East Bay, on average of 23 MGD during normal hydrologic years.

Demand Management and Water Conservation

Northern California's water resources, including EBMUD's supplies, have been stressed by periodic drought cycles. Historical multi-year droughts have significantly diminished the supplies of water available to EBMUD's customers. During the early stages of a drought and throughout a drought period, EBMUD imposes drought management programs to reduce customer demands, thereby saving water for the following year in case drought conditions continue. EBMUD has established a goal of reducing water use by 20 percent district-wide (EBMUD 2020b).

EBMUD completed development of a revised Water Supply Management Program (WSMP) 2040 in April of 2012, which is the District's plan for providing water to its customers through 2040. According to the WSMP, EBMUD's water supplies are estimated to be sufficient during the planning period (2010-2040) in normal and single dry years. The WSMP 2040 emphasizes maximum conservation and recycling, with a total of 50 mgd of future supply to be provided from those two strategies. EBMUD's 2020 Urban Water Management Plan (UWMP), which is required to be updated every five years, concludes that EBMUD has, and will have, adequate water supplies to serve existing and projected demand within the Ultimate Service Boundary during normal and wet years, but that deficits are projected for multi-year droughts. During multi-year droughts, EBMUD may require significant customer water use reductions and may also need to acquire supplemental supplies to meet customer demand. However, potential supplemental water supply projects that could be implemented to meet projected long-term water supplemental need during multi-year drought periods are also in the planning phases. Supplemental supply will also be needed to reduce the degree of rationing and to meet the need for water in drought years.

Water Distribution

EBMUD operates and maintains all treatment, storage, pumping, and distribution facilities within its service area and is responsible for all facilities up to the location of the water meter (EBMUD 2020). EBMUD owns and maintains the water distribution system in Piedmont. Piedmont is supplied by a network of 6-inch to 8-inch diameter steel pipes which are underground and generally located in street rights-of-way. Piedmont relies on the Piedmont Pressure Zone and water regulated down from the higher Dingee Pressure Zone via the Estates Reservoir.

b. Wastewater Collection and Treatment

EBMUD operates a wastewater system that serves approximately 740,000 people in an 88-square-mile area of Alameda and Contra Costa counties along the Bay's east shore, extending from Richmond in the north, and southward to San Leandro. EBMUD water customers include residential, industrial, commercial, institutional, and irrigation water users (EBMUD 2020a). EBMUD has set up different wastewater districts. Piedmont's wastewater service district (known as Special District No.1, or SD-1) was established as a separate wastewater district within EBMUD's water service area in 1944. SD-1 treats domestic, commercial, and industrial wastewater for cities of Alameda, Albany, Berkely, Emeryville, Oakland, and Piedmont. SD-1 has a service capacity of 168 MGD.

The City of Piedmont comprises 1.7 square miles of residential and minor commercial land use. The City of Piedmont owns and maintains its own sewage collection system. This system was developed by the Piedmont Sanitary District shortly after the City's incorporation, and was completed in 1941. There are 47 miles of collection pipes, ranging in size from 6 inches to 21 inches in diameter built mainly between the years of 1900 to 1940. Wastewater collected from Piedmont is discharged though the City of Oakland to EBMUD Special District No. 1 interceptor, where the interceptor transports the

flows to the EBMUD Main Wastewater Treatment Plant (MWWTP). After providing secondary treatment, the MWWTP discharges through a submerged outfall into the San Francisco Bay (EBMUD 2023).

Because some of the lines are nearly a century old, the City of Piedmont has a program for their systematic replacement to address corrosion and associated problems such as infiltration and inflow. The City's sewer rates are periodically adjusted to ensure that revenues are sufficient to cover replacement and repair. The City of Piedmont has a preventive maintenance program that includes periodic cleaning, manhole inspection, and inspection of the sewer pipes with remote camera equipment (City of Piedmont 2014).

c. Stormwater

Piedmont's hilly terrain has meant that the city must rely on curbs, gutters, and natural drainage to augment the piped system for stormwater. As a result, runoff generally flows toward the city's swales and creeks, reaching Lake Merritt, the Tidal Channel, the Oakland Estuary, and the San Francisco Bay.

Surface drainage can have several negative impacts, including soil erosion and water pollution associated with oil, grease, and other materials picked up by runoff. The City participates in the Alameda County Clean Water Program to mitigate these impacts and meet Regional Water Quality Control Board Requirements. The City also works with the Lake Merritt Institute to address stormwater runoff from Piedmont and Oakland.

Because flood hazards in Piedmont are minimal, the city is not part of the Alameda County Flood Control and Water Conservation District (City of Piedmont 2019). However, during very heavy rains, localized street flooding may occur where storm drainage flows exceed the capacity of an inlet or pipe. Therefore, the city maintains these facilities regularly and performs street sweeping to minimize such incidents (City of Piedmont 2009a).

Piedmont has also adopted a Stormwater Management Ordinance that prohibits most non stormwater discharges to the storm drain system and bans illicit connections to the system. In addition, the ordinance includes provisions for watercourse protection, including a prohibition on altering the flow of water in a natural drainage course.

d. Solid Waste

The City of Piedmont contracts with Republic Services which is a waste disposal company whose services include non-hazardous solid waste collection, waste transfer, and waste disposal, recycling, and energy services. Sites where Piedmont's waste is disposed of are listed in Table 4.19-1.

Table 4.19-1 City Service Landfill Capacity

Site[1]	Maximum Permitted Throughput per Day[2]		Maximum Permitted Capacity[3]		Remaining Capacity	
	CY[3]	Tons	CY	Tons[3]	CY	Tons[3]
Altamont Landfill & Resource Recovery	13,938	11,150	124,400,000	99,520,000	65,400,000	52,320,000
Corindo Los Trancos Landfill	4,498	3,598	60,500,000	48,400,000	22,180,000	17,744,000
Fink Road Landfill	3,000	2,400	14,640,000	11,712,000	7,184,701	5,747,761
Guadelupe Sanitary Landfill	1,652	1,300	28,600,000	22,880,000	11,055,000	8,844,000
Keller Canyon Landfill	4,375	3,500	75,081,280	60,065,024	63,408,410	50,726,728
Newby Island Sanitary Landfill	5,000	4,000	57,500,000	46,000,000	16,400,000	13,120,000
Potrero Hills Landfill	5,413	4,330	83,100,000	66,480,000	13,872,000	11,097,600
Recology Hay Road	3,000	2,400	37,000,000	29,600,000	30,433,000	24,346,400
Redwood Landfill	2,875	2,300	19,100,000	15,280,000	26,000,000	20,800,000
Vasco Road Sanitary Landfill	3,148	2,518	40,207,100	32,165,680	11,560,000	9,248,000
Zanker Material Processing Facility	438	350	640,000	512,000	640,000	512,000
Zanker Road Resource Recovery Operation	1,625	1,300	1,300,000	1,040,000	360,000	288,000
Total	**48,962**	**39,146**	**542,068,380**	**433,654,704**	**242,493,111**	**214,794,489**

cy = cubic yards

[1] List of solid waste disposal sites for Piedmont varies by year and quarter. The list used in this table encompasses all quarters in 2019, the most recent year for which there is data available. Source: CalRecycle 2023a.

[2] CalRecycle 2023b.

[3] CalRecycle identifies Maximum Permitted Throughput only in Tons/Day, while Maximum Permitted Capacity and Remaining Capacity are only provided in Cubic Yards; therefore, standard conversion factors provided by the EPA (EPA 2016) are used to provide all figures in both Tons and Cubic Yards. EPA identifies a standard conversion factor for Municipal Solid Waste (MSW) compacted to "Landfill Density" of 1,700 pounds per cubic yard, equating to approximately 0.8 ton per cubic yard of compacted MSW. Source: U.S. EPA 2016.

e. Telecommunications, Electricity, and Natural Gas

Telecommunications services in Piedmont are provided by private companies, including AT&T and Comcast Cable which provides Internet, phone, and television.

AVA, formerly East Bay Community Energy, or EBCE, supplies electricity to Piedmont using transmission infrastructure operated and maintained by Pacific Gas & Electric (PG&E). PG&E also provides natural gas service to Piedmont (City of Piedmont 2023a). Natural gas and electricity are also addressed in Section 4.5, *Energy*. AVA offers customers the choice to enroll in 100 percent renewable energy from solar and wind power, or their bright choice plan which provides approximately 42 percent of energy from renewable sources (AVA 2023).

4.16.2 Regulatory Setting

a. Water

This regulatory setting discussion is specific to the assessment of water supply availability and reliability. Regulations and policies pertaining to water quality and potable drinking water standards are also discussed in Section 4.9, *Hydrology and Water Quality*.

Federal Regulations

Clean Water Act

The Federal Clean Water Act (CWA), enacted by Congress in 1972 and amended several times since, is the primary federal law regulating water quality in the United States and forms the basis for several State and local laws throughout the country. The CWA established the basic structure for regulating discharges of pollutants into the waters of the United States. The CWA gave the U.S. Environmental Protection Agency (U.S. EPA) the authority to implement federal pollution control programs, such as setting water quality standards for contaminants in surface water, establishing wastewater and effluent discharge limits for various industry contaminants in surface water, establishing wastewater and effluent discharge limits for various industry categories, and imposing requirements for controlling nonpoint-source pollution. At the federal level, the CWA is administered by the U.S. EPA and USACE. At the State and regional levels in California, the Act is administered and enforced by the State Water Resources Control Board (SWRCB) and the nine Regional Water Quality Control Boards (RWQCBs).

Safe Drinking Water Act

The Safe Drinking Water Act (SDWA) regulates public water systems that supply drinking water (42 USC Section 300(f) et seq.; 40 CFR Section 141 et seq). The principle objective of the federal SDWA is to ensure that water from the tap is potable (safe and satisfactory for drinking, cooking, and hygiene). The main components of the federal SDWA are to:

- Ensure that water from the tap is potable
- Prevent contamination of groundwater aquifers that are the main source of drinking water for a community
- Regulate the discharge of wastes into underground injection wells pursuant to the Underground Injection Control program (see 40 CFR Section 144)
- Regulate distribution systems

State Regulations

Assembly Bill 1826

In October 2014, Governor Brown signed AB 1826, requiring businesses to recycle their organic waste on and after April 1, 2016, depending on the amount of waste they generate per week. This law also requires that on and after January 1, 2016, local jurisdictions across the State implement an organic waste recycling program to divert organic waste generated by businesses, including multifamily residential dwellings that consist of five or more units (although multifamily dwellings are not required to have a food waste diversion program). Organic waste means food waste, green waste, landscape and pruning waste, nonhazardous wood waste, and food-soiled paper waste that is mixed

in with food waste. This law phases in the mandatory recycling of commercial organics over time, while also offering an exemption process for rural counties. In particular, the minimum threshold of organic waste generation by businesses decreases over time, which means an increasingly greater proportion of the commercial sector will be required to comply (CalRecycle 2017).

Senate Bill 610

Senate Bill 610 (SB 610) amended the California Water Code to require detailed analysis of water supply availability for certain types of development projects. The primary purpose of SB 610 is to improve the linkage between water and land use planning by encouraging greater communication between water providers and local planning agencies and ensuring that land use decisions for certain large development projects are fully informed as to whether sufficient water supplies are available to meet project demands. SB 610 requires the preparation of a Water Supply Assessment (WSA) for certain large development projects unless there is an urban water management plan ("UWMP") that accounts for the demand associated with the project.

Thresholds requiring the preparation of a WSA include residential developments of more than 500 dwelling units; shopping centers or business establishments employing more than 1,000 persons or having more than 500,000 square feet of floor space; commercial office buildings employing more than 1,000 persons or having more than 250,000 square feet of floor space; industrial, manufacturing, or processing plant, or industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area; and projects that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500 dwelling unit project. For the purposes of environmental review under CEQA, an analysis of water supply sufficiency is included below in Section 4.13.3, *Impact Analysis*.

California Safe Drinking Water Act

The California SDWA (Health & Safety Code Section 116270 et seq.; 22 Cal. Code Regs. Section 64400 et seq.) regulates drinking water more rigorously than the federal law. Like the federal SDWA, California requires that primary and secondary maximum contaminant levels (MCLs) be established for pollutants in drinking water; however, some California MCLs are more protective of health. The act also requires the SWRCB to issue domestic water supply permits to public water systems.

The SWRCB enforces the federal and State SDWAs and regulates more than 7,500 public water systems. (Implementation of the federal SDWA is delegated to California.) The SWRCB's Division of Drinking Water oversees the State's comprehensive Drinking Water Program (DWP). The DWP is authorized to issue public water system permits.

Sustainable Groundwater Management Act

In September 2014, the governor signed legislation requiring that California's critical groundwater resources be sustainably managed by local agencies. The Sustainable Groundwater Management Act (SGMA) gives local agencies the power to sustainably manage groundwater and requires groundwater sustainability plans to be developed for medium- and high-priority groundwater basins, as defined by the Department of Water Resources (DWR).

EBMUD's service area overlies a significant portion of the East Bay Plan Subbasin. The East Bay Plain Subbasin is a medium priority basin and is therefore required to prepare a groundwater sustainability plan pursuant to the requirements of SGMA. SGMA requires public notifications and hearings, as well active stakeholder communication and engagement in groundwater sustainability plans. The most

recent groundwater sustainability plan for the East Bay Plain Subbasin was released in January 2022 (EBMUD 2022).

California Plumbing Code

The California Plumbing Code is codified in Title 24, California Code of Regulations, Part 5. The Plumbing Code contains regulations including, but not limited to, plumbing materials, fixtures, water heaters, water supply and distribution, ventilation, and drainage. More specifically, Part 5, Chapter 4, contains provisions requiring the installation of low flow fixtures and toilets. Existing development will also be required to reduce its wastewater generation by retrofitting existing structures with water efficient fixtures (SB 407 [2009] Civil Code Sections 1101.1 et seq.).

The Water Conservation Act of 2009 (Senate Bill X7-7)

California adopted SB X7-7, or the Water Conservation Act of 2009, in November 2009. The legislation requires urban water retailers to set urban water use targets to achieve a 20 percent reduction in per capita urban water use by December 31, 2020. Additionally, the law requires agricultural water suppliers to prepare, adopt, and regularly update agricultural water management plans. Agricultural and urban water providers are ineligible for certain State grants and loans if they do not adhere to water conservation requirements outlined in the law.

Regional Water Management Plan Report

Adopted by the State legislature in 2002, the Regional Water Management Planning Act, or SB 1672, authorizes preparation of integrated regional water management plans. Such plans are developed by regional water management groups, defined as three or more local public agencies, at least two of which have statutory authority over water supply. Integrated regional water management plans address qualified programs and projects relating to water supply, water quality, flood protection, or other water-related topics undertaken by the participating public agencies. Qualified projects, as detailed in the legislation, include but are not limited to groundwater, urban, and agricultural water management planning efforts, levee or flood control infrastructure maintenance or construction, water recycling projects, and water conservation programs.

Local Regulations

City of Piedmont General Plan

The Piedmont General Plan Natural Resources and Sustainability Element (City of Piedmont 2009b) includes the following policies applicable to water resources:

> **Policy 13.13: Creek Protection.** Retain creeks in their natural condition rather than diverting them into manmade channels or otherwise altering their flow. Riparian vegetation and habitat along the city's creeks should be protected by requiring setbacks for any development near creek banks. These setbacks should be consistent with state and federal laws governing stream alteration.
>
> **Policy 15.3: Urban Runoff.** Protect the quality of groundwater and surface water in Piedmont and the watersheds it shares with Oakland. Support the efforts of state, federal, county, and adjacent city agencies to control urban runoff, thereby improving water quality in local creeks, Lake Merritt, and San Francisco Bay.

Policy 15.4: Countrywide Clean Water Program Participation. Participate in the Alameda Countywide Clean Water Program and continue to be a co-permittee on the NPDES permit for urban runoff. This will require ongoing measures to monitor stormwater pollution, regulate construction runoff, sweep local streets and clean storm drain inlets, promote education and outreach programs (such as storm drain stenciling), enforce regulations and penalties for illicit discharges, and participate in County meetings to discuss water quality issues.

Policy 16.3: Water Conservation. Maintain development standards and building requirements that encourage the efficient use of water. These requirements should include the use of plumbing fixtures designed for water efficiency, irrigation systems designed to minimize water waste, and allowances for graywater use in residential construction, where feasible.

Policy 16.4: Permeable Pavement. Encourage the use of permeable materials for parking lots, driveways, walkways, and other paved surfaces as a way to absorb stormwater, recharge the aquifer, and reduce urban runoff.

Policy 17.5: Collaboration with other Jurisdictions. Encourage collaborative efforts with other jurisdictions to address sustainability and conservation issues, recognizing the greater results and efficiencies that can be achieved by pooling resources with other communities.

Additionally, the Community Services and Facilities Element (City of Piedmont 2009a) includes the following policies related to water resources:

Policy 7.1: Water and Sewer Investments. Provide sustained capital investment in Piedmont's water, sewer and storm drainage facilities to replace deteriorated components, enhance system performance and efficiency, ensure public safety, and improve environmental quality.

Policy 37.2: Coordination with Other Utilities. Coordinate the scheduling of road and infrastructure improvements and maintenance work to avoid repeated pavement cuts and accompanying disruption and expenses.

b. Wastewater

Federal

Federal Clean Water Act

The Federal Clean Water Act is described in Section 4.16.2, Water Supply.

State and Regional

Standards for wastewater treatment plant effluent are established using State and federal water quality regulations. After treatment, wastewater effluent is either disposed of or reused as recycled water. The RWQCBs set the specific requirements for community and individual wastewater treatment and disposal and reuse facilities through the issuance of Waste Discharge Requirements, required for wastewater treatment facilities under the California Water Code Section 13260.

The California Code of Regulations Title 22, Division 4, Chapter 3, Sections 60301 through 60355 are used to regulate recycled wastewater and are administered by the RWQCBs. Title 22 contains effluent requirements for four levels of wastewater treatment, from un-disinfected secondary recycled water to disinfected tertiary recycled water. Higher levels of treatment have higher effluent standards, allowing for a greater number of uses under Title 22, including irrigation of freeway landscaping,

pasture for milk animals, parks and playgrounds, and vineyards and orchards for disinfected tertiary recycled water.

Local

City of Piedmont General Plan

The Piedmont General Plan Community Services and Facilities Element has the following policies related to wastewater:

> **Policy 37.1: Water and Sewer Investments.** Provide sustained capital investment in Piedmont's water, sewer and storm drainage facilities to replace deteriorated components, enhance system performance and efficiency, ensure public safety, and improve environmental quality.
>
> **Policy 37.2: Coordination with Other Utilities.** Coordinate the scheduling of road and infrastructure improvements and maintenance work to avoid repeated pavement cuts and accompanying disruption and expenses.

Additionally, the Natural Resources and Sustainability Element includes the following policies related to wastewater:

> **Policy 16.3: Water Conservation.** Maintain development standards and building requirements that encourage the efficient use of water. These requirements should include the use of plumbing fixtures designed for water efficiency, irrigation systems designed to minimize water waste, and allowances for graywater use in residential construction, where feasible.
>
> **Policy 16.6: Reclaimed Water Use.** Support the use of reclaimed water ("gray water"), including treated effluent from the EBMUD wastewater facility, for landscape irrigation in Piedmont's parks and on medians. Periodically consider the feasibility of reclaimed water use based on EBMUD's capital improvement plans, cost factors, water supply, and other considerations.

Piedmont City Code

Piedmont City Code (PCC) Chapter 8, Section 8.12 regulates City's sanitary sewers. This includes standards for maintenance of private sewer laterals, limitations or prohibited discharges, sewer permits, and construction and design standards. Property owners are required to perform the required maintenance, repairs and inspections to keep the building sewer lateral in the condition required by the City of Piedmont. Construction standards and methods must comply with the city's standard details, the California Plumbing Code, applicable standards of the American Society for Testing and Materials, and the current edition of the EBMUD Regional Private Sewer Lateral (PSL) Ordinance. The Public Works Director is responsible for resolving possible conflicts between any of these standards.

c. Stormwater

Federal, State, and local regulations pertaining to stormwater management, drainage, flooding, and water quality are discussed in Section 4.9, *Hydrology and Water Quality*.

d. Solid Waste

Federal

Title 40 of the Code of Federal Regulations

Title 40 of the CFR, Part 258 (Resource Conservation and Recovery Act, Subtitle D), contains regulations for municipal solid waste landfills and requires states to implement their own permitting programs incorporating the Federal landfill criteria.

State

California's Short-Lived Climate Pollutant Reduction Strategy (SB 1383)

Signed into law in September 2016, SB 1383 establishes methane emissions reduction targets for California in a statewide effort to reduce emissions of short-lived climate pollutants. The targets are to reduce organic waste disposal 50 percent by 2020 and 75 percent by 2025. The law also grants CalRecycle the regulatory authority required to achieve the organic waste disposal reduction targets and establishes an additional target that not less than 20 percent of currently disposed edible food is recovered for human consumption by 2025. Enforcement of these targets starts January 1, 2022.

California Integrated Waste Management Act

AB 939 (PRC 41780) requires cities and counties to prepare integrated waste management plans and to divert 50 percent of solid waste from landfills beginning in calendar year 2000 and each year thereafter. AB 939 also requires cities and counties to prepare source reduction and recycling elements as part of the integrated waste management plans. These elements are designed to develop recycling services to achieve diversion goals, stimulate local recycling in manufacturing, and stimulate the purchase of recycled products.

Public Resources Code Chapter 343 (Senate Bill 1016)

SB 1016 of 2007 (PRC Chapter 343, Statutes of 2007) requires that the 50 percent solid waste diversion requirement established by AB 939 be expressed in pounds per person per day. SB 1016 changed the CalRecycle review process for each municipality's integrated waste management plan. After an initial determination of diversion requirements in 2006 and establishing diversion rates for subsequent calendar years, the CalRecycle Board reviews a jurisdiction's diversion rate compliance in accordance with a specified schedule. Since January 1, 2018, the Board is required to review a jurisdiction's source reduction and recycling element and hazardous waste element once every two years.

CALGREEN BUILDING CODE

In 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. 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-hazardous construction and demolition debris must be recycled or salvaged. The Code requires the applicant to have a construction and waste demolition and diversion plan, for on-site sorting or construction debris, which is submitted to the City of Piedmont for approval.

Regional

COUNTYWIDE INTEGRATED WASTE MANAGEMENT PLAN

In compliance with AB 939, the Alameda County Waste Management Authority adopted the Countywide Integrated Waste Management Plan (CoIWMP) in 1997 and updated the plan in 2020. The CoIWMP provides a plan for reaching the State-mandated goal of 50 percent waste diversion and the county-mandated goal of 75 percent waste diversion. It also mandates that reduction and disposal facilities in Alameda County that require Solid Waste Facility Permits must conform with the CoIWMP's policies and siting criteria (Alameda County Waste Management Authority 2020).

Local

City of Piedmont General Plan

The following policy from the General Plan Natural Resources and Sustainability Element pertains to solid waste:

> **Policy NRS-17.1: Solid Waste Reduction.** Actively promote recycling, composting, and other programs that reduce the amount of solid waste requiring disposal in landfills. The City of Piedmont will strive to exceed the waste diversion targets set by State and County waste management agencies.

Piedmont City Code

PCC Chapter 9 is the City's solid waste ordinance. This ordinance requires the diversion of construction waste in accordance with the California Green Building Standards Code. Additionally, this ordinance requires a waste management plan to be submitted and approved prior to issuance of any building permits.

Telecommunications, Electricity, and Natural Gas

The regulatory setting regarding energy is more extensively discussed in Section 4.5, *Energy*.

4.16.3 Impact Analysis

a. Methodology and Significance Thresholds

The following thresholds are based on CEQA Guidelines Appendix G. For purposes of this EIR, impacts related to water supplies, wastewater, solid waste, or storm water conveyance are considered significant if implementation of the proposed project would:

1. Require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects;
2. Have insufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years;
3. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has inadequate capacity to serve the projects' projected demand in addition to the provider's existing commitments;

4. Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals; or,
5. Not comply with federal, state, and local management and reduction statutes and regulations related to solid waste.

b. Project Impacts and Mitigation Measures

The proposed project involves implementation of the 2023-2031 Housing Element (including revisions to the General Plan Land Use Element, revisions to the PCC, and the MCSP) as well as an updates to the General Plan Environmental Hazards Element, Transportation Element, Natural Resources and Sustainability Element, Design and Preservation Element, Community Services and Facilities Element, and Parks, Recreation and Open Space Element. The updates to the General Plan elements themselves would not result in physical changes to the environment such that substantial impacts related to utilities and service systems could occur. Therefore, this analysis focuses on impacts associated with development facilitated by the implementation of the Housing Element, which would facilitate housing development throughout Piedmont.

Threshold 1:	Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

Impact UTIL-1 DEVELOPMENT FACILITATED BY THE PROPOSED HOUSING ELEMENT IMPLEMENTATION PROJECT WOULD REQUIRE UTILITY SERVICE AND CONNECTIONS FOR WATER SUPPLY, WASTEWATER CONVEYANCE, AND STORMWATER CONVEYANCE, AS WELL AS TELECOMMUNICATIONS, ELECTRICITY, AND NATURAL GAS. THE EXISTING UTILITY SYSTEMS FOR WATER, STORMWATER, ELECTRIC POWER, NATURAL GAS, AND TELECOMMUNICATION FACILITIES IN PIEDMONT HAVE SUFFICIENT CAPACITY TO SERVE THE PROJECT. HOWEVER, RELOCATION, EXPANSION, OR CONSTRUCTION OF NEW WASTEWATER CONVEYANCE FACILITIES MAY BE NEEDED, WHICH COULD RESULT IN ENVIRONMENTAL EFFECTS. THIS IMPACT WOULD BE SIGNIFICANT AND UNAVOIDABLE.

City Wide Housing Element Implementation

Water Infrastructure

This analysis focuses on impacts associated with water infrastructure including connections and conveyance facilities. Impacts associated with the availability and reliability of water supply for the proposed project are addressed below, under Impact UTIL-2.

Construction activities associated with development under the proposed project would require recycled water for dust suppression, concrete manufacturing, and such activities as washing wheels and equipment. Temporary construction water would be trucked to active construction sites or produced from existing fire hydrants or other water connections near the applicable site(s), with City approval. As such, construction water demands would not require new connections or conveyance facilities, as existing or mobile facilities would be used.

New water supply connections and associated facilities would be required for future development facilitated pursuant to the proposed project to convey potable water supply. Such upgrades would occur within existing utility easements and would be located underground, primarily within existing roadways. Development facilitated by the proposed project would primarily be located on previously developed sites or infill sites within the city that are currently zoned for residential development. New

water service connections would be consistent with utility expansion in urbanized areas, such that minimal areas of new disturbance would occur.

Due to the existing built-up nature of Piedmont, it is reasonably anticipated that future improvements for water supply and fire flow requirements would not disturb previously undisturbed areas and would be situated primarily within existing utility rights-of-way, such as, but not limited to, areas within public roadways.

Potential impacts of development facilitated by the proposed Housing Element Implementation project, including development pursuant to an adopted MCSP, related to relocation or construction of water supply facilities would be less than significant.

Wastewater Infrastructure

This analysis focuses on impacts associated with wastewater conveyance infrastructure. Impacts associated with wastewater treatment facilities are discussed under Impact UTIL-3.

Future development under the proposed project would foreseeably require new connections for wastewater conveyance. New development in Piedmont would generate wastewater to be conveyed by privately owned upper laterals, City-owned lower laterals and sewer mains, and EBMUD's interceptor lines. As shown in Table 4.16-2, development under the proposed project would generate an estimated 58,688 gallons of wastewater per day.

Table 4.16-2 Estimated Wastewater Generation for the Proposed Project

Potential Buildout Development/ Land Use[1]	Wastewater Generation Factor[1]	Projected Number of Housing Units	Projected Wastewater Generation
Residential	56 gpd/unit	1,048	58,688 gpd

gpd = gallons per day

[1] Assumes wastewater generation is 80% of water use, see Table 4.16-5 for water use factors.

During wet-weather conditions, additional flow could potentially contribute to overflow conditions on sewer mains under and adjacent to streets near the sites, in which sewage rises into manholes and emerges at ground level. New development would be required to comply with PCC Section 8.12, which includes standards for maintenance of private sewer laterals, limitations on or prohibited discharges, sewer permits, and construction and design standards. Property owners are required to perform the required maintenance, repairs and inspections to keep the building sewer lateral in the condition required by the City of Piedmont. Adherence to this ordinance by development facilitated by the proposed project would reduce wet-weather infiltration and inflow to private sewer laterals and regulate wet-weather contribution from the proposed project.

However, the construction of new or expanded sewer mains may be necessary to accommodate additional wastewater flow, particularly in areas where concentrations of units in multi-family developments are allowed. The precise sizing of new wastewater conveyance pipes would be determined at the time of installation and would be subject to the approval of the City of Piedmont to ensure that the system would be adequate. Construction of wastewater conveyance pipes would mostly occur within developed areas, such as street corridors that already contain underground infrastructure for utilities, or on other streets adjacent or near to the future development sites. The impacts of individual new sewer main construction projects would likely be less than significant due to their temporary nature, adherence to existing requirements, and the already developed nature of the city's existing wastewater conveyance corridors. General impacts associated with construction of

buildout and improvements facilitated by the proposed project are discussed throughout this EIR. Nonetheless, due to the steep slopes in some parts of the city, the levels of population growth facilitated by the proposed Housing Element Implementation project, and due to the increased demand associated with the project, particularly in areas where concentrations of units in multi-family developments are allowed, there is a potential for the need for the relocation or construction of new or expanded wastewater conveyance facilities that could cause significant environmental effects associated with construction of new infrastructure in previously undisturbed areas or on steep slopes that require grading which could cause significant environmental impacts. This impact would be potentially significant.

Stormwater

Impacts regarding stormwater drainage facilities are discussed in Section 4.9, *Hydrology and Water Quality*. As discussed in that section, with compliance with existing regulations, development pursuant to the proposed Housing Element Implementation project, including development facilitated by the MCSP, would not require the relocation or construction of new or expanded storm water drainage, facilities, the construction or relocation of which could cause significant environmental effects.

Electricity and Natural Gas

The proposed project would require connections to existing electrical transmission and distribution systems on site to serve development facilitated by the project. This service would be provided in accordance with the rules and regulations of PG&E and EBCE on file with, and approved by, CPUC. Based on the availability of existing electrical infrastructure, it is not anticipated that the construction of major new electrical transmission and distribution lines would be required, and all sites would be able to connect to existing infrastructure, except that some extensions of existing lines are anticipated in the MCSP Area, described further in the section below. Therefore, there would generally be adequate electrical facilities to serve development facilitated by the proposed Housing Element Implementation project and impacts related to electricity would be less than significant.

Development facilitated by the project would connect to existing natural gas infrastructure to meet the needs of site residents and tenants. Based on the availability of existing natural gas infrastructure, construction of major new natural gas pipelines would not be required, and all sites would be able to connect to existing infrastructure. Therefore, there would be adequate natural gas facilities to serve the development facilitated by the project and impacts related to natural gas would be less than significant.

Telecommunications

Project implementation would require connections to existing adjacent utility infrastructure to meet the needs of residents and tenants of development facilitated by the proposed Housing Element Implementation project. Based on the availability of existing telecommunications infrastructure, construction of new telephone and cable lines would not be required, and all sites would be able to connect to existing infrastructure, except that some extensions of existing communication lines are anticipated to serve development in the MCSP Area, discussed further below. Development facilitated by the project would be required to adhere to applicable laws and regulations related to the connection to existing telecommunication infrastructure. Therefore, there would be adequate telecommunications facilities to serve the development facilitated by the project and impacts related to telecommunications would be less than significant.

Moraga Canyon Specific Plan

The MCSP Area is not currently developed with residences but is developed with the City of Piedmont's Corporation Yard, a sports field, and a skate park. The MCSP Area is served by existing utility infrastructure. Impacts associated with utilities for the MCSP Area are assessed as part of the analysis for citywide Housing Element Implementation discussed above. Extensions of electricity, communications, and telecommunications utilities would occur within existing utility easements and be typical of existing development throughout Piedmont. Extensions of natural gas utilities in the MCSP Area are not anticipated for the development facilitated by the proposed MCSP, as the City of Piedmont owns the lands to be studied in the specific plan and City policy limits the establishment of new natural gas service on lands owned by the city.

As with the rest of Piedmont, because the project would facilitate residential development in the MCSP Area, new wastewater infrastructure in this area would likely be required. Because of the existing nature of the MCSP Area – steep perimeter slopes, rocky soils, lack of existing residential development, open space in its eastern portion, and other factors – and because proposed utility alignments have not yet been identified, the expansion of wastewater infrastructure could result in significant impacts associated with construction of infrastructure in previously undisturbed areas. This impact is potentially significant.

Mitigation Measures

Because the precise siting of potential wastewater infrastructure is unknown until specific development projects are proposed in the MCSP Area and other parts of Piedmont, no feasible mitigation to address impacts associated with new or expanded wastewater conveyance facilities are available.

Significance After Mitigation

Because the precise siting of potential wastewater infrastructure is unknown until specific development projects are proposed, and because there are no feasible mitigation measures, impacts related to new or expanded wastewater conveyance facilities would be significant and unavoidable.

Threshold 2:	Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

Impact UTIL-2 DEVELOPMENT UNDER THE PROPOSED PROJECT WOULD RESULT IN AN INCREASE IN WATER DEMAND. HOWEVER, THIS INCREASE IN DEMAND CAN BE SERVED BY THE EAST BAY MUNICIPAL UTILITY DISTRICT (EBMUD) WITH DEMAND MANAGEMENT MEASURES REQUIRED BY EBMUD. THIS IMPACT WOULD BE LESS THAN SIGNIFICANT.

Citywide Housing Element Implementation

The City of Piedmont is served by existing EBMUD potable water facilities. EBMUD performs a comprehensive demand projection study every ten years. The most recent update, the *2050 Demand Study*, was completed in 2020. The *2050 Demand Study* is an update of EBMUD's water demand forecasts using a land use based approach that incorporates forecasts of dwelling units and employment from land use agencies into a newly developed water demand model. It is based on projections incorporated from the U.S Census Bureau and the Association of Bay Area Governments (ABAG) and the Metropolitan Transportation Commission (MTC). EBMUD has found that while the

number of accounts for their service has increased steadily since 1970, the average daily water demand has not increased; outside of droughts, demand remains relatively stable.

Table 4.16-3 indicates the average annual demand of water through 2050 based on land use. The projections indicate that the planning level of demand, measured in million gallons per day (MGD), which is the adjusted demand in MGD for applying water conservation and cumulative recycled water savings achieved since the *1994 Water Conservation Master Plan* was implemented, would be less than the forecasted water demand for EBMUD's service area.

Table 4.16-3 Average Annual Demand Projections by Customer Use Category (MGD)

Land Use	2020	2025	2030	2035	2040	2045	2050
Single-Family Residential	115	117	119	121	125	126	129
Multi-Family Residential	40	44	48	52	59	63	67
Institutional	17	18	20	21	22	24	26
Industrial	33	35	35	36	36	37	37
Commercial	16	18	19	21	22	24	25
Irrigation	13	13	13	13	13	13	13
Forecasted Water Demand	234	245	254	264	277	287	297
Water Conservation	-48	-53	-58	-61	-63	-65	-66
Non-Potable Water	-5	-6	-6	-9	-13	-13	-13
Planning Level of Demand	181	186	190	194	201	209	218

mgd=million gallons per day

Source: EBMUD 2020a

[1] Flowrate factors are based on reference material provided by EBMUD: 50 gpd/person for high-rise apartments; 0.216 gpd/sf for commercial retail space

[2] Total net (or new) commercial buildout of 65,000 sf assumes ground floor commercial space that is a mix of retail or small-scale office space. Because it is not possible to predict the exact mix of retail versus office space, retail space water demand was assumed in order to be conservative with respect to water demand.

EBMUD also evaluated several different scenarios to assess its need for water under potential drought conditions. These different scenarios capture the uncertainty in long-term planning. Uncertainty is inherent in any future-oriented planning effort and is a driving factor in long-term water resources planning. Water supplies are constantly subject to uncertainties that directly affect the amount and timing availability of the sources of water. In order to address these inherent uncertainties, and as required by Section 10632 of the California Water Code, EBMUD maintains a current Water Shortage Contingency Plan (WSCP), which is published as part of the UWMP, and subject to five-year updates with the UWMP. The WSCP provides the framework to help address water shortages, and identifies actions to manage supply and demand before and during a water shortage to ensure a reliable water supply (EBMUD 2020b).

In order to identify appropriate water shortage response actions for the purposes of the WSCP, EBMUD defines a Base Condition, as well as a High Water Demand Condition and Extreme Drought Condition, which reflect actual demand rates from a recent drought planning sequence and are used for comparison purposes (EBMUD 2020b). The annual water demand under different scenarios for the EBMUD service area is laid out in Table 4.16-4, which also reflects water supplies that EBMUD received under its water service contract with the United States Bureau of Reclamation (USBR) to receive Central Valley Project (CVP) water through the Freeport Regional Water Project. This is a supply option that EBMUD uses during dry year conditions, as needed. A Normal Water Year is a year

that EBMUD does not need to implement any Drought Management Program (DMP) measures. A Single Dry Water Year is determined to be a year that EBMUD would implement DMP elements, which includes obtaining Central Valley Project (CVP) water deliveries and setting voluntary rationing goal between 0 to 10 percent. Year 2, which would involve the second consecutive dry year, is determined as a year that EBMUD would implement DMP elements, which includes continuing to obtain CVP water deliveries and setting a mandatory rationing between 10 – 15 percent. Year 3 would involve the third consecutive dry year and a year that EBMUD would implement DMP elements which includes obtaining CVP water deliveries and implementing mandatory rationing of 15 percent.

Table 4.16-4 Preliminary EBMUD Baseline Supply and Demand Analysis

	2020	2025	2030	2035	2040	2045	2050
Normal Year							
Mokelumne System (MGD)	>181	>186	>190	>194	>201	>209	>218
EBMUD Planning Level of Demand (MGD)	181	186	190	194	201	209	218
Need For Water	0	0	0	0	0	0	0
Single Dry Year or First Year of Multi-Year Drought							
Mokelumne System	121	126	129	132	138	144	151
CVP Supplies[2]	60	60	60	60	60	60	60
Total Supplies (MGD)	181	186	189	192	198	204	211
Voluntary Rationing (%)	0	0	1%	1%	2%	2%	3%
Need for Water (TAF) [5]	0	0	0	0	0	0	0
Second Year of Multi-Year Drought							
Mokelumne System	82	86	89	92	98	104	111
CVP Supplies[2]	74	74	74	74	74	74	74
Supply Totals	156	161	164	167	172	178	185
Mandatory Rationing (%)	13%	13%	13%	14%	14%	14%	15%
Need for Water (TAF) [5]	0	0	0	0	0	0	0
Third Year of Multi-Year Drought							
Mokelumne System (MGD)	141	145	146	145	132	118	105
CVP Supplies[2]	12	12	12	12	12	12	12
Supply Totals	153	157	158	157	144	130	117
Mandatory Rationing[4]	15%	15%	15%	15%	15%	15%	15%
Need For Water Base Condition (TAF) [5]	0	0	0	0	28	52	75

MGD = million gallons per day, TAF = thousand acre-feet

[1] Planning Level Demand accounts for projected savings from water recycling and conservation programs as discussed in the 2020 UWMP, Chapters 3. Customer demand values are based on the Water Supply Availability and Deficiency received by EBMUD, 2020a

[2] Projected available CVP supplies are taken according to the Drought Management Program Guidelines discussed in Chapter 3.

[3] Rationing reduction goals are determined according to projected system storage levels in the Drought Management Program Guidelines discussed in the 2020 UWMP, Chapter 3.

[5] Need for Water includes unmet customer demand as well as shortages on the Lower Mokelumne River.

Source: EBMUD 2020a

Based on Table 4.16-4, EBMUD anticipates having an adequate water supply to meet demand in its service area, except during the third year of a multi-year drought starting around 2025 or later. During multi-year drought, EBMUD may require substantial reductions in water use by customers and as discussed below, may also need to acquire supplemental supplies to meet demand. New development facilitated by the proposed Housing Element Implementation project would be subject to the same drought restrictions that apply to all EBMUD customers.

Table 4.16-4 shows that sufficient water supplies are projected to be available to meet existing and projected demands during normal water year (non-drought) conditions, as well as during a single dry year, and during the first two years of a multi-year drought condition. During the third year of a multi-year drought condition, it is projected that water supply shortages would occur starting in year 2040, in the amount of 28,000 AFY, increasing to 52,000 AFY in 2045, and 75,000 AFY in 2050. As discussed above this table, the WSCP which EBMUD maintains with its UWMP identifies actions to manage supply and demand before and during a water shortage, including but not limited to the use of CVP water received from USBR through the Freeport Regional Water Project. The current (2020) WSCP described that drought conditions occurred during 2014-2016, which resulted in EBMUD relying on the Freeport Regional Water Project, with the following findings:

- Take delivery of the supply as early as possible in the drought sequence to maximize delivery of the lower-cost drought supply,
- Maximize production at the West of Hills water treatment plants, and
- Manage the terminal reservoirs to maximize available space for storage (EBMUD 2020a).

These lessons from the 2014-2016 drought were incorporated into EBMUD's DMP and operational decision-making processes moving forward. Specifically, EBMUD's CVP allocation was reduced by 50 percent in the contract year 2014 and by 75 percent in contract year 2015, as the CVP was faced with increasing demands and reduced supplies as the drought continued. EBMUD made up for the reduced allocation by purchasing transfer water in 2015 and by securing options to purchase transfer water for 2016 (EBMUD 2020a). The transfer water was more expensive than the CVP water, and should comparable future drought scenarios occur, EBMUD will maximize delivery of lower-cost drought supply at the start of the drought conditions.

As described in Section 2, *Project Description*, this EIR studies a buildout that assumes 1,048 housing units. The additional water use for these units is indicated in Table 4.16-5. Overall, the project could increase demand in the City of Piedmont by an estimated 0.0736 MGD, or approximately a 0.0004 percent increase compared to the 2030 EBMUD demand estimate of 190 MGD, as shown on Table 4.16-4.

Table 4.16-5 Estimated Water Use for the Proposed Project

Potential Buildout Development/Land Use[1]	Water Generation Factor	Projected Number of Housing Units	Projected Water Demand in 2031 (gpd)	Projected Water Demand in 2031 (MGD)
Residential	70 gpd/unit	1,048	73,360 gpd	0.0736 MGD

gpd =gallons per day. MGD = million gallons per day

[1] Based on water use factors provided by EBMUD.

According to the EBMUD UWMP, the EBMUD service area has a water reduction goal of 153 gallons per capita per day (GPCD) by 2020, and in 2020 the MPWD reported its GPCD was 121 GPCD which met the target. Based on the increase of approximately 0.03 percent from the projected 2030 water demand in EMBUD's UWMP, estimated GPCD with implementation of the project would be 125 GPCD, which would still be well below the targeted 153 GPCD.

Further, compliance with the water conservation regulations and policies would help to maintain sufficient supplies. The California Code of Regulations (CCR) Title 24, Part 11 (CALGreen) requires a 20 percent reduction in residential indoor water use that would lower potential water demand. New development would be subject to the CCR concerning water-efficient landscapes (WELO) (Division 2, Title 23, CCR, Chapter 2.7, Sections 490 through 495). Implementation of the WELO would encourage water conservation for new development and in landscaped areas. The WELO, which reinforces landscape irrigation and water conservation best practices currently required by EBMUD's Section 31 Regulations, also would encourage the use of drought-tolerant landscaping and low-flow irrigation systems. Furthermore, new development would be subject to other green building and water conservation requirements described in the Water Supply Regulatory Setting. In the event of drought, EBMUD customers would be subject to a Demand Management Plan and other water conservation requirements that would address any shortage in supply.

In summary, compliance with regulatory requirements, proactive management of available supplies, and drought response and conservation efforts conducted by EBMUD collectively support the continued reliability into the future of water supplies currently used in the City of Piedmont. Although Table 4.16-4 projects water supply shortages during the third year of multi-year drought conditions and onwards, EBMUD's existing operational protocols provide for responses to such conditions, which would be initiated during the first and second years of multi-year drought conditions. Such responses are not reflected in the projections shown, because the specific actions taken will depend upon dynamic conditions during the first two years of the multi-year drought. As noted, sufficient supplies are anticipated to be available during normal water year conditions and single-drought-year conditions, as well as during the first two years of multi-drought-year conditions. Therefore, sufficient water supplies are available to serve reasonably foreseeable development pursuant to the proposed Housing Element Implementation project, including the MCSP, and appropriate systems are in place to address potential drought-related water supply shortages, such that potential impacts would be less than significant.

Moraga Canyon Specific Plan

The MCSP Area is served by EBMUD. Impacts associated with water usage for the MCSP Area are assessed as part of the analysis for citywide Housing Element Implementation discussed above.

Compliance with regulatory requirements, proactive management of available supplies, and drought response and conservation efforts conducted by EBMUD collectively support the continued reliability of water supplies currently used in the City of Piedmont. Although Table 4.16-4 projects water supply shortages during the third year and onwards of multi-year drought conditions, EBMUD's existing operational protocols provide for responses to such conditions, which would be initiated during the first and second years of multi-year drought conditions. Such responses are not reflected in the projections shown, because the specific actions taken will depend upon dynamic conditions during the first two years of the multi-year drought. As noted, sufficient supplies are anticipated to be available during normal water year conditions and single-drought-year conditions, as well as during the first two years of multi-drought-year conditions. Therefore, sufficient water supplies are available to serve reasonably foreseeable development pursuant to an adopted MCSP, and appropriate

systems are in place to address potential drought-related water supply shortages, such that potential impacts would be less than significant.

Mitigation Measures

Impacts from development pursuant to the proposed Housing Element Implementation project, including a MCSP, would be less than significant without mitigation. No mitigation measures would be required.

Threshold 3:	Would the project result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

Impact UTIL-3 ADEQUATE WASTEWATER TREATMENT CAPACITY IS AVAILABLE TO SERVE THE ADDITIONAL DEMAND GENERATED BY FUTURE DEVELOPMENT FACILITATED BY THE PROPOSED PROJECT IN ADDITION TO THE PROVIDER'S EXISTING COMMITMENTS. THIS IMPACT WOULD BE LESS THAN SIGNIFICANT.

Citywide Housing Element Implementation

EBMUD's MWWTP provides wastewater collection and treatment to Piedmont, currently treating an average daily flow of approximately 63 mgd. With a secondary treatment capacity of 168 mgd, the MWWTP has a remaining capacity of 105 mgd beyond existing inflow (EBMUD 2023).

Table 4.16-2 shows the estimated wastewater generation for development under the proposed project. As shown, development under the proposed project is estimated to generate 56,688 gallons of wastewater per day. This would also be within the remaining capacity of the MWWTP. Therefore, the plant's existing wastewater treatment capacity would be sufficient to accommodate the wastewater from the anticipated residential development facilitated by the proposed Housing Element Implementation project. Development facilitated by the proposed project would not result in the need to expand the capacity of the MWWTP or exceed the wastewater treatment requirements of the San Francisco RWQCB.

Moraga Canyon Specific Plan

Development facilitated by an adopted MCSP is considered above in the analysis for citywide Housing Element Implementation. As with development facilitated by the proposed project as a whole, EBMUD's MWWTP has sufficient capacity to treat wastewater generated by future development in the MCSP Area under an adopted MCSP. This impact would be less than significant.

Mitigation Measures

Impacts would be less than significant without mitigation. No mitigation measures would be required.

Threshold 4:	Would the project generate solid waste in excess of State or local standards or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals.
Threshold 5:	Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

Impact UTIL-4 DEVELOPMENT FACILITATED BY THE PROPOSED PROJECT WOULD NOT GENERATE SOLID WASTE IN EXCESS OF STATE OR LOCAL STANDARDS, OR IN EXCESS OF THE CAPACITY OF LOCAL INFRASTRUCTURE. THE PROJECT WOULD NOT IMPAIR THE ATTAINMENT OF SOLID WASTE REDUCTION GOALS AND WOULD COMPLY WITH FEDERAL, STATE, AND LOCAL STATUTES AND REGULATIONS RELATED TO SOLID WASTE. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Citywide Housing Element Implementation

As described in the *Project Description* section, this EIR studies a proposed project that would result in an estimated 1,048 additional units through 2031 compared to current conditions. CalRecycle estimates that multi-family residential uses generate an average of four pounds of solid waste per unit per day (CalRecycle 2023c).

As shown in Table 4.16-6, prior to implementation of State-mandated diversion requirements, development associated with the proposed project would generate an estimated 4,192 net pounds per day of solid waste, which equates to 2.1 tons or 2.5 cubic yards per day. In accordance with California's Integrated Waste Management Act of 1989, cities and counties are required to divert 50 percent of all solid wastes from landfills. The City of Piedmont has achieved a diversion rate of 75 percent, which substantially exceeds this State requirement (City of Piedmont 2023b). Assuming that this diversion rate continues to apply to new development facilitated by the proposed Housing Element Implementation project, the proposed project would generate an additional 0.5 tons per day of solid waste for disposal at landfills.

Table 4.16-6 Estimated Solid Waste Generation for the Proposed Project

Potential Buildout Development/ Land Use	Quantity	Units	Generation Rate	Solid Waste (pounds per day)	Solid Waste (tons per day)	Solid Waste (cubic yards per day)[1]
Residential	1,048	dwelling units	4 pounds/ unit/day	4,192	2.1	2.5
Total Assuming 75% Diversion Rate				**1,048**	**0.5**	**0.6**

[1] Based on the conversion factor described under Table 4.10-1, County-Service Landfill Capacity for "landfill density" Municipal Solid Waste, of approximately 750 to 1,250 pounds per cubic yard, or an average of 1,000 pounds per cubic yard (US EPA 2016).

Source: CalRecycle 2023

As discussed in the Solid Waste Setting, the total remaining capacity of all landfills serving Piedmont is 214,794,489 tons. With development facilitated by the proposed project, and assuming Piedmont's conversion rate of 75 percent remains in effect, it is estimated that development facilitated by the proposed project would generate an additional 0.5 tons per day of solid waste for disposal at landfills. This amount would equate to approximately 182.5 tons per year. This would not result in an exceedance of the landfills' capacity.

Continued compliance with applicable regulations and Piedmont General Plan policies listed in the Solid Waste Regulatory Setting would ensure that development facilitated by the proposed Housing

Element Implementation project complies with federal, State, and local statutes and regulations related to solid waste and would lead to increased recycling and waste diversion. Development facilitated by the proposed project would be required to comply with these policies, including paying a fair share for solid waste services and achieving greater diversion rates than required by AB 939. AB 939 requires the City to divert 50 percent of solid waste from landfills, a metric that Piedmont has already surpassed by 25 percent. Local infrastructure would have the capacity to accommodate solid waste generated by the project. Development facilitated by the project would also be required to demonstrate compliance with all applicable regulations. Therefore, anticipated rates of solid waste disposal from the proposed project would have a less than significant impact related to solid waste disposal facilities.

Moraga Canyon Specific Plan

Impacts associated with solid waste for the MCSP Area are assessed as part of the analysis for Citywide Housing Element Implementation, discussed in the project impact analysis above. As discussed above, anticipated rates of solid waste disposal from development facilitated by the proposed project would have a less than significant impact related to solid waste disposal facilities. Additionally, similar to all development facilitated by the proposed project, development facilitated by the proposed project in the MCSP Area would be required to comply with applicable regulations including paying a fair share for solid waste services and achieving greater diversion rates than required by AB 939. AB 939 requires the City to divert 50 percent of solid waste from landfills, a metric that Piedmont has already surpassed by 25 percent. Therefore, anticipated rates of solid waste disposal from the proposed project in the MCSP Area would have a less than significant impact related to solid waste disposal facilities.

Mitigation Measures

Impacts from development facilitated by the proposed Housing Element Implementation project, including development pursuant to an adopted MCSP, would be less than significant without mitigation. No mitigation measures would be required.

c. Cumulative Impacts

A project's environmental impacts are "cumulatively considerable" if the "incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects" (*CEQA Guidelines* Section 15065[a][3].). The cumulative setting for this analysis includes the service areas of the utility providers.

Water

The analysis above, provided under Impact UTL-2, is cumulative in nature and considers water demand associated with development within EBMUD's service area. EBMUD's average of annual demand by customer use for different land uses contained in Table 4.16-3 indicate that some water use conservation restrictions may be implemented under varying conditions. The UMWP also includes guidelines that future development would be subject to EBMUD's regulations aimed at encouraging efficient water use, such as Sections 29 and 31 of EBMUD's Regulations Governing Water Service. Section 29, "Prohibiting Wasteful Use of Water," promotes efficient water use by EBMUD customers and includes additional restrictions on wasteful uses of potable water. Section 31, "Water Efficiency Requirements," identifies the types of water efficiency requirements (i.e., maximum flow rates for

flow control devices) for water service. Therefore, the cumulative impact related to water supply would be less than significant, and the proposed Housing Element Implementation project would not considerably contribute to a significant impact.

Wastewater

Cumulative development will continue to increase demands on the existing wastewater treatment facilities. EBMUD projects that 61 mgd of wastewater will be collected and treated in the EBMUD Special District No.1 by 2040. As shown in Table 4.16-2, development under the proposed project would generate an estimated 58,688 gallons of wastewater per day, which would be approximately 0.09 percent of the wastewater collected and treated in the district by 2040. The MWWTP current capacity is sufficient to serve the anticipated growth in Piedmont under the proposed Housing Element Implementation project and in the region, as a whole. Therefore, the cumulative impact related to wastewater treatment would be less than significant, and the development facilitated by the proposed Housing Element Implementation project, including development pursuant to an adopted MCSP, would not considerably contribute to significant cumulative impact.

As discussed under Impact UTIL-2, improvements to the sewer system may be needed. Therefore, the cumulative impact related to wastewater infrastructure would be significant, and the development facilitated by the proposed project would considerably contribute to significant cumulative impact to wastewater infrastructure.

Stormwater

Cumulative Impacts regarding stormwater drainage facilities are discussed in Section 4.9, *Hydrology and Water Quality*.

Solid Waste

Cumulative development Alameda County will continue to increase solid waste generation for disposal at landfills that serve the county. State-mandated solid waste diversion rates (for recycling) would continue to minimize the quantity of waste directed to area landfills, and compliance with applicable regulations and with General Plan goals, policies, and actions would maintain or improve upon existing solid waste diversion rates. It is assumed the City of Piedmont will continue the historical trend to divert at least 75 percent of solid waste from landfills due to its recycling and green waste programs (City of Piedmont 2018). As discussed in Impact UTL-3, development facilitated by the proposed Housing Element Implementation project would generate a limited amount of solid waste. This incremental increase in solid waste would not considerably contribute to a significant cumulative impact related to solid waste disposal.

Telecommunications, Electricity, and Natural Gas

The geographic extent of cumulative analysis for telecommunications, electricity, and natural gas includes the entire service territories of the providers for each of these utilities.

Telecommunications

Telecommunication services in Piedmont are provided by private companies, including AT&T, T-Mobile, Verizon, Comcast Cable, and Sonic which provides internet, phone, and are available throughout the Piedmont. Connections for new telecommunications services are implemented on an as needed basis, and the service provider used is generally at the discretion of the customer.

Cumulative projects will establish telecommunications service connections in the same manner as residential developments under the proposed Housing Element Implementation project. There are no anticipated limitations to the availability of telecommunications service. Potential cumulative impacts associated with telecommunications would be less than significant.

Electricity and Natural Gas

Piedmont residents rely on AVA (EBCE) and PG&E as the electricity and natural gas providers. They are responsible for distributing electricity and natural gas to all land uses within its service area, including in Piedmont. Development considered as part of the cumulative analysis is described in Section 3, *Environmental Setting*. PG&E is subject to the requirements set forth and/or enforced by the CPUC. The need for electric and natural gas infrastructure would be addressed on a case-by-case basis for each cumulative project, and would be subject to CPUC requirements, similar to those applicable to the proposed Piedmont Housing Element Implementation project. Therefore, cumulative impacts related to electric power and natural gas transmission facilities would be less than significant. Therefore, the proposed Housing Element Implementation project, including development pursuant to an adopted MCSP, would not have a cumulatively considerable contribution to a cumulative impact regarding electricity and natural gas.

4.17 Wildfire

This section evaluates potential wildfire impacts that could arise from implementation of the proposed project. The wildfire analysis consists of a summary of the existing conditions in Piedmont the regulatory framework, and a discussion of the potential wildfire impacts from development under the proposed project. This section is based in part on the Emergency Evacuation Time Assessment prepared by Fehr & Peers in 2023, included in Appendix I.

4.17.1 Setting

a. Wildfire Fundamentals

A wildfire is an uncontrolled fire in an area of extensive combustible fuel, including vegetation and structures. Wildfires differ from other fires in that they take place outdoors in areas of grassland, woodlands, brushland, scrubland, peatland, and other wooded areas that act as a source of fuel or combustible material. In addition, buildings may become involved if a wildfire spreads to adjacent communities. The primary factors that increase an area's susceptibility to wildfire include slope and topography, vegetation type and condition, and weather and atmospheric conditions.

Because of substantial open space areas and associated vegetation and wildlife habitats throughout the State, California is subject to fire hazards. Grassland or other vegetation in California is easily ignited, particularly in dry seasons. Wildfire is a serious hazard in dry fuel load areas, particularly near areas of natural vegetation and steep slopes, since fires tend to burn more rapidly on steeper terrain. Wildfire is also a serious hazard in areas of high wind, given that fires will travel faster and farther geographically when winds are higher. Furthermore, wildfire is more likely in areas where electric power lines are located above ground and could ignite vegetation with which the power lines come into contact. Wildfire could also spread in areas with fuel lines (i.e., pipes carrying flammable fuels), which could fail (whether due to earthquake or error) and ignite a fire. Extreme wildfire events are expected to increase in frequency with the effects of increased global temperature, although changes in specific fire-prone areas are difficult to predict with any certainty (United States Forest Service 2023).

The Governor's Office of Planning and Research (OPR) has recognized that although high-density structure-to-structure loss can occur, structures in areas with low- to intermediate-density housing are most likely to burn, potentially due to intermingling with wildland vegetation or difficulty of firefighter access (OPR 2020). In general, increasing density decreases the risk of wildfire. The risk of loss of human life, property, natural resources, or economic assets from wildfire is highest at the Wildland Urban Interface (WUI), which are areas of urban development located adjacent to or even within wildland areas. Development that has spread into less densely populated, often hilly areas has increased the number of people living in heavily-vegetated areas that are prone to wildfire.

Today, approximately one-third of houses in California are within the WUI area (OPR 2020). It is important to note that there are varying definitions of what constitutes a WUI, and some local or regional agencies consider some areas to be WUI that are not defined as Wildland Interface or Intermix zones under the Wildland-Urban Interface Building Standards in Title 24, Part 2 of the California Code of Regulations (CCR); these standards are discussed under *Regulatory Setting* below.

The indirect effects of wildland fires can be catastrophic. In addition to stripping the land of vegetation and destroying forest resources, large, intense fires can harm the air, soil, waterways, and the land itself. Soil exposed to intense heat may lose its capability to absorb moisture and support life. Exposed

soils erode quickly and enhance siltation of rivers and streams, thereby enhancing flood potential, harming aquatic life, and degrading water quality. Lands stripped of vegetation are also subject to increased debris flow hazards. Slope instability from wildfire scarring of the landscape can result in impacts in the form of more intensive flooding and landslides. Such post-fire slope soils and altered drainage patterns can result in soil creep on downslope sides of foundations and reduce lateral support.

Wildfire has three basic elements: how and where its ignition occurred; how and why it moves across a landscape from its point of origin; and the fire's nature upon arrival at a location important to the City. In general, a fire's nature is defined by eight characteristics:

1. Direction of the advance of the fire front
2. Speed of the advance of the fire front (rate of spread)
3. Mechanism causing the advance
4. Duration at any one location
5. Structure-related consumption of fuels
6. Flame length
7. Intensity
8. Gaining control

A fire front's direction of travel is primarily determined by the direction of prevailing winds, geographic aspect, and condition of the fuels in the advanced direction. The speed of a fire front's advance results from conditions at the site of the currently burning material and conditions of lands in the advance direction of the fire. As a fire advances, the overriding influences determining its speed are prevailing wind speed, terrain slope gradient, dominant fuel size classes, and fuel continuity.

Wildfires advance by two principal mechanisms, combustion resulting from radiant heating and remote ignition resulting from ember production. Fire stays at one location primarily due to the size and class of the material being consumed. Grass formations are dominated by low volumes of very "fine" fuels and, depending on the level of dryness, can be consumed, with the fire advancing, in a matter of minutes. On the other hand, tree-dominated formations have significantly greater volumes of available fuel and many larger-sized pieces. Fires can remain at these locations for days, often weeks, and sometimes months (on heavily wooded conifer sites).

Fires burn where fuels are available, which can include vegetation and structures. For example, fires in grasslands burn at one level set by the height of the grass, while fires in brushlands can burn surface fuels and typically consume the stems and leafy crowns to the full height of the plants. Fires in tree formations have a much more complex pattern of movement-based primarily on the continuity (or "connectedness") of the fuels.

Flame lengths are generally determined by the volume of fuels burning, the amount of time to total consumption, and the height of the species in the composition. Grassland produces flame lengths typically ranging from one to three feet as they are composed of low volumes of fine materials that are consumed quickly. Flame lengths are at their maximum when the material is dry. Brush formations can produce flame lengths from 4 to 10 feet. Native oak-dominated hardwood formations can generate 20- to 40-foot flame lengths and stands of exotics, such as *Eucalyptus globulus* or *E. cinerea,* or dense conifer stands, over 100 feet. Flame length is important as it sets the distance over which radiant heating-related combustion can occur.

The temperature achieved in a wildfire is directly related to the amount of cellulosic material available for consumption. Grasslands have very low amounts and attain lower temperatures but woodland, characterized by large amounts of highly concentrated cellulosic material, can attain temperatures on the order of 1,800 degrees Fahrenheit.

Gaining control over a wildfire's behavioral character is the objective of response efforts. Grassland fires, burning in low fuel volume, rapid consumption, and at a single level are the easiest to bring under control. On the other end, fires that are burning in high fuel volumes, full spectrum size classes, and entire stand structure involvement, can require days, weeks, even months, to bring under complete control.

b. Wildfire-Conducive Conditions

Vegetation

Vegetation is fuel to a wildfire, and it changes over time with seasonal growth and die-back. The relationship between vegetation and wildfire is complex, but generally some vegetation is naturally fire resistant, while other vegetation is extremely flammable. Some plant types in California landscapes are fire resistant, while others are fire-dependent for their seed germination cycles.

Wildfire behavior depends on the type of fuels present, such as ladder fuels, surface fuels, and aerial fuels. Surface fuels include grasses, logs, and stumps low to the ground. Ladder fuels, such as tall shrubs, young trees, and the lowest branches of mature trees, provide a path for fire to climb upward into the crowns of trees. Aerial fuels include upper limbs, foliage, and branches not in contact with the ground. Ample spacing in between tree crowns and trimming of lower branches close to the ground is effective at preventing fire from either igniting the crown of a tree or spreading from an ignited tree to adjacent trees; conversely, closely packed trees with low branches are especially susceptible to crown ignition and spread (CAL FIRE 2023). Weather and climate conditions, including drought cycles, can lead to dry vegetation with low moisture content, increasing its flammability.

Changes in precipitation patterns and increased temperatures associated with climate change will alter the distribution and character of natural vegetation and associated moisture content of plants and soils. An increase in frequency of extreme heat events and drought are also expected. These changes will lead to increased frequency and intensity of large wildfires.

Piedmont experiences wet winters and warm, dry summers that dry-out vegetation. Vegetation types in Piedmont include woodlands and grasslands. Over the years, fire suppression and invasive plants have contributed to fuel build-up and could increase the risk of catastrophic fire events in the city.

Slope, Elevation and Aspect

Slope can determine how quickly a fire spreads. Fire typically burns faster uphill, because it can pre-heat the fuels above with rising hot air, and upward drafts are more likely to create fire spots. (NPS 2017). Areas containing steep, rugged terrain can also hinder access and the use of heavy firefighting equipment, posing additional difficulties for firefighting efforts. Following severe wildfires, sloping land is also more susceptible to landslide or flooding from increased runoff during substantial precipitation events. Landslides and surficial slope failure are most likely to occur in areas with more than 25 percent slope (hillside areas) and along steep bluffs.

Elevation affects fire behavior by influencing the timing and amount of precipitation, and exposure to prevailing winds. *Aspect* is the direction that a slope faces, which determines how much radiated heat the slope will receive from the sun. Slopes facing south to southwest will receive the most solar

radiation; thus, they tend to be warmer and the vegetation drier than on slopes facing a northerly to northeasterly direction, creating a higher potential for wildfire ignition and spread.

Piedmont is primarily comprised of relatively flat urban areas and rolling hills. The city's terrain is the steepest at slopes along canyons and ravines primarily in the eastern portions of the city where slopes can exceed 50 percent in some areas (City of Piedmont 2009). Piedmont is near the east bay hills, which have been the site of historical fires that have impacted neighboring cities of Oakland and Berkeley.

Weather and Atmospheric Conditions

Wind, temperature, and relative humidity are the most influential weather elements in fire behavior and susceptibility (CAL FIRE 2023). Fire moves faster under hot, dry, and windy conditions. Wind may also blow embers ahead of a fire, causing its spread. Drought conditions lead to extended periods of excessively dry vegetation, increasing the fuel load and ignition potential.

May through September is the driest time of the year and coincides with what has traditionally been considered the fire season in California. However, increasingly persistent drought and climatic changes in California have resulted in drier winters, and fires during the autumn, winter, and spring months are becoming more common.

Fuel and Energy Lines

Above-ground power lines have the potential to contribute to wildfire risk, especially when they are near or traverse wilderness areas. In some instances, high winds can blow nearby trees and branches into powerlines, sparking fires. Wind can also snap wooden poles, causing live wires to fall onto nearby grass or other fuel, igniting it. While the California Public Utilities Commission (CPUC) estimates only about 10 percent of California's wildfires are triggered by power lines, the frequency and severity of these wildfires has spurred the agency to make new requirements for power line safety practices (CPUC 2023). Natural gas poses a lower risk of causing a fire than petroleum products, because it is transported at lower pressures and, when released, rises, and dissipates into the atmosphere (United States Department of Energy 2023).

c. Wildfire Hazard Designations

In California, State and local agencies share responsibility for wildfire prevention and suppression and federal agencies take part as well. Federal agencies are responsible for federal lands in Federal Responsibility Areas (FRA). The State of California has determined that some non-federal lands in unincorporated areas with watershed value are of statewide interest and have classified those lands as State Responsibility Areas (SRA). CAL FIRE manages SRAs. All incorporated areas and unincorporated lands not in FRAs or SRAs are classified as Local Responsibility Areas (LRA).

While nearly all of California is subject to some degree of wildfire hazard, there are specific features that make certain areas more hazardous. CAL FIRE is required by law to map areas of significant fire hazards based on fuels, terrain, weather, and other relevant factors (Public Resources Code [PRC] 4201-4204, California Government Code 51175-89). As described above, the primary factors that increase an area's susceptibility to fire hazards include slope, vegetation type and condition, and atmospheric conditions. CAL FIRE maps fire hazards based on zones, referred to as Fire Hazard Severity Zones (FHSZ). There are three levels of severity: 1) Moderate FHSZs; 2) High FHSZs; and 3) Very High FHSZs. Only the Very High FHSZs are mapped for LRAs in the currently adopted CAL FIRE FHSZ maps. As of January 2022, California State Law requires CAL FIRE to map the Moderate and High

FHSZ in addition to the Very High FHSZ. Updates to the CAL FIRE FHSZ maps are in progress and are expected to be completed in early 2024.

Each of the zones influence how people construct buildings and protect property to reduce risk associated with wildland fires. However, none of the fire zones specifically prohibit development or construction. To reduce fire risk under State regulations, areas in Very High FHSZs must comply with specific building and vegetation management requirements intended to reduce property damage and loss of life in those areas.

d. Wildfire Conditions in Piedmont

Figure 4.17-1 displays the FHSZ for Piedmont. As shown on the figure, as mapped by CAL FIRE, the southeastern area of the city is in a VHFHSZ in an LRA (CAL FIRE 2007).[1] There are no lands in an SRA in Piedmont.

In addition, the eastern edge of Piedmont is considered Wildland Urban Intermix, Interface, or Influence Zone on CAL FIRE's WUI map, as shown on Figure 4.17-2 (CAL FIRE 2019).

Additionally, there are smaller areas throughout the city that are considered to be part of the influence zone. Wildland Urban Interface is dense housing adjacent to vegetation that can burn in a wildfire; Wildland Urban Intermix is housing development interspersed in an area dominated by wildland vegetation subject to wildfire; Wildfire Influence Zone is wildfire susceptible vegetation up to 1.5 miles from Wildland Urban Interface or Wildland Urban Intermix (CAL FIRE 2019). As shown on Figure 4.17-2 all areas of Piedmont are in or immediately adjacent to land classified by CALFIRE as WUI land.

According to the Piedmont City Code (PCC) Ordinance No. 750 N.S., which adopts the California Code of Regulations and establishes that regardless of the classification by CAL FIRE, the city considers all of Piedmont to be in the WUI.

e. Moraga Canyon Specific Plan Area

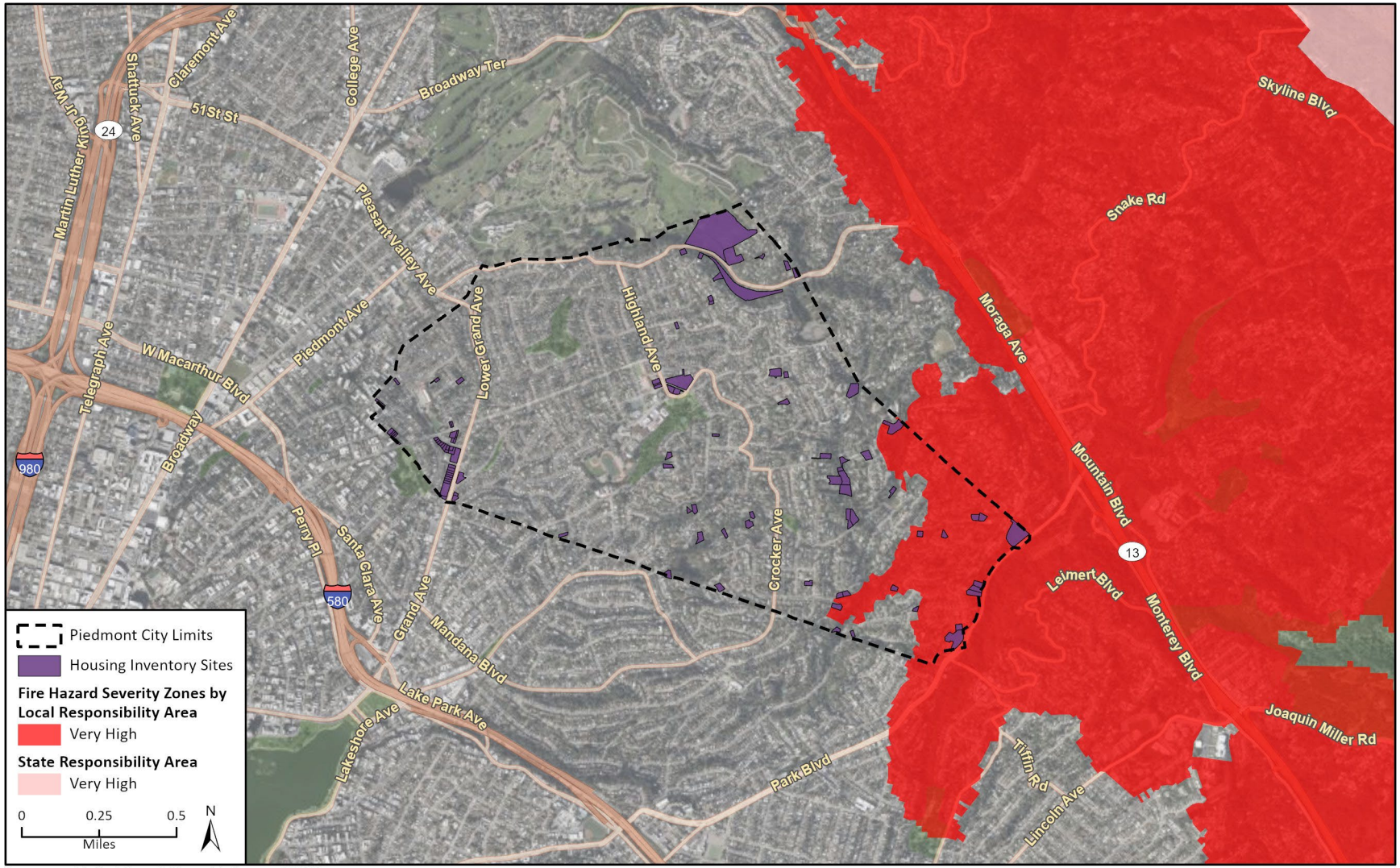
As shown on Figure 4.17-1, the Moraga Canyon Specific Plan (MCSP) Area is not within an LRA or SRA VHFHSZ. However, according to Figure 4.17-2 the MCSP Area is within the WUI according to CAL FIRE. Furthermore, the city of Piedmont considers all land within the city, including that in the MCSP Area, to be within the WUI.

f. Fire History

The most notable recent fire near Piedmont is the 1991 Oakland Hills Fire, which burned 2,000 acres in Oakland and Berkeley. There were no casualties or damage in Piedmont; the fire stopped at the city limits.

[1] CAL FIRE released new Fire Hazard Severity Zones in SRAs map on November 21, 2022; however, the 2022 map is not adopted as of August 2023 nor does it include maps of LRAs. Therefore, for the purposes of analysis in this EIR, the 2007 map will be considered.

Figure 4.17-1 Piedmont Fire Hazard Severity Zones and Responsibility Areas



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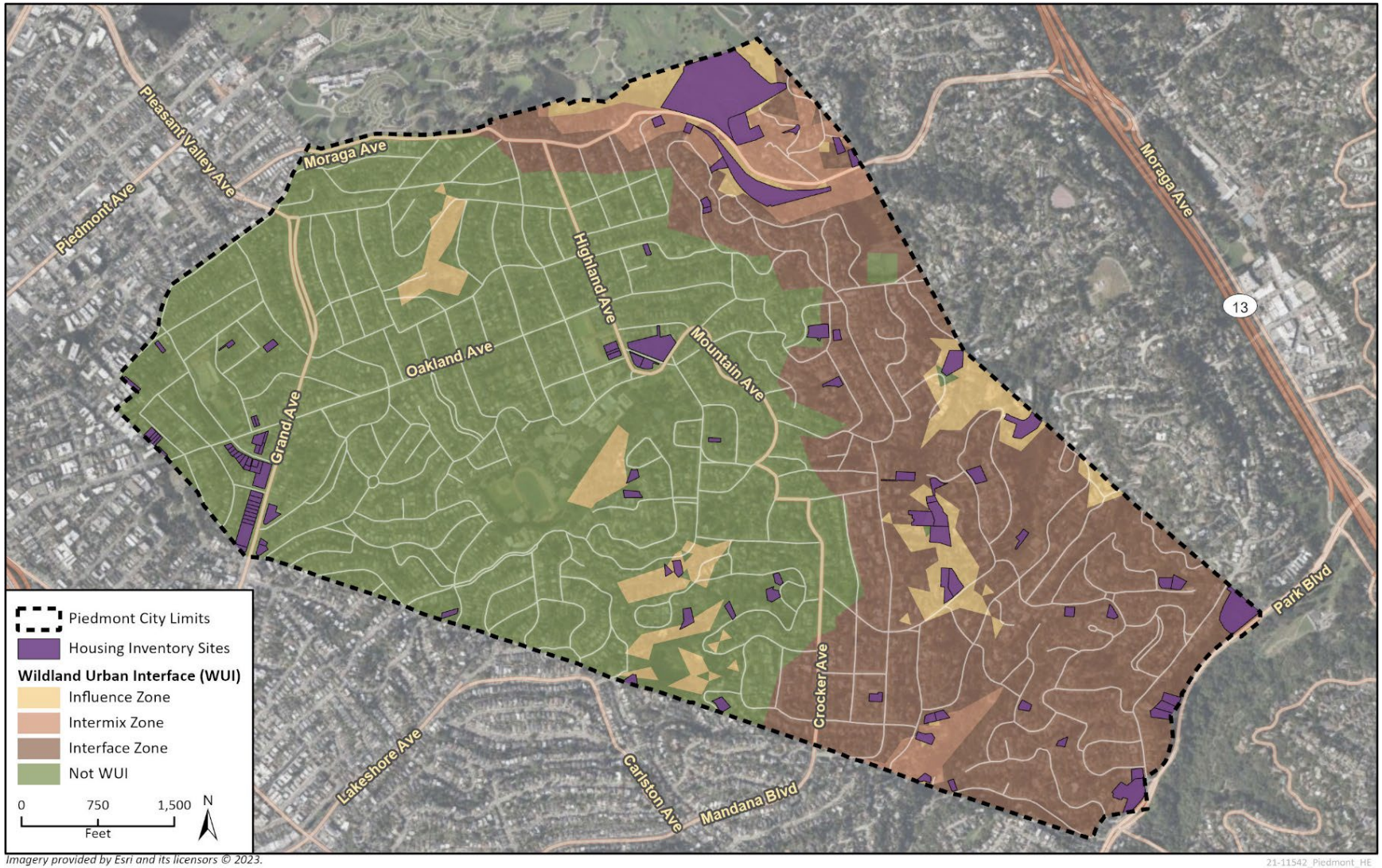
Additional data provided by CAL FIRE, 2007.

21-11542_Piedmont_HE
Fig 4.17-1 Fire Hazard Severity Zones Near Piedmont

Figure 4.17-2 Wildland Urban Interface Based on CAL FIRE Mapping



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Additional data provided by the City of Piedmont, 2023 and CalFire, FRAP, 2022.

21-11542_Piedmont_HE
Fig X WUI

g. Post-fire Slope Instability and Drainage Pattern Changes

Vegetation loss from wildfire scarring of the landscape can result in slope instability in the form of more intensive flooding and landslides. These post-fire slope soils and altered drainage patterns can result in soil creep on downslope sides of foundations and reduce lateral support.

The topography of Piedmont contains hillsides, canyons, and ravines throughout the city. Landslides in these areas may result from heavy rain, erosion, removal of vegetation, seismic activity, wildfire, or combinations of these and other factors.

h. Emergency and Evacuation Routes/Access

The City of Piedmont's Local Hazard Mitigation Plan (LHMP) is intended to guide hazard mitigation planning to better protect the people and property of the City from the effects of natural disasters such as wildfire.

As discussed in the Emergency Evacuation Time Assessment (Appendix I) prepared by Fehr & Peers in 2023, evacuation routes in Piedmont normally consist of:

- Moraga Avenue to State Route (SR) 13 or Pleasant Valley Avenue
- Oakland Avenue to Grand Avenue or Bayo Vista Avenue
- Crocker Avenue to Mandana Avenue
- Hampton Road to Estates Drive onto Park Boulevard
- LaSalle Avenue to Mountain Boulevard
- Wildwood Avenue to Winsor Avenue or Grand Avenue
- Blair Avenue to Harbord Drive

4.17.2 Regulatory Setting

a. Federal Regulations

The Disaster Mitigation Act of 2000

The Disaster Mitigation Act of 2000 requires a state-level mitigation plan as a condition of disaster assistance and provides funding to communities developing their own mitigation plans through the Pre-Disaster Mitigation Grant Program. There are two different levels of state disaster plans: "Standard" and "Enhanced." States that develop an approved Enhanced State Plan can increase the amount of funding available through the Hazard Mitigation Grant Program. The Act also established new requirements for local mitigation plans.

National Fire Plan

The National Fire Plan was developed in August 2000, following a historic wildfire season. Its intent is to establish plans for active response to severe wildfires and their impacts to communities while ensuring sufficient firefighting capacity. The plan addresses firefighting, rehabilitation, hazardous fuels reduction, community assistance, and accountability.

b. State Regulations

California Board of Forestry and Fire Protection

The Board of Forestry and Fire Protection maintains fire safe road regulations, as part of CCR Title 14. This includes requirements for road width, surface treatments, grade, radius, turnarounds, turnouts, structures, driveways, and gate entrances. These regulations are intended to ensure safe access for emergency wildland fire equipment and civilian evacuation.

California Code of Regulations Title 24 (California Building Code)

Updated every three years through a rigorous stakeholder process, Title 24 of the California Code of Regulations requires California homes and businesses to meet strong fire and safety measures. Title 24 contains numerous subparts, including Part 1 (Administrative Code), Part 2 (Building Code), Part 3 (Electrical Code), Part 4 (Mechanical Code), Part 5 (Plumbing Code), Part 6 (Energy Code), Part 8 (Historical Building Code), Part 9 (Fire Code), Part 10 (Existing Building Code), Part 11 (Green Building Standards Code), Part 12 (Referenced Standards Code). The California Building Code (CBC) is applicable to all development in California (Health and Safety Code Sections 17950 and 18938(b).)

The regulations receive input from members of industry, as well as the public, with the goal of "[r]educing of wasteful, uneconomic, inefficient, or unnecessary consumption of energy." (PRC Section 25402.) These regulations are scrutinized and analyzed for technological and economic feasibility (PRC Section 25402(d)) and cost effectiveness (PRC Section 25402(b)(2) and (b)(3)).

Part 2 – California Building Code: Fire Safety Requirements

The State of California provided a minimum standard for building design through the 2022 CBC, which is located in Part 2 of Title 24 of the California Code of Regulations. The 2022 CBC is based on the 2021 International Building Code but has been modified for California conditions. 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 include the installation of sprinklers in all new high-rise buildings and residential buildings; the establishment of fire resistance standards for fire doors, building material; and particular types of construction.

Part 2 – California Building Code: Wildland-Urban Interface Building Standards

On September 20, 2005, the Building Standards Commission approved the Office of the State Fire Marshal's emergency regulations amending the CCR Title 24, Part 2, known as the 2007 CBC. These codes include provisions for ignition-resistant construction standards in the WUI.

Interface zones are areas with dense housing adjacent to vegetation that can burn and meeting the following criteria:

- Housing density class 2 (one house per 20 acres to one house per 5 acres), 3 (more than one house per 5 acres to one house per acre), or 4 (more than one house per acre)
- In Moderate, High, or Very High Fire Hazard Severity Zone
- Not dominated by wildland vegetation (i.e., lifeform not herbaceous, hardwood, conifer, or shrub)
- Spatially contiguous groups of 30-meter cells[2] that are 10 acres and larger

[2] "30-meter cells" refers to satellite mapping or Geographic Information Systems (GIS) data, and indicates data is presented as 30-meter by 30-meter squares in the source maps used to determine zone types.

Intermix zones are housing development interspersed in an area dominated by wildland vegetation and must meet the following criteria:

- Not interface
  - Housing density class 2
  - Housing density class 3 or 4, dominated by wildland vegetation
  - In Moderate, High, or Very High Fire Hazard Severity Zone
  - Improved parcels only
  - Spatially contiguous groups of 30-meter cells 25 acres and larger

Influence zones have wildfire-susceptible vegetation up to 1.5 miles from an interface zone or intermix zone (CAL FIRE 2019).

While the 2007 CBC creates WUI definitions for interface, intermix and influence zones in order to apply required construction standards, many local and regional entities use their own definitions of WUI areas for other purposes, ranging from simple resident awareness and public outreach to further municipal-level standards. CAL FIRE lists Piedmont as an LRA. Piedmont's Local Hazard Mitigation Plan noted that the greatest threat to the City is from the Oakland Hills and into the City of Piedmont. Other areas of concern include Moraga Avenue and near Blair Park. According to LHMP and CAL FIRE, there is a population of 756 in a very high fire hazard severity zone in the City.

Part 9 – California Fire Code

The 2022 California Fire Code is Part 9 of CCR Title 24. It establishes the minimum requirements consistent with nationally recognized good practices to safeguard public health, safety, and general welfare from the hazards of fire, explosion, or dangerous conditions in new and existing buildings, structure, and premises, and to provide safety and assistance to firefighters and emergency responders during emergency operations. It is the primary means for authorizing and enforcing procedures and mechanisms to ensure the safe handling and storage of any substance that may pose a threat to public health and safety. The California Fire Code regulates the use, handling, and storage requirements for hazardous materials at fixed facilities. The California Fire Code and the CBC use a hazard classification system to determine what protective measures are required to protect fire and life safety. These measures may include construction standards, separations from property lines and specialized equipment. To ensure that these safety measures are met, the California Fire Code employs a permit system based on hazard classification. The provisions of this Code apply to the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal, and demolition of every building or structure or any appurtenances connected or attached to such building structures throughout California.

More specifically, the Fire Code is included in CCR Title 24. Title 24, part 9, Chapter 7 addresses fire-resistances-rated construction; CBC (Part 2), Chapter 7A addresses materials and construction methods for exterior wildfire exposure; Fire Code Chapter 8 addresses fire related Interior finishes; Fire Code Chapter 9 addresses fire protection systems; and Fire Code Chapter 10 addresses fire related means of egress, including fire apparatus access road width requirements. Fire Code Section 4906 also contains existing regulations for vegetation and fuel management to maintain clearances around structures. These requirements establish minimum standards to protect buildings located in FHSZs within SRAs and WUI Fire Areas. This code includes provisions for ignition-resistant construction standards for new buildings.

The California Fire Plan

The Strategic Fire Plan for California is the State's roadmap for reducing the risk of wildfire. The most recent version of the plan was finalized in January 2019 and directs each CAL FIRE Unit to address and meet incremental requirements to achieve four specific goals by 2023, including improving core capabilities, enhancing internal operations, ensuring health and safety, and building an engaged workforce (CAL FIRE 2018). A core element of the plan is increasing staffing levels from 2.67 employees per position to 3.11 employees per position to ensure adequate staffing during times of increased mobilization.

California Office of Emergency Services

The California Office of Emergency Services (CalOES) prepares the State of California Multi-Hazard Mitigation Plan (SHMP). The SHMP identifies hazard risks and includes a vulnerability analysis and a hazard mitigation strategy. The SHMP is federally required under the Disaster Mitigation Act of 2000 for the State to receive Federal funding. The Disaster Mitigation Act of 2000 requires a state mitigation plan as a condition of disaster assistance.

State Emergency Plan

The foundation of California's emergency planning and response is a statewide mutual aid system which is designed to ensure that adequate resources, facilities, and other support is provided to jurisdictions whenever their own resources prove to be inadequate to cope with a given situation.

The California Disaster and Civil Defense Master Mutual Aid Agreement (California Government Code Sections 8555–8561) requires signatories to the agreement to prepare operational plans to use within their jurisdiction, and outside their area. These plans include fire and non-fire emergencies related to natural, technological, and war contingencies. The State of California, all State agencies, all political subdivisions, and all fire districts signed this agreement in 1950.

Section 8568 of the California Government Code, the "California Emergency Services Act," states that "the State Emergency Plan shall be in effect in each political subdivision of the state, and the governing body of each political subdivision shall take such action as may be necessary to carry out the provisions thereof." The Act provides the basic authorities for conducting emergency operations following the proclamations of emergencies by the Governor or appropriate local authority, such as a City Manager. The provisions of the Act are reflected and expanded on by appropriate local emergency ordinances. The Act further describes the function and operations of government at all levels during extraordinary emergencies, including war.

All local emergency plans are extensions of the State of California Emergency Plan. The State Emergency Plan conforms to the requirements of California's Standardized Emergency Management System (SEMS), which is the system required by Government Code 8607(a) for managing emergencies involving multiple jurisdictions and agencies (CalOES 2017). The SEMS incorporates the functions and principles of the Incident Command System (ICS), the Master Mutual Aid Agreement, existing mutual aid systems, the operational area concept, and multi-agency or inter-agency coordination. Local governments must use SEMS to be eligible for funding of their response-related personnel costs under state disaster assistance programs. The SEMS consists of five organizational levels that are activated as necessary, including: field response, local government, operational area, regional, and state. CalOES divides the state into several mutual aid regions. The County of Alameda is located in Mutual Aid Region II, which includes Del Norte, Humboldt, Mendocino, Sonoma, Lake, Napa, Marin, Solano,

Contra Costa, San Francisco, San Mateo, Alameda, Santa Clara, Santa Cruz, San Benito, and Monterey Counties (CalOES 2017).

Government Code Sections 65302 and 65302.2, Senate Bill 1241 (Kehoe) of 2012

Senate Bill (SB) 1241 requires cities and counties to address fire risk in SRAs and Very High FHSZs in the safety element of their general plans. The bill also amended CEQA to direct amendments to the *CEQA Guidelines* Appendix G environmental checklist to include questions related to fire hazard impacts for projects located in or near lands classified as SRAs and Very High FHSZs. In adopting these Guidelines amendments, the Governor's Office of Planning and Research recognized that generally, low-density, leapfrog development may create higher wildfire risks than high-density, infill development.[3]

California Public Utilities Commission General Orders

General Order 95

The California Public Utilities Commission (CPUC) General Order 95 applies to construction and reconstruction of overhead electric lines in California. The replacement of poles, towers, or other structures is considered reconstruction and requires adherence to all strength and clearance requirements of this order. The CPUC has promulgated various Rules to implement the fire safety requirements of General Order 95, including:

- Rule 18A requires utility companies take appropriate corrective action to remedy Safety Hazards.
- General Order 95 nonconformances requires that each utility company establish an auditable maintenance program.
- Rules 31.2 requires that lines be inspected frequently and thoroughly.
- Rule 35 requires that vegetation management activities be performed in order to establish necessary and reasonable clearances. These requirements apply to all overhead electrical supply and communication facilities that are covered by General Order 95, including facilities on lands owned and maintained by California State and local agencies.
- Rule 38 establishes minimum vertical, horizontal, and radial clearances of wires from other wires.
- Rule 43.2.A.2 requires that for lines located within Tier 2 or Tier 3 zones, the wind loads required in Rule 43.2.A.1 be multiplied by a wind load factor of 1.1. (CPUC 2020)

General Order 165

General Order 165 establishes requirements for the inspection of electric distribution and transmission facilities that are not contained within a substation. Utilities must perform "Patrol" inspections, defined as a simple visual inspection of utility equipment and structures that is designed to identify obvious structural problems and hazards, at least once per year for each piece of equipment and structure. "Detailed" inspections, where individual pieces of equipment and structures are carefully examined, are required every five years for all overhead conductor and cables, transformers, switching/protective devices, and regulators/capacitors. By July 1st of each year, each

[3] "Leapfrog development" describes the construction of new development at a distance from existing developed areas, with undeveloped land between the existing and new development.

utility subject to this General Order must submit an annual report of its inspections for the previous year under penalty of perjury (CPUC 2017).

General Order 166

General Order 166 Standard 1.E requires that investor-owned utilities (IOU) develop a Fire Prevention Plan which describes measures that the electric utility will implement to mitigate the threat of power-line fires generally. Additionally, this standard requires that IOUs outline a plan to mitigate power line fires when wind conditions exceed the structural design standards of the line during a Red Flag Warning in a high fire threat area. Fire Prevention Plans created by IOUs are required to identify specific parts of the utility's service territory where the conditions described above may occur simultaneously. Standard 11 requires that utilities report annually to the California Public Utilities Commission (CPUC) regarding compliance with General Order 166 (CPUC 2021). Pacific Gas and Electric Company (PG&E) and East Bay Community Energy are the electric utility providers for the City of Piedmont. The most recently available report for PG&E that discusses a Wildfire Mitigation Plan is dated February 5th, 2021(PG&E 2021). PG&E has developed an interim fire threat map that shows a high fire threat districts according to CPUC. The City of Piedmont is graded in CPUC High Fire Threat District – Tier 2.

California Government Code 51182 and Assembly Bill 3074

California Government Code 51182 sets the requirements for creation of defensible space zones around residential units built in WUI areas. Currently the law requires two zones of vegetation management reaching to 30 feet and 100 feet from the residence. In 2020 the legislature passed Assembly Bill 3074, which requires the Board of Forestry and Fire Protection to develop regulations for a third zone within 0 to 5 feet of the home by January 1, 2023. Local and regional fire districts are tasked with regulation and inspection of defensible spaces. As of July 1, 2021, documentation of a compliant Defensible Space Inspection by the jurisdictional fire district is a condition of the sale or transfer of any residential property located in a High FHSZ or VHFHSZ.

Evacuation Route Requirements

In 2019, two separate bills (AB 747 and SB 99) were signed into law that added new requirements for disclosing residential development without at least two points of ingress and egress and addressing the presence and adequacy of evacuation routes in the General Plan Safety Element.

SB 99 (2019) amended Government Code Section 65302(g) to require that, upon the next revision of the housing element on or after January 1, 2020, the safety element must be updated to include information identifying residential developments in hazard areas that do not have at least two emergency evacuation routes (i.e., points of ingress and egress) (Government Code Section 65302(g)(5)).

AB 747 (2019) added Government Code Section 65302.15, which requires that, upon the next revision of a Local Hazard Mitigation Plan (LHMP) on or after January 1, 2022, or beginning on or before January 1, 2022, if a local jurisdiction has not adopted a LHMP, the safety element must be reviewed and updated as necessary to identify evacuation routes and their capacity, safety, and viability under a range of emergency scenarios. If a LHMP, emergency operations plan, or other document that fulfills commensurate goals and objectives, a local agency may use that information in the safety element to comply with this requirement by summarizing and incorporating by reference such a plan or other document into the safety element.

These new requirements apply to all types of hazards in the safety element and are not unique to fire.

Senate Bill 1028

Senate Bill 1028 (2016) requires each electrical corporation to construct, maintain, and operate its electrical lines and equipment in a manner that will minimize the risk of catastrophic wildfire posed by those components, and makes a violation of these provisions by an electrical corporation a crime under State law. The bill also requires each electrical corporation to annually prepare a wildfire mitigation plan and submit to CPUC for review. The plan must include a statement of objectives, a description of preventive strategies and programs that are focused on minimizing risk associated with electric facilities, and a description of the metrics that the electric corporation uses to evaluate the overall wildfire mitigation plan performance and assumptions that underlie the use of the metrics.

California Public Resources Code

The California Public Resources Code (PRC) includes fire safety regulations that restrict the use of equipment that may produce a spark, flame, or fire; require the use of spark arrestors on construction equipment that use an internal combustion engine; specify requirements for the safe use of gasoline-powered tools in fire hazard areas; and specify fire suppression equipment that must be provided on-site for various types of work in fire-prone areas.

These regulations include the following:

- Earthmoving and portable equipment with internal combustion engines would be equipped with a spark arrestor to reduce the potential for igniting a wildland fire (PRC § 4442)
- Appropriate fire suppression equipment would be maintained during the highest fire danger period—from April 1 to December 1 (PRC § 4428)
- On days when a burning permit is required, flammable materials would be removed to a distance of 10 feet from any equipment that could produce a spark, fire, or flame, and the construction contractor would maintain the appropriate fire suppression equipment (PRC § 4427)
- On days when a burning permit is required, portable tools powered by gasoline-fueled internal combustion engines would not be used within 25 feet of any flammable materials (PRC § 4431)

a. Local Regulations

City of Piedmont General Plan

The Piedmont General Plan Environmental Hazards Element includes the following goals and policies applicable to wildfire:

> **Policy EH-19.1: Reducing Fire Hazards.** Maintain building and development regulations that minimize the potential for damage, injury, or loss of life due to fire. Where appropriate, this should include the use of fire-resistant building materials, fire sprinklers, noncombustible roofing materials, and other fire suppression and risk-reduction measures.
>
> **Policy EH-19.2: Fuel Management.** Implement vegetation management programs which reduce the fuel load and potential for wildfire. This should include the removal of invasive fire-prone vegetation and the use of less flammable plants for landscaping, especially on hillside sites. Public education on “defensible space” and good vegetation management practices should be strongly promoted.

Policy EH-19.3: Fire-Fighting Water Flow. Ensure that Piedmont's water system remains adequate for fire-fighting purposes. As funding allows, undertake improvements for areas where capacity is determined to be deficient.

Policy EH-19.4: Fire Department Review of Development Applications. Ensure that the Piedmont Fire Department reviews proposed development applications to verify that response times will be acceptable, emergency access will be adequate, water supply and fire flow will be sufficient, vegetation clearances will be maintained, and appropriate construction materials will be used.

City of Piedmont 2019 Local Hazard Mitigation Plan

The City of Piedmont 's 2019 LHMP is a guide that better protects the people and property of the city from the effects of natural disasters and hazard events. This plan demonstrates the community's commitment to reducing risks from hazards and serves as a tool to help decision makers direct mitigation activities and resources (City of Piedmont 2019). The City of Piedmont has mitigation strategies comprised of LHMP goals and objectives and a mitigation action plan.

City of Piedmont 2018 Climate Action Plan (CAP)

The City of Piedmont's 2018 CAP defines climate change and its potential effects, outlines the actions the State and City are taking to address climate change, and describes how residents and business owners can participate in greenhouse gas (GHG) reduction efforts (City of Piedmont 2018).

Piedmont City Code

Chapter 5 of the PCC establishes provisions for disasters and emergencies, including the creation of a Disaster Council comprised of the Mayor, Vice-Mayor, City Administrator, emergency service providers, and other individuals who may be appointed by the Council. The Disaster Council is responsible for developing the city's emergency operations procedures.

Chapter 8 of the PCC relates to Building, Construction, and Fire Prevention. The City has determined that all areas within the city shall be considered a wildland-urban interface area due to the significant risk of wildfire. Ordinance 755 requires vegetation management including the maintenance of 30 feet of defensible space around all structures. Piedmont adopted the 2022 California Fire Code in Chapter 8.02 of the PCC. Additionally, Chapter 8 includes requirements for geotechnical reports for any site having a slope of 20 percent or greater.

Piedmont Emergency Operations Procedures (EOP)

Piedmont Police Department Policy 203 includes Emergency Operations Procedures for the city. These procedures coordinate the response of disaster service workers within the city to allow for maximum utilization of law enforcement resources during a major disaster or unusual occurrence. This includes the establishment of the following evacuation routes:

- Moraga Avenue to State Highway 13 or Pleasant Valley Avenue.
- Oakland Avenue to Grand Avenue or Bayo Vista Avenue.
- Crocker Avenue to Mandana Avenue.
- Hampton Road to Estates Drive onto Park Boulevard.
- LaSalle Avenue to Mountain Boulevard.
- Wildwood Avenue to Winsor Avenue or Grand Avenue.
- Blair Avenue to Harbord Drive.

4.17.3 Impact Analysis

a. Methodology and Significance Thresholds

Significance Thresholds

Pursuant to the *CEQA Guidelines*, potentially significant impacts to wildfire would result, if located in or near state responsibility areas or lands classified as very high fire hazard severity zones, the project would:

1) Substantially impair an adopted emergency response plan or emergency evacuation plan;
2) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire;
3) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment; or,
4) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.

In addition, pursuant to Section 9, *Hazards and Hazardous Materials,* of Appendix G of the *CEQA Guidelines*, a potentially significant impact would occur if the proposed project would:

1) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; or,
2) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires.

Methodology

Cal FIRE Hazard Severity Maps were consulted in determining Piedmont's proximity to SRAs or lands classified as very high fire hazard severity zones. Impacts related to wildfire hazards and risks were evaluated using FHSZ mapping for Piedmont, aerial imagery, and topographic mapping. Additionally, weather patterns related to prevailing winds and precipitation trends were evaluated as they relate to the spread and magnitude of wildfire. It was assessed whether development facilitated by the proposed Housing Element Implementation project, including development pursuant to an adopted Moraga Canyon Specific Plan, would risk exacerbating those existing environmental conditions or causing new direct, indirect, or cumulative impacts to other aspects of the environment.

California Attorney General Best Practices for Analyzing and Mitigating Wildfire Impacts of Development Projects Under the California Environmental Quality Act restates the CEQA requirement that an EIR analyze "any significant environmental effects the project might cause or risk exacerbating by bringing development and people into the area affected," including by locating development in wildfire risk areas. As such, this evaluation assesses whether projects located in or near State responsibility areas or lands classified as very high fire hazard severity zones would exacerbate wildfire risks, and thereby expose people or structures to significant risks during or post wildfire event; require the installation of emergency-related infrastructure; or result in temporary or ongoing impacts to the environment.

In addition, pursuant to *California Attorney General Best Practices for Analyzing and Mitigating Wildfire Impacts of Development Projects Under the California Environmental Quality Act*, this evaluation assesses whether projects located in or near State responsibility areas or lands classified as very high fire hazard severity zones would substantially impair an adopted emergency response plan or emergency evacuation plan.

b. Project Impacts and Mitigation

The proposed project involves implementation of the 2023-2031 Housing Element (including revisions to the General Plan Land Use Element, revisions to the PCC, and the Moraga Canyon Specific Plan) as well as updates to the General Plan Transportation Element, Environmental Hazards Element, Natural Resources and Sustainability Element, Design and Preservation Element, Community Services and Facilities Element, and Parks, Recreation and Open Space Element. The updates to the General Plan elements themselves would not result in physical changes to the environment such that impacts related to wildfire would occur. This analysis does take into account potential effects associated with new and revised policies in the Environmental Hazards Element that are part of the proposed project as the updates to this element pertain to wildfire. This analysis focuses on impacts associated with implementation of the Housing Element, including revisions to the PCC and the MCSP, which would facilitate housing development throughout Piedmont.

Threshold 1:	If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project substantially impair an adopted emergency response plan or emergency evacuation plan?
Threshold 5:	Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Impact W-1 DEVELOPMENT FACILITATED BY THE PROJECT WOULD RESULT IN ADDITIONAL POPULATION AND VEHICLES IN THE CITY. THE PROJECT COULD INCREASE ROADWAY CONGESTION SUCH THAT THE USE OF AN EVACUATION ROUTE WOULD BE HINDERED. THEREFORE, THIS IMPACT WOULD BE SIGNIFICANT AND UNAVOIDABLE.

Citywide Housing Element Implementation

The Housing Element Implementation Project would result in new development and population growth, resulting in an increase in demand for emergency services, which could affect the implementation of adopted emergency response and evacuation plans. Further, the proposed project would involve facilitating residential development in Piedmont which includes areas in and near a VHFHSZ.

As discussed in the Emergency Evacuation Analysis (Appendix I), and in the Regulatory Setting above, the Piedmont EOP identifies the following evacuation routes within the city:

- Moraga Avenue to State Route (SR) 13 or Pleasant Valley Avenue
- Oakland Avenue to Grand Avenue or Bayo Vista Avenue
- Crocker Avenue to Mandana Avenue
- Hampton Road to Estates Drive onto Park Boulevard
- LaSalle Avenue to Mountain Boulevard
- Wildwood Avenue to Winsor Avenue or Grand Avenue
- Blair Avenue to Harbord Drive

The proposed project does not include physical changes such as realigned or closed-off roadways or changes in general transportation circulation and access that would interfere with or impair emergency response or evacuation citywide. However, the proposed project would facilitate residential development throughout the city, the construction or operation of which could interfere with adopted emergency response or evacuation plans.

Increasing residential density in Piedmont would not necessarily increase the risk of wildfire because buildout under the proposed project would not create additional wildland spaces and therefore would not increase the extent of the wildland-urban interface. However, as discussed below under Impact W-2, construction of individual housing developments could interfere with adopted emergency response or evacuation plans as a result of temporary construction activities within rights-of-way. For example, temporary construction barricades, lane closures, or other construction-related obstructions used for project development could potentially impede emergency response or evacuation. The proposed project involves amendments to the Piedmont General Plan Environmental Hazards Element which includes adding the following new proposed policy:

> **Transportation Construction Plan.** Projects developers shall be required to prepare and implement a Transportation Construction Plan (TCP), which shall be approved by the City. The plan shall include the locations of material and equipment storage, trailers, worker parking, a schedule of site operations that may block traffic, and provisions for traffic control. The TCP shall include procedures for stopping construction in the event of an emergency and ensuring that emergency access and evacuation routes are not inhibited. The TCP shall ensure adequate emergency access and consistency with the California Fire Code and other development requirements as part of the development review process.

With adherence to this proposed new policy, future development would not impair or physically interfere with adopted emergency response or evacuation procedures during construction. This would reduce the impact on emergency evacuation routes associated with short-term construction of development facilitated by the proposed project.

Operation of new residences facilitated by the proposed project would involve adding population and vehicles to the city. According to the Emergency Evacuation Analysis (Appendix I), the proposed project could result in up to 2,276 additional vehicles on the road in Piedmont during an emergency evacuation event compared to existing conditions. This increase in vehicles would increase the evacuation time by between a few minutes and up to approximately 45 minutes for a citywide evacuation depending on the emergency event and the evacuation route. The specific estimated impacts to evacuation routes throughout Piedmont are included in Table 4.17-1 below.

Table 4.17-1 Estimated Evacuation Times by Route- Citywide

Evacuation Route	Total Time to Evacuate[1]		
	Existing	Existing Plus Project	Difference[2]
Eastbound Moraga Avenue to SR 13	2.81	2.95	+ 8 minutes
Westbound Morage Avenue to Pleasant Valley Avenue to Pleasant Valley Avenue to Broadway	1.74	2.40	+ 40 minutes
Grand Avenue to Pleasant Valley Avenue to Broadway	2.16	2.85	+41 minutes
Oakland Avenue to Bayo Vista Avenue to Harrison Street to I-580	2.67	3.42	+45 minutes
Grand Avenue to I-580	2.63	3.20	+34 minutes
Winsor Avenue to Lakeshore Avenue to I-580	2.58	2.85	+16 minutes
Crocker Avenue to Mandana Boulevard to Lakeshore Avenue to I-580	2.89	3.19	+18 minutes
Park Boulevard to SR 13	3.01	3.17	+10 minutes
Estates Drive to Park Boulevard to I-580	2.28	2.76	+29 minutes

[1.] Based on Scenario 3: citywide evacuation due to a wildfire originating near Coaches Field. Total time to evacuate reported in hours.

[2] Difference reported in minutes.

Source: Fehr & Peers 2023, Appendix I

The proposed project includes updates to the Piedmont General Plan Environmental Hazards Element, including the following proposed new policies related to emergency evacuation:

Policy 19.18: **Education on Fire Hazard Reduction Strategies.** Educate residents on fire hazard reduction strategies to employ on their properties, focusing on the most vulnerable populations such as renters.

Policy 19.19: **Ensure Adequate Emergency Evacuation Routes.** Ensure that all new residential development has at least two emergency routes.

Policy 19.20: **Emergency Access.** Ensure that the Piedmont Fire Department has complete access to all locations in the City, including gated residential communities and critical infrastructure.

Policy 19.21: **Emergency Roadways.** Maintain emergency roadways and improve them as necessary and appropriate to ensure they stay in operation during hazardous events.

Policy 19.22: **Residential Neighborhood Engagement.** Prioritize engagement with residential neighborhoods that have evacuation constraints to encourage home retrofits to meet current standards on structure hardening, proactively enforce defensible space standards, and conduct emergency preparedness trainings.

Policy 19.23: **Evaluate Evacuation Route Capacity.** Evaluate evacuation route capacity, safety, and viability under a range of emergency scenarios as part of the next update to the Piedmont Hazard Mitigation Plan, in accordance Government Code Section 65302.15 (as amended by AB 747). Implement recommended mitigation measures to reduce evacuation constraints.

Policy 19.25: Restrict Parking. Restrict parking periodically (e.g., on red flag days) along critical evacuation routes.

Policy 19.28: Access and Fuel Management Coordination. Coordinate with the City of Oakland Fire Department to improve emergency access and implement fuel load modification in Moraga Canyon.

Policy 21.1: **Preparedness and the Community.** Recognize the importance of communication and full community engagement to the success of all emergency preparedness strategies.

Policy 21.2: **Emergency Preparedness Plan.** Use the Standardized Emergency Management System as the basis for emergency planning. The City will maintain an emergency preparedness plan that identifies a chain of command and outlines the actions to be taken in the event of a disaster.

Policy 21.3: **Preparedness Education and Citizen Training.** Promote and coordinate public education on earthquake hazards and emergency preparedness. The City will continue to implement programs that advise the public of preparedness and post-disaster recovery measures, and will encourage volunteer citizen participation in disaster response.

Policy 21.4: **Intergovernmental Preparedness Planning.** Cooperate with other cities, regional organizations, and other public agencies to undertake emergency preparedness planning.

Adherence to these policies would help ensure access to emergency evacuation routes and emergency access to development, would restrict parking along evacuation routes during times when wildfire threat is high, and would strengthen the planning of Piedmont's emergency response through coordination with the public and neighboring agencies and organizations. Nonetheless, the additional residents in Piedmont associated with new residential development facilitated by the proposed project could further inhibit safe evacuation by putting more residents in the area that would require evacuation on narrow hillside roadways. Further, as shown above in Table 4.17-1, the increase in vehicles would increase the evacuation time by between a few minutes and up to about 45 minutes for a citywide evacuation depending on the evacuation route. Additional residents could also make wildfire risk more acute because more people would need to use evacuation routes at the same time. As such, impacts related to emergency response plan or emergency evacuation plan would be potentially significant.

Moraga Canyon Specific Plan

The MCSP is not within a VHFHSZ. Development pursuant to an adopted MCSP, like all other development within the city, would be required to comply with current and proposed new General Plan policies listed above under Citywide Housing Element Implementation. This would reduce impacts associated with the operation of development facilitated by an adopted MCSP. The Emergency Evacuation Analysis considered the proposed project as a whole, including future development in the MCSP Area. Future development within the MCSP Area would result in increased population and vehicles in that area which could impact emergency evacuation routes. The routes most likely to be used by future residents in the MCSP Area include eastbound Moraga Avenue to SR 13 and westbound Moraga Avenue to Pleasant Valley Avenue. As shown in Table 4.17-1, as with development facilitated by the proposed project as a whole, these routes could have increased evacuation times between 8 and 40 minutes. Therefore, this impact is potentially significant.

Mitigation Measures

The following mitigation measure is required:

W-1: Incorporation of Evacuation Analysis Recommendations

The City shall implement all recommendations included in the *City of Piedmont 2023-2031 Housing Element Update – Emergency Evacuation Time Assessment* (Fehr & Peers 2023) and listed below:

- Develop emergency evacuation traffic signal timing plans for traffic signals on evacuation routes, prioritizing evacuation flows and minimizing opposing traffic flows. Emergency response vehicle access into evacuation areas can be maintained through traffic signal pre-emption. Coordinate with City of Oakland and Caltrans to develop corridor evacuation timing plans.
- Identify corridors where temporary evacuation capacity, such as reversible traffic lanes, temporary use of parking lanes, shoulders, or two-way-left-turn lanes, could be provided while maintaining emergency responder access in the opposite direction.
- Explore limiting on-street parking on designated evacuation routes either permanently or during high fire risk periods to reduce potential conflicts with evacuating vehicles.
- As part of evacuation messaging, ensure evacuees are informed of the availability of multiple evacuation routes, to allow effective use of all available capacity.
- Work with Piedmont Unified School District (PUSD) and private schools to develop evacuation plans for the schools in the City of Piedmont.
- Consider staggering the evacuation orders for citywide or large area evacuations for different zones and account for the impact on potential bottleneck locations when determining the timing for evacuation of different zones.
- When considering roadway or intersection design modifications, especially in areas that have less accessibility and on key evacuation routes, consider evacuation capacity and consider design treatments that could allow reversible lanes or temporary use of parking lanes or shoulders as auxiliary lanes to provide additional capacity during an evacuation event.
- Educate residents and employees about the importance of carpooling in evacuations to reduce the number of evacuating vehicles and minimize evacuation times.
- Explore the potential use of the footpath and bicycle networks in evacuating pedestrians and cyclists to reduce the number of evacuating vehicles and minimize evacuation times.
- Examine areas that have a high concentration of residents with social vulnerability indicators such as age, disability, and other mobility factors to determine other potential barriers to evacuation besides distance to and capacity of evacuation routes. Advanced coordination between first responders to ensure an efficient and well-communicated process for evacuation may be needed in response to various hazard scenarios.

Significance After Mitigation

Implementation of Mitigation Measure W-1 would require incorporation of recommendations included in the Emergency Evacuation Analysis including the development of emergency evacuation traffic signal timing plans for traffic signals on evacuation routes, identification of corridors where temporary evacuation access could be provided, and exploration of limiting on-street parking on designated evacuation routes which would reduce impacts to evacuation access to the extent feasible. Nonetheless, for some development projects, impacts may still result from the potential for unusual site-specific or road conditions, project characteristics, increased population as a result of the proposed project, and the general ongoing fire risk in Piedmont. Based on this, impacts would be significant and unavoidable.

Threshold 2:	If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project, due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

Impact W-2 **IMPLEMENTATION OF THE PROPOSED PROJECT WOULD FACILITATE RESIDENTIAL DEVELOPMENT IN AREAS LOCATED IN AND NEAR A VERY HIGH FIRE HAZARD SEVERITY ZONE. NEW DEVELOPMENT WOULD BE REQUIRED TO COMPLY WITH EXTENSIVE REGULATIONS AND FIRE SAFETY PROVISIONS IN THE PIEDMONT CITY CODE, INCLUDING THE FIRE CODE, AND OTHER APPLICABLE REGULATIONS. BASED ON THE EXISTING REGULATORY FRAMEWORK AND PROJECT REVIEW PROCESS WITH PIEDMONT FIRE DEPARTMENT, IMPACTS WOULD BE GENERALLY AVOIDED. HOWEVER, IT REMAINS POSSIBLE THAT EVEN WITH EXISTING REGULATIONS, CONSTRUCTION OR OTHER HUMAN ACTIVITIES RELATED TO DEVELOPMENT IN OR NEAR A VHFHSZ COULD EXACERBATE WILDFIRE RISK AND EXPOSE EXISTING AND NEW RESIDENTS TO POLLUTANT CONCENTRATIONS AND UNCONTROLLED SPREAD OF A WILDFIRE. ADDITIONALLY, BY INCREASING THE POPULATION OF THE WUI AREA, MORE PEOPLE WOULD BE DIRECTLY THREATENED WHEN A WILDLAND FIRE OCCURS. THEREFORE, THIS IMPACT WOULD BE SIGNIFICANT AND UNAVOIDABLE.**

Citywide Housing Element Implementation

Portions of the southeastern portion of the city are within a VHFHSZ, as shown on Figure 4.17-1. Additionally, according to the PCC, the entire city is considered to be in the WUI.

New housing in the VHFSHZ would not increase the likelihood of fire ignition or speed of spread. Further, buildout under the proposed Housing Element Implementation project would not increase fire risk because it would not create additional wildland spaces and therefore would not increase the extent of the wildland-urban interface. As documented by Keeley and Syphard in the International Journal of Wildland Fire (2018), in recent decades (since circa 1980), human-caused fires have been negatively correlated with population density, meaning more developed areas are less likely to be affected by wildfires throughout the State (Keeley and Syphard 2018) and suggesting that additional development does not lead to more wildfires.

Additionally, development would be required to comply with State and local regulations. On a statewide level, development facilitated by the project would be subject to the California Fire Code, which includes safety measures to minimize the threat of fire, such as noncombustible or ignition-resistant building materials for exterior from the surface of the ground to the roof system and sealing any gaps around doors, windows, eaves, and vents to prevent intrusion by flame or embers. Construction would also be required to meet CBC requirements, including CCR Title 24, Part 2, which includes specific requirements related to exterior wildfire exposure. In compliance with the California Fire Code, Part 9 of the CBC, development facilitated by the project would also follow standards for fire safety such as fire flow requirements for buildings, fire hydrant location, and distribution criteria. In addition, the Board of Forestry and Fire Protection, via CCR Title 14, sets forth the minimum development standards for emergency access, fuel modification, setback, signage, and water supply, which help prevent loss of structures or life by reducing wildfire hazards.

On the local level, the PCC requires fire fuel reduction and vegetation management including the maintenance of defensible space of at least 30 feet around all structures, clearance of flammable vegetation at least three feet from roadways near developed parcels, and the removal of any hazardous vegetation or combustible material.

The proposed project includes updates to the General Plan Environmental Hazards Element, including the following proposed policies related to wildfire:

Policy 19.2: Minimize Risk to New Residential Development in Very High Fire Hazard Severity Zones. Develop stringent initial site design and on-going maintenance standards incorporating adequate mitigation measures into individual developments to achieve an acceptable level of risk, considering the increased risk associated with wildland fire hazards due to climate change.

Policy 19.3: New Development Siting. Require new development located along steep slopes and amidst rugged terrain to be fire resistant and avoid contributing to rapid fire spread and or decreased accessibility for firefighting.

Policy 19.4: Density Management. Develop and implement density management strategies that cluster residential developments and minimize low-density exurban development patterns, or developments with undeveloped wildland between them, to reduce amounts of flammable vegetation and collective exposure to wildfire risk.

Policy 19.5: Landscape Features. Site structures to maximize low-flammability landscape features to buffer against wildfire spread.

Policy 19.6: Development Water Systems. Permit development only within areas that have adequate water resources available, to include water pressure, onsite water storage, or fire flows.

Policy 19.8: Fire Protection. Require that new development have adequate fire protection, including proximity to adequate emergency services, adequate provisions for fire flow and emergency vehicle access and fire hardened communication, including high speed internet service.

Policy 19.9: Fire Protection Plans for New Development. Require fire protection plans for all new development.

Policy 19.13: Fuel Management and Public Education. Require all properties in the city to enforce precautionary measures to create defensible space, including removing flammable vegetation and maintaining a fire break around properties. This should include the removal of fire-prone vegetation and the use of less flammable plants for landscaping, especially on hillside sites. Require ongoing maintenance and upkeep to be codified as part of building covenants or homeowner covenants, conditions, and restrictions. Public education on “defensible space” and good vegetation management practices should be strongly promoted.

Policy 19.15: Fire Department Review of Development Applications. Ensure that the Piedmont Fire Department reviews proposed development applications to verify that response times will be acceptable, emergency access will be adequate, water supply and fire flow will be sufficient, vegetation clearances will be maintained, and appropriate construction materials will be used.

Policy 19.17: Vegetation Clearance for Public and Private Roads. Establish and maintain community fire breaks and fuel modification/reduction zones, including clearance alongside public and private roads.

Policy 19.24: Underground Power Lines. Coordinate with Pacific Gas & Electric to implement an electrical undergrounding plan with a focus on critical evacuation roadways and areas with highest wildfire risk.

Compliance with these policies would reduce wildfire risk associated with development facilitated by the proposed project by ensuring that development would incorporate vegetation and fuel management practices, would be sited appropriately and incorporate site-specific design elements to mitigate wildfire risk, would have adequate fire protection and fire protection plans, and would be reviewed by the fire department to verify that development would have adequate emergency access, water supply, vegetation clearances, and would utilize proper construction materials.

Adherence to the CBC and PCC would make structures more fire resistant and less vulnerable to loss in the event of a wildfire as well as reduce the potential for construction to inadvertently ignite a wildfire. Additionally, adherence to General Plan policies would require fire protection plans for new development, and stringent initial site design and on-going maintenance standards incorporating adequate mitigation measures into individual developments to achieve an acceptable level of risk for development in VHFHSZs. Adherence to these regulations and policies would reduce the risk of loss due to wildfire.

Based on all of the above, the extensive regulations and project review scheme would reduce the potential for impacts related to future development under the proposed project in and near the VHFSHZ. However, based on: the potential for site-specific conditions or hazards; project characteristics that are unique; and the general risk of fire in Piedmont, impacts may occur. Additionally, by increasing the population of the VHFHSZ, more people would be directly threatened and evacuation and firefighting efforts may be further challenged when a fire occurs. Therefore, impacts are potentially significant.

Moraga Canyon Specific Plan

The MCSP Area contains steep terrain, and while it is not located in an SRA or VHFHSZ, it is within a WUI. Therefore, development in the MCSP Area would increase the number of residents exposed to a potential wildland-urban interface fire. Development facilitated by the proposed project in the MCSP Area would be required to adhere to the CBC, PCC, and General Plan policies such as Policy 19.3 which requires new development located along steep slopes and amidst rugged terrain to be fire resistant and avoid contributing to rapid fire spread and or decreased accessibility for firefighting. Nonetheless, development in this area could result in risks to people and structures from wildfire-generated pollutants. This impact is potentially significant.

Mitigation Measures

As discussed above in the impact analysis, the City of Piedmont requires various wildfire risk mitigation. Additionally, the proposed project involves proposed new and revised policies in the General Plan Environmental Hazards Element to reduce wildfire risks, including a policy to require a Fire Protection Plan for new development to reduce the potential loss due to wildfire exposure through risk mitigation and minimization. No other mitigation measures are feasible.

Significance After Mitigation

Compliance with the existing city regulations and implementation of the City of Piedmont's requirement for Fire Protection Plan would reduce the potential to exacerbate wildfire risk during construction and after projects are constructed. This would reduce the severity of potential impacts related to exposure to pollutant concentrations from a wildfire or the likelihood of wildfire ignition. No additional mitigation measures beyond adherence to existing procedures are feasible. Nonetheless, for some development projects, even with implementation of these wildfire prevention measures, impacts may result from the potential for unusual site-specific or road conditions, project

characteristics, and the general ongoing fire risk in Piedmont. Additionally, by increasing the population of the VHFHSZ, more people would be directly threatened and evacuation and firefighting efforts would be further challenged when a fire occurs. Based on this, impacts would be significant and unavoidable.

Threshold 3:	If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

Impact W-3 **IMPLEMENTATION OF THE PROPOSED PROJECT WOULD FACILITATE RESIDENTIAL DEVELOPMENT IN AREAS LOCATED IN AND NEAR A VERY HIGH FIRE HAZARD SEVERITY ZONE. NEW DEVELOPMENT, ESPECIALLY DEVELOPMENT IN THE MCSP AREA, COULD REQUIRE THE INSTALLATION OF INFRASTRUCTURE THAT MAY EXACERBATE FIRE RISK. FUTURE DEVELOPMENT FACILITATED BY THE PROPOSED PROJECT WOULD BE REQUIRED TO COMPLY WITH EXTENSIVE REGULATIONS AND FIRE SAFETY PROVISIONS IN THE PIEDMONT CITY CODE, INCLUDING THE FIRE CODE, AND OTHER APPLICABLE REGULATIONS. WITH ADHERENCE TO THESE REGULATIONS, IMPACTS WOULD BE GENERALLY AVOIDED. HOWEVER, IT REMAINS POSSIBLE THAT EVEN WITH EXISTING REGULATIONS, INSTALLATION OR MAINTENANCE OF ASSOCIATED INFRASTRUCTURE COULD EXACERBATE FIRE RISK. THIS IMPACT WOULD BE SIGNIFICANT AND UNAVOIDABLE.**

Citywide Housing Element Implementation

Portions of the southeastern portion of the city are within a VHFHSZ, as shown on Figure 4.17-1. Additionally, according to the PCC, the entire city is considered to be in the WUI.

Most housing inventory sites are infill sites that would be served by existing infrastructure. As discussed in Section 4.14, *Utilities and Service Systems*, under Impact UTIL-1, major upgrades to electric power or natural gas and telecommunications transmission lines or water supply infrastructure are not anticipated; however, wastewater infrastructure upgrades could be needed. In the event that new development requires the installation and increased maintenance of new or improved roads, emergency water sources, power lines or other utilities, the construction and operation of which could introduce potential sources of wildfire ignition, such as the sparking of an overhead power line or construction equipment or the operation of resident vehicles, compliance with existing State and local fire safety measures would substantially reduce the risk of wildfire. These include proposed policies in the Environmental Hazards Element such as Policy 19.24 which requires the undergrounding of power lines to reduce wildfire risk. Although impacts would be generally avoided through adherence to existing regulations and General Plan policies, impacts may still occur should new development require the installation and maintenance of new or improved roads, fuel breaks, emergency water sources, or other utility infrastructure. Because the design and location of such improvements are not yet known, impacts from development facilitated by the proposed Housing Element Implementation project would be potentially significant.

Moraga Canyon Specific Plan

As discussed under Impact W-2, above, the MCSP Area contains steep terrain, and while it is not located in an SRA or VHFHSZ, it is within the WUI. Future development facilitated by the proposed project in the MCSP Area would require the installation of new infrastructure such as power lines and other utility infrastructure. Future development facilitated by the proposed project may require new circulation lanes within the MCSP Area, fuel breaks, or emergency water sources. Existing State and

local regulations would apply, including proposed policies in the Environmental Hazards Element such as Policy 19.24 which requires the undergrounding of power lines to reduce wildfire risk. However, due to the steep terrain in the MCSP Area and because the MCSP Area is not currently developed with residences, the MCSP Area would most likely require installation of some infrastructure. Because the design and location of such improvements are not yet known, impacts from development facilitated by the proposed MCSP would be potentially significant.

Mitigation Measures

There are no feasible mitigation measures beyond compliance with the General Plan policies and the PCC.

Significance After Mitigation

Implementation of General Plan Policy 19.24 would reduce the potential for impacts under this threshold by placing power lines underground in areas subject to wildfire risk. However, it may not be feasible to impose this requirement on all projects. Additionally, potentially unusual site-specific conditions or aspects of the infrastructure project, including power line installation, may result in wildfire impacts from the installation or maintenance of infrastructure required by build out under the proposed project. For some development projects with infrastructure, impacts may still result from the potential for unusual site-specific or road conditions, project characteristics, increased population as a result of the proposed project, and the general ongoing fire risk in Piedmont. Based on this, impacts would be significant and unavoidable.

Threshold 4:	If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

Impact W-4 **IMPLEMENTATION OF THE PROPOSED PROJECT WOULD ENCOURAGE DEVELOPMENT OF HOUSING IN AND NEAR VHFHSZS INCLUDING IN AREAS WITH STEEP TERRAIN, SUCH AS THE MCSP AREA. DEVELOPMENT FACILITATED BY THE PROPOSED PROJECT COULD EXPOSE PEOPLE AND STRUCTURES TO RISK DUE TO THE TERRAIN AND SLOPE WHICH COULD RESULT IN POTENTIAL RISKS SUCH AS LANDSLIDES. THIS IMPACT WOULD BE SIGNIFICANT AND UNAVOIDABLE.**

Citywide Housing Element Implementation

Piedmont contains some steep terrain and portions of the southeastern portion of the city are within a VHFHSZ, as shown on Figure 4.17-1. Additionally, according to the PCC, the entire city is considered to be in the WUI.

If a severe wildfire were to occur in areas with steep terrain, structures downslope would be at risk of landslides. When supporting vegetation is burned away, hillsides become destabilized and prone to erosion. The charred surface of the earth is hard and absorbs less water. When winter rains come, this leads to increased runoff, erosion, and landslides in hilly areas. Erosion and land slippage after fires can also lead to temporary or permanent displacement and property damage or loss. In addition, the increase in housing in a VHFHSZ could increase the exposure and vulnerability of people living downslope in these areas.

As discussed in Section 4.6, *Geology and Soils,* most of Piedmont is in moderate to high landslide susceptibility zones. Specifically, the western part of Piedmont generally has high landslide susceptibility and the eastern part of the city, where the VHFHSZ in the city is, generally has very high landslide susceptibility. The risk of landslides is typically highest in Moraga Canyon, along Indian Gulch, in Piedmont Park, in the Wildwood Gardens area, along Park Boulevard, and in the Somerset Road area along the Oakland border (City of Piedmont 2009).

As discussed in Section 4.9, *Hydrology and Water Quality*, there are no portions of Piedmont located within the flood hazard zones as mapped by FEMA, so risk of flooding within the city is minimal.

However, the proposed project could expose people and structures to landslides by facilitating increased residential development in and near a VHFHSZ and in hilly areas where landslides could occur and could be exacerbated after a wildfire. However, development would be required to adhere to the CBC and chapter 8 of the PCC which requires soil reports for new residences on a site having a slope of 20 percent or greater and guidelines for proper drainage, grading, and erosion control to minimize the risk of landslides and slope failure. Additionally, as discussed in Section 4.6, *Geology and Soils,* development facilitated by the proposed project would be required to comply with the following existing General Plan policies to reduce impacts related to development on slopes within Piedmont:

> **Policy 18.1: Restricting Development on Unstable Sites.** Permit development only in those areas where potential danger to health, safety, and welfare of Piedmont residents can be adequately mitigated.
>
> **Policy 18.4: Soil and Geologic Reports.** Require site specific soil reports and geologic studies in instances where development may be exposed to substantial geologic or seismic hazards, including ground shaking and landslides. Ensure that any identified hazards are appropriately mitigated.
>
> > **Action 18.A: Soil and Geotechnical Reporting Requirements.** Require soil and geotechnical reports for any structure constructed on a slope exceeding 20 percent, any application for a tentative subdivision map, and any new residence on any lot, regardless of slope.

These policies would require development to be permitted on stable sites where impacts to the health, safety, and welfare of Piedmont residents could be mitigated and would require soil and geotechnical reports for buildings constructed on a slope exceeding 20 percent, any application for a tentative subdivision map, and any new residence on any lot, regardless of slope.

With adherence to required policies and regulations, impacts associated with downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes would be lessened. Nonetheless, because of the topography of the city, landslide susceptibility, and wildfire susceptibility, development under the proposed project would potentially expose people and structures to significant risks, including landslides, as a result of runoff, post-fire slope instability, or drainage changes. Therefore, this impact is potentially significant.

Moraga Canyon Specific Plan

The MCSP Area contains steep terrain, and while it is not located in an SRA or VHFHSZ, it is within an area designated as WUI. The Moraga Canyon area is listed in the General Plan as an area within the city with a high risk of landslides. Development facilitated by the proposed project would be required to comply with the CBC and PCC which would decrease the risk of subsequent landslides or site instability. However, due to the high landslide risk in this area and the risk of wildfire throughout the city, development under the proposed implementation of the Moraga Canyon Specific Plan, would

potentially expose people and structures to significant risks, including landslides, as a result of runoff, post-fire slope instability, or drainage changes. Therefore, this impact is potentially significant.

Mitigation Measures

Mitigation Measure MCSP-GEO-1 in Section 4.6, *Geology and Soils,* would apply to future development in the MCSP Area. The City of Piedmont requires geotechnical studies on slopes greater than 20 percent in accordance with the General Plan and PCC Chapter 8, as discussed under Impact W-4 above. No other mitigation measures are feasible.

Significance After Mitigation

The PCC requirement of site-specific geotechnical investigations would reduce potential impacts related to landslides for individual future development projects. These requirements would reduce potential impacts such as landslides due to runoff, post-fire slope instability, or drainage changes following a potential wildfire. Additionally, implementation of mitigation measure GEO-1 would require geotechnical assessments for development in the MCSP Area specifically, which would reduce geologic impacts in this area that could be exacerbated by wildfire. However, based on the potential for unusual site-specific conditions or project characteristics, and the general ongoing fire risk in the Piedmont, impacts of a housing development project under the proposed project may still occur. Therefore, this impact would be significant and unavoidable.

Threshold 5:	Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?

Impact W-5 **IMPLEMENTATION OF THE PROPOSED PROJECT WOULD FACILITATE DEVELOPMENT IN AND NEAR AREAS WITHIN VHFHSZS. COMPLIANCE WITH EXISTING POLICIES AND REGULATIONS WOULD REDUCE WILDFIRE RISKS TO THE EXTENT FEASIBLE. HOWEVER, BECAUSE THE PROPOSED PROJECT WOULD ENCOURAGE DEVELOPMENT IN AND NEAR VHFHSZS AND WOULD LEAD TO AN OVERALL INCREASE IN PIEDMONT'S POPULATION, THIS IMPACT WOULD BE SIGNIFICANT AND UNAVOIDABLE.**

Citywide Housing Element Implementation

As discussed in the Setting section above, there is high risk of wildfire in the eastern portion of Piedmont, and all of Piedmont is within the WUI. Development facilitated by the project would encourage growth in and near areas classified as VHFHSZs. While development would be required to comply with the CBC, PCC, and General Plan policies cited under Impact W-1 through W-4 above, development facilitated by the proposed project could expose people or structures to a significant risk of loss, injury, or death involving wildland fires. This impact is potentially significant.

Moraga Canyon Specific Plan

Similar to development facilitated by the proposed project throughout the city, development in the MCSP Area would encourage growth in areas within the WUI and in areas along hillsides which may be prone to both wildfire and subsequent hazards such as landslides which are discussed under Impact W- 4 above. While development pursuant to an adopted MCSP would be required to comply with the CBC, PCC, and General Plan policies cited under Impacts W-1 through W-4 above, development in the MCSP Area could expose people or structures to a significant risk of loss, injury, or death involving wildland fires. This impact is potentially significant.

Mitigation Measures

There are no feasible mitigation measures beyond compliance with the General Plan policies and the PCC.

Significance After Mitigation

Compliance with the General Plan and PCC would reduce impacts to the extent feasible, however impacts would remain significant and unavoidable.

c. Cumulative Impacts

A project's environmental impacts are "cumulatively considerable" if the "incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects" (*CEQA Guidelines* Section 15065[a][3]). The geographic scope for cumulative wildfire impacts is Piedmont and its surrounding areas. As described in Section 3, *Environmental Setting*, development that is considered part of the cumulative analysis includes buildout under the proposed project, which takes into account development that could occur with implementation of the City of Piedmont's Housing Element in coordination with development under the Piedmont's General Plan. Development facilitated by the proposed Housing Element Implementation project, including development pursuant to an adopted Moraga Canyon Specific Plan, would increase the density of development in urban areas and within designated urban service areas, which could exacerbate wildfire risks. All new development and infrastructure would be subject to statewide standards for fire safety in the California Fire Code, as well as proposed policies in the Piedmont General Plan Environmental Hazards Element. As discussed under Impacts W-1 through W-5 above, compliance with the California Fire Code and General Plan policies would reduce the risk of wildfire to the extent feasible. However, even with mitigation, it is not possible to prevent a significant risk of wildfires or fully protect people and structures from the risks of wildfires. Therefore, cumulative development under the proposed project would result in a significant cumulative wildfire impact. The proposed project would have a considerable contribution to a cumulative impact.

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5 Other CEQA Required Discussions

This section discusses the potential significant environmental effects that cannot be avoided, growth-inducing impacts, and irreversible environmental impacts associated with implementation of the proposed Housing Element Implementation project.

5.1 Significant Environmental Effects that Cannot be Avoided

CEQA Guidelines Section 15126.2(b) requires that an EIR describe any significant impacts that cannot be avoided, even with the implementation of feasible mitigation measures. Implementation of the proposed project could result in significant and unavoidable impacts related to cultural resources (Section 4.4), greenhouse gas emissions (Section 4.7), noise (Section 4.11), transportation (Section 4.14), utilities and service systems (Section 4.16), and wildfire (Section 4.17).

5.2 Growth Inducement

CEQA Guidelines Section 15126(d) requires a discussion of growth-inducing impacts of the proposed project. As discussed in *CEQA Guidelines* Section 15126.2(e), growth-inducing impacts includes ways in which the proposed project could foster economic or population growth, or the construction of additional housing either directly or indirectly in the surrounding environment. An assessment of growth inducing impacts also includes ways in which a project could remove an obstacle to growth, such as through the expansion of utilities or infrastructure. Growth does not necessarily create significant physical changes to the environment. However, depending upon the type, magnitude, and location of growth, it can result in significant adverse environmental effects.

5.2.1 Population Growth

As discussed in Section 4.12, *Population and Housing*, while development facilitated by the proposed project would directly generate population growth, the City of Piedmont and State of California have established the need for additional housing in Piedmont. The proposed project would address the Regional Housing Needs Allocation (RHNA) assigned by ABAG of 587 units of which 257 units must be lower income households. To meet the objectives of the RHNA and provide sufficient capacity for housing development, the proposed project specifies sites for residential development and identifies implementation programs and zoning policies to encourage additional housing. Therefore, the proposed project would align with ABAG's RHNA determination and the State statutory requirements, which are established based on anticipated and desired growth within the city.

Overall, full buildout assumed under the proposed project could facilitate an estimated population growth of approximately 1,048 residential units and an additional 2,934 residents compared to existing conditions by 2031. Growth anticipated under the proposed project is intended to meet regional housing needs over the long term, as it includes State-mandated housing goals. The proposed project would be consistent with State requirements for the RHNA. The State requires that all local governments adequately plan to meet the housing needs of their communities. Given that the State is in an ongoing and protracted housing crisis due to an insufficient housing supply, the additional units under the proposed project would further assist in addressing the existing crisis and meeting

the housing needs of the City of Piedmont's communities. Therefore, the proposed Housing Element Implementation project, including development pursuant to an adopted Moraga Canyon Specific Plan (MCSP), would not result in substantial unplanned population growth, either directly or indirectly. Further, as discussed throughout Section 4, *Environmental Impact Analysis,* of this EIR, the proposed project includes amendments to the Piedmont General Plan to add proposed new policies that would reduce potential environmental impacts associated with growth under the proposed project.

5.2.2 Economic Growth

The proposed project would involve new residential development and would not directly result in new commercial or other uses that would generate employment opportunities. Development facilitated by the project would generate temporary employment opportunities during construction. However, construction workers would be expected to be drawn from the existing regional work force, and project construction would not be growth-inducing from an employment standpoint. Further, operation of proposed new residences may involve additional residential service-related jobs (such as for landscape maintenance or domestic workers). However, these jobs would also be expected to be drawn from the existing regional workforce and would not be growth-inducing from an employment standpoint. The proposed Housing Element Implementation project, including development pursuant to an adopted MCSP, would not induce substantial economic expansion to the extent that direct physical environmental effects would result.

5.2.3 Removal of Obstacles to Growth

The proposed project is located in an urbanized area that is served by existing infrastructure. In the event that roadway upgrades are required to serve specific future development, such upgrades would likely be minor (e.g., lane reconfiguration or restriping) and are not anticipated to include the construction of new arterial or connector roads or extension of arterial or connector roads into undeveloped areas. Although new residential development under the proposed project may require minor utility upgrades or expansion (e.g., water line connections, site drainage design) on a project-by-project basis, such upgrades would be intended to accommodate the growth planned under the proposed project within the City of Piedmont, existing utility infrastructure serves the existing development surrounding the City of Piedmont, and minor utility upgrades would not induce growth outside of the city. As discussed in Section 4.16, *Utilities and Service Systems,* the existing utility systems for water, stormwater, electric power, natural gas, and telecommunication facilities in Piedmont have sufficient capacity to serve the project. However, relocation, expansion, or construction of new wastewater conveyance facilities may be needed to serve development facilitated by the proposed project. Nonetheless, the construction of new wastewater conveyance infrastructure would occur primarily on developed areas of Piedmont that already contain utility infrastructure and would be intended to serve growth facilitated by the proposed project. However, the construction of wastewater infrastructure could impact previously undisturbed areas specifically in the MCSP Area. EBMUD's Municipal Wastewater Treatment Plant (MWWTP) serving Piedmont has adequate capacity to treat project-generated sewage, and sufficient water supplies are available to serve reasonably foreseeable development under the proposed project; therefore, the proposed Housing Element Implementation project, including development pursuant to an adopted MCSP, would not necessitate construction of a new wastewater treatment facility or a new potable water facility. Wastewater infrastructure improvements may be needed to serve development facilitated by the proposed project, but these improvements would serve project-related growth and would not expand the wastewater service area or create new facilities such that growth outside Piedmont would be accommodated. Because the proposed project would primarily facilitate development on

underdeveloped and underutilized lots within already urbanized areas, project implementation would not remove an obstacle to growth.

5.3 Irreversible Environmental Effects

CEQA Guidelines Section 15126.2(c) requires a discussion of any significant irreversible environmental changes that would be caused by a proposed project. Specifically, Section 15126.2(c) states:

> Uses of nonrenewable resources during the initial and continued phases of the project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as highway improvement which provides access to a previously inaccessible area) generally commit future generations to similar uses. Also, irreversible damage can result from environmental accidents associated with the project. Irreversible commitments of resources should be evaluated to assure that such current consumption is justified.

Construction activities related to future development facilitated by the proposed Housing Element Implementation project would result in the irretrievable commitment of nonrenewable energy resources, primarily in the form of fossil fuels (including fuel oil), natural gas, and gasoline for automobile and construction equipment, and energy used in manufacturing construction materials. The proposed project would involve the use of building materials and energy, some of which are non-renewable resources, to construct future development facilitated by the proposed project. Because the proposed project does not in and of itself propose individual development projects, it is not possible to estimate the size of each subsequent development project or the amount of resources and non-renewable energy they would consume. However, consumption of these resources would occur with any development in the region and are not unique to the proposed project. As discussed in Section 4.5, *Energy*, use of such resources would not be unusual as compared to common construction projects and would not substantially affect the availability of such resources.

Once constructed, the proposed project would also irreversibly increase local demand for non-renewable energy resources such as petroleum products and natural gas. However, increasingly efficient building design would offset this demand to some degree by reducing energy demands of the proposed Housing Element Implementation project. Development facilitated by the proposed project would be subject to the energy conservation requirements of the California Energy Code (Title 24, Part 6, of the California Code of Regulations, *California's Energy Efficiency Standards for Residential and Nonresidential Buildings*) and the California Green Building Standards Code (Title 24, Part 11 of the California Code of Regulations). The California Energy Code provides energy conservation standards for all new and renovated commercial and residential buildings constructed in California, and the Green Building Standards Code requires solar access, natural ventilation, and stormwater capture. Consequently, development facilitated by the proposed Housing Element Implementation project, including development pursuant to an adopted MCSP, would not use unusual amounts of energy or construction materials and impacts related to consumption of non-renewable and slowly renewable resources would be less than significant. Again, consumption of these resources would occur with any development in the region and is not unique to the proposed project.

Resources that would be consumed as a result of operation of future development facilitated by the proposed project include water. However, as discussed in Section 4.16, *Utilities and Service Systems*, the amount and rate of water consumption would not result in significant environmental impacts related to the unnecessary, inefficient, or wasteful use of resources.

The project would also require a commitment of law enforcement and fire protection public services. However, as discussed in Section 4.13, *Public Services and Recreation*, impacts associated with public services would not be significant.

Additional vehicle trips associated with the proposed project would incrementally increase local traffic and regional air pollutant and GHG emissions. However, as discussed in Section 4.2, *Air Quality*, development and operation of the project would not generate air quality emissions that would result in a significant impact. Impacts from the proposed Housing Element Implementation project associated with GHG emissions and transportation would be significant and are discussed further below.

5.4 Significant and Unavoidable Impacts

The environmental effects of the proposed Housing Element Implementation project, including development facilitated by an adopted MCSP, along with recommended mitigation measures, are discussed in detail in Section 4, *Environmental Impact Analysis*, of this EIR and summarized in the Executive Summary. The following environmental issues were determined to be less than significant, or can be reduced to less than significant with the incorporation of mitigation measures:

- Aesthetics
- Agriculture and Forestry Resources
- Biological Resources
- Energy
- Geology and Soils
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Mineral Resources
- Population and Housing
- Public Services and Recreation
- Tribal Cultural Resources

CEQA Guidelines Section 15126.2(b) requires that an EIR describe any significant impacts, including those that can be mitigated but not reduced to less than significant levels, as a result of implementation of the proposed project. The following environmental issues stemming from the proposed Housing Element Implementation project, including development facilitated by an adopted MCSP, were determined to result in potential significant and unavoidable impacts:

- Cultural Resources
- Greenhouse Gas Emissions
- Noise
- Transportation
- Utilities and Service Systems
- Wildfire

6 Alternatives

As required by *CEQA Guidelines* Section 15126.6, this EIR examines a range of reasonable alternatives to the proposed project that would attain most of the basic project objectives but would avoid or substantially lessen the significant adverse impacts.

As discussed in Section 2, *Project Description*, the objectives for the proposed project are to implement the 2023-2031 Housing Element, which includes the following goals:

1. Amend the General Plan for consistency with the adopted 6th Cycle 2023-2031 Housing Element and to accommodate the growth required by the State-mandated RHNA of 587 housing units, including amendments to the following elements: Land Use Element; Transportation Element; Environmental Hazards Element (Safety and Noise Elements); Parks, Recreation, and Open Space Element; Design & Preservation Element; Community Services and Facilities Element; and Natural Resources and Sustainability Element.
2. Revise the City's Zoning Ordinance as outlined in the programs of the adopted 6th Cycle 2023-2031 Housing Element. Under a maximum build-out scenario the revised Zoning Ordinance would allow for an estimated 1,048 new housing units, disbursed throughout the City, for occupants of all income levels.
3. Prepare a specific plan for the City-owned parcels in the Moraga Canyon area and the Moraga Avenue roadway that intersects them, located near Piedmont's northern border with the City of Oakland. The specific plan is expected to improve pedestrian, bicycle and vehicular safety in the Moraga Avenue roadway and to facilitate the development of below-market-rate housing and the accommodation of at least 132 housing units at all income levels while continuing existing recreational and Public Works Department uses and services.
4. Meet State-mandated RHNA for 6th Cycle Housing Element planning period of 2023 – 2031;
5. Enact new and amended General Plan goals, policies, and actions and new and amended City Code regulations which affirmatively further fair housing in Piedmont; and
6. Bring the General Plan into conformance with recently enacted State laws.

Included in this analysis are two alternatives, including the CEQA-required "no project" alternative, that involve changes to the project that may reduce the project-related environmental impacts as identified in this EIR. Alternatives have been developed to provide a reasonable range of options to help decision makers and the public understand the general implications of revising or eliminating certain components of the proposed project.

After consideration and rejection of a number of alternatives, the following alternatives are evaluated in more detail in this EIR:

- Alternative 1: No Project
- Alternative 2: Reduced Buildout

Detailed descriptions of the two alternatives above are included in the impact analysis for each alternative.

6.1 Alternatives Considered but Rejected

The City of Piedmont considered several alternatives that were considered but ultimately rejected.

- The City considered an alternative that would not involve adopting the Moraga Canyon Specific Plan (MCSP) in accordance with Housing Element Program 1.L to develop a Specific Plan for the City-owned parcels in Moraga Canyon. However, this would directly conflict with Project Objective #2. Further, this would likely result in Piedmont being unable to demonstrate to the California Department of Housing and Community Development (HCD) that the City was in compliance with State requirements to meet the City's RHNA. Therefore, this alternative was considered but rejected and is not included as an alternative in the analysis.
- The City also considered whether there was an additional development alternative that would reduce the significant and unavoidable impacts related to historical resources, greenhouse gas emissions, construction noise, and wildfire. However, there is no development alternative that would generally meet the project objectives and State requirements to provide for housing that could feasibly avoid demolition of unidentified historical resources, increases in greenhouse gas emissions, construction noise in exceedance of standards, or avoid development in or near the Very High Fire Hazard Severity Zone. Therefore, no such alternatives were identified.
- Given the City's RHNA and state requirements for housing, the City did not consider alternatives that would provide for less housing that mandated to meet the City's RHNA, as they would not meet the project objectives or satisfy State requirements. Therefore, no alternatives other than the two alternatives considered below were analyzed in more detail.

6.2 Alternative 1: No Project Alternative

6.2.1 Description

The "No Project" Alternative is required to be analyzed under CEQA. In this case, the alternative involves continued implementation of the City's existing plans and policies that would accommodate development in accordance with the existing land use designations, policies, and zoning standards. Consistent with the buildout assumed in the City's previous 2015-2023 Housing Element, this alternative assumes development of 60 units, or approximately 527 units fewer than the 6th Cycle RHNA and 988 fewer units than the assumed development under the proposed project's maximum build-out scenario of 1,048 units. It is assumed that development would occur generally consistent with current development patterns and trends, which involve primarily small residential projects under four units, residential additions, and the construction of accessory dwelling units (ADUs).

In addition, Alternative 1 would not include adoption of a specific plan that would facilitate residential development in the Moraga Canyon Specific Plan (MCSP) Area. Similarly, the proposed amendments to the Piedmont General Plan to implement the 2023-2031 Housing Element and bring the General Plan into conformance with recent State law, including new and revised policies in the Land Use Element; Environmental Hazards Element; Transportation Element; Parks, Recreation, and Open Space Element; Community Services and Facilities Element; Design & Preservation Element; and Natural Resources and Sustainability Element, would not be adopted.

The No Project Alternative would not meet the project objectives because it would not implement the 6th Cycle 2023-2031 Housing Element, which was designed to satisfy the City's RHNA, would not prepare a Specific Plan for the City-owned parcels in the Moraga Canyon area, and would not bring the General Plan into conformance with recent State laws.

6.2.2 Impact Analysis

a. Aesthetics

Under the No Project Alternative there would be substantially less potential for new development in Piedmont than there would be under the proposed project. Since less development would be facilitated, there would be fewer possibilities for development to adversely affect scenic views or vistas. Impacts to scenic vistas would be less than significant, the same as under the proposed project, and further reduced in comparison. Similar to the proposed project, development under the No Project Alternative would be required to comply with the City's development and design standards and requirements under the Piedmont City Code (PCC) that govern aesthetics, as well as existing policies within the Piedmont General Plan. In addition, under this alternative, there would be fewer new sources of light and glare. Overall, aesthetics impacts under the No Project Alternative would be reduced in comparison to the proposed project, but would be less than significant, the same determination as that for the proposed project.

b. Air Quality

The No Project Alternative would involve reduced buildout in Piedmont compared to the proposed project. In addition, without adoption of the proposed project, the proposed changes to the General Plan Natural Resources and Sustainability Element to add policies and actions for Construction Emissions Screening, Construction Emissions Control measures, Construction Health Risk Assessment, and Roadway Health Risk Assessment policies would not occur.

Because this alternative would involve reduced potential for development compared to the proposed project, it would result in fewer vehicle trips and mobile emissions than would the proposed project. Because development would likely include primarily small projects (under four units) or ADUs, development under existing plans and regulations would not conflict with the Bay Area Air Quality Management District's (BAAQMD) 2017 Clean Air Plan to reduce greenhouse gas (GHG) emissions or regional planning efforts to reduce vehicle miles traveled (VMT) and meet air quality standards. Therefore, this alternative would have a less than significant impact related to consistency with air quality plans, the same determination as that for the proposed project.

Because of the reduced overall buildout, this alternative could involve less construction activity in the city and less overall emissions of criteria air pollutants during construction. Although future development projects would not be required to include construction emissions control measures or prepare construction or roadway health risk assessments (HRAs) as would be required with the proposed new General Plan policies, future discretionary projects would be required to undergo CEQA analysis, including an analysis of air quality impacts and implementation of mitigation as applicable.. Nonetheless, because this alternative involves less potential for development, and because development is assumed to include small projects that don't have long construction timeframes, impacts from construction emissions would be reduced and would remain less than significant, the same determination as that for the proposed project.

The assumed reduction in buildout under this alternative would result in fewer vehicle trips and associated mobile emissions relative to the proposed project. Therefore, similar to the proposed project, operational emissions would not exceed the BAAQMD's significance thresholds. This impact would be reduced compared to the proposed project and remain less than significant, the same as under the proposed project.

Due to the reduction in construction emissions, this alternative also would result in lower overall emissions of toxic air contaminants (TACs) during construction. Although future development projects would not be required to include construction or roadway HRAs as would be required with the proposed new General Plan policies, future discretionary projects would be required to undergo CEQA analysis, including an analysis of air quality impacts and implementation of mitigation as appliable. Nonetheless, because this alternative involves less potential for development, and because development is assumed to include mainly small projects that don't have long construction timeframes, this impact would be reduced but remain less than significant, the same as determination as that for the proposed project.

Similar to the proposed project, this alternative would not include uses that generate substantial odorous emissions. Therefore, the impacts related to odors would remain less than significant.

c. Biological Resources

There would be less overall development potential in the city under the No Project Alternative than there would be under the proposed project. As with development under the proposed project, development under this alternative could potentially affect special-status species or nesting birds and their associated habitats as well as the movement of native or migratory fish or wildlife species or established native resident or migratory wildlife corridors. However, without adoption of the proposed project, the proposed changes to the General Plan Natural Resources and Sustainability Element to add new policies for Nesting Bird Protection, Bird Safe Design, San Francisco Dusky Footed Woodrat Protection, and Roosting Bat Protection policies would not occur. Nonetheless, future discretionary projects would be required to undergo CEQA analysis, including an analysis of biological resources impacts and implementation of mitigation as applicable. Because this alternative would reduce buildout compared to the proposed project and would mostly include small projects such as ADUs on already developed sites, and because development in Piedmont is still required to comply with existing General Plan polices, Piedmont City Code (PCC) requirements, and other applicable State and regional laws and regulations to protect biological resources, biological resources impacts under the No Project Alternative would likely be reduced compared to those than those under the proposed project. Impacts would be less than significant, the same determination as that for the proposed project.

d. Cultural Resources

Under the No Project Alternative there would be less overall development potential than under the proposed project. However, without adoption of the proposed project, the proposed changes to the General Plan Design and Preservation Element to add Historical Resources Assessment and Treatment and Archaeological Resources Assessment and Treatment policies would not occur.

As described in Section 4.4, *Cultural Resources*, there are various buildings within the city that may qualify as historic structures. Although less development would be facilitated, it is still possible that historic structures could be impacted by this development. Current City regulations do not require an assessment of an existing structure by architectural historian prior to its demolition. Future projects that involve demolition of historical resources would be required to undergo CEQA review and mitigate the loss of identified historical resources to the extent feasible. Nonetheless, demolition by its nature is complete and total material impairment of the historical resource, and no feasible mitigation measures are available to mitigate the demolition of the CEQA historical resources to a less-than-significant level. Therefore, impacts to historical resources could still occur. Impacts would

be reduced compared to the proposed project because it is assumed less development would occur, and therefore fewer potential historical resources could be affected.

Development under this alternative could disturb unrecorded archaeological resources and human remains, similar to the proposed project. Although future development projects would not be required to comply with the Archaeological Resources Assessment and Treatment policy as would be required with the proposed new General Plan policy, future discretionary projects would be required to undergo CEQA analysis, including an analysis of archaeological resources impacts and implementation of mitigation as applicable. Nonetheless, because this alternative would reduce buildout compared to the proposed project, cultural resources impacts under the No Project Alternative would likely be reduced as less ground disturbance would occur compared to development potential under the proposed project and would remain less than significant.

e. Energy

Under the No Project Alternative, fewer total residential units would be developed, which would result in a reduction in energy usage compared to the proposed project. Fewer residential units would decrease electricity and natural gas consumption compared to the proposed project, and fewer residents would decrease consumption of gasoline and diesel fuel compared to proposed project. Overall, energy impacts under the No Project Alternative would be reduced compared to those under the proposed project and impacts would remain less than significant, the same determination as that for the proposed project.

f. Geology and Soils

Although the No Project Alternative would result in a reduced buildout compared to the proposed project, development could still potentially be subject to seismically-induced ground shaking and other seismic hazards, including liquefaction, landslides, unstable soils, soil erosion, and expansive soils. However, development under the No Project Alternative would be required to comply with policies and requirements within the California Building Code, the PCC, Piedmont General Plan, and the NPDES permit. Impacts would remain less than significant. Because this alternative would not involve residential development in the MCSP Area, the mitigation specific to the MCSP Area would not apply.

While the No Project Alternative would result in less potential for development than the proposed project, ground disturbing construction activities in geologic units assigned a high or undetermined paleontological sensitivity could have the potential to significantly impact paleontological resources, similar to the proposed project. Although this alternative would not involve adding the Paleontological Resources policy to the General Plan Natural Resources and Sustainability Element, due to the reduced development under this alternative, less ground disturbance and compliance with CEQA, fewer unidentified paleontological resources would be impacted than under the proposed project. Impacts would be reduced compared to the proposed project and would remain less than significant.

g. Greenhouse Gas Emissions

Under the No Project Alternative, fewer total residential units would be developed, which would result in a smaller anticipated population increase and less construction-related and operational emissions in comparison to buildout under the proposed project. This alternative would result in lower GHG emissions than the proposed project as it would result in less development potential. However, this alternative would also not include amendments to the General Plan Natural Resources

and Sustainability Element to add the Greenhouse Gas Emissions Reductions policy. This alternative would not conflict with plans or policies to reduce GHG emissions impacts and therefore those impacts would be less than significant, the same as under the proposed project. Nonetheless, similar to the proposed project, development under the No Project Alternative would not be guaranteed to be consistent with BAAQMD's updated GHG threshold for prohibiting natural gas appliances or natural gas infrastructure. Therefore, similar to the proposed project, impacts would be significant and unavoidable.

h. Hazards and Hazardous Materials

The No Project Alternative would result in less development potential than the proposed project; however, the development allowed under this alternative could still occur within 0.25 mile of a school and could result in the release of hazardous materials. Just as with the proposed project, compliance with regional and federal regulations and compliance with policies within the Piedmont General Plan, as well as the Piedmont Local Hazard Mitigation Plan, would minimize the risk of releases and exposure to these materials. Impacts would be reduced and would remain less than significant.

As discussed in Section 4.8, *Hazards and Hazardous Materials,* there are multiple locations within Piedmont that are designated as hazardous materials sites. While the No Project Alternative would result in less development potential overall, it could still occur on these sites. Future development would be subject to the same federal, State, and local regulations for remediation and cleanup. Therefore, impacts would be reduced compared to the proposed project since there would be reduced development under this Alternative and impacts would remain less than significant.

Because this alternative would not involve residential development in the MCSP Area, the mitigation specific to the MCSP Area would not apply and impacts would be less under the No Project Alternative.

i. Hydrology and Water Quality

There would be less overall development in the city under the No Project Alternative than there would be under the proposed project, resulting in less construction activities that could release materials and degrade water quality and less discharge to storm drains that could contaminate and affect downstream waters. Similar to the proposed project, development under the No Project Alternative would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge and would not substantially alter the drainage pattern on sites and increase surface runoff. Development would be required to comply with the NPDES Construction General Permit, NPDES MS4 General Permit, Provision C.3 of the Municipal Regional Stormwater Permit, the PCC, and the Piedmont General Plan policies, which would reduce impacts to a less than significant level. Impacts under this alternative would be less than those of the proposed project due to reduced development and would remain less than significant.

j. Land Use and Planning

The No Project Alternative would involve continuing a pattern of development consistent with existing land use controls. The No Project Alternative would not physically divide an established community and would not conflict with Plan Bay Area 2050, the Piedmont General Plan, or the PCC. This alternative would conflict with regional and State goals to encourage housing development, would not meet the City's RHNA, and would not update the Piedmont General Plan to be consistent with State law. Nonetheless, it is assumed impacts would be less than significant and the same as those of the proposed project.

k. Noise

The No Project Alternative would result in less development potential than the proposed project. In addition, this alternative would not involve amendments to the General Plan Environmental Hazards Element to add the new policies with Construction Nosie Reduction Measures, Construction Noise Study, and Vibration Control Plan policies.

Development in Piedmont under this alternative would still generate construction and operational noise. Although development would be required to comply with daytime construction hours as set forth in the PCC, the type of construction equipment, proximity of sensitive receptors to the site, and overall duration of construction are still unknown. Nonetheless, because development under current trends involves mainly small projects (under four units) and ADUs, this type of construction is not likely to exceed noise thresholds. Therefore, construction noise impacts would be reduced in comparison with the proposed project and the unavoidable impact would not occur.

Although operational noise associated with the No Project Alternative would still be regulated by respective standards in the PCC, such noise sources would occur to a lesser degree than under the proposed project. Nonetheless, on-site operational noise would remain typical of the urban environment and off-site traffic noise associated with development would not result in a perceptible increase in noise levels. Furthermore, all development would be required to comply with State and local standards to reduce interior noise to acceptable levels. Impacts would be reduced compared to the proposed project but would remain less than significant.

Large development projects under the No Project Alternative could generate vibration exceeding thresholds for building damage, particularly during construction, similar to the proposed project. Although future large development projects would not be required to prepare vibration control plans as would be required with the proposed new General Plan policy, future discretionary projects would be required to undergo CEQA analysis, including an analysis of vibration impacts and implementation of mitigation as applicable. Impacts would be reduced compared to the proposed project but would remain less than significant.

Overall noise impacts under the No Project Alternative would be reduced compared to the proposed project.

l. Population and Housing

The No Project Alternative would result in a smaller number of residential units and therefore would result in a smaller population increase than the proposed project. Assuming 2.8 persons per unit, the reduction of 988 potential new units would reduce population growth by up to 2,766 people compared to the proposed project. Overall population growth under this alternative would be approximately 168 people, bringing the city's population to 10,961 by 2031[1]. This alternative would not achieve the State requirements for building housing capacity in Piedmont to meet the City's RHNA. However, growth would be within the growth forecasts for North Alameda County in Plan Bay Area 2050. The No Project Alternative would not involve the extension of roads or other infrastructure that could indirectly lead to population growth. Impacts would be less than significant and generally the same determination as that for the proposed project.

[1] 10,793 (current population) + 168 (new residents under Alternative 1) = 10,961 people

m. Public Services and Recreation

The No Project Alternative would result in fewer residential units than the proposed project. Therefore, the increase in demand on public services, including police protection, fire protection, schools, parks, and recreational facilities would be less than that of the proposed project. As with the proposed project, services would be adequate to service future demand, and Piedmont would continue to exceed park acreage standards. The No Project Alternative would also not involve development of residential uses in the MCSP Area; therefore, it is assumed the recreational and open space areas of the MCSP would remain the same as existing. Impacts would be reduced compared to the proposed project and would remain less than significant.

n. Transportation

The No Project Alternative would result in 988 fewer new residential units than the proposed project. On a per capita basis, the No Project Alternative would not reduce VMT to the same extent as under the proposed project. In 2020, home-based VMT per resident was estimated to be 18.8. Under the No Project Alternative, home-based VMT per resident in 2031 would decrease to 18.3. However, VMT per resident would not be reduced to the same extent as under the proposed project which would have an estimated home-based VMT per capita in 2031 of 17.8. This is because the proposed project would place additional housing near goods and services whereas the No Project Alternative would not facilitate such development. Therefore, VMT per resident would still exceed the threshold of 15 percent below the Bay Area regional baseline average of 16.8. Because this alternative would not reduce VMT per resident to the same extent as under the proposed project, impacts related to VMT would be increased and remain significant and unavoidable. This alternative would also not involve adoption of proposed new VMT Analysis and Transportation Demand Management policy in the General Plan Transportation Element. Therefore, impacts would greater than under the proposed project.

Because this alternative would reduce new development potential in Piedmont, this alternative would not conflict with a program, plan, ordinance, or policy addressing transit, bicycle, or pedestrian facilities, would not result in inadequate emergency access, and would not result in substantially increased design hazards. Overall, these impacts would be less than significant and reduced in comparison to the proposed project.

o. Tribal Cultural Resources

Under the No Project Alternative, fewer residential units would be constructed, which would result in a reduced likelihood of impacting tribal cultural resources. Future development would be required to comply with requirements of AB 52 and SB 18 as applicable, as well as City regulations governing protection of tribal cultural resources. As a result of consultation under required State laws, additional measures to protect such resources would be required if tribal cultural resources are present. Although future development projects would not be required to comply with the Tribal Cultural Resources policy as would be required with the proposed new General Plan policy, future discretionary projects would be required to undergo CEQA analysis, including AB 52 consultation and implementation of mitigation as applicable. Nonetheless, because this alternative assumes less development would occur, and therefore fewer potential tribal cultural resources could be affected, impacts related to tribal cultural resources would be reduced compared to those of the proposed project. Impacts would remain less than significant, the same determination as that for the proposed project.

p. Utilities and Service Systems

Under the No Project Alternative, fewer residential units would be constructed and therefore the demand on utilities would be reduced compared to the proposed project. This includes a reduction in water supply requirements, wastewater generation, electricity use, solid waste generation, and telecommunications. Impacts related to water supply and infrastructure, electricity, solid waste, and telecommunications would be reduced compared to those of the proposed project but would remain less than significant, the same as the proposed project. For wastewater infrastructure, because the No Project Alternative would substantially reduce buildout compared to the proposed project, it is assumed that the significant and unavoidable impact related to new or expanded wastewater infrastructure would be eliminated.

q. Wildfire

The No Project Alternative would result in fewer residential units being constructed in the City's Local Responsibility Area (LRA) Very High Fire Hazard Severity Zones (VHFHSZ) and within a wildland urban interface (WUI). This alternative would not involve land use changes that would facilitate increased development in or near a VHFHSZ or in a WUI and would substantially reduce the amount of development in the city. Therefore, wildfire-related hazards would be reduced. Further, because this alternative would substantially reduce the amount of development, it would also not increase emergency evacuation time. This alternative would not substantially exacerbate wildfire risk or expose a substantial new number of residents to pollutant concentrations, uncontrolled spread of wildfire, or post-fire-related hazards. Therefore, impacts would be reduced under this alternative, and the significant and unavoidable impacts related to wildfire would be eliminated.

6.3 Alternative 2: Reduced Buildout

6.3.1 Description

This alternative assumes that the entirety of the Housing Element is not implemented, but that State laws such as SB 9, AB 1851, AB 2244 and the State Density Bonus Law, would continue to be implemented. This alternative would include continued implementation of regulations governing ADUs and Zone B development on sites less than 10 acres. Unlike the proposed project which proposes zoning changes to facilitate development on sites more than 10 acres, Alternative 2 only anticipates development on sites less than 10 acres at the existing allowed zoning of 5.445 units per acre. Alternative 2 assumes that the MCSP would be adopted in accordance with Program 1.L and assumes that developers in Moraga Canyon would request 80 percent density bonuses for 100 percent affordable housing.

This alternative would include updates to elements of the General Plan to achieve internal consistency, implement the 2023-2031 Housing Element, and reflect regulatory changes since original adoption of the General Plan. Amendments to other General Plan elements include amendments to the: Land Use Element; Transportation Element; Environmental Hazards Element; Parks, Recreation, and Open Space Element; Community Services and Facilities Element; Design and Preservation Element; and Natural Resources and Sustainability Element.

In terms of buildout, Alternative 2 assumes 56 housing units on vacant single-family lots and two units from pipeline projects. Alternative 2 assumes that ADU growth would exceed the 2022 rate of production by an additional 5.125 ADUs (totaling 32.125 building permits issued for ADUs each year) over the 8-year planning period which would add an additional 81 housing units. Additionally, ADU

Programs and Incentive Programs in Zones A, C, and E would add 176 housing units, for a total of 257 housing units. This would exceed estimated ADU housing units from the proposed project by 65 housing units. The number of housing units from SB 9 Implementation would stay the same as the proposed project (40 units). Alternative 2 assumes that all land within Zone D develops under existing zoning with an 80 percent State density bonus while no land in Zone C is eligible for density bonus since all land in Zone C is developed near its existing development potential. Alternative 2 anticipates that all religious institutions would develop housing on properties on parking lots and within basements and underutilized spaces at the existing allowed zoning of 5.445 units per acre. Due to AB 1851 and AB 2244, which requires a density bonus for eligibility, Alternative 2 assumes that all religious institutions would request 80 percent density bonuses for 100 percent affordable housing. Alternative 2 assumes 62 units for religious affiliated housing (AB 1851 and AB 2244 including State density bonus), which is 23 less than the proposed project which assumed 85 units for religious affiliated housing.

Table 6-1 summarizes the projected buildout under Alternative 2. Alternative 2 would result in the development of 587 units, or 461 fewer units when compared to the buildout assumed under the proposed project of 1,048 units.

Table 6-1 Alternative 2 Buildout

Implementation Program	Units
Vacant Single-Family Lots	56
Pipeline Projects	2
ADU Programs in Zone A and Zone E	148
ADU Incentives Programs in Zone A and Zone E	12
ADU Programs in Zone C	14
ADU Incentives Programs in Zone C	2
Additional ADUs	81
SB 9 Development	40
State Density Bonus Zone D	108
Moraga Canyon Under Existing Zoning plus State Density Bonus	62
AB 1851 and AB 2244 plus State Density Bonus	62
Total (Alternative 2)	**587**

Alternative 2 would meet some of the project objectives because it would amend the General Plan for consistency with the 2023-2031 Housing Element and meet the number of new housing units in the RHNA of 587 units (Project Objectives #1 and #4), would prepare a Specific Plan for the City-owned parcels in the Moraga Canyon area (Project Objective #3), and would bring the General Plan into conformance with recent State laws (Project Objective #5). However, it would not facilitate the same level of development as the proposed project nor the affordability levels of the RHNA; thus, it may not achieve Project Objectives #2 and #4. Further, it would not enact all of the General Plan programs and therefore would not affirmatively further fair housing in Piedmont (Project Objective #5) to the same extent as under the proposed project, in compliance with State law.

6.3.2 Impact Analysis

a. Aesthetics

There would be less overall development in Piedmont under Alternative 2 than there would be under the proposed project. Since less development would occur, there would be fewer possibilities for development to adversely affect scenic views or vistas. Impacts to scenic vistas would be less than significant, the same determination/conclusion as that for the proposed project and reduced in comparison. Similar to the proposed project, development under the Alternative 2 would be required to comply with the City's development and design standards and requirements under the PCC that govern aesthetics, as well as existing policies within the General Plan. In addition, under this alternative, there would be fewer new sources of light and glare. Overall, aesthetics impacts under Alternative 2 would be reduced in comparison to the proposed project, but would be less than significant, the same determination/conclusion as that for the proposed project.

b. Air Quality

Alternative 2 would involve reduced buildout in Piedmont compared to the proposed project. Therefore, it would result in fewer vehicle trips and mobile emissions than the proposed project. Development under existing plans and regulations would likely not conflict with BAAQMD's 2017 Clean Air Plan to reduce GHG emissions or regional planning efforts to reduce VMT and meet air quality standards. Therefore, this alternative would have a less than significant impact related to consistency with air quality plans, the same determination/conclusion as that for the proposed project.

Because of the reduced overall buildout, this alternative could involve less construction activity in the city and less overall emissions of criteria air pollutants during construction. Future discretionary projects would be required to undergo CEQA analysis including an analysis of air quality impacts. Future development in Piedmont would be required to adhere to proposed new General Plan policies related to construction emissions control measures and preparing construction or roadway HRAs. Therefore, the impact from construction emissions would remain less than significant with implementation of proposed General Plan policies, the same as the proposed project.

The assumed reduction in buildout under this alternative would result in fewer vehicle trips and associated mobile emissions relative to the proposed project. Therefore, similar to the proposed project, operational emissions would not exceed the BAAQMD's significance thresholds. This impact would be reduced compared to the proposed project and remain less than significant, the same determination/conclusion as that for the proposed project.

Due to the reduction in construction emissions, this alternative also would result in lower overall emissions of TACs during construction. Future discretionary projects would be required to undergo CEQA analysis, including an analysis of air quality impacts. This impact would be reduced but remain less than significant, the same determination/conclusion as that for the proposed project.

Similar to the proposed project, this alternative would not include uses that generate substantial odorous emissions. Therefore, the impacts related to odors would remain less than significant.

c. Biological Resources

There would be less overall development in the city under the Alternative 2 than there would be under the proposed project. As with development under the proposed project, development could potentially affect special-status species or nesting birds and their associated habitats as well as the movement of native or migratory fish or wildlife species or established native resident wildlife or migratory wildlife corridors. Development in Piedmont under this alternative would still be required to comply with existing General Plan polices, Piedmont City Code (PCC) requirements, and other applicable State and regional laws and regulations to protect biological resources. In addition, development under Alternative 2 would be required to adhere to proposed new General Plan Natural Resources and Sustainability Element Nesting Bird Protection, Bird Safe Design, San Francisco Dusky Footed Woodrat Protection, and Roosting Bat Protection policies. Nonetheless, because this alternative would reduce buildout compared to the proposed project, biological resources impacts under Alternative 2 would be reduced compared to those under the proposed project. Impacts would be less than significant, the same as the proposed project.

d. Cultural Resources

Under Alternative 2 there would be less overall development than under the proposed project. As described in Section 4.4, *Cultural Resources*, there are various buildings within the city that may qualify as historic structures, although they have no official landmark status. Although this alternative would involve less development, it is still possible that historic structures could be impacted by this development. In addition, future development would be required to adhere to the proposed General Plan Design and Preservation Element Historical Resources Assessment and Treatment policy. Nonetheless, because this alternative would involve less development, it is still possible that historic structures could be impacted. Therefore, impacts to historical resources would be reduced compared to the proposed project but would remain significant and unavoidable.

Development under Alternative 2 could disturb unrecorded archaeological resources and human remains, similar to the proposed project. However, future development would be required to adhere to proposed General Plan Archaeological Resources Assessment and Treatment policy. Because this alternative would reduce buildout compared to the proposed project and therefore less ground disturbance would occur, cultural resources impacts under Alternative 2 would be reduced compared to those impacts under the proposed project. Impacts would be less than significant, the same determination/conclusion as that for the proposed project.

e. Energy

Under Alternative 2, fewer total residential units would be developed, which would result in a reduction in energy usage compared to the proposed project. Fewer residential units would decrease electricity and natural gas consumption compared to the proposed project, and fewer residents would decrease consumption of gasoline and diesel fuel compared to proposed project. Overall, energy impacts under the Alternative 2 would be reduced compared to those under the proposed project and impacts would remain less than significant, the same determination/conclusion as that for the proposed project.

f. Geology and Soils

Although Alternative 2 would result in a reduced buildout compared to the proposed project, development could still potentially be subject to seismically-induced ground shaking and other seismic hazards, including liquefaction, landslides, unstable soils, soil erosion, and expansive soils. However, development under the Alternative 2 would be required to comply with policies and requirements within the California Building Code, the PCC, Piedmont General Plan, and the NPDES permit. Impacts would remain less than significant. Mitigation specific to the MCSP Area (Mitigation Measure MCSP-GEO-1) would continue to apply and impacts related to the MCSP would continue to be less than significant with mitigation incorporated.

While Alternative 2 would result in less development than the proposed project, ground disturbing construction activities in geologic units assigned a high or undetermined paleontological sensitivity could have the potential to significantly impact paleontological resources, similar to the proposed project. Further, future development under Alternative 2 would be required to adhere to the proposed new Paleontological Resources policy in the General Plan Natural Resources and Sustainability Element. This alternative would reduce development and therefore involve less ground disturbance, resulting in less potential for unidentified paleontological resources to be impacted than under the proposed project. Impacts would be reduced compared to the proposed project but would remain less than significant, the same as under the proposed project.

g. Greenhouse Gas Emissions

Under Alternative 2, fewer total residential units would be developed, which would result in a smaller anticipated population increase and less construction-related and operational GHG emissions in comparison to buildout under the proposed project. This alternative would result in lower GHG emissions than the proposed project as it would result in less development. This alternative would also include amendments to the General Plan Natural Resources and Sustainability Element to add the Greenhouse Gas Emissions Reductions policy. This alternative would not conflict with plans or policies to reduce GHG emissions impacts, and therefore those impacts would be less than significant, the same as determination/conclusion as that for the proposed project. Nonetheless, similar to the proposed project, development under Alternative 2 would not be guaranteed to be consistent with BAAQMD's updated GHG threshold for prohibiting natural gas appliances or natural gas infrastructure. Therefore, similar to the proposed project, impacts would be significant and unavoidable, albeit reduced due to the lesser amount of development.

h. Hazards and Hazardous Materials

Alternative 2 would result in less development than the proposed project; however, the development allowed under this alternative could still occur within 0.25 mile of a school and could result in the release of hazardous materials. Just as with the proposed project, compliance with regional and federal regulations and compliance with policies within the Piedmont General Plan, as well as the Piedmont Local Hazard Mitigation Plan, would minimize the risk of releases and exposure to these materials. Impacts would be reduced and would remain less than significant.

As discussed in Section 4.8, *Hazards and Hazardous Materials,* there are multiple locations within Piedmont that are designated as hazardous materials sites. While Alternative 2 would result in less development overall, it could still occur on these sites. Future development would be subject to the same federal, State, and local regulations for remediation and cleanup. Therefore, impacts would be

reduced compared to the proposed project since there would be reduced overall development under this Alternative, and impacts would remain less than significant.

Because this alternative would involve residential development in the MCSP Area, the mitigation specific to the MCSP Area (mitigation measures MCSP-HAZ-1, MCSP-HAZ-2, and MCSP-HAZ-3) would continue to apply and impacts specific to the MCSP would remain less than significant with mitigation incorporated.

i. Hydrology and Water Quality

There would be less overall development in the city under Alternative 2 than there would be under the proposed project, resulting in less construction activities that could release materials and degrade water quality and less discharge to storm drains that could contaminate and affect downstream waters. Similar to the proposed project, development under Alternative 2 would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge and would not substantially alter the drainage pattern on sites and increase surface runoff. Development would be required to comply with the NPDES Construction General Permit, NPDES MS4 General Permit, Provision C.3 of the Municipal Regional Stormwater Permit, the PCC, and the General Plan policies, which would reduce impacts to a less than significant level. Impacts under this alternative would be less than those of the proposed project due to reduced development and would remain less than significant.

j. Land Use and Planning

Alternative 2 would involve continuing a pattern of development consistent with existing land use controls. Alternative 2 would not physically divide an established community and would not conflict with Plan Bay Area 2050, the Piedmont General Plan, or the PCC for the same reasons as described in Section 4.10, *Land Use and Planning*. Impacts would be less than significant and the same as those of the proposed project.

k. Noise

Alternative 2 would result in less development than the proposed project; however, development under this alternative would still generate construction and operational noise. Future development under Alternative 2 would be required to adhere to proposed new General Plan Environmental Hazards Element to add the new Construction Nosie Reduction Measures and Construction Noise Study policies. Nonetheless, although development would be required to comply with these General Plan policies and with daytime construction hours as set forth in the PCC, the type of construction equipment, proximity of sensitive receptors to the site, and overall duration of construction are still unknown. Therefore, as with the proposed project, construction noise impacts would remain significant and unavoidable, although reduced in comparison with the proposed project.

Although operational noise associated with the Alternative 2 would still be regulated by respective standards in the PCC, such noise sources would occur to a lesser degree than under the proposed project. Nonetheless, on-site operational noise would remain typical of the urban environment and off-site traffic noise associated with development would not result in a perceptible increase in noise levels. Furthermore, all development would be required to comply with State and local standards to reduce interior noise to acceptable levels. Impacts be reduced compared to the proposed project but would remain less than significant.

Development under the Alternative 2 could generate vibration exceeding thresholds for building damage, particularly during construction, similar to the proposed project. However, future development would be required to adhere to the proposed new General Plan Vibration Control Plan policy. Impacts would be reduced compared to the proposed project but would remain less than significant.

Overall noise impacts under the Alternative 2 would be reduced compared to the proposed project.

l. Population and Housing

Alternative 2 would result in a smaller number of residential units and therefore would result in a smaller population increase than the proposed project. Assuming 2.8 persons per unit, the reduction of 461 fewer units than under the proposed project would reduce population growth by 1,291 people compared to the proposed project. Overall population growth under this alternative would be approximately 1,644 people, bringing the city's population to 11,897 by 2031. Similar to the proposed project, this alternative would allow for housing capacity to meet the City's RHNA (though without a buffer) in accordance with State law. Further, growth under this alternative would be within the growth forecasts for North Alameda County in Plan Bay Area 2050. Alternative 2 would not involve the extension of roads or other infrastructure that could indirectly lead to population growth. Impacts would be less than significant and generally the same as under the proposed project.

m. Public Services and Recreation

Alternative 2 would result in fewer additional residents in Piedmont than the proposed project. Therefore, the increase in demand on public services, including police protection, fire protection, schools, parks, and recreational facilities would be less than that of the proposed project. As with the proposed project, services would be adequate to service future demand; impacts would be reduced compared to the proposed project and would remain less than significant.

Under this alternative, the population in Piedmont would still increase which would increase the demand and use of parks and recreational facilities, though to a lesser extent than under the proposed project. Alternative 2 would also still involve the designation of land within the MCSP Area for new housing and the reconfiguration and/or relocation of existing recreation facilities, open space, and parkland in the MCSP Area. It is conservatively assumed that the acreage of parks and recreational facilities in the MCSP Area could be reduced under this Alternative. Nonetheless, like the proposed project, even with the potential reduction in parkland, Piedmont would still exceed the State park acreage standard and comply with State law regarding parkland. Impacts would be less than significant, the same as under the proposed project.

n. Transportation

Alternative 2 would result in 461 fewer residential units than the proposed project. However, on a per capita basis, Alternative 2 is not expected to reduce VMT to the same extent as under the proposed project. This is because the proposed project would place additional housing near goods and services whereas Alternative 2 would not facilitate development to the same extent. It is expected home-based VMT per resident under this Alternative would still exceed the threshold of 15 percent below the Bay Area regional baseline average of 16.8. In addition, similar to the proposed project, some developments may not screen out from VMT impact analyses or may exceed VMT thresholds. Although future development would be required to adhere to proposed new VMT Analysis and Transportation Demand Management policy in the General Plan Transportation Element, since the

location, size, and characteristics of individual development projects are currently unknown, impacts related to VMT would be significant and unavoidable.

Like the proposed project, this alternative would not conflict with a program, plan, ordinance, or policy addressing transit, bicycle, or pedestrian facilities, would not result in inadequate emergency access, and would not result substantially increase design hazards for the same reasons described in Section 4.14, *Transportation*. Overall, these impacts would be less than significant and slightly reduced in comparison to the proposed project.

o. Tribal Cultural Resources

Under Alternative 2, fewer residential units would be constructed, which would result in a reduced likelihood of impacting tribal cultural resources. Future development would be required to comply with requirements of AB 52 and SB 18, as well as City regulations governing protection of tribal cultural resources. As a result of consultation under required State laws, additional measures to protect such resources may be required if tribal cultural resources are present. Future development would be subject to proposed new Tribal Cultural Resources General Plan policy. Impacts related to tribal cultural resources would be reduced compared to those of the proposed project but would remain less than significant, the same as the proposed project.

p. Utilities and Service Systems

Under Alternative 2, fewer residential units would be constructed and therefore the demand on utilities and utility infrastructure would be reduced compared to the proposed project. This includes a reduction in water supply demand, wastewater generation, electricity use, solid waste generation, and telecommunications. Impacts related to water supply and infrastructure, electricity, solid waste, and telecommunications would be reduced compared to those of the proposed project but would remain less than significant, the same determination/conclusion as that for the proposed project. For wastewater infrastructure, because Alternative 2 would reduce buildout compared to the proposed project, it is possible that the significant and unavoidable impact related to new or expanded wastewater infrastructure could be eliminated. However, because the exact location and size of future development is unknown, it is conservatively assumed that new or upgraded infrastructure could still be needed and this impact would remain significant and unavoidable.

q. Wildfire

Alternative 2 would result in fewer residential units being constructed in the VHFHSZ. Therefore, impacts related to wildfire could be reduced when compared to the proposed project. For example, evacuation time would not increase to the same extent as would occur under the proposed project. Nonetheless, development could still occur in or near a VHFHSZ and could exacerbate wildfire risk and expose existing and new residents to pollutant concentrations, uncontrolled spread of wildfire, or post-fire-related hazards. Therefore, similar to the proposed project, impacts would remain significant and unavoidable. Mitigation Measure W-1 would continue to apply.

6.4 Environmentally Superior Alternative

Table 6-2 indicates whether each alternative's environmental impact is greater than, less than, or similar to that of the proposed project for each of the issue areas studied.

Alternative 1, the No Project Alternative, assumes continued implementation of the existing 2015-2023 Housing Element. Alternative 1 also assumes that the City's existing General Plan and PCC would continue to accommodate development in accordance with existing land use designations. This alternative would result in less impacts to aesthetics, air quality, biological resources, cultural resources, energy, geology and soils, greenhouse gas emissions, hazards and hazardous materials, hydrology and water quality, land use and planning, noise, population and housing, public services and recreation, tribal cultural resources, utilities and service systems, and wildfire due to the decrease in residential units developed. Because development could still occur and the exact nature and location of such development is unknown, impacts related to historical resources and GHG would remain significant and unavoidable. The significant and unavoidable VMT impact would be increased under Alternative 1 because this alternative would not reduce VMT per resident to the same extent as under the proposed project. However, this alternative would eliminate the significant and unavoidable impacts related to construction noise, wastewater infrastructure, and wildfire.

Alternative 1 would not fulfill any of the project objectives because it would not implement the 6th Cycle 2023-2031 Housing Element, which was designed to satisfy the City's RHNA, would not prepare a Specific Plan for the City-owned parcels in the MCSP Area, and would not bring the General Plan into conformance with recent State laws.

Alternative 2, the Reduced Buildout Alternative, includes approximately 471 fewer units than the buildout included in the analysis of the proposed project. This alternative would result in less impacts to aesthetics, air quality, biological resources, cultural resources, energy, geology and soils, greenhouse gas emissions, hazards and hazardous materials, hydrology and water quality, land use and planning, noise, population and housing, public services and recreation, tribal cultural resources, utilities and service systems and wildfire due to the decrease in residential units developed. However, this alternative would not eliminate the unavoidably significant impacts related to historical resources, GHG, construction noise, wastewater infrastructure, or wildfire.

Alternative 2 would meet some of the project objectives because it would amend the General Plan for consistency with the 2023-2031 Housing Element and meet the number of new housing units in the RHNA of 587 units (Project Objectives #1 and #4), would prepare a Specific Plan for the City-owned parcels in the Moraga Canyon Area (Project Objective #3), and would bring the General Plan into conformance with recent State laws (Project Objective #5). However, it would not facilitate the same level of development as the proposed project nor the affordability levels of the RHNA; thus, it may not achieve Project Objectives #2 and #4. Further, it would not enact all of the General Plan programs and therefore would not affirmatively further fair housing in Piedmont (Project Objective #5) to the same extent as under the proposed project, in compliance with State law.

Nevertheless, as Alternative 2 slightly reduces the severity of many of the impacts that would result from the proposed project, it is the environmentally superior alternative.

Table 6-2 Impact Comparison of Alternatives

Issue	Proposed Project	Alternative 1: No Project	Alternative 2: Reduced Buildout
Aesthetics	LTS	LTS (+)	LTS (+)
Agricultural and Forestry Resources	NI	NI (=)	NI (=)
Air Quality	LTS	LTS (+)	LTS (+)
Biological Resources	LTS	LTS (+)	LTS (+)
Cultural and Tribal Cultural Resources	SAU	SAU (+)	SAU (+)
Energy	LTS	LTS (+)	LTS (+)
Geology and Soils	LTS	LTS (+)	LTS (+)
Greenhouse Gas Emissions	SAU	SAU (+)	SAU (+)
Hazards and Hazardous Materials	LTS	LTS (+)	LTS (+)
Hydrology and Water Quality	LTS	LTS (+)	LTS (+)
Land Use and Planning	LTS	LTS (=)	LTS (=)
Mineral Resources	NI	NI (=)	NI (=)
Noise	SAU	LTS (+)	SAU (+)
Population and Housing	LTS	LTS (=)	LTS (=)
Public Services and Recreation	LTS	LTS (+)	LTS (+)
Transportation	SAU	SAU (+)	SAU (-)
Utilities and Service Systems	SAU	LTS (+)	SAU (+)
Wildfire	SAU	LTS (+)	SAU (+)

NI = No Impact; LTS = Less than Significant; SAU = Significant and Unavoidable

(+) means superior to the proposed project (reduced level of impact)

(-) means inferior to the proposed project (increased level of impact)

(=) means similar level of impact to the proposed project

7 References

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None.

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Section 5, Other CEQA Required Sections

None.

Section 6, Alternatives

None.

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