

**Portola Valley Housing and Safety Elements Update and  
Conforming General Plan and Zoning Code Amendments  
INITIAL STUDY and MITIGATED NEGATIVE  
DECLARATION (IS/MND)**

**Town of Portola Valley**

October 2022



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## I. PROJECT DESCRIPTION

This section describes the Town of Portola Valley's Housing Element Update, Safety Element Update, and conforming General Plan and Zoning Amendments, together referred to as the "project" or the "proposed project." This section includes: a description of the project location; the components of the project; as well as the required approvals.

1. **Project Title:** Housing Element Update, Safety Element Update, and Conforming General Plan and Zoning Amendments
2. **Lead Agency Name and Address:**  
Town of Portola Valley  
765 Portola Road  
Portola Valley, CA 94028
3. **Contact Person and Phone Number:**  
Laura Russell, AICP, Planning & Building Director  
650-851-1700 (ext. 218)  
lrussell@portolavalley.net
4. **Project Location:** Town-wide
5. **Project Sponsor's Name and Address:**  
Town of Portola Valley  
765 Portola Road  
Portola Valley, CA 94028
6. **General Plan Designation:** N/A
7. **Zoning:** N/A
8. **Surrounding Land Uses and Setting:**

Portola Valley is located in the southern portion of San Mateo County and shares its eastern boundary with San Mateo County (see Figure 1). To the north, the town is generally bounded by Woodside and unincorporated lands. To the east, south, and west, Portola Valley is bounded by Foothills Nature Preserve, Windy Hill Open Space Preserve, and Thornewood Open Space Preserve, respectively. Interstate 280 (I-280) and California State Route 84 (SR-84) provide regional access to Portola Valley in the north-south direction and are located to the east and west of the town.



Figure 1  
Regional Location

The town encompasses approximately 9 square miles. Land uses are predominantly single-family residences and open space, with commercial and other non-residential uses concentrated along Alpine and Portola Roads. Portola Valley's topography is characterized by steep elevation changes, canyons, and above-ground creeks running throughout the town. Figure 1, Project Location, provides both a local and regional context map of the Town's jurisdictional boundaries. The town boundary serves as the geographic extent of the project (also referred to as the "planning area").

#### g. Description of Project:

The project is proposed by the Town of Portola Valley (Town) to comply with California Government Code Sections 65580-65589.8, which requires local jurisdictions to update the Housing Element of their General Plans every eight years to adequately plan for the regional housing needs of residents of all income groups, Government Code Section 65302(g) requiring all local jurisdictions to update their Safety Element upon each revision of the Housing Element and Government Code Section 65103 requiring jurisdictions to periodically revise their General Plans. The project includes the following components:

- **Housing Element Update.** Adoption and implementation of the Town's Housing Element Update (2023-2031).
- **Safety Element Update.** Adoption and implementation of related updates to the Safety Element Update. These updates would ensure the Town complies with current State law and implements policies intended to minimize the negative impacts and risks of natural and human-made hazards such as fires, floods, droughts, earthquakes, and landslides.
- **General Plan Amendments.** General Plan Amendments include the creation of a new "Gateway" land use classification in the General Plan that allows affordable housing, recreation, and open space uses. The General Plan would also be amended to include the creation of new multi-family land use classifications allowing up to four and 20 dwelling units per acre, an opt-in overlay classification to allow for a "fourplex" development on three single family lots, and a new mixed-use land use classification to allow for up to six dwelling units per acre as well as the uses currently permitted in the existing Community Commercial (C-C) zone. The General Plan Land Use Map would be revised to include these new land use designations.
- **Zoning Amendments.** The Town proposes the creation and adoption of three new zoning districts including, 1) a new multi-family district allowing up to four dwelling units per acre; 2) a new multi-family district allowing 20 dwelling units per acre; and 3) a mixed-use district allowing residential uses up to six dwelling units per acre. It would also include zoning amendments to codify the Affiliated Housing program that is currently implemented through the Housing Element and a new voluntary upzoning program. The zoning map would also be revised to reflect these new districts.

For purposes of this document, these components are together considered a “project” under CEQA regulations. Each component of the project is described in *Section 3, Project Components*, within this section.

## **Project Components**

### *Housing Element Update*

The Town of Portola Valley’s Housing Element is the component of the General Plan that addresses housing needs and opportunities for present and future residents. It provides the primary policy guidance for local decision-making related to housing. The Housing Element of the General Plan is the only General Plan Element that requires review and certification by the State of California.

The Housing Element Update (see Appendix 1) provides a detailed analysis of Portola Valley’s demographic, economic, and housing characteristics, as required by State Law. The Housing Element Update does this through assessing the success of the previous Housing Element, the need for and status of housing in the Town, constraints on the provision of housing, and sites available for housing. Building on this foundation, the Housing Element Update identifies housing goals and policies and establishes programs to increase the supply of housing, and especially affordable housing. This is the 6<sup>th</sup> update and revision of the Housing Element which was first adopted by the Town of Portola Valley in 1969.

### Regional Housing Needs Allocation (RHNA).

The RHNA represents the number and affordability of new homes that each local government must plan for in their housing element. This process is repeated every 8 years. In the case of the San Francisco Bay Area, the Association of Bay Area Governments (ABAG) and the State department of Housing and Community Development (HCD) determine the number of housing units that should be produced in the region. This determination of need is primarily based on estimated job growth. ABAG then allocates units to each jurisdiction, based on their share of the region’s households and adjusted for access to high opportunity areas, proximity of jobs to transportation and transit, and an equity adjustment to ensure that each jurisdiction receives an allocation of lower-income units that is at least proportional to its share of the region’s total households in 2020. Portola Valley’s RHNA is shown in Table 1.

In January 2021, ABAG issued its final 6th Cycle Regional Housing Needs Allocation Plan, which identified a Bay Area-wide RHNA of 441,176 housing units. Portola Valley’s “fair share” of this RHNA is 253. In addition to assigning a total number of units, ABAG categorizes the units for each jurisdiction across four income levels to anticipate the diversity of housing types needed to meet regional housing needs. As shown in Table 1, these income groups include very low-income households, which earn less than 50 percent of the area median income (AMI); low-income households, which earn between 50 and 80 percent of the AMI; moderate income households,

which earn between 80 and 120 percent of the AMI; and above moderate-income households, which earn greater than 120 percent of the AMI.

**TABLE 1 PORTOLA VALLEY REGIONAL HOUSING NEEDS ALLOCATION (2023-2031)**

Income Category	Units	Percent of Total
Very Low Income (0-50% of AMI)	73	29%
Low Income (50%-80% of AMI)	42	17%
Moderate Income (80%-120% of AMI)	39	15%
Above Moderate Income (>120% of AMI)	99	39%
<b>Total</b>	<b>253</b>	<b>100%</b>

Note: AMI = Area Median Income

Source: Final Regional Housing Needs Allocation (RHNA) Plan: San Francisco Bay Area, 2023-2031.

#### RHNA Buffer

In 2017, Senate Bill (SB) 166 was signed into law and included new “no net loss” provisions that require communities to provide an ongoing, adequate supply of land resources for housing development during the entirety of the housing element update planning period. These provisions mean communities face risks of non-compliance should a housing site be developed with non-residential uses, lower residential densities, or residential uses at affordability levels higher than anticipated by the Housing Element. To avoid non-compliance, HCD advises communities to “buffer” their assigned RHNA numbers with additional housing units ranging from at least 15 to 30 percent of their assigned RHNA. The Town of Portola Valley proposes a 16 percent buffer of 40 housing units, to ensure an ongoing supply of land resources for housing development is available through the 6<sup>th</sup> Cycle planning period. Table 2 shows the RHNA buffer by income category.

**TABLE 2 RHNA BUFFER BY INCOME CATEGORY**

Income Category	RHNA Units	Total Units	Surplus (Buffer) Percentage
Very Low Income (0-50% AMI)	73	88	21%
Low Income (51%-80% AMI)	42	51	21%
Moderate Income (81%-120% AMI)	39	47	21%
Above Moderate Income (>120% AMI)	99	107	8%
<b>Total</b>	<b>253</b>	<b>293</b>	<b>16%</b>

Source: Town of Portola Valley Planning & Building Department, 2022

### RHNA Credits and Housing Sites Inventory

The State requires communities to identify adequate land resources throughout their jurisdiction that could be used to accommodate future housing development. These land resources are referred to as a community's Housing Sites Inventory. Portola Valley's housing sites are organized into several categories which are summarized in Table 3. Figure 2 shows the location of the sites. The categories of sites in Portola Valley are described below.

**TABLE 3 SITES INVENTORY SUMMARY**

	Very Low-Income Units	Low-Income Units	Moderate- Income Units	Above Moderate- Income Units	Total Units
Approved Pipeline Units	0	11	1	1	13
Pending Projects	0	6	6	27	39
Projected ADUs	28	28	28	8	92
Vacant Land	2	4	5	12	23
Non-Vacant Land	50	0	2	23	75
Affiliated Sites	8	2	5	24	39
Opt-In Zoning Sites	0	0	0	12	12
<b>Total Sites</b>	<b>88</b>	<b>51</b>	<b>47</b>	<b>107</b>	<b>293</b>
RHNA	73	42	39	99	253
+Surplus/-Shortage	+15	+9	+8	+8	+40

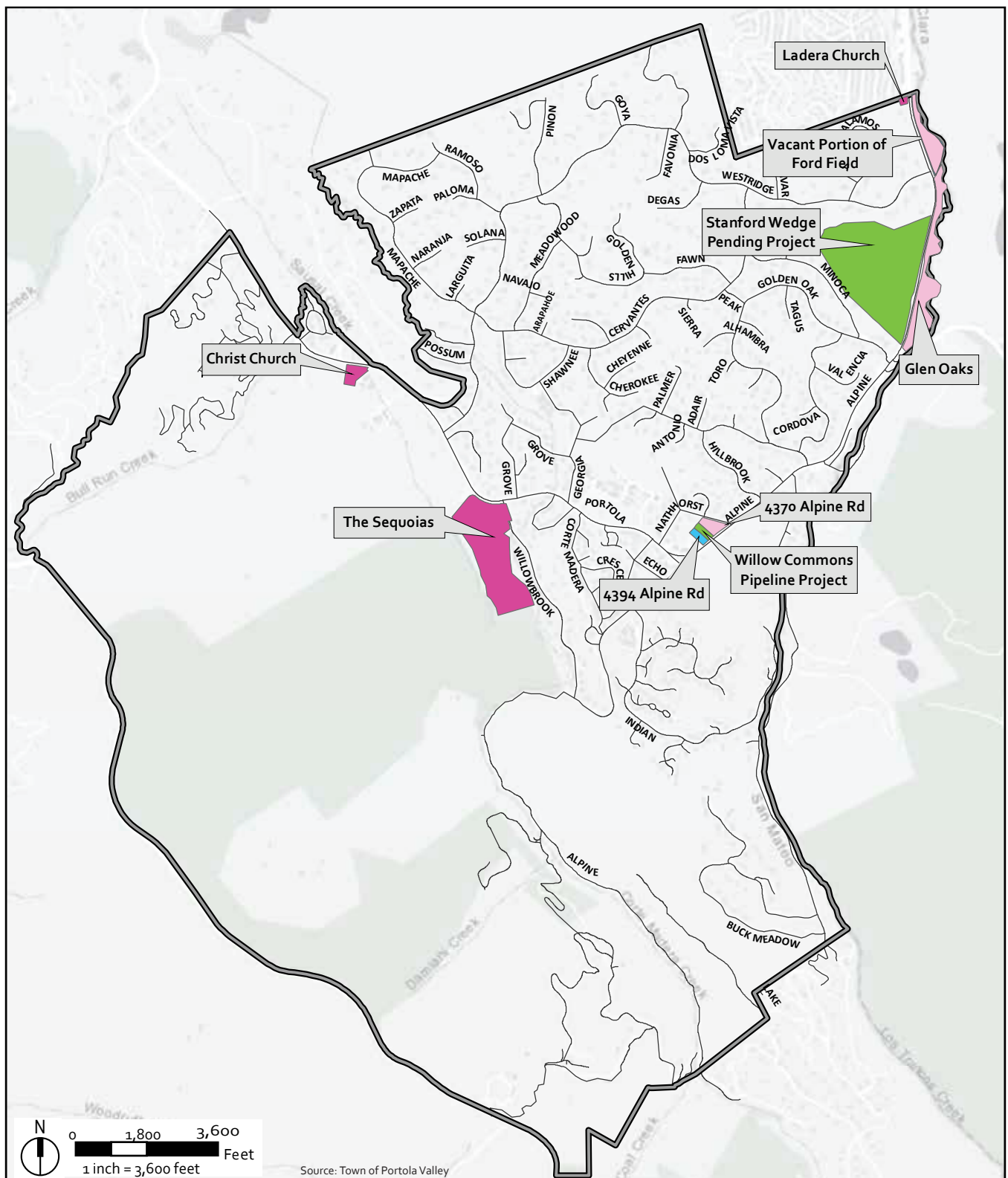
Source: Town of Portola Valley Planning & Building Department, 2022

### RHNA Credits

Existing development projects that can count as a credit towards a jurisdiction's RHNA include pipeline and pending projects, which are projects proposed, approved, or under construction and that have not received a Certificate of Occupancy as of June 30, 2022. Additionally, communities may also account for projected Accessory Dwelling Units (ADUs) development during the planning period.

- **Pipeline and Pending Projects.** Residential projects that have been approved but have not received a certificate of occupancy prior to June 30, 2022, are referred to as "pipeline projects." These projects will be developed during the 2023-2031 planning period. Similarly, pending projects are residential developments that have yet to be approved but will likely be developed during the 2023-2031 planning period. Both approved pipeline and pending projects within Portola Valley are shown in Table 4.





- Portola Valley Jurisdictional Boundary
- Pipeline and Pending Developments
- Vacant Housing Sites
- Non-Vacant Housing Sites (Not Affiliated)
- Non-Vacant Affiliated Housing Sites

Figure 2  
Housing Sites

**TABLE 4 APPROVED PIPELINE AND PENDING PROJECTS**

APN	Address	Site Name	Affordability Category				Total Units
			Very Low Income	Low-Income Units	Moderate-Income Units	Above Moderate-Income Units	
Approved Pipeline Projects							
79072120	4388 Alpine Rd	Willow Commons	0	11	1	1	13
Pending Projects							
77281020	Alpine Rd and Golden Oak Dr	Stanford Wedge	0	6	6	27	52
Total			0	17	7	28	52

Source: Town of Portola Valley Planning & Building Department, 2022

- **Accessory Dwelling Units and Junior Accessory Dwelling Units.** ADUs and Junior Accessory Dwelling Units (JADUs) are generally considered to serve as affordable-by-design housing options. Due to their co-location on existing residential lots, these types of units generally have smaller building footprints, typically ranging in size between 800 and 1,200 square feet (ADUs) and 500 square feet (JADUs).

A community may count ADU development projected to occur during the 2023-2031 planning period towards their RHNA requirements. To do so, communities must analyze historic building permit trends, over the last several years to accurately identify a reasonable projection of ADUs to be developed over the planning period. Due to the Town's trends in ADU building permits, property owner interest, as well as several new ADU and JADU programs proposed as part of the Housing Element Update to encourage development of ADUs and JADUs, the Town assumes an average of 11-12 ADU/JADU building permits to be issued each year. This equates to a total of 92 ADUs/JADUs planned to be constructed over the next 8 years. The Town anticipates that 30 percent of anticipated ADU/JADU development (28 ADUs/JADUs) would be affordable to "very low income" households; 30 percent (28 ADU/JADU units) developed as affordable to "low income" households; 30 percent (28 ADU/JADU units) are anticipated to be developed as affordable to "moderate-income" households; and 10 percent (8 ADUs/JADUs) are anticipated to be developed as affordable to "above moderate-income" households.

#### Housing Sites Inventory

Following the accounting of approved pipeline projects, pending projects, and ADU projections that can serve as credits towards a community's RHNA, jurisdictions must demonstrate their ability to accommodate the remainder of their RHNA through land resources. The Sites Inventory includes both vacant and non-vacant properties throughout the town which have been identified for potential future residential development or redevelopment. Conservative assumptions were used to estimate the realistic capacity of each site. As shown in Figure 2, development as a result

of the Housing Element Update would be focused along Portola Road and Alpine Road. Additional units anticipated by ADU development or the opt-in rezoning program would be dispersed throughout residential neighborhoods.

Affiliated sites refer to multi-family housing developments on institutional sites intended to serve employees and staff affiliated with the institutions that own the site or other members of the Town's workforce. Due to the high-cost of living within Portola Valley, many employees of these institutional uses cannot afford to live in market-rate housing options provided within the town. Accordingly, the Town has identified these "Affiliated Housing Sites" for inclusion within the Housing Element Update. A summary of vacant, non-vacant, affiliated sites, and opt-in zoning sites are shown in Table 5.

#### Vacant Land

The housing site located in the Nathhorst Triangle at 4394 Alpine Road is approximately 1.18 acres and is currently vacant and consists of a grassy field. A preliminary concept plan prepared for the site estimated 23 units could be developed. This site would be rezoned with the new multi-family district that would allow 20 units to the acre.

#### Non-Vacant Land

The Town's non-vacant land resources are anticipated to accommodate a total of 75 residential units of the Town's RHNA. These non-vacant land resources are categorized into five housing sites throughout the town. Several non-vacant sites are developed with existing land uses that are proposed to be eventually redeveloped with residential uses, while other non-vacant sites are proposed to be developed with affiliated housing options.

#### Affiliated Housing Program

Inclusion of these affiliated housing sites within the Town's Sites Inventory is based on the Town's experienced success with their existing Affiliated Housing Program and the interest of these institutions in developing additional housing in the future. To date, the Town's Affiliated Housing program has provided for the development of a total of 13 affiliated housing units which are located at the Woodside Priory School, a private catholic college preparatory school located northwest of the intersection of Alpine Road and Portola Road in the Town. Six units were recently completed, two of which are deed restricted for lower-income residents.

#### Opt-In Single-Family Rezoning Program

To further increase housing development, the Town is creating an Opt-in Single-Family Rezoning Program to disperse additional residential units throughout the community and provide a greater diversity of types of housing units available. To gauge interest in such a program, the Town held an "Opt-in Rezoning" focus group meeting for property owners that may be interested in

## I. PROJECT DESCRIPTION

**TABLE 5 SITES INVENTORY**

APN	Address/Name	Acres	Existing Use	Existing Zoning	Proposed Rezoning	Assumed Density (Du/Acre)	Realistic Capacity				
							VLI	LI	MI	AMI	TOTAL
VACANT SITE											
79072130	4394 Alpine Rd Housing Site	1.18	Vacant	A-P	Multi-Family	20	2	4	5	12	23
Subtotal											23
NON-VACANT SITES											
77272010	Vacant Portion of Dorothy Ford Field and Open Space Housing Site	2.48 <sup>a</sup>	Baseball Field (To Remain)	O-A & R-E	No change	20	50	0	0	0	50
77282030	Glen Oaks Housing Site	4 <sup>a</sup>	Equestrian	O-A & R-E	Multi-Family	4	0	0	2	14	16
79072060	4370 Alpine Rd Housing Site	1.5	Office	A-P	Mixed-Use	6	0	0	0	9	9
Subtotal											75
Affiliated Housing Sites											
79200030	Sequoias Affiliated Housing Site	42 <sup>b</sup>	Multi-Family	R-E	No change	8 <sup>c</sup>	0	0	5	18	23
076262030	Christ Church Affiliated Housing Site	1	Church	R-E	No change	6 <sup>c</sup>	0	0	0	6	6
77271180	Ladera Church Affiliated Housing Site	0.5	Church	R-E	Multi-Family	20	8	2	0	0	10
Subtotal											39
Opt-In Rezoning Program											
Opt-In Rezoning Program Sites.		>1	Single-Family Residential	R-1, R-E	Opt-In Rezoning	4	0	0	0	12	12
TOTAL											149

Notes: VLI = Very Low-Income, LI = Low-Income, MI = Moderate-Income, AMI = Above Moderate-Income, R-E = Residential Estate, R-1 = Single-Family Residential, A-P=Administrative Professional, O-A = Open Area, CC=Community Commercial. <sup>a</sup> Developable area. <sup>b</sup> Portion of a larger site. <sup>c</sup>Density to be determined by the Planning Commission. Source: Town of Portola Valley, 2022.

voluntarily upzoning their property. After the meeting, five property owners expressed interest in the program. The Town expects the program to be viable based on this preliminary level of interest and the number of potential units that could be produced on those sites. The new program will allow single-family residential parcels 1 acre or greater to upzone to allow up to four dwelling units per acre and a maximum of four dwelling units per lot. The program is limited to 12 units and will sunset when this goal is achieved. More detail on this program is provided in the Zoning Amendments section below.

### Housing Element Goals and Policies

The following are the goals and policies included in the Draft Housing Element Update:

*GOAL 1: Expand the types of housing allowed in the community. Facilitate the development of a range of housing types to meet the Town's fair share of regional housing needs and accommodate current and new Portola Valley residents of diverse ages, races, and socioeconomic backgrounds.*

Policy 1: Allow for new housing through new General Plan land use classifications for multi-family and mixed-use districts, a voluntary upzoning program, and other programs.

Policy 2: Create a well-managed affordable housing program that preserves affordability in perpetuity.

Policy 3: Develop housing on town or non-profit owned parcels where feasible.

*GOAL 2: Elimination of Government Constraints. Removal of governmental policies or regulations that unnecessarily constrain the development, improvement, or conservation of market-rate or affordable housing.*

Policy 4: Revise standards and approval process to reduce cost and uncertainty for affordable housing and lower cost market rate housing.

Policy 5: Improve the development review process to reduce uncertainty and encourage development that fits with the Town's objective standards while preserving rural character.

*GOAL 3: Resilient Housing. Manage wildfire vulnerability through design and policy strategies.*

Policy 6: Continue to refine fire resistant building standards and land use policies to ensure they utilize the most up to date science in preparation for wildfire resiliency.

*GOAL 4: Affirmatively Furthering Fair Housing. Promote equal opportunity for all residents to reside in the housing of their choice regardless of their special characteristics as protected under State and Federal fair housing law.*

Policy 7: Promote ADU/JADU construction and affordability and encourage programs that would increase the diversity of ADU occupants.

Policy 8: Encourage and support the enforcement of laws and regulations prohibiting discrimination in lending practices and in the sale or rental of housing.

### *Safety Element Update*

The Safety Element Update (see Appendix 2) comprehensively updates the Town's previous Safety Element adopted in 2010. An update of the Safety Element is needed given the land use and regulatory changes that have taken place over the last 12 years, and in response to new State law requiring jurisdictions update their safety element in conjunction with their housing element update, which occurs on an eight-year cycle.

The Safety Element includes policies and implementation actions intended to minimize the negative impacts and risks of natural and human-caused hazards associated with fires, floods, droughts, earthquakes, landslides, and other environmental hazards identified by the community. Senate Bill (SB) 379 requires jurisdictions on or after January 1, 2017 to update their safety element to address applicable climate change adaptation and resiliency strategies. Senate Bill (SB) 99 also 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. In addition, Assembly Bill (AB) 747 requires jurisdictions to, after January 1, 2022, review and update the safety element as necessary to identify evacuation routes and evaluate their capacity, safety, and viability under a range of emergency scenarios.

### *General Plan Amendments*

State law requires internal consistency between the elements of the General Plan. The Housing Element contains several new programs that will require conforming amendments to other General Plan Elements. These programs include: the creation of a new "Gateway" district that allows affordable housing, recreation, and open space; the creation of two new multi-family land use classifications allowing up to four and 20 dwelling units per acre, respectively; an "opt-in" overlay provision permitting limited single family homes to voluntarily upzone to up to 4 units (not to exceed a townwide total of 12 units) and a new mixed-use land use classification to allow for up to six dwelling units per acre. These changes will require relatively minor conforming updates to the Land Use Element, and the Nathhorst Triangle Plan and corresponding maps/diagrams. In addition, the Alpine Scenic Corridor Plan will be updated to clarify that any new development along the Alpine Scenic Corridor should be designed to respect the Plan's scenic principles and provide sufficient setback for the use of Alpine as a major evacuation corridor. Finally, the Land Use Element will be updated to remove impermissible limits on population control.

### *Zoning Amendments*

Pursuant to Government Code Section 65583.2(c), the Town of Portola Valley would adopt three new zoning districts: 1) a new multi-family district allowing up to four dwelling units per acre; 2) a new multi-family district allowing 20 dwelling units per acre; and 3) a mixed-use district allowing

residential uses up to six dwelling units per acre. Sites which are proposed to be rezoned to these new zoning designations as part of this Housing Element Update are indicated within Table 5. The new districts and rezonings are described below and would be adopted by January 2023. The Affiliated Housing program and voluntary upzoning program (Opt-in-Single-Family Rezoning Program) are also discussed below. The key components of these programs would be incorporated into the Housing Element. The Zoning Ordinance would be amended to include two new combining (sometimes referred to as overlay) districts with objective design criteria to be implemented through subsequently adopted guidelines.

#### Multi-Family Zoning Districts

Two new multi-family zoning districts would be created to allow for residential development up to four dwelling units per acre and 20 dwelling units per acre, respectively. Both districts would be subject to objective design standards that would be codified in the Municipal Code including but not limited to floor area, height, setback, lighting, and landscaping. The four dwelling units per acre zoning district would be limited to the Glen Oaks housing site. The 20 dwelling units per acre would be applied to 4394 Alpine Road and the Ladera Church Affiliated housing site.

#### Mixed-Use Zoning District

The new mixed-use zoning district would allow for mixed-use residential development up to six dwelling units per acre. Objective standards would be included in the Municipal Code including, but not limited to, floor area, height, setback, lighting, and landscaping. The standards would allow for up to 100 percent of building floor area to be dedicated to residential uses anticipated to be built on the back of the designated lot. If the property redevelops, at least 50 percent of the site must be dedicated to housing. The amendments would allow the current amount of existing square footage to remain as commercial and no significant changes to the allowable commercial uses on the site is proposed. This zoning district would be limited to the 4370 Alpine Road housing site.

#### Affiliated Housing Program

Currently the Affiliated Housing program is implemented through the Housing Element. With this update, the Municipal Code will be updated to further incentivize use of this program to provide affordable workforce housing and to establish the parameters and process for the Affiliated Housing program, including development standards and affordability requirements. Residential density standards shall correspond with the densities in the Housing Element site inventory. This program will allow new affiliated partners to be added to the program upon approval of the Town Council. New partners may add up to 20 units per acre through a discretionary process approved by the Planning Commission and appealable to the Town Council.

### Opt-In Single-Family Rezoning Program

To further increase housing development, the Town is creating an Opt-in Single-Family Rezoning Program to disperse additional residential units throughout the community and provide a greater diversity of types of housing units available. The new program would allow single-family residential parcels one acre or greater to upzone to allow up to four dwelling units per acre and a maximum of four dwelling units per lot, subject to the following safety criteria:

- Accessible to two ways of ingress and egress;
- Located on a slope less than 30 percent;
- Outside of a very high fire hazard severity zone, as adopted by the Town Council;
- Outside of a fault zone; and
- Outside of areas identified with unstable soils or at risk of landslide or liquefaction.

These potentially eligible parcels range from approximately one to three acres in size and are broadly dispersed throughout Portola Valley's neighborhoods. The Town has conducted a preliminary analysis of the properties meeting the criteria and is limiting this program to a total of 12 residential units may be accommodated through the Town as part of the described Opt-In Rezoning Program during the 6<sup>th</sup> Cycle planning period.

Prior to a property participating in the proposed Opt-in Rezoning Program, the Town's Planning Commission would review the site for program eligibility consistent with the above safety criteria, which would be further detailed in the Municipal Code (adopted by January 2023). Contingent on eligibility being determined, proposed development of these sites would then be reviewed by the Town's Architectural and Site Control Commission (ASCC) for consistency with newly established objective design standards proposed to be adopted in 2023. These objective design standards would include but not be limited to, floor area, setback, height, lighting, exterior material, landscaping, and water usage standards.

### **10. Required Approvals**

Implementation of the project would require amendments to the General Plan and to the Town's Municipal Code. These amendments are included as part of, and would be adopted at the same time as, the project. Upon adoption, the Housing Element Update and the Safety Element Update would replace the existing Elements.

This IS/MND is intended to provide the information and environmental analysis necessary to assist the Town in considering all the approvals and actions necessary to adopt and implement the project. The following are anticipated actions/approvals concerning the project:

- **Adopt the Mitigated Negative Declaration** and adopt a Mitigation Monitoring and Reporting Program pursuant to CEQA.



- Adopt the Housing Element Update.
- Adopt the Safety Element Update.
- **Amend the General Plan** and associated maps, Nathhorst Area Plan, and Alpine Scenic Corridor Plan to be consistent with the project, including land use designations pursuant to the Housing Element.
- **Amend the Portola Valley Municipal Code** text and maps to be consistent with the project, including new zoning districts and amendments pursuant to the Housing Element.

### Other Required Approvals

Additional agencies would need to review and approve components of the project, as listed below.

- **California Department of Housing and Community Development (HCD)** will review the Housing Element Update prior to adoption and subsequently certify the Housing Element Update following adoption.
- **California Board of Forestry and Fire Protection** will review the Safety Element Update prior to adoption.
- **Woodside Fire Protection District** will review the Safety Element Update prior to adoption.
- **California Geological Survey of the Department of Conservation** will review the Safety Element Update prior to its adoption.

11. **Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.?**

The Town of Portola Valley started the AB 52 and SB 18 Tribal Consultation opportunity period, according to Government Code Section 65352.3, by sending out certified written notices on September 19, 2022 inviting the appropriate tribes to consult on the project. As of the date of this IS/MND, no tribes have requested consultation.



## II. ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

- |   |   |
|---|---|
| <input type="checkbox"/> Aesthetics                                 | <input type="checkbox"/> Mineral Resources                    |
| <input type="checkbox"/> Agriculture and Forestry Resources         | <input checked="" type="checkbox"/> Noise                     |
| <input checked="" type="checkbox"/> Air Quality                     | <input type="checkbox"/> Parks and Recreation                 |
| <input type="checkbox"/> Biological Resources                       | <input type="checkbox"/> Population/Housing                   |
| <input checked="" type="checkbox"/> Cultural Resources              | <input type="checkbox"/> Public Services                      |
| <input type="checkbox"/> Energy                                     | <input type="checkbox"/> Transportation                       |
| <input checked="" type="checkbox"/> Geology/Soils                   | <input checked="" type="checkbox"/> Tribal Cultural Resources |
| <input checked="" type="checkbox"/> Greenhouse Gas Emissions        | <input type="checkbox"/> Utilities/Service Systems            |
| <input checked="" type="checkbox"/> Hazards and Hazardous Materials | <input type="checkbox"/> Wildfire                             |
| <input type="checkbox"/> Hydrology/Water Quality                    | <input type="checkbox"/> Mandatory Findings of Significance   |
| <input type="checkbox"/> Land Use/Planning                          |   |

### Determination:

On the basis of this initial evaluation:

- ☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- ☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- ☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- ☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been

adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

- ☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.



Signature

10/28/2022

Date

### III. ENVIRONMENTAL CHECKLIST

#### A. AESTHETICS

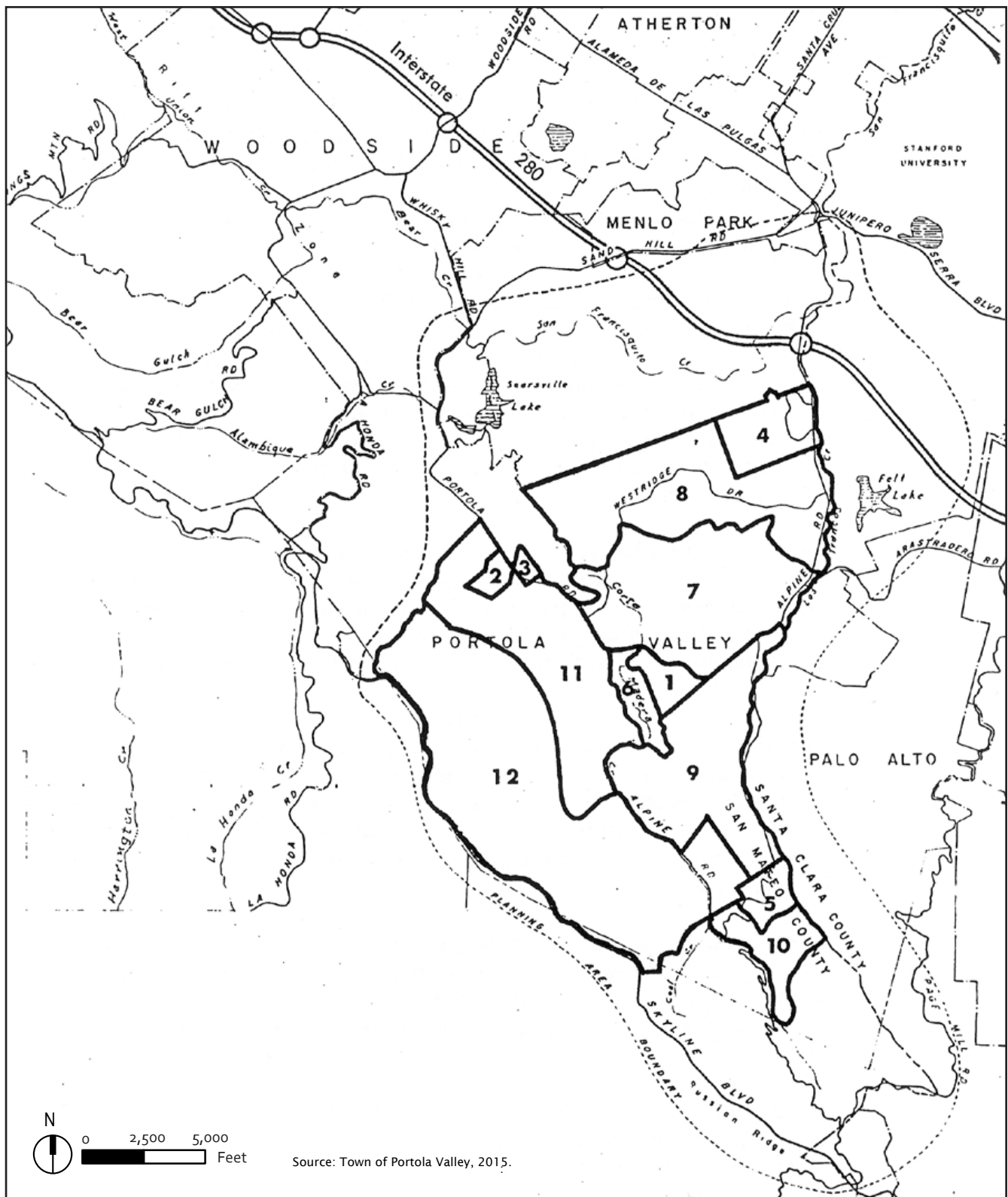
	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Except as provided in Public Resources Code Section 21099, would the project:				
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) 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 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?)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

#### Affected Environment

Portola Valley's visual character is defined by the natural setting it is located within. Trees, vegetation, and changing topography are a continuous aesthetic theme throughout the Town, which is reinforced with the presence of the Windy Hill Open Space Preserve, located within the Town boundary and visible from much of the Town. The main use within the suburban Town is single family dwellings. There is no uniform appearance of the single-family residences; they include a variety of architectural styles, sizes, heights, and setbacks. In some cases, residences are visible from the road, and in other instances intervening vegetation or changes in land topography prevents full view of residences from public viewpoints or roadways.

The Land Element of the General Plan divides the planning area into 11 different residential areas. A map showing the location of these areas is included as Figure A-1, Residential Areas Map, and a brief description of these areas, as provided in the General Plan, is presented below:

- **Residential Area No. 1.** This area comprises the Brookside Park and Brookside Orchard subdivisions. The low-medium intensity recognizes the long-established character of the area. The area is almost fully developed with homes. Attention should be continually given to conserving and enhancing this residential area.



Source: Town of Portola Valley, 2015.

Figure A-1

Residential Areas Map

- **Residential Area No. 2.** This area comprises the Woodside Highlands subdivision. The low-medium intensity recognizes the character of this old subdivision. Originally an area of summer homes, this area has been converted to year-around living, is served by narrow roads and individual sewage disposal systems, and includes some areas of unstable ground. There are a few lots without homes. Continuing attention should be given to improving the quality and amenities of this area while protecting its individual character.
- **Residential Area No. 3.** This area comprises the Portola Redwoods subdivision. The low-medium intensity is consistent with the long-established nature of this subdivision. Virtually all lots are developed with homes. The character of this small residential area should be preserved and continual attention should be given to maintaining appropriate land use relationships between this area and surrounding and nearby non-residential uses.
- **Residential Area No. 4.** This area, in the town's sphere of influence, comprises the Ladera subdivision. The low-medium intensity recognizes the established character of this area. The area contains very few vacant lots. The existing character of Ladera should be maintained and attention should be continually given to assuring compatibility of uses on the Webb Ranch with the residential character of Ladera.
- **Residential Area No. 5.** This area, in the town's sphere of influence, consists of the Los Trancos Woods subdivision. The low-medium intensity is consistent with the character of the long-established residential area. Originally an area of summer homes, it is now used for year-around living, is served by narrow roads and individual sewage disposal systems, and is affected by some areas of geologic instability. Some lots are still vacant. Efforts should be made to improve the quality and amenities of the area while preserving its character.
- **Residential Area No. 6.** This area comprises the Willowbrook subdivision, with parcel sizes of 1 acre or more, and several larger parcels along the eastern side of the area. The area is shown in the low intensity category and is virtually entirely developed with homes. The character of this area should be preserved and efforts should be made to reduce through traffic.
- **Residential Area No. 7.** This area is composed primarily of the Arrowhead Meadows, Alpine Hills, Hillbrook, Stonegate, Stonegate Meadows, Corte Madera Acres, Palmer Estates, Portola Terrace, Portola Heights, and Pine Ridge subdivisions. All of these subdivisions have minimum parcel sizes of 1 acre or more. In addition, there are unsubdivided areas of larger parcels, namely in the vicinity of Georgia Lane. The entire area is shown in the low intensity category.

As the unsubdivided areas are developed, attention should be given to ensuring careful integration into the largely developed area so as to ensure compatibility. Particular attention

will need to be given to land use relationships in the vicinity of the non-residential uses along Portola and Alpine Roads.

- **Residential Area No. 8.** This area is composed of the Westridge and Oak Hills subdivisions plus a steep undivided area between Westridge and Alpine Hills subdivision. The area is shown in the conservation residential intensity. Few lots are vacant in the subdivisions. The character and quality of the area should be conserved as the area plays an important part in maintaining the open space character of the town.
- **Residential Area No. 9.** The development pattern for a large portion of this area has been set by the Portola Valley Ranch subdivision where there are slightly in excess of two acres per housing unit. Most of the balance of the area is in large ownerships. The area is shown in the conservation residential intensity category.

Most of the area has good access to local town roads, most utilities, schools, and shopping. Parts of the area are quite stable geologically, while other parts are highly unstable, and slopes range from moderate to steep. The plan diagram indicates large areas in the residential open space preserve category.

In the area along Alpine Road, any development should be kept well back from the road so as not to encroach on the Alpine Road Corridor, Portola Road Corridor, and Nathhorst Triangle Area.

- **Residential Area No. 10.** This area, in the town's sphere of influence, comprises the Vista Verde subdivision. The area is shown in the conservation residential intensity category. There are some vacant lots in the subdivision. Geologic instabilities in the area warrant careful continuing evaluation as additional homes are built.
- **Residential Area No. 11.** This area consists of the lower portion of the western hillsides and is unsubdivided except for the old Coombsville subdivision, which occupies a small part of the area. The area is shown in the conservation residential intensity category. It is characterized by gentle to steep slopes, geologically stable to unstable lands and grass covered slopes to tree covered canyons. The major development potential on the western slopes is confined to this area, which is less steep, enjoys somewhat more stable lands than the upper portion of the western hillsides, and has greater accessibility to roads, utilities, schools, and shopping. A major portion of this area is owned by the Midpeninsula Regional Open Space District.

Additional suburban uses are located along Portola Road. The Portola Road/Alpine Road area includes commercial, educational, and institutional uses. The Town Center area includes commercial, agricultural, institutional, and recreational uses. As with the residential uses, the non-residential uses do not have a consistent architectural theme or treatment to these structures, but most parcels include an abundance of trees and landscaping, creating a more rural feel amongst the suburban uses.



### *Scenic Corridors*

The General Plan identifies several scenic corridors within the town. Scenic corridors are broad linear bands of open space along major roads in which recreational types of uses are compatible with the open character of the scenic corridor. These corridors include the Alpine Road Scenic Corridor, the Portola Road Scenic Corridor, and the Skyline Scenic Corridor.

### *State Scenic Highways and Roadways*

The General Plan identifies scenic highways and roadways within the town. The two State highways designated as scenic highways are Skyline Boulevard, which serves as the Town's southwest border and sits approximately 1,500 feet above most of the developed Town, and Highway 280, which sits outside of and lower than the Town, but within its area of influence to the northeast.

The General Plan identifies two local scenic roads: Alpine Road and Portola Road. Alpine Road has two distinct segments, the first of which is far busier and more viewed. The first intersects with Highway 280 and passes by Ladera, a residential and commercial area beyond the Town's border, then climbs into Town, passing two recreation fields, the Alpine Inn roadhouse, a fitness club, and Nathhorst Triangle. The second segment leaves the center of town and quickly becomes a one lane road, paralleling a creek as it climbs a wooded canyon. Both segments include natural beauty and variety; the creeks it follows are lined with tall trees, and the lower countryside has kept much of its earlier rural character and viewsheds. The upper mountain canyon is wild and tight, with smaller viewsheds that stay within the canyon. Portola Road, within the confines of Portola Valley, is the most "urban" of the scenic roadways. Portola Road includes residential areas, the Town Center, The Sequoias (a retirement community), Woodside Priory School, meadows, orchards, and stables. Special consideration is given to building size, design, and setbacks along this road.

## **Regulatory Setting**

### *State*

#### California Scenic Highway Program<sup>1</sup>

The California Scenic Highway Program is administered by the California Department of Transportation (Caltrans) with the purpose of preserving the character of scenic highways and protecting them from changes that may diminish the aesthetic value of adjacent lands. Within

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<sup>1</sup> California Department of Transportation, California Scenic Highway Mapping System, Officially Designated Scenic Highways. Available at: <https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways>, accessed September 2, 2022.

the Portola Valley area, Skyline Boulevard, also known as State Route 35 (SR-25), and the I-280 Highway are both Officially Designated State Scenic Highways.

Nighttime Sky – Title 24 Outdoor Lighting Standards, 2019<sup>2</sup>

The California Energy Commission (CEC) regulates the energy efficiency of outdoor lighting for residential and nonresidential development. The standards serve to improve the quality of outdoor lighting by reducing the impacts of light pollution, light trespass, and glare. The standards regulate lighting characteristics such as maximum power and brightness, shielding, and sensor controls to turn lighting on and off. Exterior lighting allowances vary by Lighting Zones (LZ). The lowest illumination levels are encouraged in LZ0 (very low) and increasingly more power is allowed in LZ1 (low), LZ2 (moderate), LZ3 (moderately high), and LZ4 (high). The statewide default location for each Lighting Zone is as follows:

LZ0 – Undeveloped areas of government designated parks, recreation areas, and wildlife preserves.

LZ1 – Developed portion of government designated parks, recreation areas, and wildlife preserves.

LZ2 – Rural areas, as defined by the 2010 U.S. Census.

LZ3 – Urban areas, as defined by the 2010 U.S. Census.

LZ4 – No statewide default location. Special district created by local government.

*Local*

General Plan

The General Plan contains the following objectives and policies that promote the protection and enhancement of aesthetics in Portola Valley:

Land Use Element

*General Objective 2:* To maintain the natural character of the planning area and to provide for limited park, recreation and open space uses in appropriate scenic areas where the uses will be compatible with the maintenance of the residential nature and quality of the planning area.

*General Objective 4:* To minimize consumption of energy from non-renewable sources and to encourage the use of renewable energy sources while preserving the scenic and aesthetic qualities of the area.

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<sup>2</sup> California Energy Commission, 2019 Building Energy Efficiency Standards for Residential and Nonresidential Buildings, Title 24, Part 6 and Associated Administrative Regulations in Part 1. Available at: <https://www.energy.ca.gov/2015publications/CEC-400-2015-037/CEC-400-2015-037-CMF.pdf>, accessed February 6, 2019.

General Principle 6: In order to maintain the rural atmosphere of Portola Valley, all buildings should be subordinate to their natural surroundings in size, scale and siting. Monumental buildings should be avoided.

General Principle 8: In order to help minimize the adverse effects of higher intensity uses upon lower intensity uses, landscaping areas of primarily native plants appropriate to the site should be provided. Such buffers should be of a size and design that will provide an effective visual buffer.

*Residential Areas Objective 1:* To assure that all building sites and residences are developed in a manner minimizing disturbance to natural terrain and vegetation and maximizing preservation of natural beauty and open space.

*Residential Areas Objective 3:* To provide for the grouping or clustering of residential buildings where this will maximize the opportunity to preserve natural beauty, habitat and open space without generally increasing the intensity of development otherwise possible.

*Residential Areas Objective 4:* To maintain the present character of established residential areas.

Residential Areas Principle 7: To the extent feasible, all structures (including residences) should complement and blend in with the natural setting of the planning area; and to this end, the following principles should be adhered to:

- a. Structures may be located in existing tree covered areas to the extent possible and still be consistent with slope, geologic and related conditions and the need to preserve locally unique or especially beautiful wooded areas.
- b. Largely bare slopes and sparsely wooded ridges visible from large portions of the town or planning area should be kept free of structures to the maximum extent possible.
- c. If development does take place on highly visible barren slopes or ridges, it must be unobtrusive and of a scale and design to maintain the character of the natural setting, and with required planting of native trees and plants where appropriate

Residential Areas Principle 8: In all residential areas of the town, or its spheres of influence, particular attention must be given to the effects of approaching the maximum amount of development permitted on individual parcels. The cumulative effect of buildout under appropriate ordinances and policies should be examined and steps taken to ensure that its effect will not be injurious to the unique and desirable characteristics of each area. Overall development levels as measured by floor area ratios and impervious surfaces should be limited so as to preserve the rural setting.

Residential Areas Principle 9: To the extent feasible, the design of subdivisions should retain a representative composition of habitats on the site and their interrelationships.

### Open Space Element

*Objective 4:* To retain and enhance important vistas, including the view of the skyline ridge as seen from below and the view of the valley as seen from the hillsides.

*Objective 8:* To provide scenic corridors along routes of major movement.

Principle 1: In any land development project, the basic visual character of the planning area should be conserved through regulation or through public acquisition of less than fee title.

Principle 2: All major visual features should be preserved through public acquisition of fee title or lesser interest.

Principle 3: A variety of vistas should be provided and preserved, ranging from the small enclosed private views to the more distant views shared by many people.

Principle 9: Open space along creeks, streams and scenic trails should be protected from encroachment through flood plain zoning, development setbacks, conservation easements, public acquisition of stream sides and other appropriate devices which will help preserve them in an essentially natural state.

Principle 16: Scenic corridors should be protected so as to maximize their scenic quality.

Principle 17: Scenic corridors and greenways

- a. Scenic corridors and greenways should be of a width suitable to preserve the natural quality of the area through which the corridor passes and provide space for appropriate uses.
- b. Development within scenic corridors and greenways should not detract from the essential qualities of the corridor or greenway.
- c. Scenic corridors and greenways should be designed to insulate residential areas from noise and activity on trafficways and to provide buffers between other incompatible uses.

### Scenic Roads and Highway Element

*Objective 1:* To provide policies with respect to designation of highways within the planning area that are or may be eligible for scenic highway designation by the state.

*Objective 2:* To provide guidance regarding the maintenance of the scenic qualities of our major roads. Because Portola Valley is a place of unusual natural beauty, all roads in Portola Valley can be considered "scenic." However, it is possible that the pressure of increasing development and the resultant traffic could lead to the erosion of the aesthetic quality of our roadsides if care is not taken.

Principle 1: Regulate density and land use, as provided in the general plan and zoning ordinances, with special attention to the view from the road.

Principle 2: Give special consideration to site development, including controlled access for driveways and special setbacks for buildings.

Principle 3: Keep the amount of roadway cuts and fills required in road maintenance or construction to a reasonable minimum.

Principle 4: Contour and plant cut and fill slopes as an integral part of the road design, construction and maintenance process.

Principle 5: Carefully control earth moving, grading, contouring and replanting in areas adjacent to and visible from the road.

Principle 6: Keep traffic signs and markers to a minimum and place with consideration for the visual quality of the road. In addition, all commercial signs on scenic routes must be of such design as to be in keeping with a rural and natural atmosphere.

Principle 7: Control the design of all structures abutting scenic routes, including review by the Architectural and Site Control Commission.

Principle 8: Landscape all development along scenic routes and maintain such landscaping.

Principle 9: The town and user groups should be responsible for the regular pick up of trash in the rights of way of town scenic routes.

Principle 10: Encourage planting of native wildflowers, shrubs, and trees on public and private property. Wherever possible, remove aggressive exotic volunteers such as yellow star thistle, pampas grass, acacia, Scotch and French broom and eucalyptus.

Principle 11: Provide hiking and riding trails and bicycling paths separated from the pavement, where possible, as a part of future road improvements.

Principle 12: As a condition of their conditional use permit, require commercial developments along scenic roads to maintain a neat and tidy appearance. Surroundings of the buildings must be kept clean, and planted areas must be maintained.

Principle 13: Give high priority to placing underground all existing overhead utility lines, and structures to the extent possible, along the town scenic roads. Do not erect new or additional overhead facilities.

### Alpine Scenic Corridor Plan

The Alpine Scenic Corridor is a schematic guide for the conservation and development of the corridor. In addition to longer range actions, the plan focuses public attention on the actions that can be taken to create, maintain and protect the scenic corridor. It also lists measures that can be taken, both public and private, to prevent damage to the corridor by actions that could seriously affect its future value. The basic goal of this plan is the conservation and enhancement of the landscape, views, and the plants and wildlife of the scenic corridor. A further goal is to carry local traffic and to provide recreational opportunities while preserving to the maximum extent possible the natural setting with improvements limited to trails, paths and features designed to protect and enhance the natural character and the public safety.

### Portola Road Corridor Plan

The Portola Road scenic corridor comprises Portola Road, the trail that parallels the road, and the lands immediately on either side of the road and trail. Running along the floor of the Portola valley, this corridor is part of the area that helps define the visual character and quality of the community and is considered the "heart of the town." Portola Road is designated a greenway. The corridor links many of the town's destinations including commercial, institutional, recreational, and natural resources. Both town residents and visitors alike make frequent use of the corridor and benefit from its scenic qualities. The corridor divides the steeper open spaces of the western hillsides and the more residentially developed eastern portions of the town. Immediate views and distant vistas within and from the roadway corridor define its character and underscore the open space and more rural values of Portola Valley as a whole.

## Discussion

a) *Have a substantial adverse effect on a scenic vista?*

**Less than Significant.** Scenic vistas are located throughout the planning area. The General Plan identifies various scenic highways, roadways, corridors, and viewpoints within the town.

In and around Portola Valley, there are two scenic highways and two scenic corridors. Both SR-35, known as Skyline Boulevard, and Highway 280 are designated scenic highways under the California State Scenic Highway Program. Of the sites included in the 6<sup>th</sup> Cycle Housing Element Update – Sites Inventory (Sites Inventory), the Sequoias site is in closest proximity to Skyline Boulevard (1.77 miles) and the vacant portion of the Dorothy Ford Field and Open Space is in closest proximity to Highway 280 (0.57 miles), though neither is prominent in the views from these State scenic highways.

Portola Valley's General Plan identifies Alpine Road and Portola Road as local scenic roads, and the Town has developed the Alpine Scenic Corridor Plan and Portola Road Corridor Plan to define and protect the scenic corridor within the context of development under the General Plan. The Town has permitted development to occur along this corridor and special attention has been focused on preserving sight lines and compatible building design. Of the vacant and non-vacant sites included in the Sites Inventory, four are located along Alpine Road – the vacant portion of Dorothy Ford Field and Open Space housing site, the 4394 Alpine Road housing site, the Glen Oaks housing site, and the 4370 Alpine housing site. Two of the inventory sites are located off of Portola Road.

One of the larger inventory sites identified within the Housing Element Update is the vacant portion of the Dorothy Ford Field and Open Space housing site, which includes approximately 2.48 acres of developable area in an irregular shape and is located in the northeast corner of the town along Alpine Road. This is a Town-owned site that was identified in the Housing Element Update as being able to accommodate up to 50 housing units. As there are no site-specific development plans for this parcel, a site-specific aesthetic analysis is not included in this environmental document. If plans are prepared for this site, the development would need to adhere to site specific constraints, including maintaining the Town's 75-foot scenic corridor requirement and 55-foot creek setback. There are two large oak trees located on this site, and it is possible they may need to be removed as part of the development; any tree removal would adhere to applicable permit requirements. Additionally, the new "Gateway" district proposed would include policies to help preserve as much open space as possible. Furthermore, any site-specific development plans would be reviewed by the ASCC and the Planning Commission.

As there are scenic vistas located throughout the Town, new development associated with implementation of the Housing Element Update could change existing scenic views depending on the view point and existing landscaping or development, topography, and the final site plans

of future development. As development associated with implementation of the Housing Element Update is proposed, all new development would need to be consistent with zoning district and General Plan development standards, as well as applicable sub-area plan standards. Furthermore, site specific development plans would be reviewed by the ASCC and the Planning Commission. Development associated with the Housing Element Update would be anticipated to be of similar style and massing to existing structures within the town, and development would not be of a size to significantly change the rural character of the views. Implementation of the proposed project would not result in a significant adverse effect on a scenic vista; this impact would be considered less than significant.

*b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State Scenic Highway?*

**Less than Significant.** Within the Portola Valley area, SR-35 and I-280 are "Officially Designated State Scenic Highways." Implementation of the Housing Element Update would result in an incremental increase in new residential development. Inventory sites included in the Housing Element Update do not include any sites immediately adjacent to SR-35 or I-280.

While there are no development inventory sites immediately adjacent to highways included in the State Scenic Highway program, it is possible that development associated with implementation of the Housing Element Update could be intermittently visible at selected locations along these highways. As discussed above, all development and redevelopment would be subject to the development and design standards for the applicable zoning district. Development associated with implementation of the Housing Element Update would be expected to be in a similar massing and size of existing development within Portola Valley and would not substantially alter the existing rural character of the Town.

Depending on the location of the inventory sites, Alpine Scenic Corridor Plan and Portola Road Corridor Plan policies and standards may also be applicable. Requiring new development and redevelopment to comply with the General Plan, as well as adhere to the development and design standards set forth in the General Plan, applicable sub-area plans, and the Municipal Code, would ensure that scenic resources along State Scenic Highways are preserved; this potential impact would be less than significant.

*c) 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 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?)*

**Less than Significant.** Implementation of the project would result in the construction of additional residential development within the town. As described in the Housing Element Update, it is anticipated that approximately 30 percent of the new units would be ADUs/JADUs. These types of units are defined as an accessory use to another residential use on the same lot

and would be expected to be relatively smaller than the existing structures on the lot. It is anticipated that these additional dwelling units would be similar in character, and smaller in size, than the existing residential structures within the town, and would be required to adhere to all applicable setback, height, or other development standard requirements.

The Housing Element Update also identifies multi-family development sites and creates new multi-family and mixed-use development districts. All development proposed under these districts would need to meet floor area, height, setback, lighting, and landscaping standards. Additionally, projects located along Alpine Road and Portola Road would need to meet the development standards outlined in the Alpine Scenic Corridor Plan and Portola Road Corridor Plan. As site specific development plans are proposed, they would be reviewed by the ASCC and the Planning Commission.

Development associated with the Housing Element Update would be anticipated to be of similar style and massing to existing structures, and development would not be of a size to significantly change the rural character of the Town. Implementation of the proposed project would not substantially degrade the existing visual character of the Town; this potential impact would be considered less than significant.

*d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?*

**Less than Significant.** Most structures emit some light and glare during day and evening hours, as is typical in a suburban environment. Development associated with implementation of the Housing Element Update would include indoor lighting and outdoor lighting for safety purposes. These new sources of light would be visible from a distance at night; however, the addition of new light sources associated with implementation of the project would generally blend in with surrounding development and would represent a continuation of existing residential development within this area.

As site specific development plans are proposed, they would be reviewed by the ASCC and the Planning Commission. Site-specific development applications would be required to prepare an exterior lighting plan which would be required to be consistent with the Town's lighting regulations and guidelines and identifying all proposed exterior light fixtures by type, location, and intensity of illumination. Any proposed lighting associated with new development would be required to be consistent with applicable regulations and would need to minimize the impact of light from offsite viewpoints or into the sky. Light and glare levels generated would be consistent with modern residential development and the surrounding development. Implementation of the project would result in a less-than-significant light and glare impact.



**B. AGRICULTURAL AND FOREST RESOURCES**

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<p>In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California agricultural land evaluation and site assessment model (1997) prepared by the California Dept. of conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significantly environmental effects, lead agencies may refer to information compiled by the California department of forestry and fire protection regarding the state's inventory of forest land, including the forest and range assessment project and the forest legacy assessment project; and forest carbon measurement methodology provided in forest protocols adopted by the California air resources board. Would the project:</p>				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to a non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Governmental Code Section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

*a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to a non-agricultural use?*

**No Impact.** Urban and built-up land comprises most of Portola Valley with some portions of the town identified as "unique farmland" under the Farmland Mapping and Monitoring Program. However, none of the sites identified in the Housing Element Update overlay land that has been identified as unique farmland nor has any potential important farmland been mapped in Portola Valley. Therefore, the project would not affect prime, unique, or farmland of statewide importance.

*b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?*

**Less Than Significant.** The Portola Valley General Plan identifies agricultural lands in various areas of the town. However, none of the sites identified in the Housing Element Update sites inventory are located on agricultural lands. Additionally, according to the California Department of Conservation, there is no Williamson Act Contract Land in the Town of Portola. Thus, the project would not conflict with the existing zoning for agricultural use and therefore would have a less-than-significant impact.

*c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?*

**No Impact.** The project would not affect timberland. The Housing Element Update sites identified to satisfy the RHNA do not include timberland, according to the Portola Valley General Plan. As such, there would be no impact from the project.

*d) Result in the loss of forest land or conversion of forest land to non-forest use?*

**No Impact.** The project would not affect forestland. The town does not contain any lands for forest use and the project would only affect development within the town limits. There would be no impact to or conversion of forest land from the project.

*e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?*

**No Impact.** Implementation of the project would not result in the conversion of Farmland or forest land to non-agricultural or non-forest use, respectively. The project facilitates vegetation management and future residential development, but only within Town limits. The Town has adequate residential capacity inside the Town limits to accommodate its RHNA and implementation of the project would not affect the agricultural or forest lands surrounding the town. As such, the project would have no impact.

**C. AIR QUALITY**

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) 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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Affected Environment**

Portola Valley is located on the San Francisco Peninsula, on the eastern slope of the Santa Cruz Mountains, and within the San Francisco Bay Area Air Basin (SFBAAB). The SFBAAB is under the jurisdiction of the Bay Area Air Quality Management District (BAAQMD) and the analysis in this section was prepared in accordance with the BAAQMD's CEQA Air Quality Guidelines.<sup>3</sup>

In the SFBAAB, the primary criteria air pollutants of concern are ground-level ozone formed through reactions of oxides of nitrogen (NO<sub>x</sub>) and reactive organic gases (ROG), PM<sub>10</sub>, and PM<sub>2.5</sub>. Regional air pollutants, such as ozone, PM<sub>10</sub>, and PM<sub>2.5</sub>, can be formed and/or transported over long distances and affect ambient air quality far from the emissions source. The magnitude and location of specific health effects from exposure to increased ozone, PM<sub>10</sub>, and PM<sub>2.5</sub> concentrations are the result of emissions generated by numerous sources throughout the SFBAAB, as opposed to a single project.

The BAAQMD and other air districts use regional air dispersion models to correlate the cumulative emissions of regional pollutants to potential community health effects. However, these dispersion models have limited sensitivity to the relatively small (or negligible) changes in criteria air pollutant concentrations associated with an individual project. Therefore, it is not feasible to provide reliable estimates of specific health risks associated with the air pollutant emissions from an individual project.

<sup>3</sup> Bay Area Air Quality Management District (BAAQMD), 2017. California Environmental Quality Act Air Quality Guidelines, May.

Localized air pollutants generally dissipate with distance from the emission source and can pose a health risk to nearby populations. Toxic air contaminants (TACs), such as diesel particulate matter (DPM), are considered localized pollutants. PM<sub>2.5</sub> is also considered a localized air pollutant, in addition to being considered a regional air pollutant. Air dispersion models can be used to reliably quantify the health risks to nearby receptors associated with emissions of localized air pollutants from an individual project.

## **Regulatory Setting**

### *Federal and State*

The federal EPA is responsible for implementing the programs established under the federal Clean Air Act, such as establishing and reviewing the National Ambient Air Quality Standards (NAAQS) and judging the adequacy of State Implementation Plans to attain the NAAQS. A State Implementation Plan must integrate federal, State, and local plan components and regulations to identify specific measures to reduce pollution in nonattainment areas, using a combination of performance standards and market-based programs. If a state fails to enforce its implementation of approved regulations, or if the EPA determines that a State Implementation Plan is inadequate, the EPA is required to prepare and enforce a Federal Implementation Plan to promulgate comprehensive control measures for a given State Implementation Plan.

The California Air Resources Board (CARB) is responsible for establishing and reviewing the California Ambient Air Quality Standards (CAAQS), developing and managing the California State Implementation Plans, identifying TACs, and overseeing the activities of regional air quality management districts. In California, mobile emissions sources (e.g., construction equipment, trucks, and automobiles) are regulated by CARB and stationary emissions sources (e.g., industrial facilities) are regulated by the regional air quality management districts.

The CAAQS and NAAQS, which were developed for criteria air pollutants, are intended to incorporate an adequate margin of safety to protect the public health and welfare. California also has ambient air quality standards for sulfates, visibility-reducing particles, hydrogen sulfide, and vinyl chloride. To achieve CAAQS, criteria air pollutant emissions are managed through control measures described in regional air quality plans as well as emission limitations placed on permitted stationary sources.

In accordance with the federal Clean Air Act and California Clean Air Act, areas in California are classified as either in attainment, maintenance (i.e., former nonattainment), or nonattainment of the NAAQS and CAAQS for each criteria air pollutant. To assess the regional attainment status, the BAAQMD collects ambient air quality data from over 30 monitoring sites within the SFBAAB. Based on current monitoring data, the SFBAAB is designated as a nonattainment area for ozone, PM<sub>10</sub>, and PM<sub>2.5</sub>, and is designated an attainment or unclassified area for all other pollutants (see Table C-1).

**TABLE C-1 AIR QUALITY STANDARDS AND ATTAINMENT STATUS**

Pollutant	Averaging Time	CAAQS		NAAQS	
		Concentration	Attainment Status	Concentration	Attainment Status
Ozone	8-Hour	0.070 ppm	N	0.070 ppm	N
	1-Hour	0.09 ppm	N	Revoked in 2005	---
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	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	---	---	0.030 ppm	A
Coarse Particulate Matter (PM <sub>10</sub> )	Annual	20 µg/m <sup>3</sup>	N	---	---
	24-Hour	50 µg/m <sup>3</sup>	N	150 µg/m <sup>3</sup>	U
Fine Particulate Matter (PM <sub>2.5</sub> )	Annual	12 µg/m <sup>3</sup>	N	12 µg/m <sup>3</sup>	U/A
	24-Hour	---	---	35 µg/m <sup>3</sup>	N
Sulfates	24-Hour	25 µg/m <sup>3</sup>	A	---	---
	30-Day	1.5 µg/m <sup>3</sup>	A	---	---
Lead	Calendar Quarter	---	---	1.5 µg/m <sup>3</sup>	A
	Rolling 3-Month	---	---	0.15 µg/m <sup>3</sup>	A
Hydrogen Sulfide	1-Hour	0.03 ppm	U	---	---
Vinyl Chloride	24-Hour	0.010 ppm	U	---	---
Visibility Reducing Particles	8 Hour (10:00 to 18:00 PST)	---	U	---	---

Notes: A = Attainment; N = Nonattainment; U = Unclassified; "—" = not applicable; ppm = parts per million; µg/m<sup>3</sup> = micrograms per cubic meter; PST = Pacific Standard Time.

Source: Bay Area Air Quality Management District (BAAQMD), 2017. Air Quality Standards and Attainment Status. Available at: <http://www.baaqmd.gov/research-and-data/air-quality-standards-and-attainment-status>, accessed May 30, 2019. Last updated January 5, 2017.

Regulation of TACs, referred to as hazardous air pollutants (HAPs) under federal regulations, is achieved through federal, State, and local controls on individual sources. The air toxics provisions of the federal Clean Air Act require the EPA to identify HAPs that are known or suspected to cause cancer or other serious health effects to protect public health and welfare, and to establish National Emission Standards for Hazardous Air Pollutants. California regulates TACs primarily through the Tanner Air Toxics Act (Assembly Bill [AB] 1807) and the Air Toxics Hot Spots Information and Assessment Act of 1987 (AB 2588). The Tanner Act created California's program

to identify and reduce exposure to TACs. To date, the CARB has identified over 21 TACs and adopted the EPA's list of 188 HAPs as TACs. The Hot Spots Act supplements the Tanner Act by requiring a statewide air toxics inventory, notification of people exposed to a significant health risk, and facility plans to reduce these risks.

### *Local*

#### Bay Area Air Quality Management District

The BAAQMD is primarily responsible for ensuring that the NAAQS and CAAQS are attained and maintained in the SFBAAB. The BAAQMD fulfills this responsibility by adopting and enforcing rules and regulations concerning air pollutant sources, issuing permits, inspecting stationary sources of air pollutants, responding to citizen complaints, and monitoring ambient air quality and meteorological conditions. The BAAQMD also awards grants to reduce motor vehicle emissions and conducts public education campaigns and other activities associated with improving air quality within the SFBAAB.

The demolition of existing buildings and structures are subject to BAAQMD's Regulation 11, Rule 2 (Asbestos Demolition, Renovation, and Manufacturing), which limits asbestos emissions from demolition or renovation of structures and the associated disturbance of asbestos-containing waste material generated or handled during these activities. The rule addresses the national emissions standards for asbestos and contains additional requirements. The rule requires the lead agency and its contractors to notify the BAAQMD of any regulated renovation or demolition activity. The notification must include a description of the affected structures and the methods used to determine the presence of asbestos-containing materials. All asbestos-containing material found on site must be removed prior to demolition or renovation activity in accordance with BAAQMD Regulation 11, Rule 2, which includes specific requirements for surveying, notification, removal, and disposal of materials that contain asbestos. Implementation of Regulation 11, Rule 2 ensures that asbestos-containing materials are disposed of appropriately and safely.

The BAAQMD's CEQA Guidelines<sup>4</sup> include thresholds of significance to assist lead agencies in evaluating and mitigating air quality impacts under CEQA. The BAAQMD's thresholds establish levels at which emissions of ozone precursors (ROG and NOx), PM<sub>10</sub>, PM<sub>2.5</sub>, TACs, and odors could cause significant air quality impacts. The scientific soundness of the thresholds is supported by substantial evidence presented in the BAAQMD's Revised Draft Options and Justification Report.<sup>5</sup>

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<sup>4</sup> Bay Area Air Quality Management District (BAAQMD), 2017. California Environmental Quality Act Air Quality Guidelines, May.

<sup>5</sup> Bay Area Air Quality Management District (BAAQMD), 2009. Revised Draft Options and Justification Report; California Environmental Quality Act Thresholds of Significance, October.

### Bay Area Clean Air Plan

In accordance with the California Clean Air Act, the BAAQMD is required to prepare and update an air quality plan that outlines measures by which both stationary and mobile sources of pollutants can be controlled to achieve the NAAQS and CAAQS in areas designated as nonattainment. In April 2017, the BAAQMD adopted the 2017 Clean Air Plan: Spare the Air, Cool the Climate (2017 CAP).<sup>6</sup> The primary goals of the 2017 CAP are the attainment of ambient air quality standards and reduction of population exposure to air pollutants for the protection of public health in the Bay Area.

The 2017 CAP was developed based on a multi-pollutant evaluation method that incorporates well-established studies and methods of quantifying health benefits; air quality regulations; computer modeling and analysis of existing air quality monitoring data and emissions inventories; and traffic and population growth projections prepared by the Metropolitan Transportation Commission and the Association of Bay Area Governments, respectively. The 2017 Plan complements and supports other important regional and state planning efforts, including Plan Bay Area and the State of California's 2030 Scoping Plan.

### **Discussion**

This section analyzes the impacts related to air quality that would result from implementation of the project. The project does not include any new policies related to air quality; therefore, no air quality related impacts from updating the policies would occur. The following impact analysis is based on an assessment of baseline conditions for the planning area, including regional and local air quality conditions. This analysis identifies potential impacts based on the interaction between the affected environment and construction and operation activities related to planned-for future development that could occur under the project.

Potential air quality impacts associated with future development under the project are evaluated in accordance with the BAAQMD's CEQA Guidelines. For communitywide planning documents (e.g., general plans), BAAQMD recommends that local governments demonstrate compliance with the plan-level thresholds summarized in Table C-2, below. Because this is a plan-level project, these are the thresholds of significance that will apply.

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<sup>6</sup> Bay Area Air Quality Management District (BAAQMD), 2017. 2017 Clean Air Plan: Spare the Air, Cool the Climate, April 19.

**TABLE C-2 BAAQMD'S PLAN-LEVEL THRESHOLDS OF SIGNIFICANCE FOR AIR QUALITY**

Impact Analysis	Threshold
Criteria Air Pollutants and Precursors	<b>Construction:</b> None <b>Operational:</b> Consistency with current air quality plan and projected vehicle miles travelled or vehicle trip increase is less than or equal to projected population increase.
Local Community Risk and Hazards	Land use diagram identifies special overlay zones around existing and planned sources of TACs and PM2.5, including special overlay zones of at least 500 feet (or Air District-approved modeled distance) on each side of all freeways and high-volume roadways, and plan identifies goals, policies, and objectives to minimize potentially adverse impacts.
Odors	Identify locations of odor sources in plan; identify goals, policies, and objectives to minimize potentially adverse impacts.

Source: Bay Area Air Quality Management District (BAAQMD), 2017. California Environmental Quality Act Air Quality Guidelines, May.

For individual developments proposed under the project, the BAAQMD recommends using their project-level thresholds of significance to identify levels at which individual projects could cause significant air quality impacts related to emissions of ozone precursors (ROG and NOx), PM10, PM2.5, and TACs. These have been provided for informational purposes only, as this is a plan-level project, and to support CEQA tiering of the future developments proposed under the project. The BAAQMD's recommended project-level thresholds are summarized in Table C-3.

**TABLE C-3 BAAQMD'S PROJECT-LEVEL THRESHOLDS OF SIGNIFICANCE FOR AIR QUALITY**

Impact Analysis	Pollutant	Threshold
Regional Air Quality (Construction)	ROG	54 pounds/day (average daily emission)
	NOx	54 pounds/day (average daily emission)
	Exhaust PM10	82 pounds/day (average daily emission)
	Exhaust PM2.5	54 pounds/day (average daily emission)
	Fugitive dust (PM10 and PM2.5)	Best management practices
Regional Air Quality (Operation)	ROG	54 pounds/day (average daily emission) 10 tons/year (maximum annual emission)
	NOx	54 pounds/day (average daily emission) 10 tons/year (maximum annual emission)
	Exhaust PM10	82 pounds/day (average daily emission) 15 tons/year (maximum annual emission)
	Exhaust PM2.5	54 pounds/day (average daily emission) 10 tons/year (maximum annual emission)
	Exhaust PM2.5 (project)	0.3 µg/m <sup>3</sup> (annual average)
Local Community Risks and Hazards (Operation and/or Construction)	TACs (project)	Cancer risk increase > 10 in one million Chronic hazard index > 1.0
	Exhaust PM2.5 (cumulative)	0.8 µg/m <sup>3</sup> (annual average)



**TABLE C-3 BAAQMD'S PROJECT-LEVEL THRESHOLDS OF SIGNIFICANCE FOR AIR QUALITY**

Impact Analysis	Pollutant	Threshold
	TACs (cumulative)	Cancer risk > 100 in one million Chronic hazard index > 10.0

Note: ROG = reactive organic gases; NOx = oxides of nitrogen; PM10 = coarse particulate matter; PM2.5 = fine particulate matter;  
 $\mu\text{g}/\text{m}^3$  = micrograms per cubic meter

Source: Bay Area Air Quality Management District (BAAQMD), 2017. California Environmental Quality Act Air Quality Guidelines, May.

a) *Conflict with or obstruct implementation of the applicable air quality plan?*

**Less Than Significant.** The BAAQMD's 2017 CAP is the applicable air quality plan for projects located in the SFBAAB. Consistency may be determined by evaluating whether the project supports the primary goals of the 2017 CAP, including applicable control measures contained within the 2017 CAP, and would not conflict with or obstruct implementation of any 2017 CAP control measures. The primary goals of the 2017 CAP are the attainment of ambient air quality standards and reduction of population exposure to air pollutants for the protection of public health in the Bay Area.

The 2017 CAP includes control measures that aim to reduce air pollution and GHGs from stationary, area, and mobile sources. The control measures are organized into nine categories: stationary sources, transportation, buildings, energy, agriculture, natural and working lands, waste, water, and super-GHG pollutants (e.g., methane, black carbon, and fluorinated gases). Table C-4 shows the project consistency with BAAQMD's 2017 CAP in those nine categories.

**TABLE C-4 PROJECT CONSISTENCY WITH BAAQMD'S 2017 CAP**

Control Measures	Project Consistency
Stationary Source	The stationary source measures, which are designed to reduce emissions from stationary sources, are incorporated into rules adopted by the BAAQMD and then enforced by the BAAQMD's Permit and Inspection programs. Development under the project would be subject to the BAAQMD's permitting requirements for stationary sources. Therefore, the project would be <b>consistent</b> with the stationary source control measures.
Transportation	The transportation control measures are designed to reduce vehicle trips, use, miles traveled, idling, or traffic congestion for the purpose of reducing vehicle emissions. The Town requires residential developers to provide a 15 foot wide lane/path to facilitate residents to ride horses, hike and bicycle throughout the community, which helps to reduce vehicle travel and associated emissions. The Town is also adopting a new mixed-use zoning district (4370 Alpine Road housing site) allowing residential uses up to six dwelling units per acre in the Housing Element update. The project would include Affiliated Housing sites within the Town's Site Inventory to encourage people work and live in one place. This reduces vehicle emissions associated with employees driving to town. Therefore, the project would be <b>consistent</b> with the goals for transportation control in the 2017 CAP.
Energy	The energy control measures are designed to reduce emissions of criteria air pollutants, TACs, and GHGs by decreasing the amount of electricity consumed in the Bay Area, as well as decreasing the carbon intensity of the electricity used by switching to less GHG-intensive fuel sources for electricity generation. The Renewables Portfolio Standard (RPS) Program requires that all electricity

**TABLE C-4 PROJECT CONSISTENCY WITH BAAQMD'S 2017 CAP**

Control Measures	Project Consistency
	retailers in California increase procurement from eligible renewable energy resources. Passage of Senate Bill (SB) 350 in September 2015 increased and extended the required procurement from renewable sources to 50 percent by 2030. Since these measures apply to electrical utility providers and local government agencies (and not individual projects), the energy control measures of the 2017 CAP are <b>not applicable</b> to the project. However, it should be noted that Peninsula Clean Energy (PCE) is the official electricity provider for the Town and provides every residence and business with 100 percent access to clean and renewable energy. For residence and business that do not choose PCE, Pacific Gas and Electric Company (PG&E) supplies 93 percent of its electric power mix from a combination of renewable and GHG-free sources. <sup>a</sup>
Buildings	The BAAQMD has authority to regulate emissions from certain sources in buildings such as boilers and water heaters, but has limited authority to regulate buildings themselves. Therefore, the building control measures focus on working with local governments that have authority over local building codes to facilitate adoption of best practices and policies to control GHG emissions. Future projects within the Town will be required to meet the minimum code efficiency requirements for the Title-24 Green Building Standards Code and Energy Code. The Building Code of Portola Valley is adopting the 2022 California Building Standards Code with local amendment 5.106.13 to require all newly constructed buildings to be constructed as all-electrical buildings. An all-electrical building has no natural gas or propane plumbing installed within the building, and uses electricity as the source of energy for its space heating, water heating, cooking appliances, and clothes drying appliances. Therefore, the project would be <b>consistent</b> with the buildings control measures.
Agriculture	The agriculture control measures are designed to primarily reduce emissions of methane. Since the project does not include any agricultural activities, the agriculture control measures of the 2017 CAP are <b>not applicable</b> to the project.
Natural and Working Lands	The control measures for the natural and working lands sector focus on increasing carbon sequestration on rangelands and wetlands, as well as encouraging local governments to ordinances that promote urban-tree plantings. Since the project does not include the disturbance of any rangelands or wetlands, the natural and working lands control measures of the 2017 CAP are <b>not applicable</b> to the project.
Waste Management	The waste management measures focus on reducing or capturing methane emissions from landfills and composting facilities, diverting organic materials away from landfills, and increasing waste diversion rates through efforts to reduce, reuse, and recycle. Future development under the project would comply with local requirements for waste management (e.g., recycling services). Therefore, the project would be <b>consistent</b> with the waste management control measures.
Water	The water control measures to reduce emissions from the water sector will reduce emissions of criteria pollutants, TACs, and GHGs by encouraging water conservation, limiting GHG emissions from publicly owned treatment works (POTWs), and promoting the use of biogas recovery systems. Since these measures apply to POTWs and local government agencies (and not individual projects), the water control measures of the 2017 CAP are <b>not applicable</b> to the project.
Super GHGs	The super-GHG control measures are designed to facilitate the adoption of best GHG control practices and policies through the BAAQMD and local government agencies. Since these measures do not apply to individual projects, the super-GHG control measures of the 2017 CAP are <b>not applicable</b> to the project.

<sup>a</sup> Pacific Gas and Electric (PG&E), 2019. Clean Energy Solutions [https://www.pge.com/en\\_US/about-pge/environment/what-we-are-doing/clean-energy-solutions/clean-energy-solutions.page](https://www.pge.com/en_US/about-pge/environment/what-we-are-doing/clean-energy-solutions/clean-energy-solutions.page), accessed March 23, 2022.

As described in Table C-4, the project would be consistent with applicable control measures from the 2017 CAP. Therefore, based on the BAAQMD's CEQA Air Quality Guidelines, the project

would not conflict with or obstruct implementation of the applicable air quality plan, and the impact would be less than significant.

*b) 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?*

#### Plan-Level Analysis

**Less Than Significant.** According to BAAQMD's plan-level threshold, operational-related criterial air pollutant and precursor impacts would be less than significant if the projected rate of increase in vehicle miles travelled (VMT) is less than or equal to the rate of increase in its projected population. The BAAQMD considers reductions in VMT a key strategy for achieving the federal and State ambient air quality standards for ozone, PM<sub>10</sub>, and PM<sub>2.5</sub>.

Table C-5 summarizes the rates of increase for the service population and the total VMT for 2040 with and without the project. The VMT and associated criteria air pollutant emissions would increase at a lower rate than the service population growth. Therefore, implementation of the project would not result in a cumulatively considerable net increase in criteria air pollutants for which the region is in nonattainment, and this impact would be less than significant at the plan level.

**TABLE C-5 BASELINE AND PLUS PROJECT POPULATION AND VEHICLE MILES TRAVELED PER SERVICE POPULATION**

	Cumulative (2040) Conditions (Baseline conditions)	Cumulative (2040) Conditions with Project	Net Increase
Residential Population	5,040	5,730	13.7%
Residential VMT	194,050	215,820	11.2%

Note: See estimated residential population and home-based VMT reported in *Section Q. Transportation*.

#### Project-Level Analysis

##### Construction Emissions

**Less Than Significant with Mitigation Incorporated.** Construction activities for future developments under the project would generate criteria air pollutant emissions that could potentially affect regional air quality. During construction, the primary pollutant emissions of concern would be ROG, NO<sub>x</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> from the exhaust of off-road construction equipment and on-road construction vehicles related to worker vehicles, vendor trucks, and haul trucks. In addition, fugitive dust emissions of PM<sub>10</sub> and PM<sub>2.5</sub> would be generated by soil disturbance and demolition activities, and fugitive ROG emissions would result from the application of architectural coatings and paving.

The generation of ROG, NO<sub>x</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> emissions from the exhaust of off-road construction equipment and on-road vehicles and fugitive ROG emissions from the application of architectural coatings and paving could result in a cumulatively considerable net increase in criteria air pollutants. According to the BAAQMD's screening criteria,<sup>7</sup> construction of individual residential developments with more than 114 single-family units or more than 240 multi-family units could potentially exceed the BAAQMD's project-level thresholds of significance for criteria air pollutants (see Table C-3). According to the Housing Sites Inventory, there are no housing sites where the construction of single-family or multi-family units would exceed the BAAQMD's screening criteria. Therefore, the increase in exhaust emissions of ROG, NO<sub>x</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> and fugitive emissions of ROG during construction activities for residential developments under the project would not result in a cumulatively considerable net increase in criteria air pollutants for which the region is in nonattainment.

The generation of fugitive dust PM<sub>10</sub> and PM<sub>2.5</sub> emissions from soil disturbance and demolition activities could result in a cumulatively considerable net increase in regional PM<sub>10</sub> and PM<sub>2.5</sub> concentrations. The BAAQMD does not have a quantitative threshold of significance for fugitive dust PM<sub>10</sub> and PM<sub>2.5</sub> emissions; however, the BAAQMD considers implementation of best management practices to control dust during construction sufficient to reduce air quality impacts from fugitive dust to a less-than-significant level. Without implementation of best management practices to control dust, residential development under the project would have a potentially significant impact related to criteria air pollutant emissions. The BAAQMD's recommended best management practices for controlling dust are included in Mitigation Measure AIR-1, below.

**Mitigation Measure AIR-1: Dust Control Program.** During project construction, the contractor shall implement a dust control program that includes the following measures recommended by the Bay Area Air Quality Management District (BAAQMD) and these measures shall be included in contract specifications for construction of the project:

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
- All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
- 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.
- All vehicle speeds on unpaved roads shall be limited to 15 miles per hour (mph).

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<sup>7</sup> Bay Area Air Quality Management District (BAAQMD), 2017. California Environmental Quality Act Air Quality Guidelines, May.

- 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.
- Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.
- All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
- A publicly visible sign shall be posted with the telephone number and person to contact at the construction site regarding dust complaints. This person shall respond and take corrective action within 48 hours. The BAAQMD's phone number shall also be visible to ensure compliance with applicable regulations.

Implementation of these measures would ensure that emissions of PM<sub>10</sub> and PM<sub>2.5</sub> from dust generated during construction of residential developments under the project would not result in a cumulatively considerable net increase in criteria air pollutants for which the region is in nonattainment, and this impact would be less than significant at the project level.

#### Operational Emissions

**Less Than Significant with Mitigation Incorporated.** Operation of future developments under the project would generate criteria air pollutant emissions that could potentially affect regional air quality. During operation, the primary pollutant emissions of concern would be ROG, NO<sub>x</sub>, and exhaust PM<sub>10</sub> and PM<sub>2.5</sub> from mobile sources, energy use, and area sources (e.g., consumer products and architectural coatings, and landscape maintenance equipment). It is possible that individual development projects, if large enough, could result in significant effects related to the operational emissions of criteria air pollutants, even if the overall plan-level analysis is determined to have a less-than-significant impact.

According to the BAAQMD's screening criteria<sup>8</sup>, operation of an individual residential development with more than 325 single-family units or more than 451 multi-family units could potentially exceed the BAAQMD's project-level thresholds of significance for criteria air pollutants (see Table C-3). According to the Housing Sites Inventory, there are no sites where the maximum housing capacity could exceed the BAAQMD's screening criteria. Therefore, operation of individual residential developments under the project would not result in a cumulatively considerable net increase in criteria air pollutants for which the region is in nonattainment.

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<sup>8</sup> Bay Area Air Quality Management District (BAAQMD), 2017. California Environmental Quality Act Air Quality Guidelines, May.

There is one mixed-use development under the project (4370 Alpine Road housing site) that would allow up to 100 percent residential on a 1.5 acre site. If the site is developed for 100 percent residential, then the site could include up to 9 residential units which is well below the BAAQMD's screening criteria. However, the potential non-residential uses that could be developed on the site (e.g., office, bank, restaurant) are not defined at this time. Therefore, operation of a mixed-used development under the project could have a potentially significant impact related to criteria air pollutant emissions.

**Mitigation Measure AIR-2: Quantified Emissions.** Proposed projects that would exceed the current BAAQMD's screening criteria for operational criteria air pollutant emissions shall retain a qualified air quality consultant to quantify criteria air pollutant emissions and identify measures, as needed, to reduce the project's average daily emissions below 54 pounds per day for ROG, NOx, and PM<sub>2.5</sub> and 82 pounds per day for PM<sub>10</sub>, and reduce the maximum annual emissions below 10 tons per year for ROG, NOx, and PM<sub>2.5</sub> and 15 tons per year for PM<sub>10</sub>. Quantified emissions and identified reduction measures shall be submitted to the Town for review and approval prior to the issuance of building permits.

Implementation of Mitigation Measure AIR-2 would ensure that operation of developments under the project would not result in a cumulatively considerable net increase in criteria air pollutants for which the region is in nonattainment, and this impact would be less than significant at the project level.

*c) Expose sensitive receptors to substantial pollutant concentrations?*

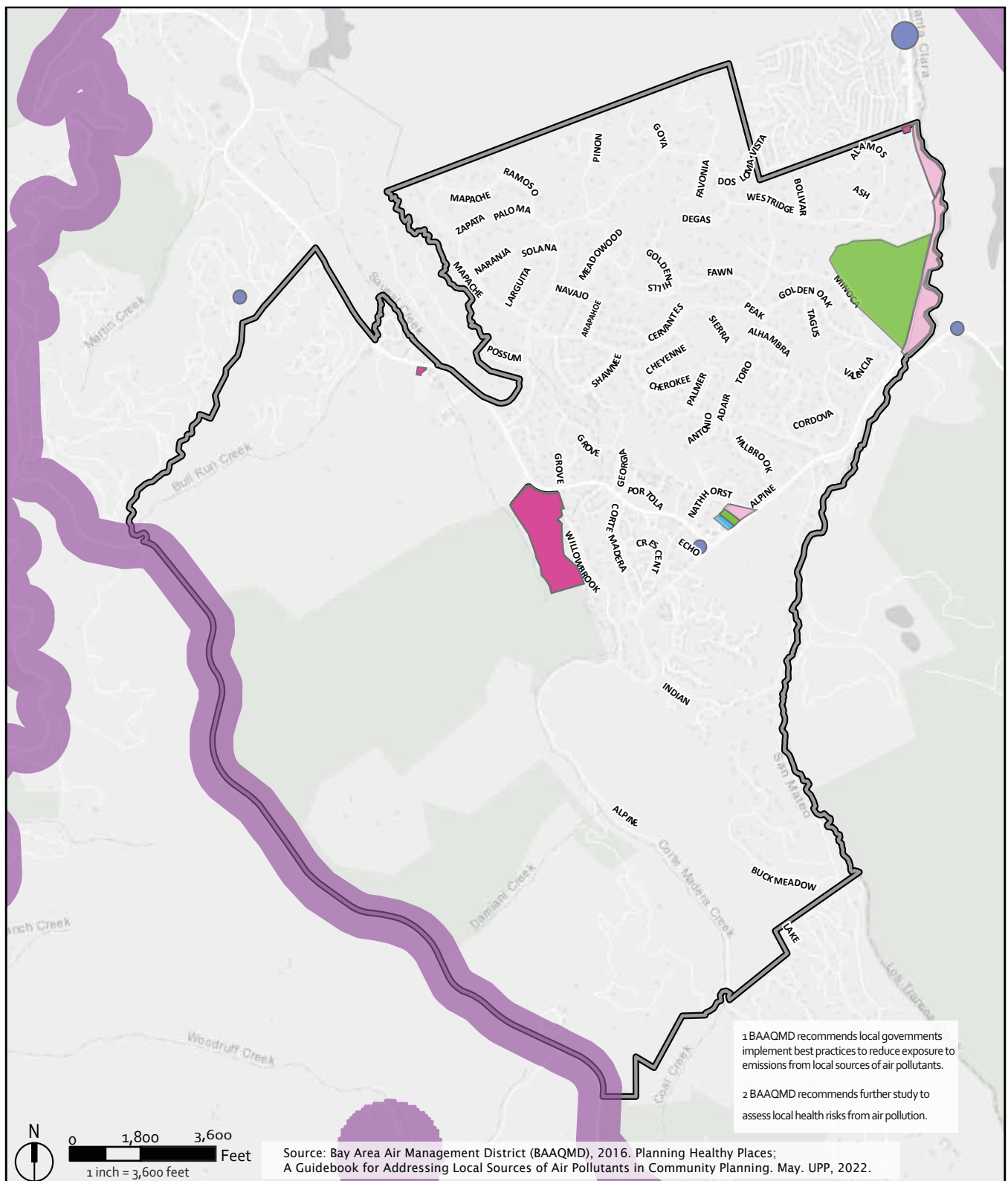
**Less Than Significant.** Sensitive receptors include schools, convalescent homes, and hospitals because the very young, the old, and the infirm are more susceptible than the rest of the public to air-quality-related health problems. Residential areas are also considered sensitive to poor air quality because people are often at home for extended periods, thereby increasing the duration of exposure to potential air contaminants.

The BAAQMD's Planning Healthy Places guidance<sup>9</sup> has mapped local areas with elevated levels of TAC and/or PM<sub>2.5</sub> pollution (Figure C-1, as updated by the BAAQMD).

The purpose of this guidance document is to encourage local governments to address and minimize potential local air pollution issues early in the land-use planning process, and to provide technical tools to assist them in doing so. Based on a screening-level cumulative analysis of mobile and stationary sources in the Bay Area, the BAAQMD mapped localized areas of elevated air pollution that: 1) exceed an excess cancer risk of 100 in a million; 2) exceed PM<sub>2.5</sub> concentrations of 0.8 micrograms per cubic meter; or 3) are located within 500 feet of a freeway,

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<sup>9</sup> BAAQMD, 2021. Planning Healthy Places. Available at: <https://www.baaqmd.gov/plans-and-climate/planning-healthy-places>, accessed October 12, 2022.



- Portola Valley Town Boundary
- Pipeline and Pending Developments
- Vacant Housing Sites
- Non-Vacant Housing Sites (Not Affiliated)
- Non-Vacant Affiliated Housing Sites

- Area with Elevated TAC and/or PM<sub>2.5</sub> Concentrations<sup>1</sup>
- Area Requiring Further Study<sup>2</sup>

Notes: TAC = toxic air contaminant;  
PM<sub>2.5</sub> = fine particulate matter

Figure C-1  
Local Air Quality Pollutants  
Portola Valley Housing and Safety Elements Update IS/MND

175 feet of a major roadway (with more than 30,000 annual average daily vehicle trips), or 500 feet of a ferry terminal. Within these localized areas of elevated air pollution, the BAAQMD encourages local governments to implement best practices to reduce exposure to and emissions from local sources of air pollutants. As shown by the purple and blue areas in Figure C-1, elevated levels of TACs and/or PM<sub>2.5</sub> pollution may currently exist near gas stations and in the vicinity of mobile sources located along Route 35 on the southwest boundary of the Town.

According to the Housing Sites Inventory, none of the proposed housing sites are located within or near areas of elevated TACs and/or PM<sub>2.5</sub> pollution. Therefore, future development within the planning area would not generate TACs and PM<sub>2.5</sub> emissions that would substantially contribute to the existing poor air quality in the planning area and expose sensitive receptors to substantial pollutant concentrations. As a result, impacts from future residential developments under the project would be less than significant related to plan- and project-level generation of TACs and PM<sub>2.5</sub>.

*d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?*

**No Impact.** Future development under the project would not be expected to generate significant odors because residences would not include handling or generation of noxious materials. Therefore, the project would have no impact related to other emissions.



**D. BIOLOGICAL RESOURCES**

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) 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 Game or US Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Background and Methods**

Biological resources were identified through a literature review of existing information and aerial imagery, focusing on properties in the Sites Inventory. The review provided information on the biological resources in the vicinity, the extent of known sensitive natural communities and jurisdictional waters, and the distribution and habitat requirements of special-status species that have been reported from or are considered to have some likelihood to occur in the Portola Valley vicinity. This included review of the occurrence records of the California Natural Diversity Data Base (CNDDDB) of the California Department of Fish and Wildlife (CDFW), designated critical habitat for listed special-status species for listed species, and wetlands mapped by the U.S. Fish and Wildlife Service (USFWS) as part of the National Wetland Inventory. The *Portola Valley Sensitive Biological Resources Assessment and Fuel Hazard Assessment (SBRA)*<sup>10</sup> provided detailed

<sup>10</sup> TRA Environmental Sciences, Inc and Moritz Arboricultural Consulting. 2010 and 2008. *Portola Valley Sensitive Biological Resources Assessment and Fuel Hazard Assessment*. Prepared for Town of Portola Valley. April and October

information on vegetation and wildlife resources and the known distribution of special-status species within the town.

## **Affected Environment**

### *Habitat Types within the Planning Area*

The Town of Portola Valley is located on the eastern slopes of the Santa Cruz Mountains, which transition from steep, forested slopes at the western reaches to low rolling foothills at the eastern edge of the planning area. Primary drainages through the planning area include Los Trancos, Corte Madera, and Sausal Creeks, together with their tributaries.

As indicated in Figure D-1, plant communities form a mosaic of cover types that include oak savanna and woodland, mixed evergreen forest, and redwood forest grassland, coastal scrub, chaparrals, with riparian woodland and scrub along segments of the major creeks. Suburban and rural development cover much of the valley floors and lower elevations of the planning area, containing roadways, parking areas, structures, irrigated turf, and a combination of remnant native cover and planted ornamental landscaping. Planted vineyards are also scattered through the southwestern portion of the planning area. The following provides a summary of the various vegetation types and representative habitat found in the planning area

**Oak Woodland and Savanna.** Oak woodland and savanna occurs primarily on the lower slopes and on rolling hills in the central area of Portola Valley, and on hillside slopes in the eastern part of the planning area. Coast live oak, valley oak, and blue oak dominate the tree canopy, along with other native trees, such as California bay and California buckeye. Shrubs, native and non-native grasses, and forbs are also common. Native and non-native herbaceous species characteristic of grassland habitat are present in canopy openings. Due to the abundance of food (e.g., acorns, bay nuts and buckeyes) and other habitat components (e.g., snags and cavity-bearing trees), oak woodlands are some of the most biologically productive and diverse wildlife habitats in California. Characteristic wildlife species that use oak woodlands and savanna habitat include: mammals such as deer, mountain lion, gray fox, deer mice, San Francisco dusky-foot woodrat, and numerous bat species; a large number of birds, such as hawks, woodpeckers, owls, and passerines; and reptiles and amphibians such as common gopher snake, king snake, western rattlesnake, alligator lizard, skink, western fence lizard, and California slender salamander.

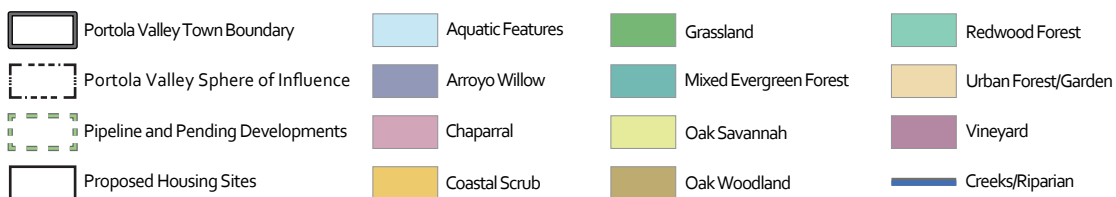
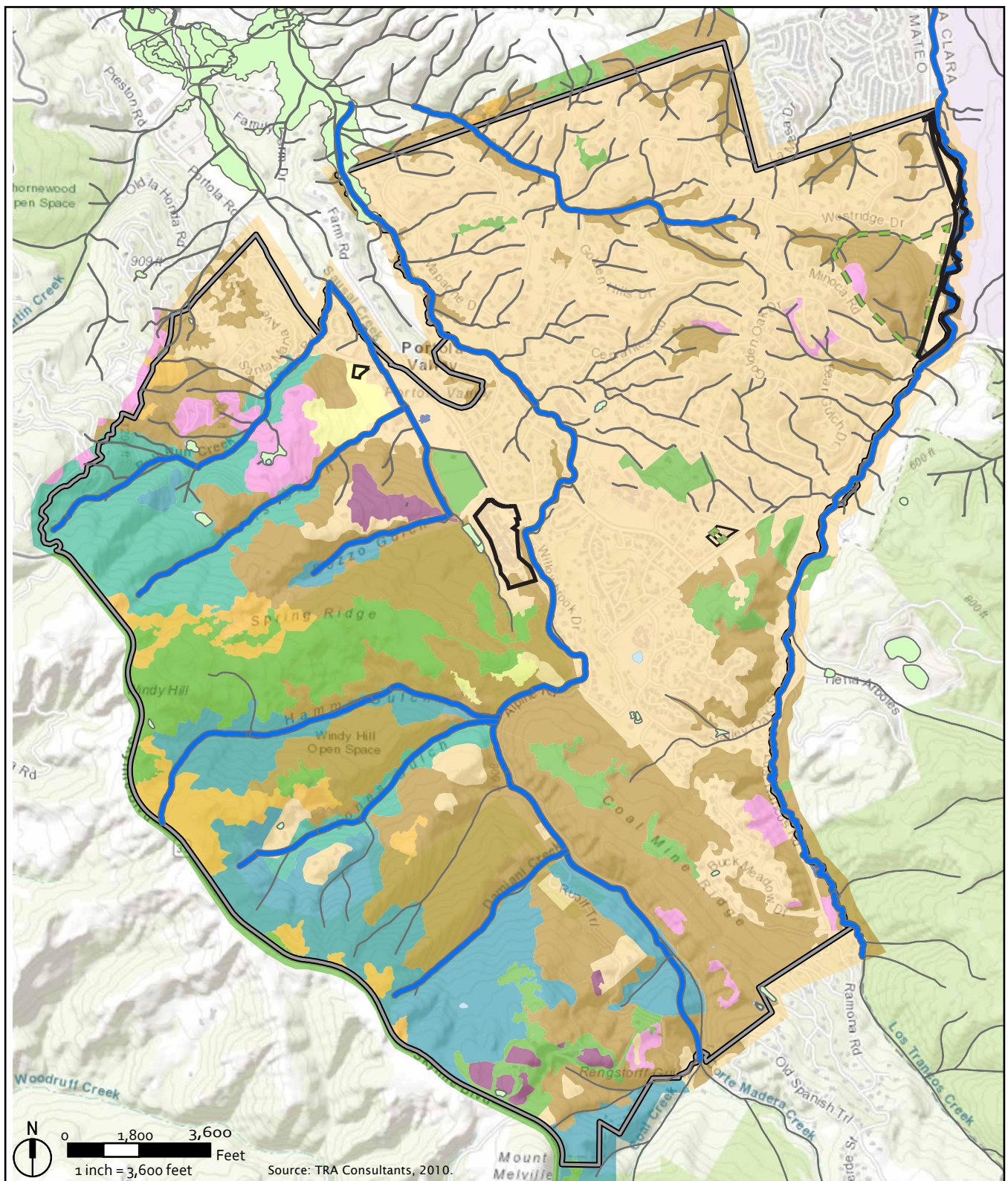


Figure D-1  
Vegetation Map

**Mixed-Evergreen and Redwood Forests.** The mixed evergreen and redwood forests occur on the western slopes of the planning area in the foothills and eastern slopes of the Santa Cruz Mountains. Coast redwood is dominant on lower slopes, drainages, and other areas with deeper soils and higher soil moisture. A variety of trees, shrubs, and herbs grow in the deep shade of the redwood canopy, including a diverse mix of broad-leafed deciduous and evergreen trees such as California bay, tan oak, and big leaf maple. Native shrubs are common in openings, along with herbaceous species. Common wildlife in the forest habitat includes birds, grey squirrel, raccoon, skunk, deer mice, and reptiles and amphibians.

**Grasslands.** Grassland habitat remains along some ridgetops and in vacant lands where suburban and rural development occupy the eastern half of the planning area. Native grasslands in California have been greatly altered from their original condition as a result of grazing and other influences over the past 150 years, with the grasslands in Portola Valley now largely dominated by non-native grasses and forbs, with occasional native species. Areas that have been heavily disturbed generally contain ruderal (weedy) species like yellow star thistle, prickly wild lettuce, mustards, bristly oxtongue, and Bermuda grass, among other non-native species. Grasslands support a rich and varied wildlife population, including deer, California ground squirrel, meadow voles, and Bottas pocket gopher, which, along with abundant invertebrates, serve as prey to bird and mammal predators, such as hawks and coyotes. Some grasslands in the Portola Valley area are underlain by serpentine soils that create unique habitat conditions that support native grasslands that are considered a sensitive natural community type and may contain occurrences of special-status plants and insect species.

**Chaparral and Coastal Scrub.** Stands of chaparral and coastal scrub habitat are scattered through the planning area, dominated by a variety of shrub species. These include chamise, manzanita, coyote brush, poison oak, California sagebrush, and sticky monkey-flower, among others. Coyote brush-dominated scrub is relatively abundant on the margins of open fields and edge of woodland habitat, spreading as a result of fire suppression and removal of past grazing practices. Wildlife associated with these habitat types include western fence, gopher snake, king snake, western rattle snake, rufous-sided towhee, California thrasher, California quail, and brush rabbit.

**Riparian Woodland/Scrub.** Riparian vegetation refers to the native scrub or woodland occurring along creeks and streams in the planning area. In riparian areas, the roots of trees and other vegetation can easily reach the water table. Central coast riparian scrub is dense and brushy riparian cover, dominated by willows that occur in scattered locations. Other species in the riparian scrub can include coyote brush, poison oak, California blackberry and invasive Himalayan blackberry. Riparian woodland contains large trees and typically has a more open understory than riparian scrub. Component species in the riparian woodland include sycamore, California black walnut, oaks, blue elderberry, and cottonwood, as well as invasive species such as tree of heaven and eucalyptus.

Riparian areas provide important breeding and foraging habitat for many species of birds, mammals, reptiles, and amphibians. This includes possible presence of the federally-listed California red-legged frog (*Rana aurora draytonii*) which has been from locations surrounding the planning area. Riparian areas also provide cover for wildlife and serve as important movement corridors. The cover typically provided by the riparian corridors allows animals to move between habitat areas even if the intervening areas are less suitable.

**Freshwater Marsh.** A variety of freshwater wetlands occur within the planning area. These include stands of freshwater wetlands dominated by cattail, rushes, and sedges in the riparian habitat along creeks, as well as freshwater marsh around ponds and freshwater wetlands associated with perennial and seasonal seeps, springs, and wetlands. These wetland features support a number of aquatic-dependent species including California red-legged frog, western toad, Pacific chorus frog, newts, and western pond turtle, as well as ducks, herons, and egrets which forage on the abundant invertebrate populations.

**Suburban Development.** Suburban development and landscape plantings occupy much of the planning area, as indicated in Figure D-1. Vegetation includes remnant oaks and other native trees, together with ornamental plantings and grassland cover. Tree species commonly found in landscaped yards and in the parks and landscaping within the planning area include coast redwood, London planetree, Australian tea tree, southern magnolia, deodar cedar, Monterey pine, eucalyptus, and native coast live oak and valley oak, among others. Wildlife species found in urbanized areas are tolerant of on-going disturbances and human presence, and often considered pests that are capable of utilizing limited food sources. Landscaped areas can provide cover, foraging, and nesting habitat for bird species that have adapted to suburban environments and are tolerant of disturbances and human presence. Some of the wildlife species found in urbanized areas are non-native, such as racoon, Virginia opossum, Norway rat, house mouse, red fox, house finch and English sparrow, among others. Native wildlife such as Pacific treefrog, western fence lizard, alligator lizard, barn swallow, Brewer's blackbird, California scrub jay, mourning dove, Anna's hummingbird, and myotis bat may remain where suitable foraging and breeding habitat conditions remain in otherwise urbanized areas.

### *Sensitive Natural Communities*

Sensitive natural communities are natural community types considered by the CDFW to have a high inventory priority because of their rarity and vulnerability to disturbance and loss. Although sensitive natural communities have no legal protective status under the Federal Endangered Species Act (FESA) or California Endangered Species Act (CESA), they are provided some level of consideration under CEQA. The level of significance of a project's impact on any particular sensitive natural community depends on that natural community's relative abundance and rarity.

Natural communities are ranked based on rarity and threat with the Vegetation Classification and Mapping Program (VegCAMP) tool of the Biogeographic Data Branch of CDFW. Based on records

maintained by CNDDDB of the CDFW, occurrences of serpentine grasslands have been reported from the Jasper Ridge Biological Preserve at the northern edge of Portola Valley and other stands of serpentine grasslands may occur where serpentine substrate is present. The CDFW considers the following vegetation types known or suspected to occur in the planning area to be of high inventory and are considered sensitive natural community types: native grasslands, seasonal wetlands, freshwater seeps and marshes, valley oak woodlands, and riparian scrub and woodlands.

### *Special-Status Species*

Special-status species are plants and animals that are legally protected under the State and/or Federal Endangered Species Acts or other regulations, as well as other species that are considered rare enough by the scientific community and trustee agencies to warrant special consideration, particularly with regard to protection of isolated populations, nesting or denning locations, communal roosts, and other essential habitat. Listed species often represent constraints to development, when proposed development would result in “take”<sup>11</sup> of these species. A number of species known to occur in the Portola Valley vicinity are protected pursuant to federal and/or State of California endangered species laws or have been designated Species of Special Concern by CDFW. For the purposes of this IS/MND, special-status species include:

- Plant and wildlife species listed as rare, threatened, or endangered under the federal or State endangered species acts;
- Species that are candidates for listing under either federal or State law;
- Species formerly designated by the USFWS as Species of Concern or designated by CDFW as a California Species of Special Concern (SSC);
- Species protected by the federal Migratory Bird Treaty Act (16. U.S.C. 703-711) and provisions in the California Fish and Game Code; and/or
- Species such as candidate species that may be considered rare or endangered pursuant to Section 15380(b) of the CEQA Guidelines.

A number of special-status species are known to occur or have the potential to occur in the planning area. Data on the known distribution of special-status species is available from the CNDDDB of the CDFW, the California Native Plant Society (CNPS) Electronic Inventory of rare and endangered vascular plants and in California (Inventory), and the detailed habitat assessment prepared as part of the SBRA for the Town of Portola Valley. Figures D-2 and D-3 show the distribution of special-status plant and animal species respectively in Portola Valley according to

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<sup>11</sup> “Take” as defined by FESA means “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect” a threatened or endangered species. “Harm” is further defined by USFWS to include killing or harming of wildlife by significant obstruction of essential behavior patterns (i.e., breeding, feeding, or sheltering) through significant habitat modification or degradation. CDFW also considers the loss of listed species’ habitat as take.

records maintained by the CNDDDB. A summary of these special-status plant and animal species is provided below.

### Plants

As indicated in Figure D-2, a total of 18 special-status plant species have been reported by the CNDDDB within several miles of the planning area. Most of these are broad generalized occurrences that are based on historic collection records that may have been extirpated where urbanization has occurred. This provides an indication of the previous range and potential for additional occurrences in the area. Most of the more precise occurrences are from more recent collections of the conspicuous shrub western leatherwood (*Dirca occidentalis*) made in the open space lands of Windy Hills Open Space and Jasper Ridge. A continuous occurrence of Choris' popcornflower (*Plagiobothrys chorisianus* var. *chorisianus*) has been mapped along most of the Corte Madera Creek corridor through the planning area based on a vague record from "El Corte Madera Creek" made in 1898. Both of these species have no listing status under the FESA and CESA, but they have a rank of 1B (Rare, threatened, or endangered in California and elsewhere) in the California Native Plant Society (CNPS) *Inventory of Rare and Endangered Plants*, as discussed further below under Regulatory Setting. Other occurrences of special-status plants extend over the margins of the planning area, but most of these are from generalized occurrence records. Detailed information on the name, status, preferred habitat, known locations, and blooming period of the species considered to have the highest potential for occurrence in the planning area is provided in Tables 2 and 3 from the SBRA and contained in Appendix D-1. Updated status on each of the special-status plant species shown in Figure D-2 is provided in the Summary Table Report also contained in Appendix D-1, based on data from the CNDDDB. Where suitable habitat is present in remaining natural areas in the planning area, detailed field surveys by a qualified botanist are typically required to provide confirmation on presence or absence of any special-status plant species from a particular location as is recommended in the SBRA.

### Animals

As indicated in Figure D-3, a total of 22 special-status animal species have been reported by the CNDDDB within several miles of the planning area. These include a combination of broad, generalized occurrences based on historic collection records, as well as more recent records, some with very locationally specific occurrences that are still presumably present. These varied occurrence records provide an indication of the known range and potential for additional occurrences in the surrounding area. Occurrence records that extend into the planning area include several sightings of American badger (*Taxidea taxus*), Townsend's big-eared bat (*Corynorhinus townsendii*), hoary bat (*Lasiurus cinereus*), and foothill yellow-legged frog (*Rana boylei*). Critical habitat for California red-legged frog extends over the eastern slopes of the Santa Cruz Mountains just to the west of the planning area and there remains a moderate potential for this species to be present where suitable aquatic and upland habitat is present.







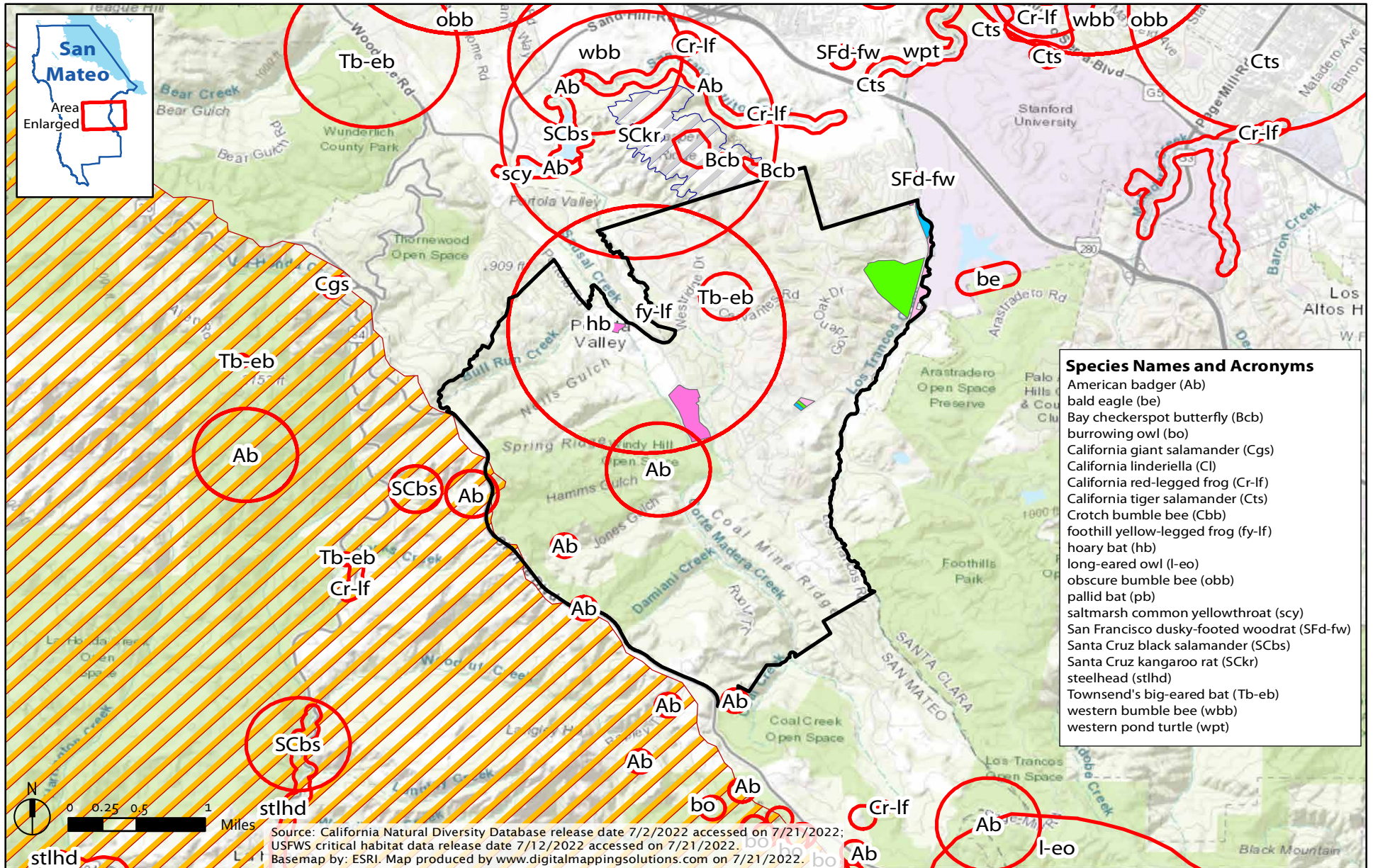


Figure D-2  
Special-Status Animals and Critical Habitat  
Portola Valley Housing and Safety Elements Update IS/MND

Detailed information on status, habitat characteristics, vegetation associations, and distribution of the 18 special-status animal species considered to have the highest potential for occurrence in the planning area is reviewed in Tables 2 and 3 from the SBRA (see Appendix D-1). Updated information on status of each of these species is contained in the Summary Table Report also contained in Appendix D-1, based on data from the CNDDDB. Where suitable habitat is present in remaining natural areas in the planning area, detailed field surveys by a qualified biologist are typically required to provide confirmation on presence or absence of any special-status animal species from a particular location as recommended in the SBRA.

### *Regulated Waters*

Regulated waters are wetlands, unvegetated open waters, and riparian habitats that fall under State and federal laws, as discussed further below. Wetlands are generally considered to be areas that are periodically or permanently inundated by surface or ground water, and support vegetation adapted to life in saturated soil. Wetlands are recognized as important features on a regional and national level because of their high inherent value to fish and wildlife, use as storage areas for storm and flood waters, and their water recharge, filtration, and purification functions. Technical standards for delineating wetlands have been developed by the U.S. Army Corps of Engineers (Corps) and USFWS, which generally define wetlands through consideration of three criteria: hydrology, soils, and vegetation.

Regulated waters in the planning area include the various creeks and tributary drainages, scattered ponds and areas of freshwater seeps, springs, and seasonal wetlands. Creeks within the planning area include Los Trancos, Corte Madera, and Sausal Creeks. Further assessment and mapping would be necessary to confirm presence or absence of State and/or federally-regulated waters associated with the creeks and other potential wetland features in the planning area. Regulated waters tend to be of relatively high value and modifications require authorization from appropriate State and federal agencies, as discussed further below under *Regulatory Setting*.

### **Regulatory Setting**

This section describes the existing federal, State, and local regulatory frameworks related to biological resources.

#### *Federal*

##### Federal Endangered Species Act

USFWS, National Oceanic and Atmospheric Administration (NOAA), and National Marine Fisheries Service (NMFS) are responsible for implementation of federal Endangered Species Act (FESA). The act protects fish and wildlife species that are listed as threatened or endangered, and their habitats. "Endangered" species, subspecies, or distinct population segments are those that are in danger of extinction through all or a significant portion of their range, and "threatened"

species, subspecies, or distinct population segments are likely to become endangered in the near future.

Section 9 of the FESA prohibits the “take” of any fish or wildlife species listed as endangered, including the destruction of habitat that prevents the species’ recovery. “Take” is defined as an action or attempt to hunt, harm, harass, pursue, shoot, wound, capture, kill, trap, or collect a species. Section 9 prohibitions also apply to threatened species unless a special rule has been defined with regard to take at the time of listing. Under Section 9 of the FESA, the take prohibition applies only to wildlife and fish species. Section 7 of the FESA requires that all federal agencies address whether proposed activities may jeopardize listed species and critical habitat and defines certain federal activities that may be exempt from the Section 9 take prohibitions.<sup>12</sup> Section 10 of the FESA defines conditions where take of a listed species may be allowed as a result of implementing a nonfederal action. Section 10 requires the issuance of an incidental take permit before any nonfederal action may be taken that would potentially take an individual of an endangered or threatened species. The permit requires preparation and implementation of a habitat conservation plan (HCP), which would offset the impact of taking that may occur by providing for the overall preservation of the affected species through specific mitigation measures. Additional information on the Yolo HCP/NCCP is described further below under Local Regulatory Environment.

FESA and National Environmental Protection Act (NEPA) Section 404 guidelines prohibit the issuance of wetland permits for projects that would jeopardize the existence of threatened or endangered wildlife or plant species. As defined in Section 7 of the FESA, the Corps must consult with the USFWS and NMFS when threatened or endangered species may be affected by a proposed project to determine whether issuance of a Section 404 permit would jeopardize the species.

The USFWS also designates critical habitat for threatened and endangered species listed under the FESA. Critical habitats are areas occupied by the species, located within a specific geographic region determined to be critical for survival, and protected from adverse modification. No critical habitats were identified for federally threatened or endangered species in the planning area and planning area vicinity.<sup>13</sup>

#### Migratory Bird Treaty Act

The USFWS is also responsible for implementing the Migratory Bird Treaty Act (MBTA). The MBTA implements a series of treaties between the United States (U.S.), Mexico, and Canada that

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<sup>12</sup> U.S. Fish and Wildlife Services (USFWS), 1973. Endangered Species Act of 1973. Available at: <https://www.fws.gov/sites/default/files/documents/endangered-species-act-accessible.pdf>, accessed June 10, 2022.

<sup>13</sup> U.S. Fish and Wildlife Services (USFWS), 2018. Threatened and Endangered Species Active Critical Habitat Report. Available at: <https://ecos.fws.gov/ecp/report/table/critical-habitat.html>, accessed January 29, 2019.

provide for the international protection of migratory birds. Wording in the MBTA makes it clear that most actions that result in taking or possession (permanent or temporary) of a protected species can be a violation of the Act. On December 27, 2017, the Interior Department (DOI) issued an opinion that the MBTA only applies to the intentional and not the inadvertent take of species protected under the Act. The word “take” is defined as meaning “pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to pursue, hunt, shoot, wound, kill, trap, capture, or collect.” However, this opinion from the DOI is only the latest interpretation from the current Administration of the MBTA. This legal opinion is contrary to the long-standing interpretation for over 40 years that held the MBTA strictly prohibits the intentional or incidental killing of birds or destruction of their nests when in active use.

#### Clean Water Act

The Corps regulates discharge of dredged or fill material into waters of the U.S. under Section 404 of the Clean Water Act (CWA). “Discharge of fill material” is defined as the addition of fill material into waters of the U.S., including, but not limited to the following: placement of fill that is necessary for the construction of any structure, or impoundment requiring rock, sand, dirt, or other material for its construction; site-development fills for recreational, industrial, commercial, residential, and other uses; causeways or road fills; fill for intake and outfall pipes and subaqueous utility lines requires any applicant for a federal license or permit to conduct any activity that may result in a discharge of a pollutant into waters of the U.S. to obtain a certification that the discharge will comply with the applicable effluent limitations and water quality standards.

Waters of the U.S. include a range of wet environments such as lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, and wet meadows. Wetlands are defined as “those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions” [33 C.F.R. 328.3(b)].

Furthermore, jurisdictional “Waters of the U.S.” can be identified where they exhibit a defined bed and bank and ordinary high-water mark (OHWM). The OHWM is defined by the Corps as “that line on shore established by the fluctuations of water and indicated by physical character of the soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas” [33 C.F.R. Section 328.3(e)].

#### *State*

#### California Endangered Species Act

The California Endangered Species Act (CESA) (State Fish and Game Code (FGC) Section 2050 et seq.) was enacted in 1984 and establishes State policy to conserve, protect, restore, and enhance threatened or endangered species and their habitats. The CESA mandates that State agencies

should not approve projects that jeopardize the continued existence of threatened or endangered species if reasonable and prudent alternatives are available that would avoid jeopardy. For projects that would affect a species that is on the federal and State lists, compliance with the FESA satisfies the CESA if the CDFW determines that the federal incidental take authorization is consistent with the CESA under FGC Code Section 2080.1. For projects that would result in take of a species that is only State listed, the project proponent must apply for a take permit under Section 2081(b).

#### California Native Plant Protection Act

The California Native Plant Protection Act (CNPPA) of 1977 prohibits importation of rare and endangered plants into California, “take” of rare and endangered plants, and sale of rare and endangered plants. The CESA defers to the CNPPA, which ensures that State-listed plant species are protected when State agencies are involved in projects subject to CEQA. In this case, plants listed as rare under the CNPPA are not protected under the CESA but rather under CEQA.

The California Native Plant Society (CNPS) is a non-governmental conservation organization dedicated to the preservation of native flora in California. The CNPS has been involved in assembling, evaluating, and distributing information on special-status plant species in the State, as listed in the *Inventory of Rare and Endangered Plants of California* (2001 and electronic inventory update). CNPS has updated their rating system for the rarity of special-status plants, and now include both a California Rare Plant Rank and a Threat Rank. CEQA requires government agencies to consider environmental impacts of discretionary projects and to avoid or mitigate them where possible. Under Section 15380, CEQA provides protection for both State-listed species and for any other species which can be shown to meet the criteria for State listing. The CDFW recognizes that special-status plants with a California Rare Plant Rank of 1A (Presumed extinct in California), 1B (Rare, threatened, or endangered in California and elsewhere), and 2 (Rare and endangered in California, but are more common elsewhere) in the CNPS Inventory consist of plants that, in most cases, would qualify for listing and these species should be addressed under CEQA review. In addition, the CDFW recommends, and local governments may require, protection of species which are regionally significant, such as locally rare species, disjunct populations, essential nesting and roosting habitat for more common wildlife species, or plants with a CNPS California Rare Plant Rank of 3 (Plant species for which additional data is needed – a review list) and 4 (Plant species of limited distribution - a watch list).

#### California Fish and Game Code

Through the State Fish and Game Code, the CDFW provides protection from “take” for a variety of species. The CDFW also protects streams, water bodies, and riparian corridors through the Streambed Alteration Agreement process under Section 1601 to 1606 of the FGC. The FGC stipulates that it is “unlawful to substantially divert or obstruct the natural flow or substantially change the bed, channel or bank of any river, stream or lake” without notifying the Department,

incorporating necessary mitigation, and obtaining a Streambed Alteration Agreement. CDFW's jurisdiction extends to the top of banks and often includes the outer edge of riparian vegetation canopy cover.

Plant and wildlife species receive additional consideration during the CEQA process. Species that may be considered for review are included on a list of California "Species of Special Concern" or SSC species developed by the CDFW. These species are broadly defined as animals that are of concern to the CDFW because of population declines and restricted distribution, and/or because they are associated with habitats that are declining in California. These species are sometimes inventoried in the CNDDDB, focusing on nesting, roosting, and congregation sites for non-listed species. In addition, wildlife species designated as "Fully Protected" or "Protected" may not be taken or possessed without a permit from the Fish and Game Commission and/or the CDFW.

FGC Section 3503.5 prohibits "take," possession, or destruction of any raptor (e.g., bird of prey species in the orders Falconiformes and Strigiformes), including their nests or eggs. Violations of this law may include destruction of active raptor nests as a result of tree removal and disturbance to nesting pairs by nearby human activity that causes nest abandonment and reproductive failure.

Several provisions in the FGC provide for the protection of birds and bird nests in active use. Unless the FGC or its implementing regulations provide otherwise, under California law it is unlawful to:

- A. Take a bird, mammal, fish, reptile, or amphibian (FGC Section 2000);
- B. Take, possess, or needlessly destroy the nest or eggs of any bird (FGC Section 3503);
- C. Take, possess, or destroy any bird of prey in the orders Strigiformes (owls) and Falconiformes (such as falcons, hawks, and eagles) or the nests or eggs of such bird (FGC Section 3503.5);
- D. Take or possess any of the 13 fully protected bird species listed in FGC Section 3511;
- E. Take any non-game bird (i.e., bird that is naturally occurring in California that is not a gamebird, migratory game bird, or fully protected bird) (FGC Section 3800);
- F. Take or possess any migratory non-game bird as designated in the MBTA or any part of such bird, except as provided by rules or regulations adopted by the DOI under the MBTA (FGC Section 3513);

Take, import, export, possess, purchase, or sell any bird (or products of a bird), listed as an endangered or threatened species under the CESA unless the person or entity possesses an Incidental Take Permit or equivalent authorization from CDFW (FGC Section 2050 et seq.).

### State Regulated Waters

In addition to waters regulated by the CDFW under the Streambed Alteration Agreement process, the Regional Water Quality Control Board (RWQCB) is responsible for implementing Section 401 of the CWA and for upholding state water quality standards. Pursuant to Section 401 of the Act, projects that apply for a Corps permit for discharge of dredge or fill material, and projects that qualify for a Nationwide Permit must obtain water quality certification. The RWQCB has taken an increasing role over regulating wetlands that are hydrologically isolated following the U.S. Supreme Court decision in 2001 regarding the case Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers, which limits the jurisdictional authority of the Corps under Section 404. These hydrologically isolated features are now often regulated by the RWQCB under authority of Section 401 of the CWA and the Porter-Cologne Water Quality Control Act.

### McAteer-Petris Act

The McAteer-Petris Act was adopted to protect San Francisco Bay as a natural resource for the benefit of the public and to encourage development compatible with this protection. The San Francisco Bay Conservation and Development Commission (BCDC) is authorized by the McAteer-Petris Act to analyze, plan, and regulate San Francisco Bay and its shoreline. BCDC implements the San Francisco Bay Plan and regulates filling and dredging in the bay, its sloughs and marshes, and certain creeks and their tributaries. BCDC jurisdiction includes the waters of San Francisco Bay as well as a shoreline band that extends inland 100 feet from the high tide line. Any fill, excavation of material, or substantial change in use within BCDC jurisdiction requires a permit from BCDC.

### *Local*

### General Plan

The Portola Valley General Plan includes the following relevant principles and standards that assist in reducing or avoiding potential impacts related to biological and wetland resources:

### Conservation Element

#### *Objectives: Vegetation -Both Native and Exotic*

1. To minimize disturbance of the natural terrain and native vegetation.
2. To preserve and protect all native and naturalized plants with special attention to preservation of unique, rare or endangered species and plant communities such as oak woodland and serpentine grasslands.
3. To encourage the planting of native plant species as part of any site development for ecological, aesthetic and water conservation purposes.



4. To ensure that when changes in natural grades or removal of existing vegetation is required on any public or private project, remedial measures call for the restoration or introduction of native vegetative cover for ecological as well as erosion control purposes.
5. To ensure that all thoroughfares and local roads are designed and planned to preserve the natural beauty and character of the corridor to the maximum extent possible.
6. To encourage the planting of native trees and shrubs to provide a substantial buffer between roadways and adjoining properties in harmony with the general character of the town.
7. To encourage the removal and prevention of the spreading of aggressive exotics such as pampas grass, acacia, yellow star thistle, French broom, Scotch broom and eucalyptus.
8. To preserve and maintain an area of native vegetation along creek corridors in order to separate turf and impervious surfaces from the creeks.
9. To protect forests and other vegetation for their roles in helping maintain and improve air quality.

*Principles: Water - Creeks, Ponds and Ground Water*

2. Environmental impact reports or studies, prepared professionally, should be required of public and private projects that propose extensive grading or vegetation removal on watershed lands.
5. The town shall require that there be no significant alterations of stream channels or obstructions to the natural flow of water. Creeks should be maintained in their naturally meandering channels consistent with geomorphic processes. Where channels are damaged or property threatened, bank stabilization by biotechnical methods are preferable to engineered solutions such as concrete walls and similar structures.
7. To protect water quality, the town shall encourage development to maintain an undisturbed or enhanced protective buffer between all cut and fill slopes, non-native turf or areas under chemical management or impermeable surfaces, and any creek corridors.

*Principles: Vegetation*

1. Removal of native vegetation should be minimized, and replanting required where necessary to maintain soil stability, prevent erosion and maximize reoxygenation.
3. Mature native trees and shrubs should be conserved.
4. Plantings in public trail easements or public road rights of way shall be of native plants and trees and shall not interfere with the use of the easements for public purposes such as equestrians, hikers, pedestrians, bicyclists, runners and vehicles.
5. The town should encourage restoration of unique or rare vegetation and habitats.
6. Along creeks, indigenous vegetation should be protected and, where necessary, restored and enhanced.
7. Management of native vegetation for the purpose of fire safe management practices should be done only to the extent necessary to meet reasonable fire safety objectives while still seeking to protect the biological resources of the environment.

*Principles: Wildlife*

1. An environmental impact report or study, prepared by a qualified biologist, should be required to determine if the habitat of wildlife is being impacted, particularly of endangered species, by any proposed public or private project where such encroachment appears likely.
2. All subdivision and site development proposals should be reviewed to ensure that they do not obstruct wildlife access to important water, food and breeding areas.



3. Designate creek corridors as sensitive areas which provide important aquatic and terrestrial wildlife habitat. Setback requirements should be established by zoning for all new development along creeks. All new subdivisions and site development proposals should contain setback area sufficient to buffer wildlife inhabiting the creek corridor from the impacts of development.
4. Protect lands and habitat that support endangered or protected species wherever possible and consistent with state and federal requirements.
5. Give attention to restoring native habitat for wildlife when reviewing development proposals and initiating town projects.

#### *Standards*

4221 Regulation. The town has established special setbacks along the major creeks in the town, which are: Los Trancos Creek, Corte Madera Creek and Sausal Creek. The purposes of the setbacks are to improve the quality of creekbank protection measures, reduce risk to property improvements, protect scenic values and protect the riparian habitat important to wildlife. Administration of these provisions by town officials and staff will be a major factor in protection of these important habitats.

4223 Regulation. The town's report "Portola Valley Sensitive Biological Resources Assessment and Fuel Hazard Assessment" dated 2008 and 2010, includes GIS maps of vegetation, soils and fire hazard and also provides extensive technical information on native vegetation. Guidelines for protecting habitat are included and should be consulted regularly by planning staff and decision-making bodies in conjunction with the review of development proposals. Furthermore, the report includes guidelines for protecting biological resources when undertaking vegetation management for the purpose of fire hazard mitigation.

4227 Technical Advice. Professional technical advice is essential for full understanding of the natural processes. As noted above, the town's report "Portola Valley Sensitive Biological Resources Assessment and Fuel Hazard Assessment" dated 2008 and 2010 provides detailed mapping of vegetation in the town along with lists of endangered and threatened species associated with such vegetation. A system for applying the information in the planning program and in particular when reviewing development proposals should be developed.

### Town of Portola Valley Municipal Code

The Town of Portola Valley Municipal Code includes regulations relevant to biological resources in the planning area as discussed below.

Significant Trees. Chapter 15.12, Site Development and Tree Protection, establishes regulations for the preservation of significant trees. Significant trees consist of following native species and minimum trunk sizes:

- Coast live oak (*Quercus agrifolia*), 11.5 inches in diameter or greater.
- Black oak (*Quercus kelloggii*), 11.5 inches in diameter or greater.
- Valley oak (*Quercus lobata*), 11.5 inches in diameter or greater.
- Blue oak (*Quercus douglasii*), 5 inches in diameter or greater.
- Coast redwood (*Sequoia sempervirens*), 17.2 inches in diameter or greater.
- Douglas fir (*Pseudotsuga menziesii*), 17.2 inches in diameter or greater.
- California bay (*Umbellularia californica*), 11.5 inches in diameter or greater.
- Big leaf maple (*Acer macrophyllum*), 7.6 inches in diameter or greater.
- Madrone (*Arbutus menziesii*), 7.6 inches in diameter or greater.

To protect significant trees, Section 15.12.080 requires a development permit application if significant tree removal is proposed. The application must identify the tree location(s), proximity to structures, health and general conditions, and necessity for removal or other anticipated action. Following submission, the Town Planning Coordinator would refer the application to a member of the Conservation Committee. The Planning Coordinator, or the appropriate approving authority, may issue the permit with appropriate conditions upon receipt of requested documentation.

Creek Setbacks. Chapter 18.59, Creek Setbacks, establishes regulations for development adjacent to specific creeks within the Town of Portola Valley. Section 18.59.020 defines the following creeks as subject to creek setback provisions: Los Trancos Creek, Corte Madera Creek, and Sausal Creek. Section 18.59.030 defines setback requirements from these regulated creeks. For building permits and site development permits, setbacks may be measured from either the top of creek bank or the ordinary high water mark as defined under Sections 18.59.040 and 18.59.050, respectively, at the option of the property owner. Setback distances vary based on parcel size as follow:

1. Parcels less than one acre in size - Thirty feet from top of bank, or thirty-five feet from ordinary high water mark.
2. Parcels of one acre to two and one-half acres—Forty-five feet from top of bank or fifty feet from ordinary high water mark.
3. Parcels of two and one-half acres or more—Fifty-five feet from top of bank or sixty feet from ordinary high water mark.

For planned unit developments, setbacks may be modified by the Planning Commission to achieve better consistency with the purposes of the ordinance as part of the planned unit development process to increase safety as well as protect the natural environment. For new subdivisions, parcels must have a minimum creek setback of fifty-five feet from the top of creek bank, but this setback may be required to be enlarged as part of the subdivision process to increase safety as well as protect the natural environment. Sensitive habitats, floodplains, and eroding creek banks are to be included within the setback area.

#### Stanford University Habitat Conservation Plan

Stanford University in partnership with the USFWS developed a Habitat Conservation Plan (HCP) to maintain populations of species covered under FESA inhabiting land owned by Stanford University. The HCP sets forth goals and objectives that aim to enhance and protect listed species' habitat, including riparian vegetation, creeks, grasslands, and seasonal wetlands. The HCP and Final Environmental Impact Statement was published in November 2012 and the HCP was updated in March 2013.<sup>14</sup> The conservation goals and objectives set forth by the HCP apply to all land owned by Stanford University which totals 8,180 acres in four cities: Palo Alto, Menlo Park, Woodside, and unincorporated areas of Portola Valley. Most of the HCP area is located northeast of I-280 with a portion extending to the east of Felt Lake, but all outside the planning area.

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<sup>14</sup> Stanford University Habitat Conservation Plan, <http://hcp.stanford.edu/about.html>.

## Discussion

The following discussion provides an evaluation and analysis of the potential impacts of development under the project related to biological resources. No policies and implementation actions from the Housing Element and Safety Element Updates relate specifically to biological resources.

*a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?*

**Less than Significant.** Local, regional, State, and federal regulations provide varying levels of protection for special-status species, depending on several factors, including: legal protective status, rarity and distribution, the magnitude of the potential impact on essential habitat, specific occurrence and overall population levels, and take of individual plants or animals. Activities requiring discretionary approvals by local, regional, State, and federal agencies provide for the greatest oversight because each potential future development that could occur from implementation of the project must be evaluated for their potential impact on special-status species and other sensitive biological resources. This includes further review of parcels identified for residential use in the Sites Inventory, where warranted.

As discussed above, numerous special-status plant and animal species are known or suspected to occur in the planning area. These special-status species occupy a range of habitat types but are typically no longer found in urbanized areas, which now characterize much of the planning area. No occurrences of special-status plant and animal species from the CNDDDB records, indicated in Figures D-2 and D-3, overlap parcels in the Sites Inventory with the exception of a generalized record of arcuate bush-mallow (*Malacothamnus arcuatus*) that extends over portions of the Stanford Wedge and Glen Oaks housing sites and a historic record from 1906 for foothill yellow-legged frog that encompasses the north-central portion of the planning area that extends over the Christ Church and The Sequoias housing sites. The potential for occurrence of special-status species in developed areas is generally very remote in comparison to undeveloped lands that contain essential habitat characteristics for the range of species known from the planning area vicinity.

While the potential for adverse impacts on special-status species is relatively low, there remains a varying potential for loss or disruption to special-status species remaining in the planning area due to conversion of areas of natural habitat, removal of trees and other vegetation, increases in light and noise, and other modifications and disturbance associated with future development that could occur as a result of the project. Development in locations abutting or in the vicinity of open space lands or water resources, where special-status species are more likely to remain, could potentially result in a significant impact or inadvertent loss unless further review and adequate controls implemented where a potential conflict could occur.

However, the principals and objectives in the Conservation Element of the Town's General Plan call for avoidance of sensitive resources such as special-status species and require that detailed assessments be prepared where potential impacts could occur. Where natural habitat remains that could support special-status species, wetlands, and other sensitive resources, further detailed studies and assessment would be performed when a development project is proposed to verify presence or absence. The SBRA contains detailed prescriptions for when further studies are warranted based on affected habitat and potential for presence of special-status plant and animal species, which are summarized in Table 6 of the SBRA (see Appendix D-1).

The location and nature of development considered under the project would continue to be guided by the Town's General Plan and Municipal Code. Future development projects would continue to be reviewed through the Town's entitlement process and CEQA to ensure consistency with local, State, and federal regulations and all General Plan principals and objectives intended to protect sensitive biological resources. Development under the project would be performed in accordance with the General Plan policies discussed above, which would ensure that potential impacts on special-status species would be less than significant.

*b) 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 Game or US Fish and Wildlife Service?*

**Less than Significant.** Future development could result in direct or indirect impacts on sensitive natural communities if these resources are not adequately identified and protected. Direct impacts occur as a result of converting natural habitat to development, including construction of new structures, creating impervious surfaces for roadways and parking, and culverting of natural drainages. Sensitive natural communities in the planning area include native grasslands, seasonal wetlands, freshwater seeps, freshwater marshes, valley oak woodlands, riparian woodlands, and redwood forest, among others. Most of the parcels in the Sites Inventory have been disturbed by past grading and development and the potential for sensitive natural communities is generally low except riparian habitats along Los Trancos and Corte Madera Creeks. Detailed environmental review is currently being conducted for the Stanford Wedge housing site,<sup>15</sup> which identified a sensitive vegetation alliances and regulated waters as being present. There remains a potential for presence of sensitive natural communities on some parcels in the Sites Inventory, and in other locations where future development could occur where natural habitat remains in the planning area.

As discussed above in Criterion a, principals and objectives in the Conservation Element of the Town's General Plan call for avoidance of sensitive resources such as sensitive natural communities and require that detailed studies be conducted where potential impacts could

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<sup>15</sup> Lamphier - Gregory. 2022. *Stanford Wedge Housing Project, Draft Environmental Impact Report*. Prepared for Town of Portola Valley. March.

occur. Where natural habitat remains that could support sensitive natural communities, further detailed studies and assessment would be performed to verify presence or absence in accordance with guidelines described in the SBRA. This further assessment process would serve to ensure that occurrences of sensitive natural communities are identified, avoided, or adequately mitigated. Development under the project would be performed in accordance with the General Plan and Municipal Code consistency review discussed above, which would ensure that potential impacts on sensitive natural communities would be less than significant.

*c) 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?*

**Less than Significant.** Future development could result in direct or indirect impacts on regulated waters if these resources are not adequately identified and protected. Direct impacts would occur as a result of converting natural habitat to development, filling of wetlands, and culverting of natural drainages. Most of the parcels in the Sites Inventory have been disturbed by past grading and development and do not appear to support well-developed wetlands. However, a few of the parcels in the Sites Inventory are located adjacent to creeks and other drainages, and there remains a potential for presence of seasonal wetlands or other regulated waters on these parcels and in other locations in the planning area.

As discussed above in Criteria a, principals and objectives in the Conservation Element of the Town's General Plan call for avoidance of sensitive resources such as regulated waters and require that detailed studies be conducted where potential impacts could occur. Where necessary, further detailed studies and assessment would be performed to verify presence or absence of regulated waters. This further assessment process would serve to ensure that occurrences of sensitive natural communities are identified, avoided, or adequately mitigated. Development under the project would be performed in accordance with the General Plan and Municipal Code consistency review discussed above, which would ensure that potential impacts on regulated waters would be less than significant.

*d) 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?*

**Less than Significant.** Development and land use activities associated with implementation of the project would generally be in urbanized areas with few wildlife corridors or locations where wildlife is already acclimated to human activity. Wildlife species typically found in urbanized and ruderal habitats would be displaced or lost as a result of site grubbing and grading, but these species are relatively common, and this impact would be considered less than significant. However, the planning area does contain some habitat that could be adversely affected by new development if adequate controls are not implemented, particularly along creeks and other drainages, or adjacent to open space and undeveloped lands.

As discussed above in Criteria a, principals and objectives in the Conservation Element of the Town's General Plan call for avoidance of sensitive resources such as important wildlife habitat and movement corridors and require that detailed studies be conducted where potential impacts could occur. This further assessment process would serve to ensure that important wildlife habitat and movement corridors are identified and protected in accordance with the General Plan and Municipal Code consistency review discussed above, which would ensure that potential impacts on wildlife movement opportunities would be less than significant.

*e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?*

**Less than Significant.** Future development under the project would be implemented consistent with other elements of the Town's General Plan, including the relevant principals, objectives, and standards in the Conservation Element. Implementation of these relevant principals, objectives, and standards from the General Plan would serve to ensure that sensitive biological and wetland resources are identified and protected as part of future development, and that no substantial conflicts are anticipated as discussed above with regard to special-status species, sensitive natural communities, and regulated waters.

Future development would also be subject to the provisions of the Town's Municipal Code, including Significant Trees (Chapter 15.12) and Creek Setbacks (Chapter 18.59). Parcels in the Sites Inventory contain trees that would qualify as a regulated size, and a tree removal permit or approval for tree removal would be required as part of a development application where avoidance is not feasible. Portions of the Ford Field and Glen Oaks housing sites are located in proximity of Los Trancos Creek, and the southeastern edge of The Sequoias Affiliated housing site is located near Corte Madera Creek, and future development would be reviewed in conformance with creek setback requirements, as would any housing units under the Opt-In Rezoning Program. Compliance with the Town's General Plan and provisions in the Municipal Code would ensure that no conflicts with local plans and policies would occur and that potential impacts on trees and creeks would be less-than-significant.

*f) 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.** This criterion is not applicable to the project because there are no adopted habitat conservation plans or natural community conservation plans within the planning area. The Stanford University HCP is located over a ½-mile to the northeast of the planning area on land owned by Stanford University. Therefore, there would be no impact related to a conflict with an adopted Habitat Conservation Plan or Natural Community Conservation Plan.

**E. CULTURAL RESOURCES**

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Affected Environment**

The planning area is generally characterized as sitting on the San Francisco Peninsula in San Mateo County along the eastern slope of the Santa Cruz Mountains and overlooking Silicon Valley. This area was historically occupied by the tribelets of the Costanoan linguistic group, who are also known today as the Ohlone. No resources considered significant at the state or federal level will be impacted by this development of the potential housing areas. A plaque denoting the former location of a locally significant resource may have to be removed and reinstalled as part of development of the new housing areas. An unevaluated but potentially significant resource borders a potential housing area along the San Mateo County/Santa Clara County/Town of Portola Valley border and likely extends into a potential housing area and would be affected by the project.

**Regulatory Setting***Federal*National Historic Preservation Act of 1966

The National Historic Preservation Act (NHPA) is the primary federal law governing the preservation of cultural and historic resources in the United States. The law establishes a national preservation program and a system of procedural protections which encourage the identification and protection of cultural and historic resources of national, state, tribal and local significance. A primary component of the act requires that federal agencies take into consideration actions that could adversely affect historic properties listed or eligible for listing on the National Register of Historic Places, known as the Section 106 Review Process.

National Register of Historic Places

The National Register of Historic Places is the nation's official list of buildings, structures, objects, sites, and districts worthy of preservation because of their significance in American history,

architecture, archeology, engineering, and culture. The National Register recognizes resources of local, state and national significance which have been documented and evaluated according to uniform standards and criteria.

Authorized under the National Historic Preservation Act of 1966, the National Register is part of a national program to coordinate and support public and private efforts to identify, evaluate, and protect historic and archeological resources. The National Register is administered by the National Park Service, which is part of the U. S. Department of the Interior.

To be eligible for listing in the National Register, a resource must meet at least one of the following criteria:

- A. Is associated with events that have made a significant contribution to the broad patterns of our history
- B. Is associated with the lives of persons significant in our past
- C. Embodies the distinctive characteristics of a type, period or method of construction, or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components may lack individual distinction
- D. Has yielded, or may be likely to yield, information important in history or prehistory

#### Native American Graves Protection and Repatriation Act (NAGPRA) of 1990

The NAGPRA of 1990 sets provisions for the intentional removal and inadvertent discovery of human remains and other cultural items from federal and tribal lands. It clarifies the ownership of human remains and sets forth a process for repatriation of human remains and associated funerary objects and sacred religious objects to the Native American groups claiming to be lineal descendants or culturally affiliated with the remains or objects. It requires any federally funded institution housing Native American remains or artifacts to compile an inventory of all cultural items within the museum or with its agency and to provide a summary to any Native American tribe claiming affiliation.

#### *State*

#### California Environmental Quality Act

CEQA states that: It is the policy of the state that public agencies should not approve projects as proposed if there are feasible alternatives or feasible mitigation measures available which would substantially lessen the significant environmental effects of such projects, and that the procedures required are intended to assist public agencies in systematically identifying both the



significant effects of proposed project and the feasible alternatives or feasible mitigation measures which will avoid or substantially lessen such significant effects.

CEQA declares that it is state policy to: "take all action necessary to provide the people of this state with...historic environmental qualities." It further states that public or private projects financed or approved by the state are subject to environmental review by the state. All such projects, unless entitled to an exemption, may proceed only after this requirement has been satisfied. CEQA requires detailed studies that analyze the environmental effects of a proposed project. In the event that a project is determined to have a potential significant environmental effect, the act requires that alternative plans and mitigation measures be considered.

Public Resources Code Section 5097.5:

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 (lands under state, county, city, district or public authority jurisdiction, or the jurisdiction of a public corporation), except with the express permission of the public agency having jurisdiction over such lands. Violation of this section is a misdemeanor. As used in this section, "public lands" means lands owned by, or under the jurisdiction of, the state, or any city, county, district, authority, or public corporation, or any agency thereof.

California Register of Historical Resources

The California Register of Historical Resources (CRHR) is a listing of all properties considered to be significant historical resources in the state. The California Register includes all properties listed or determined eligible for listing on the National Register, including properties evaluated under Section 106, and State Historical Landmarks No. 770 and above. The California Register statute specifically provides that historical resources listed, determined eligible for listing on the California Register by the State Historical Resources Commission, or resources that meet the California Register criteria are resources which must be given consideration under CEQA (see above). Other resources, such as resources listed on local registers of historic resources or in local surveys, may be listed if they are determined by the State Historic Resources Commission to be significant in accordance with criteria and procedures to be adopted by the Commission and are nominated; their listing in the California Register is not automatic.

Resources eligible for listing include buildings, sites, structures, objects, or historic districts that retain historical integrity and are historically significant at the local, state or national level under one or more of the following four criteria:

- 1) It is associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States;

- 2) It is associated with the lives of persons important to local, California, or national history;
- 3) It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master or possesses high artistic values; or
- 4) It has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation.

In addition to having significance, resources must have integrity for the period of significance. The period of significance is the date or span of time within which significant events transpired, or significant individuals made their important contributions. Integrity is the authenticity of a historical resource's physical identity as evidenced by the survival of characteristics or historic fabric that existed during the resource's period of significance.

Alterations to a resource or changes in its use over time may have historical, cultural, or architectural significance. Simply, resources must retain enough of their historic character or appearance to be recognizable as historical resources and to convey the reasons for their significance. A resource that has lost its historic character or appearance may still have sufficient integrity for the California Register, if, under Criterion 4, it maintains the potential to yield significant scientific or historical information or specific data.

#### Native American Human Remains

Sites that may contain human remains important to Native Americans must be identified and treated in a sensitive manner, consistent with State law (i.e., Health and Safety Code Section 7050.5 and Public Resources Code Section 5097.98), as reviewed below:

In the event that human remains are encountered during project development and in accordance with the Health and Safety Code Section 7050.5, the County Coroner must be notified if potentially human bone is discovered. The Coroner will then determine within two working days of being notified if the remains are subject to his or her authority. If the Coroner recognizes the remains to be Native American, he or she shall contact the Native American Heritage Commission (NAHC) by phone within 24 hours, in accordance with Public Resources Code Section 5097.98. The NAHC will then designate a Most Likely Descendant (MLD) with respect to the human remains. The MLD then has the opportunity to recommend to the property owner or the person responsible for the excavation work means for treating or disposing, with appropriate dignity, the human remains and associated grave goods.

#### California Administrative Code, Title 14, Section 4307

This section states that "No person shall remove, injure, deface or destroy any object of paleontological, archeological or historical interest or value."

## *Local*

### General Plan

The Portola Valley General Plan includes the following principles and standards related to cultural resources:

### Historic Element

Objective 1: To preserve, protect and enhance the historic resources of the planning area because they are unique and valuable assets for the planning area, San Mateo County, the Peninsula or the entire San Francisco Bay Area.

Objective 2: To build civic pride in Portola Valley's unique qualities by fostering citizen efforts to preserve and enhance historic resources.

Objective 3: To promote community awareness of local history and historic resources for the education, pleasure, and welfare of the people of the town.

Principle 1: Each resource in the element is classified according to whether it is to be preserved, denoted by a plaque, listed for further consideration or simply listed to provide a record of history.

Principle 2: While it is the intent to preserve identified resources for the benefit of the town, it is recognized that there will be circumstances where it will not be possible to achieve preservation. Such determinations cannot always be made in advance and therefore prudent decisions must be made when individual resources are before the town for action.

Principle 3: When evaluating the preservation of an historic resource, consideration should be given to preserving any immediate physical surroundings that contribute to the historic quality of the resource.

### Standards

Under the description section of this element, each historic resource is noted as to whether it is to be preserved, identified with a plaque, listed for further consideration, or simply listed to provide a record of history. Each of these classifications are described below.

### Historic Resource to be Preserved

1. A historic resource noted for preservation shall have its exterior appearance retained to the maximum extent possible. This does not preclude:
  - a. Exterior alterations necessary to ensure safety which conform to the historic character of the resource.
  - b. Additions which conform to the historic character of the resource.
  - c. Additions or changes required to conform with the Americans with Disabilities Act.
2. Any additions or alterations pursuant to Section 2511.1. [of the General Plan] shall be accomplished in such a manner that they can be removed at a future time to reveal the historic resource as it appeared prior to such additions or alterations.

3. A historic resource which at some time has been partially or entirely destroyed may be reconstructed to its original design.
4. A historic resource noted as to be preserved shall not be removed unless one of the following conditions has been determined to exist; however, if one of the conditions is determined to exist, time shall be provided to allow the town to consider alternate ways in which to retain the resource.
  - a. The resource is a potential safety hazard and alterations to provide safety and retain its historic character are unreasonable.
  - b. The resource has been so altered or modified that its historic significance no longer exists.
  - c. Retention of the historic resource is an unreasonable burden on a property owner.
5. It is intended that resources noted as to be preserved should at an appropriate time have a plaque installed in a location visible by the public unless otherwise indicated in the description section of this element.

Historic Resource to be Noted with a Plaque

1. Plaques are intended to assist the public in identifying sites of former structures, trails, roads and natural features.
2. Plaques should be located where they can be read by the public without entering private property.

Historic Resource Listed for Further Consideration

1. This category is intended for those resources where available data is not conclusive as to the appropriateness of preserving the resource.
2. It is intended that prior to any exterior modification to or removal of such resource, a determination shall be made as a part of an application before the town as to whether to reclassify the resource as to be preserved or reclassified to be added to the list to provide a record of history. Concurrent with such determination, this element shall be modified as appropriate.

Historic Resource Listed to Provide a Record of History

1. These resources are included in the element to help complete the identification of historically significant resources in the town.
2. These resources are either located outside of the town limits, or are features which do not require identification with a plaque.

Open Space Element

Objective 13: To preserve those areas of cultural and historic significance to the town, the Midpeninsula, and the Bay Area.

**Discussion**

*California Historic Resources Information System*

Cogstone requested a search of the California Historical Resources Information System (CHRIS) from the Northwest Information Center (NWIC) located at Sonoma State University on June 24,

2022 which included the entire planning area. Results of the record search (NWIC File No.: 21-2176)<sup>16</sup> indicate that 61 previous studies have been completed within the planning area.

Thirteen cultural resources have been recorded within the planning area consisting of seven historic built environment resources, one historic landscape, one historic-aged archaeology site, two prehistoric-aged archaeological sites, one prehistoric-aged archaeological isolate, and one multi-component site with prehistoric-aged and historic-ages archaeological components. These include:

- Three resources listed in the NRHP/CRHR: Casa de Tableta, P-41-000177 (CA-SMA-000177H), Our Lady of the Wayside, P-41-000168 (CA-SMA-000168H), and Portola Valley School, P-41-000179 (CA-SMA-000179H), two of which are also California Historic Landmarks (Casa de Tableta and Our Lady of the Wayside)
- Two California Points of Historical Interest
- Four resources that have not been evaluated for NRHP/CRHR listing including one recorded directly adjacent to the Town limit, that likely extends into the town.
- Four resources that have been determined or recommended as not eligible for NRHP or CRHR listing

#### Resources listed in NRHP, CRHR

##### *Casa de Tableta, P-41-000177 (CA-SMA-000177H)*

Built in ca. 1851, the Casa de Tableta (also known as “Buelna’s Roadhouse” and currently “Alpine Inn Beer Garden”) is a one-story wooden building which originally served as a meeting place for Spanish-speaking Californios of the 1850 and 1860s. It was listed as California Historical Landmark No. 825 in 1968 and listed in the National Register of Historic Places in 1973.

##### *Our Lady of the Wayside, P-41-000168 (CA-SMA-000168H)*

Our Lady of the Wayside is regarded as an excellent example of a Mission Revival Country Church and is the first designed by the renowned California architect, Timothy L. Pflueger. P-41-000168 was originally recommended as a California Historical Landmark in 1977 by the Town of Portola Valley Councilman James Whitman and Town Historian Dorothy F. Regnery. The State Historic Resources Commission Department of Parks and Recreation confirmed the listing later in 1977 and assigned it California Historic Landmark Number 909. The church was listed in the National Register of Historic Places in 1977.

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<sup>16</sup> Northwest Information Center, 2000. Results letter for the Portola Valley’s Housing Element and Safety Element Update, NWIC File No.: 21-2176. On file at the Northwest Information Center.

Portola Valley School, P-41-000179 (CA-SMA-000179H)

Built in ca. 1909, the Portola Valley School is described as a “charming example” of the Mission Revival style. It is also one of the few remaining turn-of-the-century examples of the Mission Revival style school. P-41-000179 was originally recommended as eligible for the NRHP in 1964 by Dorothy F. Regnery and listed in 1974.

California Points of Historical Interest

The Village of Portola, P-41-001507

After the abandonment of Searsville in 1892, Andrew Smith Hallidie helped to found the Village of Portola. Hallidie set aside 4.7 acres of his own estate to make way for the construction of a store and blacksmith shop. A post office, hotel, and various businesses were later developed. After the death of Mr. Hallidie, his widow repurchased the land and in 1902, all the associated building were either demolished or moved. The site of the Village of Portola was designated a Point of Historical Interest in 1972.

Site of Maximo Martinez residence, P-41-001508

In 1834, Maximo Martinez was granted the rights to the Rancho La Canada de Corte del Madera, where he built a redwood house. Three generations of the Martinez family lived in the house until it was demolished in 1940. The home site was designated a Historical Point of Interest in 1972.

California Historic Landmarks

Our Lady of the Wayside, P-41-000168 (CA-SMA-000168H)

California Historic Landmark Number 909 (described above).

Casa de Tableta, P-41-000177 (CA-SMA-000177H)

Historical Landmark No. 825 (described above).

Resources Not Evaluated for NRHP or CRHR Listing

P-41-000297 (CA-SMA-293)

This cultural resource is a prehistoric archaeological site consisting of a ring of large stones and some flakes. The site was recorded in 1988 by Barn Bocek and Bill Miller of Stanford University. This site was not evaluated for potential listing at the local, state, or national level.

1260 Westridge Drive, P-41-002403

This single-family property was built in ca. 1957 and includes a two-story house (built in the French Eclectic style), a care-taker house, a gardener's work shed, pump house, and the associated landscape. The property was recorded by Stacey De Shazo of Evans & De Shazo, LLC in 2015 but was not evaluated for potential listing at the local, state, or national level.

Windy Hill Open Space, P-41-002421

The rural open space (historic landscape) spans approximately 17 acres is located within the San Andreas rift zone south of the Portola Valley civic center in San Mateo County. The area consists of dense grass and shrubbery and its boundaries are enclosed by a barbed wire fence. This resource was recorded in 1997 by Margit Aarons in a reconnaissance survey but was not evaluated for potential listing at the local, state, or national level.

P-43-000557 (CA-SCL-00562)

This site is immediately adjacent to the planning area (Town boundaries). It was previously recorded as two separate resources (P-43-000667 and P-43-000557) however, in 2014, the highest primary number, P-43-000667, was voided and both resources were combined as a single site under P-43-000557. A portion of the overall site was first recorded in 1984 by Bert A. Gerow and James Rutherford. Artifacts found include obsidian point fragments, shell beads, and one human burial. In 1988, B. Bocek discovered a large shell midden, flakes, and core fragments. In 2010 and 2012, the site was revisited and expanded by D. Daly and K. Turner of Stanford University. Additional artifacts discovered included fire-cracked rock, chert, and charcoal. This site was not evaluated for potential listing at the local, state, or national level.

**Town of Portola Valley Historic Resources Inventory**

Portola Valley maintains a list of locally significant buildings, structure, roads, trails, and natural features. The list is included in Appendix E-1 and includes 44 resources from the 1998 Town of Portola Valley General Plan.

**Cultural Resources Sensitivity**

Based on a review of the CHRIS system record search, three cultural resources currently known to the NWIC are located within potential new housing sites.

1. Cultural resource, P-41-00297, a prehistoric archaeological site consisting of a stone circle, is located within potential new housing Stanford Wedge. However, this project is undergoing a separate environmental review process and therefore not analyzed in this IS/MND.

2. Cultural resource, P-41-002421, Windy Hill Open Space Preserve, intersects the northern boundary of The Sequoias proposed housing site. This resource has not been evaluated for listing in the NRHP.
3. The western edge of Cultural resource P-43-000557 in Santa Clara County, is located along the San Mateo County/Santa Clara County/Town of Portola Valley border and conforms to this boundary line, indicating while that recording was confined to Santa Clara County, the resource itself is likely present in San Mateo County/Town of Portola Valley. This resource is located within the Glen Oaks proposed housing site.

Portola Valley has a list of 44 locally significant buildings, structure, roads, trails, and natural features (Appendix E-1). One historic resource on this list, Number 13B, a turnpike remnant from the Crossing of Los Trancos Creek, is within the Vacant Portion of Ford Field proposed housing site.

No other items on the list are likely to be affected by development of the proposed housing sites.

Much of Portola Valley sits upon geological units that are too old to hold buried intact cultural deposits. However, most of the potential new housing sites sit wholly or partially on Pleistocene sediments that have moderate potential for intact cultural deposits (see Figure E-1). Potential housing sites that have areas of moderate and high cultural sensitivity include Christ Church, The Sequoias, and the Vacant Portion of Ford Field.

No information has been found that indicates the sensitivity for Native American burials or funerary items varies from that of other intact prehistoric cultural deposits. The same applies to buried traditional cultural properties. Review of current and historic aerial photography from the USDA (NETROnline 1948, 1968, 2002)<sup>17</sup> and Google Earth (2002)<sup>18</sup> does not show large or frequent areas such as bedrock outcrops that may hold rock art or other material that would contribute to higher sensitivity of traditional cultural resources.

*a) Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?*

**Less Than Significant with Mitigation.** One resource from the Local Historic Resources Inventory is located within the Vacant Portion of Ford Field proposed housing site. The resource is Number 13B, a turnpike remnant from the Crossing of Los Trancos Creek. It is recommended that this resource be avoided or be evaluated for its significance and eligibility for listing in the CRHR/NRHP. The potentially discovery of cultural material is a potentially significant impact. Implementation of the following mitigation measure would reduce this impact to a less-than-significant level.

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<sup>17</sup> NETROnline, 1948, 1968, 2002. *Historic Aerials*. Available at: <https://www.historicaerials.com/viewer#>, accessed July 29, 2022

<sup>18</sup> Google Earth, 2002 Aerial photographs of the Portola Valley, California area. Imagery dated September 27, 2022



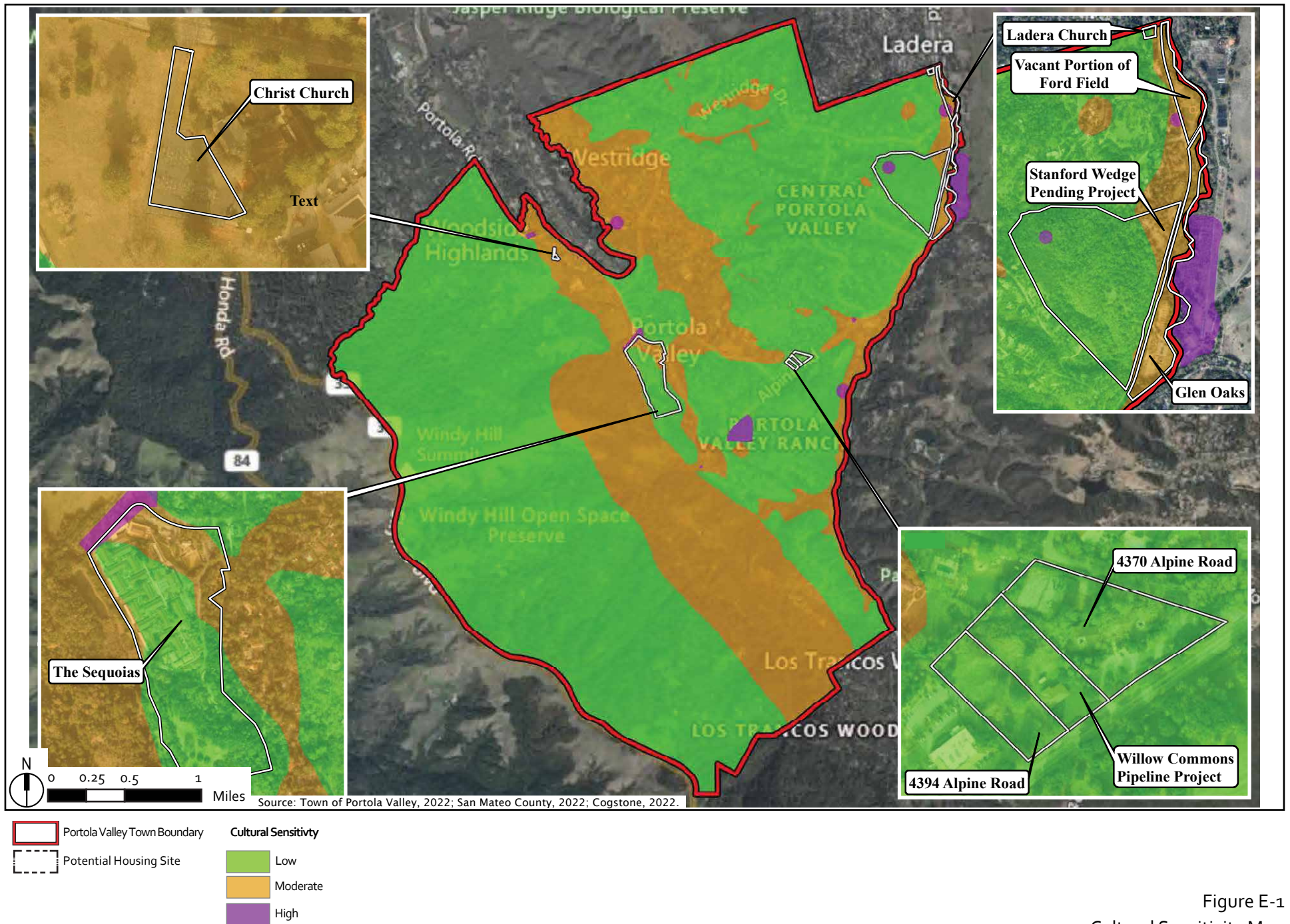


Figure E-1  
Cultural Sensitivity Map  
Portola Valley Housing and Safety Elements Update

**Mitigation Measure CULT-1: Accidental Discovery of Cultural Resources.** If cultural material is discovered during ground-disturbing activities on the Ford Field housing site, all work must halt within 50 feet of the find until the qualified archaeologist can determine the significance. No soil shall be exported from within the 50-foot buffer around the find until a determination of significance is made. The qualified archaeologist will then also determine if continued archaeological monitoring, testing, or data recovery is warranted.

*b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?*

**Less Than Significant with Mitigation.** One archaeological resource P-41-002421 is located within The Sequoias proposed housing site. This resource has not been evaluated for significance. It is recommended that this resource be avoided or be evaluated for its significance and eligibility for listing in the CRHR/NRHP. The western site boundary for one archaeological resource P-43-000557 currently recorded in Santa Clara County conforms western edge of Santa Clara County/San Mateo County/Town of Portola Valley/Glen Oaks proposed housing site border indicating that recording was confined to San Mateo County, but the resource is likely present in San Mateo County. This resource has not been evaluated for significance. It is recommended that this resource be avoided or be evaluated for its significance and eligibility for listing in the CRHR/NRHP. The potentially discovery of archeological material is a potentially significant impact. Implementation of the following mitigation measure would reduce this impact to a less-than-significant level.

**Mitigation Measure CULT-2: Accidental Discovery of Archaeological Resources.** If archaeological material is discovered during ground-disturbing activities on The Sequoias or the Glen Oaks housing sites, all work must halt within 50 feet of the find until the qualified archaeologist can determine the significance. No soil shall be exported from within the 50-foot buffer around the find until a determination of significance is made. The qualified archaeologist will then also determine if continued archaeological monitoring, testing, or data recovery is warranted.

*c) Disturb any human remains, including those interred outside of formal cemeteries?*

**Less Than Significant with Mitigation.** No known human burial sites are located in areas to be impacted by the project. However, the following mitigation measure is proposed to address the unexpected presence of unidentified subsurface resources or remains.

**Mitigation Measure CULT-3a: Halt Construction Activity, Evaluate Find, and Implement Mitigation.** In the event that any previously unidentified cultural resource (historic / archaeological / paleontological / Native American) are uncovered during site preparation, excavation, or other construction activity, all such activity shall cease until these resources have been evaluated by a qualified consultant and specific measures can be implemented to

protect these resources in accordance with sections 21083.2 and 21084.1 of the California Public Resources Code.

**Mitigation Measure CULT-3b: Halt Construction Activity, Evaluate Remains, and Take Appropriate Action in Coordination with Native American Heritage Commission.** In the event that any human remains are uncovered during site preparation, excavation, or other construction activity, all such activity shall cease until these resources have been evaluated by the County Coroner, and appropriate action taken in coordination with the Native American Heritage Commission, in accordance with section 7050.5 of the California Health and Safety Code or, if the remains are Native American, section 5097.98 of the California Public Resources Code.

Implementation of Mitigation Measures CULT-3a and CULT-3b would reduce the impacts associated with possible disturbance of unidentified historic resources, archaeological resources, or human remains at proposed housing sites to a less-than-significant level.

## F. ENERGY

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

### Setting

This section provides background information on energy and summarizes the existing environmental setting related to energy within the Town of Portola Valley.

#### *Electricity and Natural Gas*

Pacific Gas and Electric Company (PG&E) is the primary provider of natural gas and electricity in Portola Valley. PG&E produces or buys energy from conventional and renewable sources. In 2021, approximately 93 percent of the electricity came from greenhouse gas free resources, including renewables, nuclear, and large hydroelectric power. Approximately 50 percent of the electricity came from renewable resources that qualify under the California Renewable Portfolio Standard.<sup>19</sup>

#### *Transportation Fuels*

Transportation accounts for a major portion of California's overall energy consumption. Gasoline is the most used transportation fuel in California, with 97 percent of all gasoline being consumed by light-duty cars, pickup trucks, and sport utility vehicles.<sup>20</sup> Diesel fuel is the second largest transportation fuel used in California, representing about 17 percent of total fuel sales behind gasoline. Nearly all heavy duty-trucks, delivery vehicles, buses, trains, ships, boats, barges, farm, construction, and heavy-duty military vehicles and equipment have diesel engines.<sup>21</sup>

<sup>19</sup> Pacific Gas and Electric (PG&E), 2022. Exploring Clean Energy Solutions. Available at: [https://www.pge.com/en\\_US/about-pge/environment/what-we-are-doing/clean-energy-solutions/clean-energy-solutions.page](https://www.pge.com/en_US/about-pge/environment/what-we-are-doing/clean-energy-solutions/clean-energy-solutions.page), accessed September 30, 2022.

<sup>20</sup> California Energy Commission (CEC), 2022. Transportation Energy. Available at: <https://www.energy.ca.gov/data-reports/energy-almanac/transportation-energy/california-gasoline-data-facts-and-statistics>, accessed September 30, 2022.

<sup>21</sup> California Energy Commission (CEC), 2022. Transportation Energy. Available at: <https://www.energy.ca.gov/data-reports/energy-almanac/transportation-energy/diesel-fuel-data-facts-and-statistics>, accessed September 30, 2022.

## Regulatory Setting

This section describes the existing federal, State, and local regulatory frameworks related to energy.

### *Federal*

#### National Energy Conservation Policy Act

The National Energy Conservation Policy Act (NECPA) is the foundation for federal-level conservation and efficiency goals and requirements related to energy use. The NECPA was a result of the energy crisis during the mid-1970s and was signed into law in 1978. As passed, the NECPA promoted three major roles for the federal government in energy conservation: setting energy-efficiency standards; disseminating information about energy conservation opportunities; and improving efficiencies of federal buildings.

#### National Energy Policy Act of 2005

The National Energy Policy Act addresses energy production in the U.S. in the following aspects: energy efficiency, renewable energy, oil and gas, coal, tribal energy, nuclear matters and security, vehicles and motor fuels, hydrogen, electricity, energy tax incentives, hydropower and geothermal, and climate change technology. The Energy Policy Act of 2005 granted the Federal Energy Regulatory Commission the responsibilities and the authority to oversee the nation's electricity transmission grid, ensure fair competition in the wholesale power markets, and provide rate incentives to promote electric transmission investment, among other duties.

#### Corporate Average Fuel Economy Standards

Established by the U.S. Congress in 1975, the Corporate Average Fuel Economy standards reduce energy consumption by increasing the fuel economy of cars and light trucks. The National Highway Traffic Safety Administration (NHTSA) and U.S. Environmental Protection Agency (EPA) jointly administer the Corporate Average Fuel Economy standards. The U.S. Congress has specified that the Corporate Average Fuel Economy standards must be set at the "maximum feasible level" with consideration given for: (1) technological feasibility; (2) economic practicality; (3) effect of other standards on fuel economy; and (4) need for the nation to conserve energy.

### *State*

As described in *Section H, Greenhouse Gas Emissions*, many of the State regulations that are designed to reduce greenhouse gas emissions are based on measures that promote energy conservation, energy efficiency, and renewable energy. Some of these key regulations are also described below.

### Warren-Alquist Act

The Warren-Alquist Act of 1975 is the legislation that created the California Energy Commission. The Act enables the California Energy Commission to formulate and adopt the nation's first-ever energy conservation standards for buildings constructed and appliances sold in California. The California Energy Commission was also directed to create a research and development program with a focus on fostering non-conventional energy sources.

### California Energy Action Plan

California's 2008 Energy Action Plan Update updates the 2005 Energy Action Plan II, which is the State's principal energy planning and policy document. The plan maintains the goals of the original Energy Action Plan, describes a coordinated implementation plan for State energy policies, and identifies specific action areas to ensure that California's energy is adequate, affordable, technologically advanced, and environmentally sound. First-priority actions to address California's increasing energy demands are to promote energy efficiency, demand response (i.e., reducing customer energy usage during peak periods to address power system reliability and support the best use of energy infrastructure), and use of renewable power sources. To the extent that these strategies are unable to satisfy increasing energy and capacity needs, the plan supports clean and efficient fossil-fuel fired generation.

### Renewable Portfolio Standard

In 2002, under Senate Bill (SB) 1078, the State enacted the Renewable Portfolio Standard (RPS) program, which aims to increase the percentage of renewable energy in California's electricity mix to 20 percent of retail sales by 2017. The RPS timeline was accelerated in 2006 under SB 107 and expanded in 2011, 2015, 2018 under SB X1-2, SB 350, and SB 100, respectively. The RPS program currently requires investor-owned utilities, electric service providers, and community choice aggregators to increase procurement from eligible renewable energy resources to 60 percent by 2030. In addition, SB 100 sets a planning goal that 100 percent of total retail sales of electricity in California come from eligible renewable energy resources and zero-carbon resources by December 31, 2045.

### Title 24 Building Efficiency Standards

The State regulates energy consumption under Title 24 Building Standards Code, Part 6 of the California Code of Regulations (also known as the California Energy Code). The Title 24 Building Energy Efficiency Standards were developed by the California Energy Commission and apply to energy consumed for heating, cooling, ventilation, water heating, and lighting in new residential and nonresidential buildings. The California Energy Code is updated every three years, with the most recent iteration (2019) effective as of January 1, 2020, and the next version (2022) planned to go into effect on January 1, 2023. The California Energy Commission's long-term vision is that

future updates to the California Energy Code will support zero-net energy for all new residential and commercial buildings by 2030.

#### Title 24 California Green Building Standards Code

Title 24 Building Standards Code, Part 11 of the California Code of Regulations is referred to as the California Green Building Standards Code (CALGreen Code). 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.

#### *Local*

#### Portola Valley Building Codes

The Town has adopted the following codes related to energy use of buildings for future projects:

- 2019 California Building Code
- 2019 California Energy Code
- 2022 California Building Standards Code

#### General Plan

The General Plan contains the following goals, objectives, and policies related to energy in Portola Valley:

#### Land Use Element

*General Objective 4:* To minimize consumption of energy from non-renewable sources and to encourage the use of renewable energy sources while preserving the scenic and aesthetic qualities of the area.

*General Principle 11:* Conservation of energy from non-renewable sources should be considered in the design, improvement, reconstruction and remodeling of buildings.

*General Principle 12:* The use of passive and active solar energy should be encouraged in the siting, design and construction of buildings.

#### Sustainability Element

*Overarching Goal 2:* To encourage the use of renewable resources and minimize the use of nonrenewable resources.

*Overarching Goal 4:* To encourage and provide for enhanced resource efficiency and the use of sustainable materials in all building projects.

*Overarching Goal 5: To employ the principles of "green" building.*

*Community Education and Involvement Objective 5:* To link interested residents with sustainable products and practices such as energy efficient products, water conservation measures, and waste reduction practices such as composting so that people have the tools they need to implement sustainable lifestyles.

*Goal: New Buildings - Encourage, and where feasible, require new buildings to adhere to "green" building design standards.*

*New Buildings Objective 1:* To require all new buildings to achieve a minimum level of sustainability based on an accepted "green" rating system.

The *New Buildings* Objective 1 objective addresses many topics including: use of passive and active solar energy as well as geothermal energy in the siting, design and construction of buildings; conservation of water through the use of drought-tolerant plant materials and recycling; reduced use of non-renewable resources in design and construction of buildings.

## Discussion

There are no new or existing policies related to energy in the Safety Element Update of the project. In the Housing Element Update, there is a revised policy (Program 6-7) that promotes energy conservation and native landscaping for future development under the project. Future development under the project would also be supported by existing energy policies in other chapters of the General Plan, which are listed above. Therefore, no energy related impacts from updating the Housing Element and Safety Element would occur.

*a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?*

**Less Than Significant.** Peninsula Clean Energy (PCE) and Pacific Gas & Electric Company (PG&E) provide energy to Town of Portola Valley. According to the California Energy Commission, the total electricity usage in PG&E's service area in 2020 was approximately 78,520 million kilowatt-hours (kWH).<sup>22</sup> New development in Portola Valley facilitated by the project would lead to increased energy consumption due to both construction and operation. Construction-related energy usage would be temporary and have a negligible contribution to the project's overall energy consumption. Construction contractors would have a financial disincentive to waste fuel used by construction equipment (i.e., excess fuel usage reduces profits) and therefore, it is generally assumed that energy used during construction would be conserved to the maximum extent feasible. Furthermore, best management practices and regulations enforced by the California Air Resources Board (Title 13, Section 2485 of California Code of Regulations) limit the idling time of diesel construction equipment to five minutes.

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<sup>22</sup> CEC, 2021. "Electricity Consumption by Entity." Available at <http://ecdms.energy.ca.gov/elecbyutil.aspx>. Accessed September 30, 2022



The project also includes Program 6-7 to reduce the energy consumption of future residential households through solar installation and native landscaping to increase resiliency. Future development would also comply with applicable provisions of the California Building Code related to energy efficiency, including recently adopted 2022 California Building Standards Code requiring all electric appliances for newly constructed buildings. The Sustainability Element of the General Plan (*Transportation* Objectives 1-4) also encourages active transportation and energy efficient vehicles to help reduce GHG emissions and the number and length of vehicle trips.

For the reasons discussed above, the project would not result in wasteful, inefficient, or unnecessary consumption of energy resources. The inclusion of policies to reduce energy consumption and facilitate development that is more energy efficient could have a positive impact on energy consumption and any impacts would be less than significant.

*b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?*

**Less Than Significant.** The project would be subject to energy efficiency and conservation requirements under the Title 24 Building Efficiency Standards and CALGreen Code. Operation of the project would not interfere with the current Renewables Portfolio Standard program requirements for investor-owned utilities, electric service providers, and community choice aggregators to increase procurement from eligible renewable energy resources to 60 percent by 2030. The current 2019 Title 24 Building Efficiency Standards also require newly constructed single-family and low-rise multifamily buildings to install rooftop photovoltaic systems. The General Plan's Sustainability Element includes New Building Objective 1 which requires all new buildings to achieve a minimum level of sustainability based on an accepted "green" rating system. The Sustainability Element also encourages the use of green building design standards as an Overarching Goal 5 and *New Buildings* Goal. Therefore, compliance with existing regulations and the General Plan policies would ensure that future developments under the project provide beneficial support to existing renewable energy and energy efficiency programs. Thus, the project would not conflict with any state or local plans for renewable energy or energy efficiency and this impact is less than significant.

## G. GEOLOGY AND SOILS

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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? Refer to Division of Mines and Geology Special Publication 42.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii. Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii. Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv. Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Directly or indirectly destroy a unique paleontological resource or unique geologic feature?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### Affected Environment

#### *Geology and Topography*

The planning area is located within the Coast Ranges geomorphic province, a relatively geologically young and seismically active region.<sup>23, 24</sup> The Coast Ranges are mountain ranges (ranging in elevation from 2,000 to 6,000 feet above sea level) and valleys that trend northwest, approximately parallel to the San Andreas fault, from near the Oregon border to southern California. The only major break in the Coast Ranges is the depression containing San Francisco Bay Area (Bay Area) within which the planning area is located.

<sup>23</sup> California Geological Survey (CGS), 2002a. California Geomorphic Provinces, Note 36.

<sup>24</sup> Norris, Robert M. and Robert W. Webb, 1976. Geology of California, 2nd Edition. J. Wiley & Sons, Inc.

The planning area is located on the east side of the Santa Cruz Mountains and southwest of San Francisco Bay. The topography of the planning area is hilly and includes the eastern foothills of the Santa Cruz Mountains in the eastern portion of the planning area and steeper eastern slopes of the Santa Cruz Mountains in the western portion of the planning area.

### *Faults*

The entire Bay Area is located within the San Andreas Fault Zone, a complex of active faults. Numerous historic earthquakes have been generated in northern California on faults within the San Andreas Fault Zone. This level of active seismicity results in relatively high seismic risk in the Bay Area.

The planning area, like much of the San Francisco Bay area, is vulnerable to seismic activity based on the presence of several active faults in the region, as shown on Figure G-1. The most prominent active fault in the vicinity of the planning area is the San Andreas Fault, which crosses through the planning area as shown on Figure G-2. An active fault is one that has experienced displacement within the last 11,700 years<sup>25</sup> and is expected to move again at some point in the future. Faults other than the San Andreas Fault that have undetermined activity have also been mapped in the western portion of the planning area as shown on Figure G-2.

The traces of the San Andreas Fault Zone judged to be active and with significant potential for future displacement are shown on the Town of Portola Valley's Ground Movement Potential Map<sup>26</sup> presented as Figure G-3. This geologic map was prepared by the Town, based on the study of aerial photographs, field investigations, and other available geologic studies. The map portrays the various geologic conditions with considerable accuracy and was adopted by the Town Council to serve as guidelines for addressing geologic hazards, with the intention of modifying them as new information becomes available.<sup>27</sup>

### *Surface Rupture*

Surface rupture occurs when the ground surface is broken due to fault movement during an earthquake. Surface rupture can generally be assumed to occur along an active or potentially active major fault trace. Areas that are most susceptible to fault rupture are delineated by the California Geological Survey (CGS) Alquist-Priolo Zones and require specific geological investigations prior to development to reduce the threat to public health and safety and to

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<sup>25</sup> California Geological Survey (CGS), 2018. Special Publication 42, Earthquake Fault Zones, a Guide for Government Agencies, Property Owners / Developers, and Geoscience Practitioners for Assessing Fault Rupture Hazards In California. Available at: [https://www.conservation.ca.gov/cgs/Documents/Publications/Special-Publications/SP\\_042.pdf](https://www.conservation.ca.gov/cgs/Documents/Publications/Special-Publications/SP_042.pdf), accessed October 3, 2022.

<sup>26</sup> Cotton, Shires and Associates, Inc., Ground Movement Potential Map, Town of Portola Valley, San Mateo County, California, June 2017.

<sup>27</sup> Town of Portola Valley, 2022a. General Plan, Safety Element Update.

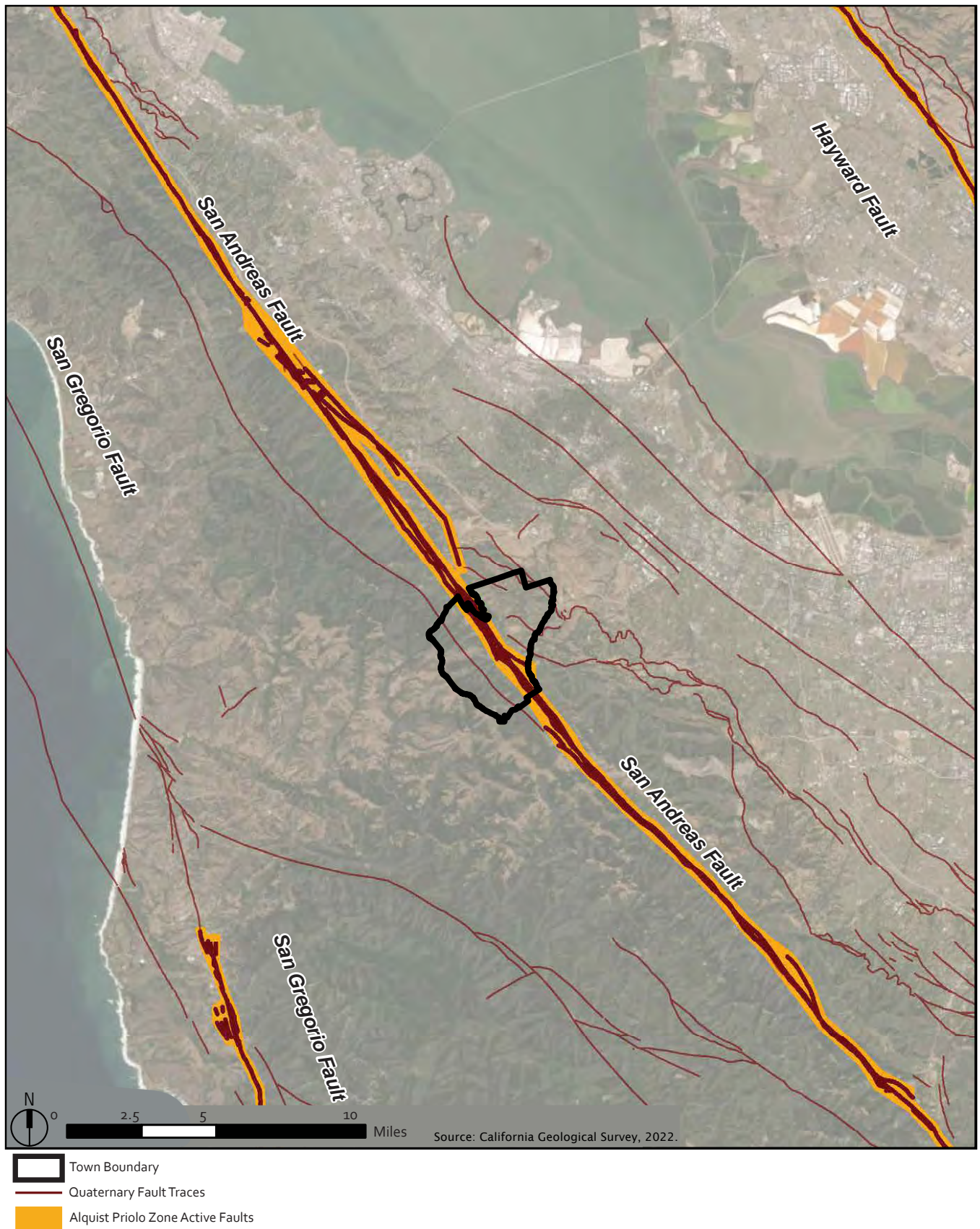
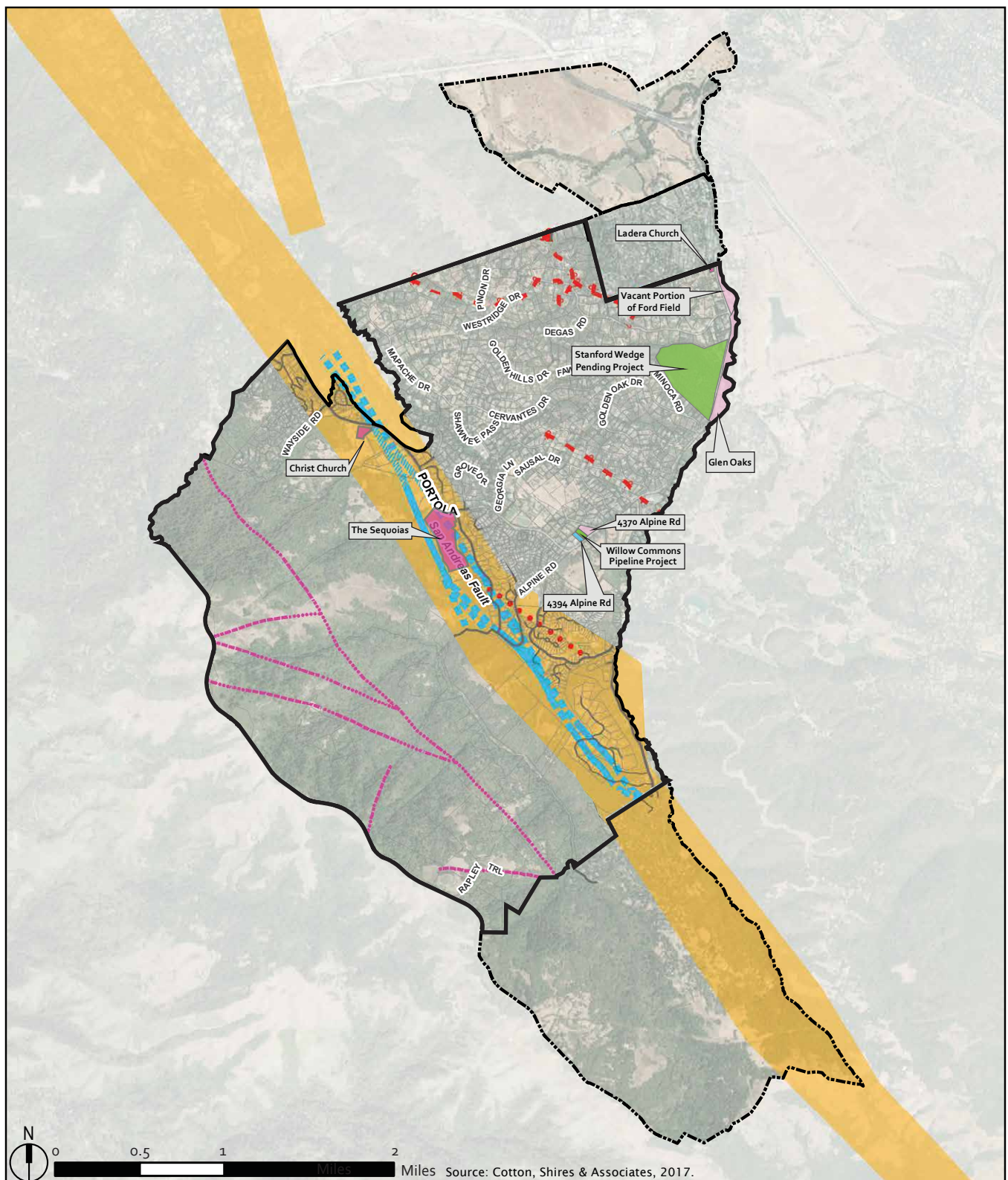


Figure G-1  
Regional Fault Areas Map





- |   |  |
|---|--|
| Portola Valley Town Boundary              | Alquist-Priolo Zone  |
| Portola Valley Sphere of Influence        | Traces of the San Andreas Fault, dashed where approximate. En-echelon rupture behavior depicted by series of diagonal slashes.                         |
| Pipeline and Pending Developments         | Fault (other than San Andreas) of undetermined activity, dashed where approximate, dotted where conceals, barbs are located on upthrown side of fault. |
| Vacant Housing Sites                      | Inactive Fault   |
| Non-Vacant Housing Sites (Not Affiliated) |  |
| Non-Vacant Affiliated Housing Sites       |  |

Figure G-2  
Local Faults







minimize the loss of life and property posed by earthquake-induced ground failure. Wherever an active fault exists, if it has the potential for surface rupture, a structure for human occupancy cannot be placed over the fault and must be a minimum distance from the fault (generally 50 feet). Due to the recent activity of the San Andreas Fault, CGS has placed it within an Alquist-Priolo Zone<sup>28</sup> as shown on Figures G-1 and G-2. Two of the parcels listed in the Sites Inventory (Christ Church and The Sequoias) are located within the Alquist-Priolo Zone for the San Andreas Fault. These two parcels are also intersected by the zone of potential primary surface rupture shown on the Ground Movement Potential Map (Figure G-3).

### *Ground Shaking*

Ground shaking is a general term referring to all aspects of motion of the earth's surface resulting from an earthquake, and is normally the major cause of damage in seismic events. The extent of ground shaking is controlled by the magnitude and intensity of the earthquake, distance from the epicenter, and local geologic conditions. The Modified Mercalli Intensity (MMI) Scale is the most commonly used scale for measurement of the subjective effects of earthquake intensity (Table G-1). The MMI values range from I (earthquake not felt) to XII (damage nearly total), and intensities ranging from VI to XII can cause slight to significant structural damage.<sup>29</sup>

**TABLE G-1 MODIFIED MERCALLI INTENSITY (MMI) SCALE**

MMI Value	Effects of Earthquake Intensity
I	Not felt except by a very few under especially favorable circumstances.
II	Felt only by a few persons at rest, especially on upper floors of buildings. Delicately suspended objects may swing.
III	Felt quite noticeably indoors, especially on upper floors of buildings, but many people do not recognize it as an earthquake. Standing motor cars may rock slightly. Vibration like passing of truck. Duration estimated.
IV	During the day felt indoors by many, outdoors by few. At night some awakened. Dishes, windows, doors disturbed; walls make cracking sound. Sensation like heavy truck striking building. Standing motor cars rocked noticeably.
V	Felt by nearly everyone, many awakened. Some dishes, windows, etc., broken; a few instances of cracked plaster; unstable objects overturned. Disturbances of trees, poles, and other tall objects sometimes noticed. Pendulum clocks may stop.
VI	Felt by all, many frightened and run outdoors. Some heavy furniture moved; a few instances of fallen plaster or damaged chimneys. Damage slight.
VII	Everybody runs outdoors. Damage negligible in building of good design and construction; slight to moderate in well-built ordinary structures; considerable in poorly built or badly designed structures; some chimneys broken. Noticed by persons driving motor cars.

<sup>28</sup> California Geological Survey (CGS), 2022. Earthquake Zones of Required Investigation, Available at: <https://maps.conservation.ca.gov/cgs/EQZApp/app/>, accessed September 21, 2022.

<sup>29</sup> California Geological Survey (CGS), 2002b. How Earthquakes and Their Effects are Measured, Note 32.

**TABLE G-1 MODIFIED MERCALLI INTENSITY (MMI) SCALE**

MMI Value	Effects of Earthquake Intensity
VIII	Damage slight in specially designed structures; considerable in ordinary substantial buildings, with partial collapse; great in poorly built structures. Panel walls thrown out of frame structures. Fall of chimneys, factory stacks, columns, monuments, walls. Heavy furniture overturned. Sand and mud ejected in small amounts. Changes in well water. Persons driving motor cars disturbed.
IX	Damage considerable in specially designed structures; well-designed frame structures thrown out of plumb; great in substantial buildings, with partial collapse. Buildings shifted off foundations. Ground cracked conspicuously. Underground pipes broken.
X	Some well-built wooden structures destroyed; most masonry and frame structures destroyed with foundations; ground badly cracked. Rails bent. Landslides considerable from river banks and steep slopes. Shifted sand and mud. Water splashed (slopped) over banks.
XI	Few, if any, (masonry) structures remain standing. Bridges destroyed. Board fissures in ground. Underground pipelines completely out of service. Earth slumps and land slips in soft ground. Rails bent greatly.
XII	Damage total. Practically all works of construction are damaged greatly or destroyed. Waves seen on ground surface. Lines of sight and level are distorted.

Source: California Geological Survey (CGS), 2002b. How Earthquakes and Their Effects are Measured, Note 32.

Mapping of earthquake shaking scenarios by the Association of Bay Area Governments (ABAG)<sup>30</sup> indicates that a large earthquake on the San Andreas Fault could produce maximum ground shaking intensities in the planning area with severe (MMI VIII) to violent (MMI IX) shaking. A large earthquake on the San Gregorio Fault would produce very strong (MMI VII) to severe (MMI VIII) shaking in the planning area, and a large earthquake on the Hayward Fault or Calaveras Fault would produce strong shaking (MMI VI) in the planning area.

### *Landslides*

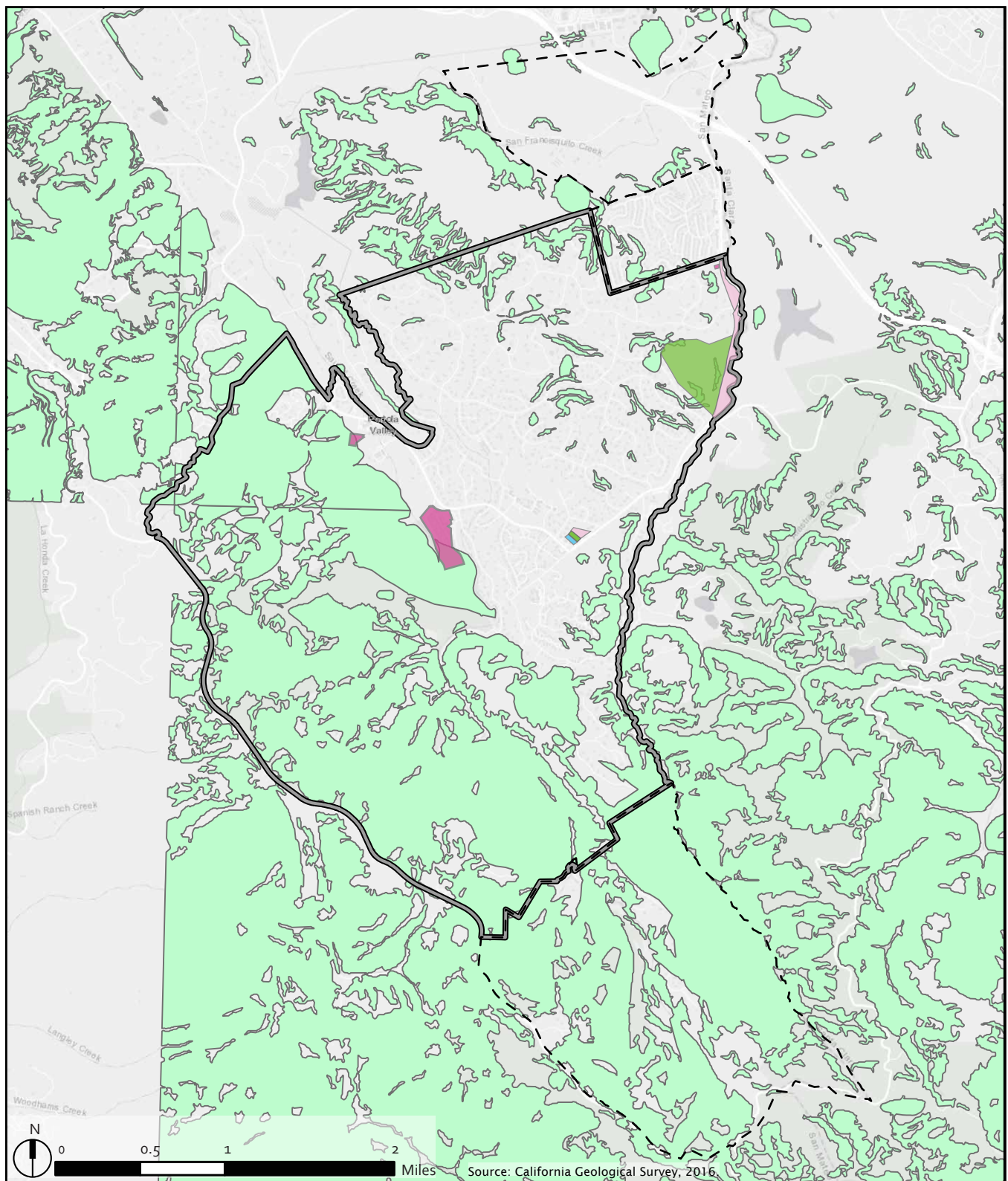
Slope failure can occur as either rapid movement of large masses of soil (landslide) or slow, continuous movement (creep) on slopes of varying steepness. Areas susceptible to landslides are characterized by steep slopes and downslope creep of surface materials. Landslides can be triggered by heavy rain and/or seismic activity. Much the western and southern portions of the planning area and some areas in the eastern and northeastern portions of the planning area have been mapped by CGS as seismically induced landslide hazard zones,<sup>31</sup> as shown on Figure G-4. One of the housing sites (The Sequoias)<sup>32</sup> is intersected by landslide hazard zones, as shown

<sup>30</sup> Association of Bay Area Governments (ABAG), 2022. Hazard Viewer Map, Available at: <https://mtc.maps.arcgis.com/apps/webappviewer/index.html?id=4a6f3f1259df42eab29b35dfcdo86fc8>, Accessed September 21, 2022.

<sup>31</sup> California Geological Survey (CGS), 2022. Earthquake Zones of Required Investigation, Available at: <https://maps.conservation.ca.gov/cgs/EQZApp/app/>, accessed September 21, 2022.

<sup>32</sup> The Stanford Wedge site is also intersected by landslide hazard zones; however, it is a pending project that is undergoing a separate CEQA process.





- Portola Valley Town Boundary
- Portola Valley Sphere of Influence
- Pipeline and Pending Developments
- Vacant Housing Sites
- Non-Vacant Housing Sites (Not Affiliated)
- Non-Vacant Affiliated Housing Sites
- Landslide Hazard Zone

Figure G-4  
Landslide Hazard Zones

Portola Valley Housing and Safety Elements Update IS/MND

on Figure G-4. These two parcels contain areas of relatively small active landslides and larger inactive landslides with significant potential for downslope movement as shown on Figure G-3.

### *Liquefaction, Lateral Spreading, and Seismic Settlement*

Liquefaction is the temporary transformation of loose, saturated granular sediments from a solid state to a liquefied state as a result of seismic ground shaking. In the process, the soil undergoes transient loss of strength, which commonly causes ground displacement or ground failure to occur. Because saturated soils are a necessary condition for liquefaction, soil layers in areas where the groundwater table is near the surface have higher liquefaction potential than those in which the groundwater table is located at greater depths. The potential for liquefaction-induced ground failure (e.g., loss of bearing strength, ground fissures, sand boils) depends on the thickness of the liquefiable soil layer relative to the thickness of the overlying non-liquefiable material. Areas near several creeks within the planning area have been mapped by CGS as liquefaction hazard zones,<sup>33</sup> as shown on Figure G-5. Five of the housing sites (Christ Church, The Sequoias, Glen Oaks, Vacant Portion of Ford Field, and Ladera Church) are intersected by liquefaction hazard zones, as shown on Figure G-5.<sup>34</sup>

Lateral spreading is a form of horizontal displacement of soil toward an open channel or other “free” face, such as an embankment or excavation boundary. In a lateral spread failure, a layer of ground at the surface is carried on an underlying layer of liquefied material over a nearly flat surface towards the free face. The lateral spreading hazard tends to mirror the liquefaction hazard for an area, assuming a free face is located nearby. Areas that may be susceptible to lateral spreading in the planning area include areas where liquefaction hazard zones are located near creeks, drainage channels, embankments, retaining walls, or other free faces.

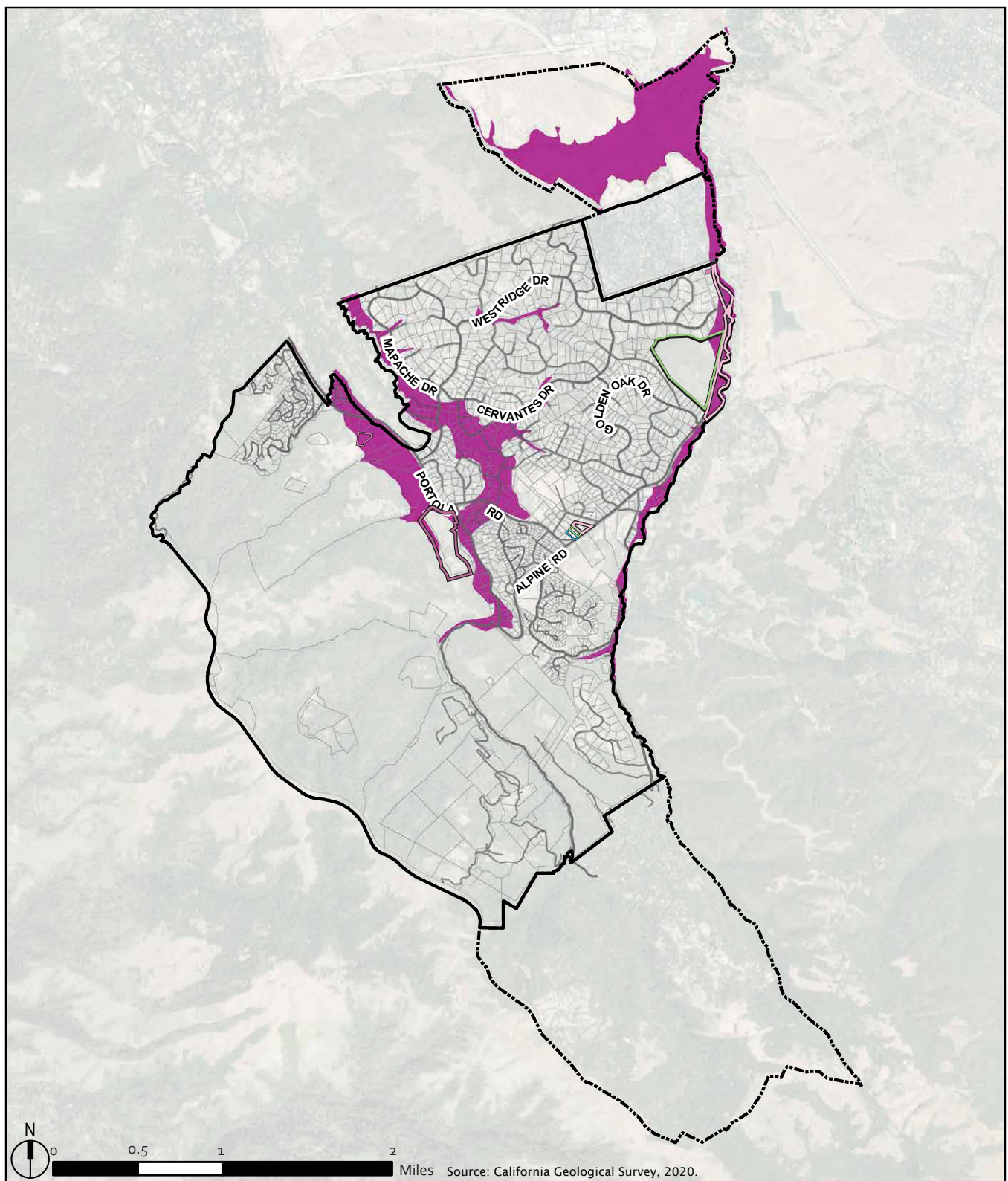
Seismic settlement (also referred to as cyclic densification or differential compaction) can occur when non-saturated, cohesionless sand or gravel soil is densified by earthquake vibrations. When the degree of cyclic densification varies based on variations in soil types, differential (i.e., unequal) settlement may occur which can result in greater damage to structures compared to relatively equal settlement.

Loose unconsolidated soil that could be subject to seismic settlement can be present near creeks where soil has been deposited in a saturated environment, at the base of steep slopes where soil has been deposited by erosion, and in areas where fill materials have been placed without proper compaction. All of the parcels listed in the Sites Inventory include areas mapped as unconsolidated granular material subject to settlement as shown on Figure G-3.

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<sup>33</sup> California Geological Survey (CGS), 2022. Earthquake Zones of Required Investigation, Available at: <https://maps.conservation.ca.gov/cgs/EQZApp/app/>, accessed September 21, 2022.

<sup>34</sup> The Stanford Wedge site is also intersected by liquefaction hazard zones; however, it is a pending project that is undergoing a separate CEQA process.



- Portola Valley Town Boundary
- Portola Valley Sphere of Influence
- Pipeline and Pending Developments
- Vacant Housing Sites
- Non-Vacant Housing Sites (Not Affiliated)
- Non-Vacant Affiliated Housing Sites
- Liquefaction Zone

Figure G-5  
Liquefaction Hazard Zones  
Portola Valley Housing and Safety Elements Update IS/MND

### *Settlement, Differential Settlement, and Subsidence*

Settlement is the lowering of the land surface elevation as a result of loading (i.e., placing heavy loads, typically fill or structures), which often occurs with the development of a site. Settlement or differential (i.e., unequal) settlement could occur if buildings or other improvements are built on low-strength foundation materials (including imported non-engineered fill) or if improvements straddle the boundary between different types of subsurface materials (e.g., a boundary between native material and/or new engineered fill or a boundary between bedrock and soil). Although settlement generally occurs slowly enough that its effects are not dangerous to inhabitants, it can cause significant building damage over time. Loose or uncontrolled (non-engineered) fill and variable soil conditions may be present in various areas of the planning area.

Subsidence is the lowering of the land-surface elevation. The mechanism for subsidence is generally related to groundwater pumping and subsequent consolidation of loose aquifer sediments. The primary hazards associated with subsidence are increased flooding hazards and damage to underground utilities as well as above-ground structures. Other effects of subsidence include changes in the gradients of stormwater and sanitary sewer drainage systems for which the flow is gravity driven.

### *Expansive Soils*

Expansion and contraction of soil volume can occur when expansive soils undergo alternating cycles of wetting (swelling) and drying (shrinking). During these cycles, the volume of the soil changes markedly. Shrink-swell potential is influenced by the amount and type of clay minerals present and can be measured by the percent change of the soil volume. Shrink-swell potential is also influenced by the location of the soils; soils below the groundwater table maintain a steady moisture content and would therefore not be subject to shrink-swell effects. Because of volume changes due to expansive soils, structural damage to buildings and infrastructure can occur if potentially expansive soils are not considered in project design and during construction. Repeated expansion and contraction of soils on slopes can also result in the slow creep of soil downslope. One parcel listed in the Sites Inventory (The Sequoias) is mapped as having potentially expansive soils as shown on Figure G-3.

### *Paleontological Resources*

Paleontological resources include fossilized remains or traces of organisms, including plants, vertebrates (animals with backbones), invertebrates (e.g., starfish, clams, ammonites, and marine coral), and microscopic plants and animals (microfossils), including their imprints, from a previous geological period. Collecting localities (i.e., areas that include in-situ fossils) and the geologic formations containing those localities are also considered paleontological resources as they represent a limited, non-renewable resource and once destroyed, cannot be replaced. The Society of Vertebrate Paleontology (SVP) has established guidelines for the identification, assessment, and mitigation of adverse impacts on non-renewable paleontological resources. The

SVP has helped define the value of paleontological resources and, in particular, states that significant paleontological resources are fossils and fossiliferous deposits 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 considered to be older than recorded human history and/or older than middle Holocene (i.e., older than about 5,000 years).

A search of paleontological localities in the fossil collections database maintained by the University of California Museum of Paleontology identified many fossil localities within San Mateo County including plants, invertebrates, vertebrates, and microfossils. The precise locations of the fossil localities are not provided in the database, however based on the locality names many were located in coastal areas of the County. For many of the localities there is no information provided to infer even the general location within the County; however, based on the available information it appears that there are several localities potentially located within or near the planning area, including several microfossil localities and two vertebrate localities identified as San Francisquito Creek.<sup>35</sup>

## Regulatory Setting

### *Federal*

#### Federal National Earthquake Hazards Reduction Program

The US Congress established the National Earthquake Hazards Reduction Program (NEHRP) when it passed the Earthquake Hazards Reduction Act of 1977, Public Law 95–124. In establishing NEHRP, Congress recognized that earthquake-related losses could be reduced through improved design and construction methods and practices, land use controls and redevelopment, prediction techniques and early-warning systems, coordinated emergency preparedness plans, and public education and involvement programs. The four basic NEHRP goals are:

- Develop effective practices and policies for earthquake loss reduction and accelerate their implementation.
- Improve techniques for reducing earthquake vulnerabilities of facilities and systems.
- Improve earthquake hazards identification and risk assessment methods, and their use.
- Improve the understanding of earthquakes and their effects.

Implementation of NEHRP priorities is accomplished primarily through original research, publications, and recommendations to assist and guide State, regional, and local agencies in the development of plans and policies to promote safety and emergency planning.

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<sup>35</sup> University of California Museum of Paleontology, 2022. Collections Database, Locality Search. Available at: <https://ucmpdb.berkeley.edu/loc.html>, accessed May 21, 2019.



## *State*

### Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act was passed in 1972, and its main purpose is to prevent the construction of buildings used for human occupancy on the surface trace of active earthquake faults. The Alquist-Priolo Earthquake Fault Zoning Act requires the State Geologist to establish regulatory zones (known as Earthquake Fault Zones) around the surface traces of known active faults and to issue appropriate maps. "Earthquake Fault Zones" were called "Special Studies Zones" prior to January 1, 1994. The maps are distributed to all affected cities, counties, and state agencies for their use in planning and controlling new or renewed construction. Local agencies must regulate most development projects within the zones.

### Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act of 1990 (Public Resources Code (PRC), Section 2690- 2699.6) directs the CGS to identify and map areas prone to liquefaction, earthquake-induced landslides, and amplified ground shaking. The purpose of the Seismic Hazards Mapping Act is to minimize loss of life and property through the identification, evaluation, and mitigation of seismic hazards. The Seismic Hazards Mapping Act was passed by the legislature following the 1989 Loma Prieta earthquake. As a result, CGS geologists gather existing geological, geophysical, and geotechnical data from numerous sources to produce the Seismic Hazard Zone Maps. They integrate and interpret this data regionally in order to evaluate the severity of the seismic hazards and designate as Zones of Required Investigation those areas prone to ground shaking, liquefaction, and earthquake-induced landslides. Cities and counties are then required to use the Seismic Hazard Zone Maps in their land use planning and building permit processes. The Seismic Hazards Mapping Act requires that site-specific geotechnical investigations be conducted within Zones of Required Investigation to identify and evaluate seismic hazards and formulate mitigation measures prior to permitting most developments designed for human occupancy. The CGS has completed seismic hazard mapping for the portions of California most susceptible to liquefaction, ground shaking, and landslides (primarily the Bay Area and the Los Angeles basin).

### California Building Standards Codes

The 2019 California Building Code, which refers to Part 2 of the California Building Standards Code in Title 24 of the California Code of Regulations, is based on the 2018 International Building Code, and is the most current State building code. The 2019 California Building Code covers grading and other geotechnical issues, building specifications, and non-building structures. The Town has adopted the most current State building codes, as indicated in the Chapter 16 of the Municipal Code. The Town's Building Division is responsible for reviewing plans, issuing building permits, and conducting inspections.

The California Building Code requires that a site-specific geotechnical investigation report be prepared by a licensed professional for proposed developments of one or more buildings greater than 4,000 square feet to evaluate geologic and seismic hazards. Buildings less than or equal to 4,000 square feet also are required to prepare a geologic engineering report, except for one-story, wood-frame, and light-steel-frame buildings that are located outside of the Alquist-Priolo Earthquake Fault Zones. The purpose of the geotechnical investigation is to identify seismic and geologic conditions that require project mitigation, such as ground shaking, liquefaction, differential settlement, and expansive soils. Based on the conditions of the site, the building code requires specific design parameters to ensure construction of buildings that will resist collapse during an earthquake. These design parameters do not protect buildings from all earthquake shaking hazards but are designed to reduce hazards to a manageable level. Requirements for the geotechnical investigation are presented in Chapter 16 "Structural Design" and Chapter 18 "Soils and Foundation" of the 2019 California Building Code. Geotechnical investigation reports for individual projects within the Town would be reviewed by the Town's Building and Planning Department prior to issuance of building permits.

### *Local*

#### General Plan

The Portola Valley General Plan includes the following relevant policies, principals, and standards that assist in reducing or avoiding potential impacts related to geology and soils:

#### Land Use Element

*General Principle 5:* In any development within the planning area, full consideration should be given to the geologic conditions so that development on unstable land can be avoided or minimized.

*Residential Areas, Principle 4:* Steep slopes, potentially unstable ground, canyons and ravines should be left undisturbed as residential open space preserves.

*Residential Areas, Standard 2106c:* Residential development and related improvements should be permitted only where geologic stability meets the standards of the town for the specific uses.

*Public Facilities and Services Principle 3:*

4. All utility installations should be designed to minimize damage from identified geologic hazards.
8. Vegetative ground cover should be sustained to prevent storm water erosion. Unobstructed natural drainage channels should remain the principal storm drainage system, and riparian vegetation along their sides should be maintained in order to reduce erosion and bank failure and preserve habitat. Publicly owned drainage structures should be provided and maintained in accordance with the current Storm Drainage Plan of Portola Valley.

#### Conservation Element

*Soils and Geology Principle 1:* Zoning and other land use regulations should be used to limit, and in some cases prohibit, development in geologically hazardous areas. The degree of development limitation provided for in such

regulations should be commensurate with the degree of hazard involved and the public costs likely to be incurred if emergency or remedial public action becomes necessary in these areas.

### Portola Valley Municipal Code

Chapter 15.04 of the Municipal Code adopts and amends the 2019 (most recent) California Building Code.

Section 15.12.150 of the Municipal Code establishes grading standards including grading of slopes and cuts, placement of fill material, drainage, backfilling, compaction, setbacks, erosion control and landscaping, tilling for agriculture or fire protection, protection of significant trees, special precautions, driveway design and surfacing.

Section 17.48.020 of the Municipal Code requires that sewage disposal from subdivisions be by means of public sanitary sewer, unless the planning commission determines such method of disposal is not reasonably feasible, and finds alternative on-site sewage disposal by septic tanks and drainfields would not create risks or be inconsistent with policies, standards, public interest, and welfare as set forth in the Municipal Code.

Section 18.58.030 of the Municipal Code establishes special building setbacks along earthquake faults to minimize the potential loss of property and life resulting from differential movement along fault traces caused by tectonic forces. The town geologic map and Ground Movement Potential Map (Figure G-3) provide the basis for required fault setbacks. Two types of setbacks are established for buildings intended for human occupancy. One type is for setbacks along the San Andreas Fault. The boundaries of the "Pf zones" on the Ground Movement Potential Map constitute the required building setback lines along the San Andreas Fault for buildings for human occupancy. These setbacks are based on the following measurements taken at a right angle from the fault trace:

Where the location of the trace is "known", the boundary of the zone is set back from the trace 50 feet from the center line of the trace.

Where the location of the trace is "inferred", the boundary of the zone is set back 100 feet from the center line of the trace.

Where the trace is characterized as an "en-echelon" trace, the boundary of the zone is set back 100 feet from the center line of the trace.

The other type is for setbacks from faults other than the San Andreas. Construction of new buildings for human occupancy within 100 feet of such mapped fault traces must be supported by a site-specific geologic investigation that demonstrates to the satisfaction of the town geologist that the structure would not be underlain by the suspected fault. This investigation must include recommendations for specific geotechnical measures, including appropriate seismic design criteria and minimum setback requirements, to mitigate potential adverse impacts from the mapped fault trace and the estimated potential for some degree of displacement along the fault trace alignment.

When geologic studies acceptable to the planning commission demonstrate that delineations of the San Andreas Fault setback zones or the location of faults (other than the San Andreas) are incorrect, the planning commission may approve modifications to the Town's geologic map and/or the ground movement potential map.

### **Discussion**

The following discussion provides an evaluation and analysis of the potential impacts of development under the project related to geology and soils. The proposed policies and



implementation actions related to geology and soils in the Safety Element Update are very similar and functionally equivalent to previously existing policies in the General Plan. There is one proposed program related to geology and soils in the Housing Element Update, which is similar to, but more prescriptive than, a previously existing policy in the General Plan, which would further reduce the potential for impacts related to geology and soils. Therefore, no geology and soils related impacts from updating the policies or implementation measures of the General Plan would occur. The policies and implementation actions in the Safety Element Update and the program in the Housing Element Update that are related to geology and soils are discussed below.

*a) Directly or indirectly cause 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? Refer to Division of Mines and Geology Special Publication 42.*

**Less Than Significant.** As discussed above, two of the parcels listed in the Sites Inventory (Christ Church and The Sequoias) are located within the Alquist-Priolo Zone for the San Andreas Fault (Figure G-2) and are also intersected by the zone of potential primary surface rupture (Pf) shown on the Ground Movement Potential Map (Figure G-3). In accordance with the requirements of the Alquist-Priolo Earthquake Fault Zoning Act, site-specific fault investigation reports must be prepared prior to development of buildings for human occupancy on properties in the Alquist-Priolo Zone to evaluate the locations of faults and appropriate setbacks for structures (if a fault is identified). In accordance with the Municipal Code, construction of any new buildings intended for human occupancy on these parcels would be required to be outside of the Pf setback zones shown on the Ground Movement Potential Map or would require geologic studies acceptable to the planning commission to demonstrate that the Town's setback zones should be modified. The Safety Element Update includes the following policies and implementation actions related to potential fault rupture:

*Policy P-1:* Consider all faults shown on the Town's Geologic Map and Ground Movement Potential Map, adopted by Resolution 2746-2017 during the review of development applications. Required setbacks for buildings for human occupancy illustrated on the Ground Movement Potential Map (Figure 3) should be adhered to and reflected in the Town's zoning ordinance.

*Policy P-2:* At a minimum, new habitable structures shall be designed and built per the most recent California Building Code.

*Policy P-3:* Qualifying subdivisions, including structures for human occupancy and other critical structures within an Earthquake Fault Zone shown on current maps published by the California Geological Survey,<sup>36</sup> should prepare

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<sup>36</sup> Division of Mines and Geology (now California Geological Survey), Fault-Rupture Hazard Zones in California, Alquist-

a site-specific fault investigation report by a certified engineering geologist for Town review and approval. Also, any proposed new living space within a fault setback (consistent with the Pf Zone illustrated on the Town Movement Potential Map) should be supported by a fault investigation. The corresponding report should contain at a minimum the results of subsurface investigations, locations of hazardous faults adjacent to the project site, recommended setback distances of proposed structures from hazardous faults, and additional recommended measures to accommodate warping and distributive deformation associated with faulting (e.g., strengthened foundations, engineering design, flexible utility connections). The recommendations should be incorporated into project design plans.

*Implementation Action A-3-1:* Design and construct new Town and utility infrastructure (either public or private) that cross active fault traces in a manner which recognizes the hazard of fault movement. Such designs should consider that there is a possibility of up to a 20-foot right-lateral displacement on the Woodside and Trancos traces of the San Andreas Fault.

*Implementation Action A-3-2:* Equip water, gas, and electric lines that cross active fault traces with shut-off devices and flexibility which utilize the best available technology for quick shutoff consistent with providing reliable service.

*Implementation Action A-3-3:* Develop a Utilities Resilience Program that examines all existing utility lines that cross active fault traces to determine their ability to survive fault movement and the necessary modifications if they are unable to accommodate fault movement.

*Implementation Action A-3-4:* Encourage utility companies to institute an orderly program for installing shutoff devices on these lines, starting with the lines that cross the Woodside and Trancos traces and those which serve the most people.

*Implementation Action A-3-5:* In consultation with Cal Water and WFPD, establish and maintain adequate emergency water supplies in areas served by water lines that cross active fault traces.

*Policy P-4:* Require above ground crossing of utility lines where it has been determined that continued service and safety cannot be assured for subsurface lines.

*Policy P-5:* Consider fault traces identified as "Fault other than the San Andreas" in the review of applications for the construction of buildings for human occupancy, site development, land divisions and subdivisions. Require the appropriate geological investigation/report of relevant fault locations and characteristics of proposed development areas before approval of a new development application.

The Housing Element Update includes the following program related to fault zones:

*Program 1-3:* Create a new voluntary upzoning program that allows property owners with sites one acre or greater to develop up to four dwelling units per acre, assuming they meet the following safety criteria:

- Accessible to two ways of ingress and egress.
- Located on a slope less than 30%.
- Outside of a very high fire hazard severity zone.
- Outside of a fault zone.

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Priolo Earthquake Fault Zoning Act with Index to Earthquake Fault Zone's Maps (name changed from Special Studies Zones January 1, 1994), Special Publication 42, Revised 1997, Supplements 1 and 2 added in 1999

- Outside of areas identified with unstable soils or at risk of landslide or liquefaction.

Interested property owners would be required to go before Planning Commission to demonstrate all safety criteria would be met. Subsequently, the Architectural Site Control Commission (ASCC) would review the planning application for compliance with a set of objective design standards.

Compliance with the Alquist-Priolo Earthquake Fault Zoning Act and Municipal Code and implementation of the policies and implementation measures of the Safety Element Update would ensure that proposed development near active faults would only be permitted if site-specific geotechnical investigations are performed to evaluate the geologic hazards and implementation of geotechnical recommendations would mitigate the geologic hazards. Implementation of Program 1-3 of the Housing Element Update would ensure that the proposed new voluntary upzoning program would not result in construction of additional housing units within fault zones.

Potential structural damage and the exposure of people to the risk of injury or death from structural failure due to fault rupture would be further minimized by compliance with engineering design and construction measures of the California Building Code, as required by the Municipal Code and Policy P-2 of the Safety Element Update. Implementation of the policies and implementation measures of the Safety Element Update would also ensure that utilities crossing fault traces are designed and constructed to account for potential fault movement. Therefore, compliance with existing regulations and the Municipal Code and implementation of the policies and implementation measures of the Safety Element Update would ensure that potential impacts related to fault rupture would be less than significant.

ii. *Strong seismic ground shaking?*

**Less Than Significant.** Development under the project would increase the amount and density of residential land uses in the planning area. The intensification of land uses would increase the number of people and structures that could be directly or indirectly affected by seismic ground shaking. Based on regional mapping, developments within the planning area would be potentially subject to damage from seismic ground shaking. During a major earthquake on a regional fault, strong to violent ground shaking could occur in the planning area.<sup>37</sup>

The risk to structures and improvements from seismic ground shaking is reduced through adherence to the design and materials standards set forth in the California Building Code, as required by the Municipal Code. The Safety Element Update includes the following proposed policies and implementation actions related to seismic ground shaking:

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<sup>37</sup> Association of Bay Area Governments (ABAG), 2022. Hazard Viewer Map, Available at: <https://mtc.maps.arcgis.com/apps/webappviewer/index.html?id=4a6f3f1259df42eab29b35dfcd086fc8>, accessed September 21, 2022.

*Policy P-6:* Require that all essential (critical) buildings (facilities) be designed and constructed to meet or exceed the current California Building Code requirements.

*Implementation Action A-6-1:* Review the structural integrity of all essential services buildings in the town, and strengthen, remove, or replace those that are found to be unable to meet policy P-6 above.

*Policy P-7:* Require that new developments/projects be built to the latest siting, design, and construction standards that promote structural integrity and functionality after a seismic event.

*Implementation Action A-7-1:* Periodically review methods to enhance current siting, design, and construction standards for ensuring post seismic event structural integrity and functionality. Update Town requirements accordingly.

*Policy P-8:* Encourage seismic retrofits for existing homes within the Town. Consistent with the current California Building Code and recommendations from the California Earthquake Authority.

*Implementation Action A-8-1:* Identify funding opportunities to assist homeowners with seismic retrofit improvements.

*Policy P-9:* Review State building code updates and make any necessary local amendments to address local geologic, topographic or climatic conditions.

Compliance with the California Building Code and implementation of the policies and implementation measures of the Draft Safety Element would ensure that potential impacts related to seismic ground shaking would be less than significant.

*iii. Seismic-related ground failure, including liquefaction?*

**Less Than Significant.** Development under the project would increase the amount and density of residential land uses in the planning area. The intensification of land uses would increase the number of people and structures that could be directly or indirectly affected by seismic related ground failure including liquefaction, lateral spreading, and seismic settlement. Seismic related ground failure can result in damage to structures and other improvements (e.g., roadways and utilities) due to settlement, differential settlement, and lateral displacement.

Areas near several creeks within the planning area have been mapped by CGS as liquefaction hazard zones,<sup>38</sup> as shown on Figure G-5. Areas that may be susceptible to lateral spreading in the planning area include areas where liquefaction hazard zones are located near creeks, drainage channels, embankments, retaining walls, or other free face. Five of the housing sites (Christ Church, The Sequoias, Glen Oaks, Vacant Portion of Ford Field, and Ladera Church) are intersected by liquefaction hazard zones, as shown on Figure G-5. These parcels could also be subject to lateral spreading as they are located near creeks. All of the parcels listed in the Sites

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<sup>38</sup> California Geological Survey (CGS), 2022. Earthquake Zones of Required Investigation, Available at: <https://maps.conservation.ca.gov/cgs/EQZApp/app/>, accessed September 21, 2022.

Inventory include areas mapped as unconsolidated granular material subject to settlement as shown on Figure G-3.

Site-specific geotechnical reports are required by the Seismic Hazards Mapping Act for any structures that would be located in Seismic Hazards Zones mapped by CGS, including liquefaction hazard zones (which would include areas susceptible to lateral spreading). Prior to development within CGS mapped Seismic Hazard Zones, the developer must perform a site-specific geotechnical evaluation of seismic hazards which must include recommendations to mitigate the seismic hazards in accordance with the guidelines of CGS Special Publication 117A.<sup>39</sup>

The risk to structures and improvements from seismic related ground failure is reduced through adherence to the design and materials standards set forth in the California Building Code and recommendations in site-specific geotechnical reports. The Safety Element Update includes the following policies and implementation actions related to liquefaction and settlement:

*Policy P-17:* Address areas of potential settlement within the Town as part of the development process.

*Implementation Action A-17-1:* Regularly update the Town's Geologic Map that identifies geologic deposits prone to ground settlement.

*Implementation Action A-17-2:* Require geologic investigations for sites identified with or suspected to contain settlement-prone geologic units.

*Policy P-18:* Require liquefaction assessment studies for all development projects proposed in areas identified as potentially susceptible to liquefaction, ensuring compliance with current state code.

*Implementation Action A-18-1:* Require that all new developments/projects must prepare and comply with a Design-Level Geotechnical Investigation Report prepared by a Certified Engineering Geologist, Geotechnical Engineer, or qualified Civil Engineer and with Structural Design Plans as prepared by a Registered Structural Engineer.

Implementation of Program 1-3 of the Housing Element Update would ensure that the proposed new voluntary upzoning program would not results in construction of additional housing units within area that may be subject to liquefaction. Compliance with the Seismic Hazards Mapping Act, California Building Code, and implementation of the policies and implementation measures of the Safety Element Update would ensure that potential seismic-related ground failure impacts, including liquefaction, lateral spreading, and seismic settlement, would be less than significant.

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<sup>39</sup> California Geological Survey, 2008. Special Publication 117A, Guidelines for Evaluating and Mitigating Seismic Hazards in California, Revised and Re-adopted September 11.

iv. *Landslides?*

**Less Than Significant.** Much the western and southern portions of the planning area and some areas in the eastern and northeastern portions of the planning area have been mapped by CGS as seismically induced landslide hazard zones,<sup>40</sup> as shown on Figure G-4. One of the housing sites y (The Sequoias) is intersected by landslide hazard zones. These two parcels contain areas of relatively small active landslides and larger inactive landslides with significant potential for downslope movement as shown on Figure G-3. Development in areas susceptible to landslides can present potential risks as structures and other improvements could be damaged by landslides. Development in areas susceptible to landslides can also exacerbate the risk of landslides occurring as grading and excavation activities can potentially destabilize existing slopes.

The risks associated with development in areas susceptible to landslides are reduced through adherence to recommendations in site-specific geotechnical reports. Site-specific geotechnical reports must be prepared for proposed developments as discussed under *Ground Shaking and Seismic-Related Ground Failure* above. This would include preparation of a site-specific geotechnical evaluation of landslide hazards which must include recommendations to mitigate the landslide hazards in accordance with the guidelines of CGS Special Publication 117A.<sup>41</sup> The Safety Element Update includes the following proposed policies and implementation actions related to landslides:

*Policy P-10:* Review all proposed developments with respect to the "Geologic Map" and "Ground Movement Potential Map" of the town. Require geologic and soil reports, when deemed necessary by the town geologist, to determine landslide risk/potential for developments.

*Policy P-11:* Require geologic and soil reports for all new development in areas of identified landslides or other zones of geologic hazard susceptibility, or when deemed necessary by the town geologist.

*Implementation Action A-11-1:* Continue to file, reference, and index geologic/geotechnical mapping and data within the Town's Geographic Information System.

*Implementation Action A-11-2:* Require that all geotechnical investigations within the Town be prepared by a Geotechnical Engineer, Civil Engineer with geotechnical expertise, or Certified Engineering Geologist and be peer-reviewed by the Town's on-call geotechnical consultant.

*Policy P-12:* Locate structures for human habitation and most public utilities so as to minimize disturbances from potential landslides. Give due consideration to mitigating measures, based on geologic and other reports acceptable to the Town, that can be taken to reduce the risk from seismic and non-seismic hazards to an acceptable level (as defined in Table 3 below and related text).

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<sup>40</sup> California Geological Survey (CGS), 2022. Earthquake Zones of Required Investigation, Available at: <https://maps.conservation.ca.gov/cgs/EQZApp/app/>, accessed September 21, 2022.

<sup>41</sup> California Geological Survey, 2008. Special Publication 117A, Guidelines for Evaluating and Mitigating Seismic Hazards in California, Revised and Re-adopted September 11.

*Policy P-13:* Where roads or utility lines are proposed to cross landslide areas for reasons of convenience or necessity, they should be permitted only if special design and construction techniques can be employed to assure that acceptable risk levels will be met.

*Policy P-14:* Maintain policies and regulations that correlate the various land uses permitted by the zoning ordinance with the several categories of landslides shown on the Ground Movement Potential Map which will help assure that any failures of ground due to landslides will not endanger public or private property beyond levels of acceptable risk defined in this element.

*Policy P-15:* Restrict development projects that will cause hazardous geologic conditions or expose existing developments to an unacceptable level of risk until the causative factors are mitigated.

*Policy P-16:* When considering development in areas that contain unstable ground, it is preferable to develop on those areas of natural stable terrain and thereby avoid the potential negative environmental impacts from engineered solutions.

Implementation of Program 1-3 of the Housing Element Update would ensure that the proposed new voluntary upzoning program would not result in construction of additional housing units within areas susceptible to landslides. Compliance with the Seismic Hazards Mapping Act and implementation of the proposed policies and implementation measures of the Safety Element Update would ensure that potential impacts related to landslides and slope stability would be less than significant.

*b) Result in substantial soil erosion or the loss of topsoil?*

**Less Than Significant.** Soil erosion, which is discussed in detail in *Section J, Hydrology and Water Quality*, could occur during grading and construction of developments under the project. As described in *Section J*, compliance with the State Water Resources Control Board's Construction General Permit, including the preparation and implementation of Stormwater Pollution Prevention Plans, would ensure that developments that would disturb 1-acre or more of land would result in less-than-significant impacts related to erosion or loss of topsoil during construction. The Town implements a construction site inspection and control program in accordance with Provision C.6 of the Municipal Regional Permit (MRP), as discussed in detail in *Section J, Hydrology and Water Quality*, which enforces implementation of erosion control measures at all construction sites, including those that are smaller than 1-acre. The Municipal Code establishes grading standards including grading requirements for erosion control, and the Draft Safety Element includes the following proposed policies and implementation actions related to erosion:

*Policy P-31:* Maintain natural slopes and preserve existing vegetation, especially in hillside areas.

*Implementation Action A-31-1:* When change in natural grade or removal of existing vegetation is required, employ remedial measures to provide appropriate vegetative cover to control storm water runoff.

*Implementation Action A-31-2:* Give special attention to minimizing erosion problems resulting from the keeping of animals. In specific applications, these policies will be tempered by the need for fire safety.

*Policy P-32:* Enforce hillside protection measures that control runoff and erosion.

*Policy P-33:* Require drought-resistant vegetation with deep root systems where appropriate in new developments and major remodels to reduce over-irrigation in areas of the Town prone to slope instability.

*Policy P-34:* Continue to administer the provisions of the subdivision ordinance concerning landscaping and erosion control and the provisions of the site development ordinance concerning grading, giving special attention to the protective measures that are appropriate prior to the advent of seasonal rains.

During operation of developments under the project, the developments would be covered with buildings, paved surfaces, and landscaping, which would minimize the potential for post-development erosion. Therefore, compliance with the Construction General Permit, MRP, and Municipal Code and implementation of the policies and implementation measures of the Safety Element Update would ensure that potential impacts related to erosion or loss of topsoil would be less than significant.

*c) 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?*

**Less Than Significant.** Potential impacts related to unstable soil including landslides, liquefaction, lateral spreading, and seismic settlement would be less than significant as discussed above. Other unstable soil conditions can include loose, unconsolidated soils and clays that can undergo settlement under new loads such as fill material or structures. Such soils are often present in marshy areas or near the margins of bays, rivers, and creeks where silts, clay, and alluvial deposits occur in saturated environments. Undocumented fill materials (e.g., fill materials from unknown sources that may have been placed without appropriate compaction) may also be unstable and experience settlement under new loads. Settlement and differential settlement of unstable soil can cause significant damage to buildings and other improvements over time.

The risks associated with development in areas of unstable soil are reduced through adherence to the design and materials standards set forth in the California Building Code and adherence to recommendations in site-specific geotechnical reports and soils reports. Site-specific geotechnical reports must be prepared for proposed developments in areas that may be subject to settlement as described above.

Subsidence or collapse can result from the removal of subsurface water resulting in either catastrophic or gradual depression of the ground surface elevation. The primary hazards associated with subsidence are increased flooding hazards and damage to underground utilities as well as above-ground structures. If construction-related dewatering would be required during development under the project, it would be temporary, limited to shallow groundwater, and localized in the areas of future developments; therefore, construction dewatering would not result in land subsidence or collapse. The Town receives its municipal water supply from the California Water Service Company (Cal Water) Bear Gulch District. Cal Water does not operate



any groundwater wells to supply water for Bear Gulch District. All of the water supply is obtained from surface water sources.<sup>42</sup> Therefore development under the project would not lead to an increase in groundwater pumping that could result in subsidence or collapse of unstable soil.

Implementation of Program 1-3 of the Housing Element Update would ensure that the proposed new voluntary upzoning program would not result in construction of additional housing units within areas of unstable soil. Implementation of the policies and implementation measures of the Draft Safety Element would ensure that potential impacts related to settlement, subsidence, or collapse of unstable would be less than significant.

*d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?*

**Less Than Significant.** Expansive soils may be present in areas where the clay content of soil or bedrock formations is high. One parcel listed in the Sites Inventory (The Sequoias) is mapped as having potentially expansive soils as shown on Figure G-3. Damage to buildings and infrastructure can occur if potentially expansive soils are not considered in project design and during construction. The Safety Element Update includes the following policies related to expansive soils:

*Policy P-35:* In areas where information available to town officials indicates the probability of expansive soils or soil creep, soils reports should be submitted in connection with all applications for development. In those instances where expansive or creep-prone soils are reported, measures necessary to mitigate the probable effects of this hazard should be required.

*Policy P-36:* Subdivisions, structures, or other developments must prepare and comply with a Design-Level Geotechnical Investigation Report prepared by a Certified Engineering Geologist, Geotechnical Engineer, or Qualified Civil Engineer and with Structural Design Plans as prepared by a Registered Structural Engineer. The report should consider field test results and observations regarding the nature, distribution, and strength of existing soils, and provide recommendations for appropriate grading practices and project design. The recommendations should be incorporated into project design plans.

Development under the project in accordance with recommendations from site-specific geotechnical investigations that would be prepared as required by the California Building Code, Seismic Hazards Mapping Act, and Municipal Code; and implementation of the policies and implementation measures of the Safety Element Update would ensure that potential impacts related to expansive soil would be less than significant.

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<sup>42</sup> California Water Service, 2021. 2020 Urban Water Management Plan, Bear Gulch District, June.

*e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?*

**Less Than Significant.** Development under the project would generally occur in areas where developments would be able to tie into existing wastewater sewer systems. As discussed above under *Regulatory Setting*, the Municipal Code establishes standards for connecting to the public sanitary sewer system or installing and operating individual on-site sewage disposal systems. Connecting to the public sanitary sewer system is required for all developments where it is feasible. If installation and operation of individual on-site sewage disposal systems (i.e., septic system) is the only feasible option for a development site, then the septic system must be consistent with the standards of the California Regional Water Quality Board as identified and enforced by the San Mateo County Environmental Health. Septic systems are the only approved alternative wastewater disposal systems in San Mateo County.<sup>43</sup> Compliance with the San Mateo County Environmental Health requirements for installation of septic systems would ensure that use of septic systems would only occur on sites that have soils capable of adequately supporting their use. Therefore, potential impacts related to the use of septic tanks or alternative wastewater disposal for development under the project would be less than significant.

*f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?*

**Less than Significant with Mitigation Incorporated.** Unique geologic features have not been identified in the planning area. As described under *Affect Environment* above, many fossil localities have been identified within San Mateo County, including several localities potentially located within or near the planning Area. Development under the project would involve excavation and grading that could encounter and damage unique paleontological resource if appropriate precautions are not taken. The potential for destruction of paleontological resources during development under the project is a potentially significant impact. Implementation of the following mitigation measure would reduce this impact to a less-than-significant level.

**Mitigation Measure GEO-1: Paleontological Resources During Construction.** Should any paleontological resources be encountered during construction activities, all ground-disturbing activities within 50 feet of the find shall be stopped, the Town shall be notified by the applicant, and a qualified paleontologist shall be contacted and retained to assess the situation per Society of Vertebrate Paleontology standards. The qualified paleontologist shall consult with agencies, as appropriate, and make recommendations for the treatment of the discovery if found to be significant. If construction activities cannot avoid the paleontological resources, adverse effects to paleontological resources shall be mitigated. Mitigation may include monitoring, recording the fossil locality, data recovery and analysis, preparation of a technical report, and providing the fossil material and technical report to a paleontological

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<sup>43</sup> San Mateo County Environmental Health, 2022. Land Use, Septic Systems & Water Wells, Available at: <https://www.smchealth.org/landuse>, accessed October 4, 2022.

repository, such as the University of California Museum of Paleontology. Public educational outreach may also be appropriate. Upon completion of the assessment, a report documenting methods, findings, and recommendations shall be prepared and submitted to the Town for review.

Implementation of Mitigation Measure GEO-1 would ensure that development under the project would result in less-than-significant impacts to paleontological resources.

## H. GREENHOUSE GAS EMISSIONS

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### Affected Environment

Climate change refers to change in the Earth's weather patterns, including the rise in temperature due to an increase in heat-trapping greenhouse gases (GHGs) in the atmosphere. Existing GHGs allow about two-thirds of the visible and ultraviolet light from the sun to pass through the atmosphere and be absorbed by the Earth's surface. To balance the absorbed incoming energy, the surface radiates thermal energy back to space at longer wavelengths primarily in the infrared part of the spectrum. Much of the thermal radiation emitted from the surface is absorbed by the GHGs in the atmosphere and is re-radiated in all directions. Since part of the re-radiation is back toward the surface and the lower atmosphere, the global surface temperatures are elevated above what they would be in the absence of GHGs. This process of trapping heat in the lower atmosphere is known as the greenhouse effect.

An increase of GHGs in the atmosphere affects the energy balance of the Earth and results in a global warming trend. Increases in global average temperatures have been observed since the mid-20th century and have been linked to observed increases in GHG emissions from anthropogenic sources. The primary GHG emissions of concern are carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), and nitrous oxide (N<sub>2</sub>O). Other GHGs of concern include hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF<sub>6</sub>), but their contribution to climate change is less than 1 percent of the total GHGs that are well-mixed (i.e., that have atmospheric lifetimes long enough to be homogeneously mixed in the troposphere).<sup>44</sup> Each GHG has a different global warming potential. For instance, CH<sub>4</sub> traps about 28 times more heat per molecule than CO<sub>2</sub>.<sup>45</sup> As a result, emissions of GHGs are reported in metric tons of carbon dioxide equivalents (CO<sub>2</sub>e), wherein each GHG is weighted by its global warming potential relative to CO<sub>2</sub>.

<sup>44</sup> Intergovernmental Panel on Climate Change (IPCC), 2013. Climate Change 2013; the Physical Science Basis; Working Group I Contribution to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change.

<sup>45</sup> Intergovernmental Panel on Climate Change (IPCC), 2014. AR5 Synthesis Report: Climate Change 2014.

According to the Bay Area Air Quality Management District (BAAQMD), some of the potential effects of increased GHG emissions and associated climate change may include loss of snowpack (affecting water supply), more frequent extreme weather events, more large forest fires, more drought years, and sea level rise. In addition, climate change may increase electricity demand for cooling, decrease the availability of hydroelectric power, and affect regional air quality and public health.<sup>46</sup>

In 2019, the California Air Resources Board (CARB) estimated that transportation was responsible for about 40 percent of California's GHG emissions, followed by industrial sources and electrical power generation at about 21 percent and 14 percent, respectively.<sup>47</sup> In 2015, 85 million metric tons of CO<sub>2</sub>e was emitted from anthropogenic sources within the San Francisco Bay Area Air Basin (SFBAAB). Emissions of CO<sub>2</sub> dominate the GHG inventory in the SFBAAB, accounting for about 90 percent of the total CO<sub>2</sub>e emissions reported.<sup>48</sup> The 2015 GHG emissions in the SFBAAB are summarized in Table H-1.

Portola Valley's GHG emissions inventory can be accessed through the San Mateo County Performance Portal. Figure H-1 shows the Town's GHG inventories from energy use, transportation, water use, wastewater treatment, and solid waste production for the years 2010 to 2015. From 2010 to 2015, the Town's overall GHG emissions were reduced by 22 percent with the largest reductions observed in the transportation and energy use sectors.

**TABLE H-1 SAN FRANCISCO BAY AREA 2015 GHG EMISSIONS INVENTORY**

<b>Pollutant</b>	<b>Percent</b>	<b>CO<sub>2</sub>e (MMT/Year)</b>
CO <sub>2</sub>	90	76.5
CH <sub>4</sub>	4	3.4
N <sub>2</sub> O	2	1.7
HFC, PFC, SF <sub>6</sub>	4	3.4
<b>Total</b>	<b>100</b>	<b>85</b>

Note: MMT = million metric tons

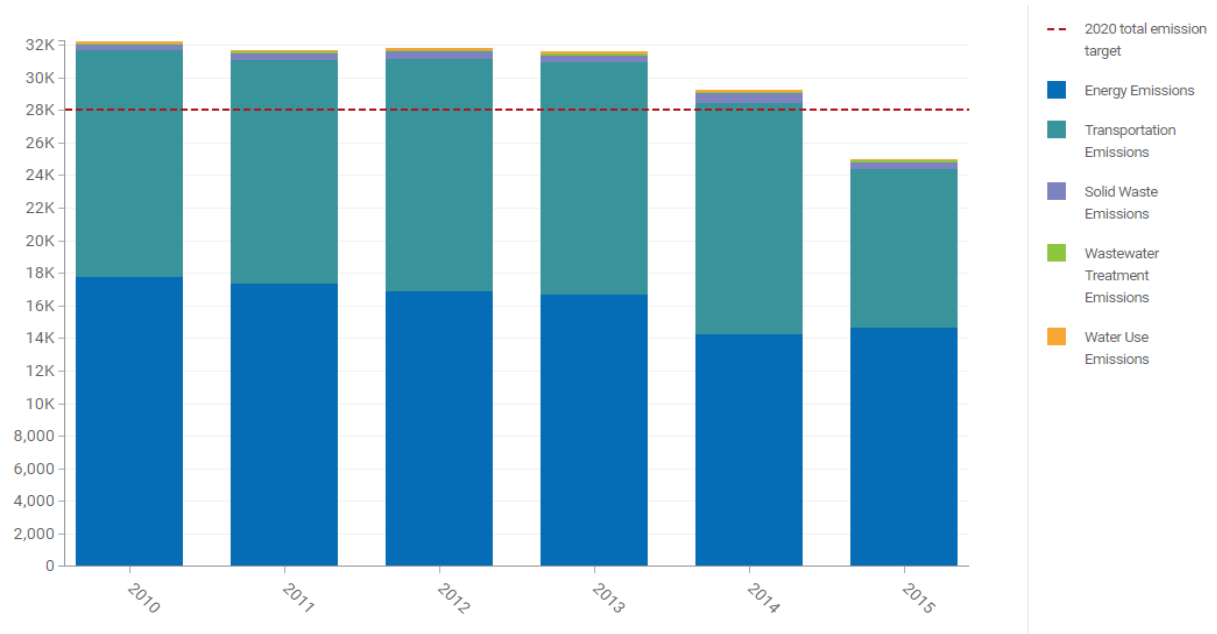
Source: Bay Area Air Quality Management District (BAAQMD), 2017. Final 2017 Clean Air Plan. April 19.

<sup>46</sup> Bay Area Air Quality Management District (BAAQMD), 2017. Final 2017 Clean Air Plan. April 19.

<sup>47</sup> California Air Resources Board (CARB), 2021. California Greenhouse Gas Emissions for 2000 to 2019— Trends of Emissions and Other Indicators. July 28.

<sup>48</sup> Bay Area Air Quality Management District (BAAQMD), 2017. Final 2017 Clean Air Plan. April 19.

**Figure H-1 Portola Valley GHG Emissions Trend**



Source: San Mateo County, 2022. San Mateo County Performance Portal, Portola Valley, Greenhouse Gas Emissions Overview, Available at: <https://performance.smcgov.org/stories/s/Portola-Valley-Climate-Planning/8e93-bvi7/>, accessed September 19, 2022.

## Regulatory Setting

### Federal

#### Federal Climate Action Goals

The United States (U.S.) participates in the United Nations Framework Convention on Climate Change. In 1998, the U.S. signed the Kyoto Protocol, which would have required reductions in GHGs; however, the protocol did not become binding in the U.S. as it was never ratified by Congress. Instead, the federal government chose voluntary and incentive-based programs to reduce emissions and has established programs to promote climate technology and science. In 2002, the U.S. announced a strategy to reduce the GHG intensity of the American economy by 18 percent over a 10-year period from 2002 to 2012. In 2015, the U.S. submitted its “intended nationally determined contribution” to the framework convention, which targets to cut net GHG emissions by 26 to 28 percent below 2005 levels by 2025.

The U.S. Environmental Protection Agency (EPA) is responsible for enforcing the federal Clean Air Act and the 1990 amendments to it. On April 2, 2007, the U.S. Supreme Court ruled that CO<sub>2</sub> is an air pollutant as defined under the Clean Air Act, and that the EPA has the authority to

regulate emissions of GHGs.<sup>49</sup> The EPA made two distinct findings regarding GHGs under Section 202(a) of the Clean Air Act, as follows:

- **Endangerment Finding:** The current and projected concentrations of the six key well-mixed GHGs (CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, HFCs, PFCs, and SF<sub>6</sub>) in the atmosphere threaten the public health and welfare of current and future generations.
- **Cause or Contribute Finding:** The combined emissions of these well-mixed GHGs from new motor vehicles and new motor vehicle engines contribute to the GHG pollution that threatens public health and welfare.

These findings do not themselves impose any requirements on industry or other entities. However, they were a prerequisite for implementing GHG emissions standards for vehicles.

#### Federal Vehicle Emission Regulations

The EPA has established national GHG emission and fuel economy regulations for vehicles that would achieve substantial GHG emissions reductions along with reductions in other criteria pollutants. Some of the key EPA regulations related to GHG emissions from vehicles are summarized below:

- In 2010, EPA in collaboration with the National Highway Traffic Safety Administration (NHTSA), finalized updated Corporate Average Fuel Economy (CAFE) and GHG emissions standards for light-duty vehicles for the model years 2012 to 2016.
- In 2012, EPA and NHTSA extended the CAFE and GHG emissions standards for light-duty vehicles for the model years 2017 to 2025. Combined with the 2012 to 2016 standards, the regulation will result in vehicles emitting 50 percent less than 2010 levels in 2025.
- In 2016, EPA and NHTSA finalized national GHG emission and fuel economy standards for medium- and heavy-duty vehicles that would cover model years 2018 to 2027 for certain trailers and model years 2021 to 2027 for semi-trucks, large pickup trucks, vans, and all types and sizes of buses and work trucks.
- In 2020, EPA and NHTSA finalized updated CAFE and GHG emissions standards for light-duty vehicles and established new standards, covering model years 2021 through 2026.
- In 2021, EPA revised the GHG emissions standards for light-duty vehicles for model years 2023 to 2026 to leverage advances in clean car technology.
- In 2022, NHSTA revised the CAFE standards for light-duty vehicles for model years 2024 to 2026, which are expected to result in average fuel economy label values of 49 miles per gallon.

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<sup>49</sup> Massachusetts, et al. v. U.S. Env'tl. Prot. Agency, et al. (2007) 549 U.S. 497.

### *State*

California has set ambitious GHG emission reduction targets for the next 30 years. As described below, the State has implemented a range of regulatory programs to help achieve statewide climate action goals.

#### California Climate Action Goals

California has established the following long-term climate action goals:

- **Assembly Bill (AB) 32:** Reduce GHG emissions to 1990 levels by 2020.
- **Senate Bill (SB) 32:** Reduce GHG emissions to 40 percent below 1990 levels by 2030.
- **Executive Order B-55-18:** Carbon neutrality as soon as possible, but no later than 2045.
- **Executive Order S-3-05:** Reduce GHG emissions to 80 percent below 1990 levels by 2050.

It should be noted that executive orders are legally binding only on State agencies and have no direct effect on local government or the private sector.

#### California Vehicle Emission Regulations

California has established statewide GHG emission and fuel economy regulations for vehicles that align with or supersede the national standards. The key State regulations related to GHG emissions from vehicles are summarized below:

- The Pavley Regulations (AB 1493), as amended in 2009, required a 30 percent reduction in state GHG emissions from new passenger vehicles from 2009 through 2016.
- The Advanced Clean Cars Program extends the Pavley Regulations beyond 2016 and established a technology mandate for zero-emission vehicles.
- The Low-Carbon Fuel Standard (Executive Order S-1-07), as amended in 2019, requires a 20 percent reduction in the carbon intensity of California's transportation fuels by 2030.
- SB 375 establishes regional GHG reduction targets from passenger vehicles for the years 2020 and 2035 by requiring metropolitan planning organizations (MPOs) to develop and implement Sustainable Communities Strategies that align regional transportation planning efforts with regional housing allocation needs.

#### California Energy Efficiency Regulations

California has established statewide energy efficiency regulations, including programs that increase the statewide procurement of renewable energy. The key State regulations related to GHG emissions from energy use are summarized below:



- The Renewable Portfolio Standard Program, as updated in 2018 (SB 100), requires the State to procure 60 percent of its electricity from renewable sources by 2030 and 100 percent from carbon-free sources by 2045.
- Title 24 Building Efficiency Standards are updated every three years with the long-term vision to support zero-net energy for all new single-family and low-rise residential buildings by 2020 and new high-rise residential and nonresidential buildings by 2030.
- Title 24 California Green Building Standards, referred to as the CALGreen Code, aim 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.

#### California Cap-and-Trade Program

The Cap-and-Trade Program is a key element of California's strategy to reduce GHG emissions from covered entities<sup>50</sup> that are responsible for about 85 percent of California's GHG emissions. The program establishes a declining limit on major sources of GHG emissions throughout California, and it creates a powerful economic incentive for significant investment in cleaner and more efficient technologies. CARB creates allowances equal to the total amount of permissible GHG emissions (i.e., the "cap"). Each year, fewer allowances are created and the annual cap declines. As a result, the annual auction reserve price for allowances increases which creates a steady and sustained carbon price signal to incentivize actions to reduce GHG emissions and enable a smooth transition to a cleaner economy.

#### California's Short-Lived Climate Pollutant Reduction Strategy

The Short-Lived Climate Pollutant (SLCP) Reduction Strategy is California's plan for reducing emissions of high global-warming potential gases with short atmospheric lifetimes.<sup>51</sup> SLCPs include methane, HFCs, and anthropogenic black carbon. In accordance with SB 1383, the SLCP Reduction Strategy has set the following targets for statewide reductions in SLCP emissions:

- 40 percent below 2013 levels by 2030 for methane and HFCs.
- 50 percent below 2013 levels by 2030 for anthropogenic black carbon.

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<sup>50</sup> The program's covered entities include electric power plants, fuel distributors (natural gas and petroleum), and large industrial facilities that emit more than 25,000 million tons of CO<sub>2</sub>e per year.

<sup>51</sup> California Air Resources Board (CARB), 2017. Short-Lived Climate Pollutant Reduction Strategy. March.

The SLCP Reduction Strategy also provides specific direction for reductions from dairy and livestock operations and from landfills by diverting organic materials.

#### California's Climate Change Scoping Plan

In December 2008, CARB adopted the Climate Change Scoping Plan to identify how the State can achieve its 2020 climate action goal under AB 32. In 2017, CARB updated the Scoping Plan to identify how the State can achieve its 2030 climate action goal under SB 32, and substantially advance toward its 2050 climate action goal under Executive Order S-3-05. The 2017 Scoping Plan includes the regulatory programs identified above, such as the Advanced Clean Cars Program, Low-Carbon Fuel Standard, Renewable Portfolio Standard Program, energy efficiency standards, SLCP Reduction Strategy, and Cap-and-Trade Program.<sup>52</sup>

#### *Local*

The BAAQMD is the regional government agency that regulates sources of GHG emissions within the SFBAAB. The BAAQMD established a climate protection program that includes measures that promote energy efficiency, reduce regional vehicle miles travelled (VMT), and develop alternative sources of energy, all of which assist in reducing emissions of GHGs and in reducing air pollutants that affect the health of residents. The BAAQMD also seeks to support current climate protection programs in the region and to stimulate additional efforts through public education and outreach, technical assistance to local governments and other interested parties, and promotion of collaborative efforts among stakeholders.

#### BAAQMD 2017 Clean Air Plan

The BAAQMD and other air districts prepare clean air plans in accordance with the State and federal Clean Air Acts. In April 2017, the BAAQMD adopted the 2017 Clean Air Plan: Spare the Air, Cool the Climate, which is a comprehensive plan to improve Bay Area air quality and protect public health through implementation of a control strategy designed to reduce emissions and ambient concentrations of harmful pollutants. The 2017 Clean Air Plan also includes measures designed to reduce GHG emissions and supports other important regional and state planning efforts, including the 2017 Scoping Plan.

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<sup>52</sup> California Air Resources Board (CARB), 2017. California's 2017 Climate Change Scoping Plan. November.

### Portola Valley Municipal Code

The Town has adopted and amended the following codes<sup>53</sup> related to GHG emissions and energy use of buildings for future projects:

- 2022 California Building Code;
- 2022 California Green Building Standards Code (CALGreen Code); and
- 2022 California Energy Code.

### General Plan

The General Plan contains the following goals, objectives, and policies related to energy in Portola Valley:

### Sustainability Element

Overarching goal 6: To reduce carbon emissions to 1990 levels by the year 2020 and to 80 percent below 1990 levels by the year 2050.

Goal: *New Buildings* - Encourage, and where feasible, require new buildings to adhere to “green” building design standards.

Goal: *Transportation* - Provide for transportation needs by methods that reduce greenhouse gas emissions.

## **Discussion**

This section analyzes environmental impacts related to GHG emissions that could result from implementation of the project. The project does not include any new policies related to GHG emissions; therefore, no GHG related impacts from updating the policies would occur.

The following impact analysis related to residential development that could occur under the proposed project is performed in accordance with guidance from the BAAQMD. On April 20, 2022, the BAAQMD adopted updated CEQA thresholds of significance for determining whether a proposed project would have a significant impact related to GHG emissions.<sup>54</sup> Climate change is not caused by any individual emissions source but by a large number of sources around the world emitting GHGs that collectively create a significant cumulative impact. CEQA requires agencies in California to analyze such impacts by evaluating whether a proposed project would make a “cumulatively considerable” contribution to the significant cumulative impact on climate change.

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<sup>53</sup> Town of Portola Valley, 2022. Staff Report: Conduct Second Reading and Adopt a Proposed Ordinance Amending Chapter 15.04 [Building Codes] of Title 15 [Building and Construction] of the Portola Valley Municipal Code to Adopt the 2022 California Building Standards Code with Local Amendments. October 26.

<sup>54</sup> Bay Area Air Quality Management District (BAAQMD), 2022. Justification Report: CEQA Thresholds for Evaluating the Significance of Climate Impacts from Land Use Projects and Plans. April.

The BAAQMD's updated GHG thresholds of significance are intended to assist public agencies in determining whether proposed projects would make a cumulatively considerable contribution to global climate change, as required by CEQA.

For communitywide planning documents (e.g., general plans), BAAQMD recommends that local governments evaluate such plans based on whether they will be consistent with the State's long-term climate action goals. The BAAQMD strongly recommends that local governments adopt qualified climate action plans to document specific strategies and implementation measures to achieve the statewide climate action goals. The BAAQMD recommends that local governments demonstrate compliance with at least one of the plan-level thresholds for GHG emissions summarized in Table H-2, below. A proposed plan that meets at least one of these thresholds will support the State's ability to achieve its climate goals and thus will have a less-than-significant impact on GHG emissions. Since Portola Valley does not have a qualified climate action plan, the project needs to meet Option A in Table H-2 below to be considered to have a less-than-significant impact on GHG emissions.

**TABLE H-2 BAAQMD'S GHG THRESHOLDS OF SIGNIFICANCE FOR PLANS (MUST INCLUDE A OR B)**

Option	Threshold
A	Meet the State's goals to reduce emissions to 40 percent below 1990 levels by 2030 and carbon neutrality by 2045.
B	Be consistent with a local GHG reduction strategy that meets the criteria under State CEQA Guidelines Section 15183.5(b).

Source: Bay Area Air Quality Management District (BAAQMD), 2022. Justification Report: CEQA Thresholds for Evaluating the Significance of Climate Impacts from Land Use Projects and Plans. April.

*a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?*

**Less than Significant with Mitigation Incorporated.** The Town has not developed a qualified climate action plan. Although the General Plan Sustainability Element set non-specific GHG emission reduction goals or objectives, it does not provide enforceable programs or measures to facilitate meeting the State's long-term GHG reduction goals. In the absence of a local qualified climate action plan, the BAAQMD recommends that individual projects demonstrate compliance, if feasible, with the following design elements<sup>55</sup> to support the State's long-term GHG reduction goals:

1. The project will not include natural gas appliances or natural gas plumbing.

<sup>55</sup> Bay Area Air Quality Management District (BAAQMD), 2022. Justification Report: CEQA Thresholds for Evaluating the Significance of Climate Impacts from Land Use Projects and Plans. April.

2. The project will not result in any wasteful, inefficient, or unnecessary energy usage as determined by the analysis required under CEQA Section 21100(b)(3) and Section 15126.2(b) of the State CEQA Guidelines.
3. The project will achieve a 15 percent reduction in project-generated vehicle miles travelled (VMT) below the regional average consistent with the current version of the California Climate Change Scoping Plan or meet a locally adopted Senate Bill 743 VMT target, reflecting the recommendations provided in the Governor's Office of Planning and Research's Technical Advisory on Evaluating Transportation Impacts in CEQA.
4. Achieve compliance with off-street electric vehicle (EV) requirements in the most recently adopted version of CALGreen Tier 2.

The Town Building Code Section 4.106.5.1 requires newly constructed buildings and gas-fired outdoor amenities (such as outdoor kitchens, grills, pools, spas, fireplaces, firepits and outdoor heaters) be constructed as all-electric buildings. An all-electric building is a building that has no natural gas or propane plumbing installed within the building. Thus, future development under the project would be energy efficient and meet the BAAQMD's recommendations for no natural gas appliances or plumbing and no wasteful or inefficient energy use (criteria 1 and 2, above).

Significant VMT reductions are more difficult for small, rural towns such as Portola Valley where there is no major public transit and little commercial development. As a result, achieving a 15 percent reduction in project-generated VMT may not be feasible. According to the VMT analysis in *Section Q Transportation*, the project will decrease the VMT per service population by approximately two percent, which is a less-than-significant impact. Instead, the Town has emphasized other strategies for effectively reducing GHG emissions in town.

The Town Building Code (Section 4.106.4.1) requires that all new one- and two-family dwellings and townhomes have an EV ready space supplied by a minimum 40-ampere 208/240 branch circuit, which meets the CALGreen Tier 2 EV requirements. The Town Building Code does not require new multifamily development projects or mixed-used developments to meet the CALGreen Tier 2 EV requirements. Therefore, the project could result in a potentially significant impact on the environment from a cumulatively considerable increase in GHG emissions from non-electric vehicles (criterion 4, above). Implementation of the following mitigation measure would reduce GHG emissions from future developments.

**Mitigation Measure GHG-1: Off-Street Electric Vehicle Requirements:** All developments shall demonstrate compliance with the off-street electric vehicle (EV) requirements in the most recently adopted version of CALGreen Tier 2 prior to the Town of Portola Valley issuing building occupancy permits. Alternatively, developments shall demonstrate consistency with a climate action plan adopted by the Town of Portola Valley that meets the criteria under State CEQA Guidelines Section 15183.5(b) and identifies community-wide measures that can

be implemented to achieve the statewide GHG emissions targets of 40 percent below 1990 levels by 2030 and support the State's goal of achieving carbon neutrality by 2045.

Implementation of Mitigation Measure GHG-1 would comply with the BAAQMD's recommended plan-level thresholds of significance and the project would have a less-than-significant impact on the environment related to GHG emissions.

*b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?*

**Less than Significant with Mitigation Incorporated.** The 2017 Climate Change Scoping Plan identifies numerous regulations and programs the State will use to achieve its 2030 climate action goal, and substantially advance toward its 2050 climate action goal. The Sustainability Element of the Portola Valley General Plan includes policies to encourage energy conservation and green building practices. As discussed above, the Town does not have a qualified climate action plan and the current General Plan did not set specific or enforceable GHG emission reduction policies, programs, or measures to facilitate meeting the State's long-term goals for GHG reductions. The recently adopted Town Building Codes include all-electric building and EV parking requirements that would help to reduce GHG emissions associated with building operations. However, the Town Building Codes does not require multifamily and mixed-use developments to meet the CALGreen Tier 2 EV requirements recommended by BAAQMD's to demonstrate compliance with the State's long-term GHG reduction goals described in the 2017 Scoping Plan. While the project would not conflict with the regulations and programs described in the 2017 Scoping Plan, the project would conflict with the climate action goals described in the plan. Therefore, the project could result in a potentially significant impact from a cumulatively considerable increase in GHG emissions, which would conflict with the 2017 Scoping Plan. Implementation of the following mitigation measure would reduce GHG emissions from future developments.

**Mitigation Measure GHG-2:** Implement Mitigation Measure GHG-1.

Implementation of Mitigation Measure GHG-2 would support the State's long-term climate action goals and the 2017 Scoping Plan; therefore, the project would have a less-than-significant impact on applicable plans, policies, and regulations adopted for the purposes of reducing GHG emissions.

**I. HAZARDS AND HAZARDOUS MATERIALS**

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) 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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within ¼-mile of an existing or proposed school?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) 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 it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Affected Environment***Hazardous Materials Transport, Use, or Disposal*

A hazardous material is any substance or material that could adversely affect human health or the environment. Hazardous materials are commonly used in the planning area including uses for construction, service/maintenance industries, commercial businesses, pest/weed management, agriculture, medical facilities, schools, and households. Hazardous wastes are hazardous materials that no longer have practical use or are discarded or released into the environment. Hazardous wastes can be liquids, solids, or contained gases, and can be the by-products of manufacturing processes, used materials (e.g., used oil), or discarded unused commercial products (e.g., cleaning products or pesticides). Soil that is excavated and contains hazardous materials may also be a hazardous waste if it exceeds specific criteria outlined in California Code of Regulations (CCR) Title 22.

The U.S. Environmental Protection Agency (EPA) describes household hazardous waste as leftover household products that can catch fire, react, explode under certain circumstances, or that are corrosive or toxic. Household hazardous wastes include products such as paints, cleaners, oils, batteries, and pesticides.<sup>56</sup> Household hazardous waste generated in the planning area can be disposed of at facilities operated under the San Mateo County Household Hazardous Waste Program.

Medical facilities, including clinics, hospitals, professional offices, blood and plasma centers, and medical research facilities generate a wide variety of hazardous substances. These substances may include contaminated medical equipment or supplies, infectious biological matter, prescription medicines, and radioactive materials used in medical procedures. San Mateo County Environmental Health Services (SMCEH) implements the Medical Waste Program in the planning area through the implementation and enforcement of regulations that apply to the handling, storage, treatment, and disposal of medical waste.

Hazardous materials facilities (including hazardous waste generating facilities) within the planning area are permitted and inspected by the SMCEH through their Certified Unified Program Agency (CUPA) programs, which includes the Hazardous Waste Generator Program, Tiered Permitting Program, Underground Storage Tank (UST) Program, Aboveground Petroleum Storage Tank (AST) Program, Hazardous Materials Business Plan (HMBP) Program, and California Accidental Release Prevention (CalARP) Program. Additional information regarding the CUPA Programs is presented below under the *Regulatory Setting* section.

Although incidents can happen almost anywhere, certain areas of the planning area are at higher risk for inadvertent releases of hazardous materials. Locations near roadways that may be used for transporting hazardous materials and locations near facilities that use, store, or dispose of hazardous materials have an increased potential for a release incident. Hazardous materials response, mitigation, and cleanup for San Mateo County is managed by the Belmont Fire Protection District's Hazardous Materials Team through a contractual agreement between the County of San Mateo, the Emergency Services Council, and the Belmont Fire Protection District.<sup>57</sup>

### *Soil and Groundwater Contamination*

In California, the status and location of hazardous materials release sites under regulatory oversight for assessment and/or remediation actions are reported on the State Water Resources Control Board (State Water Board) GeoTracker database and the Department of Toxic

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<sup>56</sup> U.S. EPA, 2022a. Household Hazardous Waste. Available at: <https://www.epa.gov/hw/household-hazardous-waste-hhw>, accessed June 23, 2022.

<sup>57</sup> County of San Mateo, 2022. Emergency Management - Hazardous Materials Team, Available at: <https://www.smcgov.org/ceo/emergency-management-hazardous-materials-team>, accessed October 10, 2022.



Substances Control (DTSC) EnviroStor database. The GeoTracker database includes leaking UST (LUST) and Cleanup Program sites. In addition to known LUST sites, it is not uncommon for older USTs to have been abandoned in place with no documentation of location or abandonment technique. Cleanup Program sites are undergoing investigation and/or cleanup due to spills and leaks of hazardous materials that were used by various businesses and industries (e.g., dry cleaners), which can include heavy metals, solvents, petroleum compounds, and other hazardous materials. The EnviroStor database includes properties such as industrial/commercial sites, school sites, military bases, and waste disposal sites that are known or suspected to be contaminated with some level of toxic substances. The SMCEH Groundwater Protection Program has served as the local oversight agency for investigations and cleanup of petroleum releases from LUSTs and chemical spills.

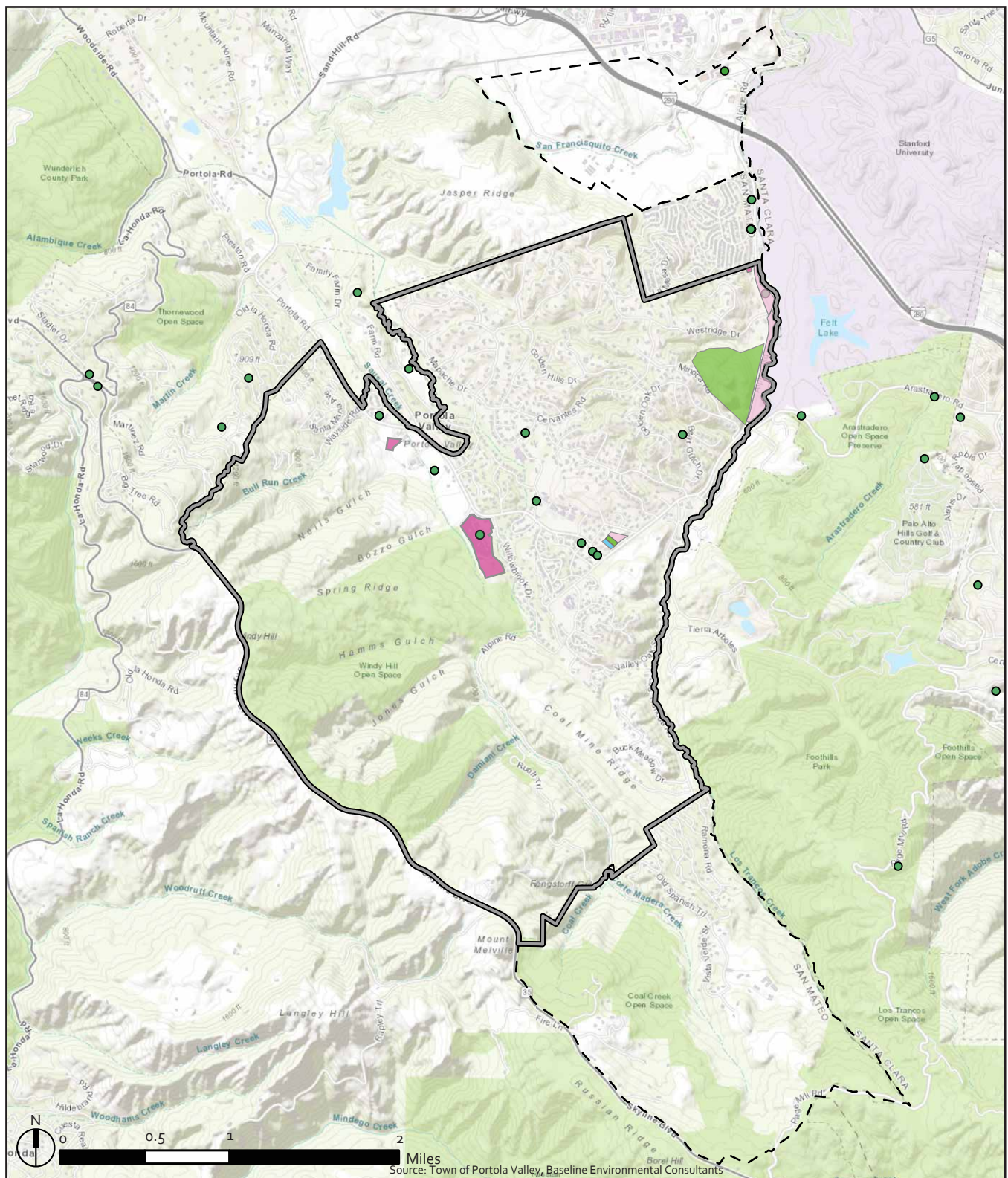
Hazardous materials release sites identified on GeoTracker within the planning area are shown on Figure I-1. There are no hazardous materials release sites identified on EnviroStor within the planning area. All of the hazardous materials release sites identified on GeoTracker in the planning area have a “closed case” status, indicating that investigation and/or remediation has been completed to the satisfaction of the regulatory agency(ies) providing oversight. In some cases, closed sites may be certified as having completed investigation and/or remediation; however, site management requirements or land use restrictions may be in place to ensure that residual contamination does not pose a risk to human health or the environment.

In some cases, closed sites that do not have site management requirements or land use restrictions may have residual contamination that was considered acceptable at the time of case closure; however, the residual contamination could pose risks to human health or the environment based on more current information regarding contaminant exposure pathways (e.g., soil vapor intrusion) and toxicology, or if a change to a more sensitive land use is proposed (e.g., from industrial/commercial to residential).

As of October 2022, the GeoTracker database<sup>58</sup> records identify 11 LUST sites and 3 Cleanup Program sites within the planning area. Some parcels identified in the Sites Inventory are located in relatively close proximity to hazardous materials release sites. Because hazardous materials contamination can migrate through groundwater and soil vapor, properties located near hazardous materials release sites can also be impacted by hazardous materials contamination. Two of the parcels identified in the Sites Inventory were identified as hazardous materials release sites and are discussed further below.

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<sup>58</sup> State Water Board, 2022a. GeoTracker. Available at: <https://geotracker.waterboards.ca.gov/>, accessed October 6, 2022.



- Portola Valley Town Boundary
- Portola Valley Sphere of Influence
- Pipeline and Pending Developments
- Vacant Housing Sites
- Non-Vacant Housing Sites (Not Affiliated)
- Non-Vacant Affiliated Housing Sites
- Hazardous Materials Release Sites

Figure I-1  
Hazardous Materials Release Sites  
Portola Valley Housing and Safety Elements Update IS/MND

### The Sequoias, 501 Portola Road

The Sequoias, located at 501 Portola Road, is identified on GeoTracker as a closed LUST case under the name *North Calif. Presbyterian Home*.<sup>59</sup> According to the Case Closure Letter<sup>60</sup> issued by SMCEH, a 1,000-gallon gasoline UST, a 350-gallon gasoline UST, and a hydraulic jack were removed from this property in 1994, and a 15,000-gallon diesel UST was removed from this property in 1996. Approximately 100 cubic yards of petroleum hydrocarbon impacted soil was removed from the property between 1994 and 1997. Concentrations of petroleum hydrocarbons and associated volatile organic compounds (VOCs) were detected in soil samples collected before cleanup, and residual concentrations of petroleum hydrocarbons remained in groundwater after cleanup. One groundwater monitoring well was installed at the property and groundwater was as shallow as approximately 6.9 feet below the ground surface. The Case Closure Letter indicated that there are no site management requirements and no need to review corrective action if land use changes. While there are no site management requirements for this property, it is possible that there could be residual impacts from petroleum hydrocarbons and associated VOCs in soil, groundwater, and soil vapor beneath this property.

### Ford Field, 3329 Alpine Road

Ford Field, located at 3329 Alpine Road, is identified on GeoTracker as a closed Cleanup Program case. Information available on the GeoTracker web page for this Cleanup Program case indicates that in 2014 a dump truck ran off the road and collided with a fence and trees at Ford Field. It was estimated that 80 gallons of diesel fuel was released, and the area of release was excavated to a depth of approximately 14 feet, removing 61 tons of diesel contaminated soil and 800 gallons of diesel contaminated groundwater.<sup>61</sup> In 2015, a Soil and Groundwater Assessment Report<sup>62</sup> was prepared which indicated that dissolved-phase hydrocarbons remained in groundwater at concentrations above Environmental Screening Levels when the remedial excavation was backfilled, however residual contamination at the release site was adequately delineated with concentrations near or below reporting limits in the soil and groundwater samples collected during the 2015 investigation. Information presented in a Case Closure Letter<sup>63</sup> issued by SMCEH in 2017 indicates that the diesel release and cleanup occurred in the riparian corridor of Los Trancos Creek adjacent to the south of the Ford Field parking lot. This release area appears to be

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<sup>59</sup> State Water Board, 2022b. GeoTracker Webpage for North Calif. Presbyterian Home (To608100770), 501 Portola Road, Portola Valley, CA 94028, Available at: [https://geotracker.waterboards.ca.gov/profile\\_report.asp?global\\_id=To608100770](https://geotracker.waterboards.ca.gov/profile_report.asp?global_id=To608100770), accessed October 7.

<sup>60</sup> San Mateo County Health Department, 2006. Case Closure For 15,000-, 1,000-, And 350-Gallon USTs Removed at 501 Portola Road, Portola Valley, California, August 17.

<sup>61</sup> State Water Board, 2022c. Geotracker Webpage for Ford Field (T10000006313), 3329 Alpine Road, Portola Valley, CA 94028, Available at: [https://geotracker.waterboards.ca.gov/profile\\_report.asp?global\\_id=T10000006313](https://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T10000006313), accessed October 7.

<sup>62</sup> Cardno, 2015. Soil and Groundwater Assessment Report, Ford Field, 3329 Alpine Road, Portola Valley, California, September 25.

<sup>63</sup> San Mateo County Environmental Health, 2017. Case Closure, Remedial Action Oversight, Ford Field at 3329 Alpine Road, Portola Valley, California, April 4.

within the northern end of the Glen Oaks parcel identified in the Sites Inventory. The Case Closure Letter indicates that site investigation and remedial action carried out at the release site satisfied the cleanup goal requirements.<sup>64</sup> It is possible that there could be residual contamination from petroleum hydrocarbons and associated VOCs in soil, groundwater, and soil vapor beneath this release area; however, the release area appears to be an adequate distance away from the developable areas on both the Vacant Portion of Ford Field and Glen Oaks sites such that residual contamination, if present, would not affect potential development of these properties.

#### Previously Unidentified Contamination

In addition to the known hazardous materials release sites in the planning area discussed above, there is the potential for previously unidentified hazardous materials contamination to be present in the planning area, particularly in areas of past or existing commercial land use. There is also the potential for previously unidentified contamination to be present in the planning area due to past agricultural land uses and placement of fill materials as discussed below.

There is a history of agricultural production in the planning area. Prior to World War II when residential development in the Town began, the planning area was a place of small farms and large estates.<sup>65</sup> Some vineyards, farms, and orchards (and remnants of orchards) remain in the planning area. Agricultural activities typically include the storage and periodic application of pesticides, herbicides, and fertilizers, as well as the storage and use of fuels and solvents. The infiltration of these substances may leach into local groundwater supplies, presenting an elevated risk of groundwater contamination. Residual impacts from agricultural chemicals such as organochlorine pesticides (OCPs) and heavy metals (e.g., lead and arsenic) could also be present in shallow soil in parts of the planning area that were historically used for agriculture.

Soil and groundwater contamination can be present in areas where fill materials have been placed. Fill materials from unknown sources could be contaminated with various hazardous materials (e.g., pesticides, heavy metals, petroleum compounds, and polychlorinated biphenyls [PCBs]). Fill materials historically placed in low lying areas (particularly near historically industrial areas) often contain contaminants such as heavy metals, petroleum compounds, PAHs, and PCBs that may be associated with the presence of construction rubble/debris in the fill or the dumping of hazardous waste byproducts from past industrial/manufacturing operations.

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<sup>64</sup> San Mateo County Environmental Health, 2017. Case Closure, Remedial Action Oversight, Ford Field at 3329 Alpine Road, Portola Valley, California, April 4.

<sup>65</sup> Town of Portola Valley, 2022b. History of Portola Valley, Available at: <https://www.portolavalley.net/about/history-of-portola-valley>, accessed October 7, 2022.

### *Hazardous Building Materials*

Hazardous materials are commonly found in building materials (particularly within older buildings) that may be affected by demolition and renovation activities under the project. The Planning Area includes many buildings that may contain hazardous building materials such as lead-based paint, asbestos containing materials (ACMs), PCBs containing materials and equipment, and mercury containing lights and devices.

Asbestos is a known human carcinogen that was commonly used in building materials until the early 1980's. In 1989, the EPA issued a final rule banning most asbestos-containing products. In 1991, this regulation was overturned and as a result of the Court's decision, the 1989 asbestos regulation only bans new uses of asbestos in products that would be initiated *for the first time* after 1989 and bans the following specific asbestos-containing products: flooring felt, rollboard, and corrugated, commercial, or specialty paper.<sup>66</sup> Asbestos-containing products remain in use within the United States, and include some roof and non-roof coatings and other asbestos-containing building materials.<sup>67</sup> Section 19827.5 of the California Health and Safety Code requires that local agencies not issue demolition or alteration permits until an applicant has demonstrated compliance with notification requirements under applicable federal regulations regarding hazardous air pollutants, including asbestos.

Prior to 1978, lead compounds were commonly used in exterior and interior paints. Due to its health effects, the application of lead-based paint on residential structures was banned in 1978; however, lead-based paint can be found in commercial or industrial structures, regardless of construction date (because its use is still allowed in commercial and industrial applications).<sup>68</sup>

PCBs were historically used as coolants and lubricants in transformers, capacitors, heating/cooling equipment, and other electrical equipment, and were also used as plasticizers in paints, plastics, rubber products, and caulking. PCBs have been demonstrated to cause cancer and a variety of other adverse health effects in animals, including effects on the immune system, reproductive system, nervous system, and endocrine system. Although manufacturing of PCBs has been banned in the United States since 1979, they may still be found in older electrical equipment and other building materials such as light ballasts and caulking. PCBs or PCBs-contaminated items require proper off-site transport and disposal at a facility that can accept such wastes, in accordance with the Toxic Substances Control Act (TSCA) of 1976 and other federal and State regulations. PCBs in manufactured materials such as caulking may also spread

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<sup>66</sup> EPA, 2022b. Asbestos Ban and Phase-Out Federal Register Notices. Available at: <https://www.epa.gov/asbestos/asbestos-ban-and-phase-out-federal-register-notices>, accessed June 1, 2022.

<sup>67</sup> EPA, 2017. Preliminary Information on Manufacturing, Processing, Distribution, Use, and Disposal: Asbestos, February. Available at: <https://www.epa.gov/sites/production/files/2017-02/documents/asbestos.pdf>, accessed June 1, 2022.

<sup>68</sup> Department for Toxic Substances Control, 2006. Interim Guidance Evaluation of School Sites with Potential Soil Contamination as a Result of Lead from Lead-Based Paint, Organochlorine Pesticides from Termiticides, and Polychlorinated Biphenyls from Electrical Transformers. June 9 (Revised).

into adjoining materials, particularly porous materials such as wood, concrete, and other types of masonry.<sup>69</sup>

The EPA has indicated that there was potential widespread use of PCB-containing building materials in buildings built or renovated between about 1950 and 1979. Prior to removal, EPA recommends PCB testing of caulk and other building materials that are going to be removed to determine what protections are needed during removal and to determine proper disposal requirements.<sup>70</sup>

Fluorescent lighting tubes and ballasts, computer displays, and several other common items containing hazardous materials (including mercury, a heavy metal) are regulated as “universal wastes” by the State of California. Universal waste regulations allow common, low-hazard wastes to be managed under less stringent requirements than other hazardous wastes. Management of other hazardous wastes is governed by DTSC hazardous waste rules.

#### *Emergency Response and Evacuation Plans*

The Town’s Emergency Operations Plan (EOP)<sup>71</sup> describes organizational structures, roles and responsibilities, policies, and protocols for providing emergency support to ensure the effective management of emergency operations within the Town during an extraordinary emergency or disaster. It provides a framework for understanding the emergency management structure including how and when the Emergency Operations Center is activated.

The designated evacuation routes in the town are presented on Figure I-2 and include Portola Road, Westridge Road, Alpine Road, Los Trancos Road, and Arastradero Road. These collector and arterial streets would be followed to promote safe and efficient evacuation of residents out of the town. All of the parcels listed in the Sites Inventory are located along designated evacuation routes as shown on Figure I-2.

#### *Fire Risk in Wildland Areas*

The planning area is susceptible to wildland fires due to the hilly topography, dense vegetation, and climatic conditions. The topography creates difficult-to-access areas where vegetation management is difficult to accomplish; in addition, east-west oriented canyons create funnels for strong autumn winds, which tend to blow from the east or west and amplify wildfire hazards. In the event of a fire emergency, the planning area is served by the Woodside Fire Protection

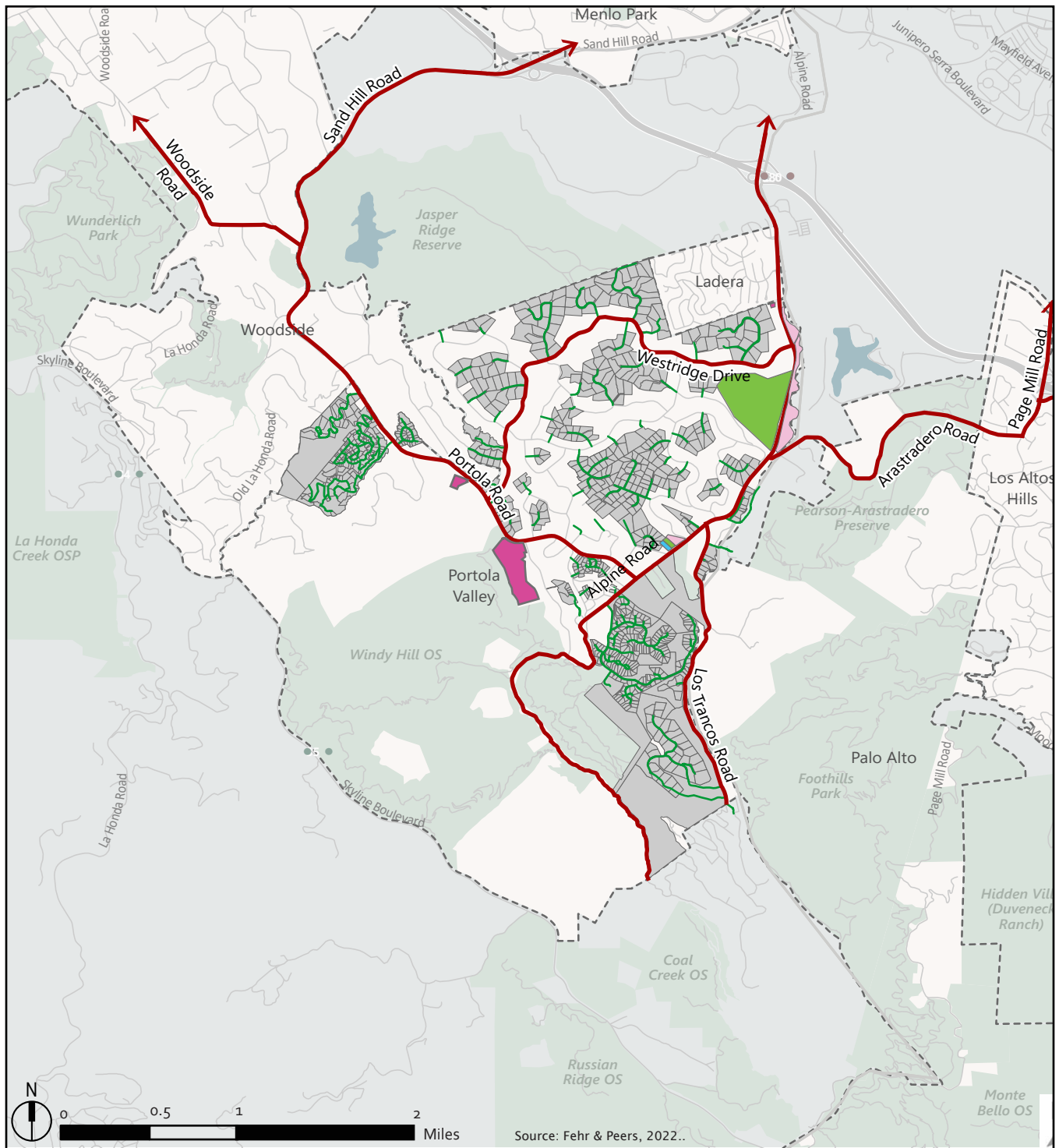
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<sup>69</sup> EPA, 2015a. PCBs in Building Materials – Questions & Answers, July 28. Available: [https://www.epa.gov/sites/production/files/2016-03/documents/pcbs\\_in\\_building\\_materials\\_questions\\_and\\_answers.pdf](https://www.epa.gov/sites/production/files/2016-03/documents/pcbs_in_building_materials_questions_and_answers.pdf), accessed June 1, 2022.

<sup>70</sup> EPA, 2015b. Practical Actions for Reducing Exposure to PCBs in Schools and Other Buildings, Guidance for school administrators and other building owners and managers, July 28. Available: [https://www.epa.gov/sites/production/files/2016-03/documents/practical\\_actions\\_for\\_reducing\\_exposure\\_to\\_pcb\\_in\\_schools\\_and\\_other\\_buildings.pdf](https://www.epa.gov/sites/production/files/2016-03/documents/practical_actions_for_reducing_exposure_to_pcb_in_schools_and_other_buildings.pdf), accessed June 1, 2022.

<sup>71</sup> Town of Portola Valley, 2017. Emergency Operations Plan, Adopted January 11.





- Portola Valley Town Boundary
- Portola Valley Sphere of Influence
- Pipeline and Pending Developments
- Vacant Housing Sites
- Non-Vacant Housing Sites (Not Affiliated)
- Non-Vacant Affiliated Housing Sites
- Evacuation Routes
- Parcels with Constrained Access

Figure I-2  
Evacuation Routes

District (WFPD), California Department of Forestry and Fire Protection (CAL FIRE), and Stanford University. Northern and eastern portions of the planning area are also served by the Menlo Park Fire Protection District and the Palo Alto Fire Department. The Town established both an Emergency Preparedness Committee and Wildfire Preparedness Committee, which coordinate efforts with the WFPD and San Mateo County Office of Emergency Services. Since its establishment in 2019, the Wildfire Preparedness Committee has taken the lead on recommending a variety of wildfire mitigation measures related to home hardening, vegetation management, communications, evacuation, and insurance-related issues to the Town Council.<sup>72</sup>

Fire hazard severity zone mapping prepared by CAL FIRE for the planning area is shown on Figure I-3. There are three zones based on increasing fire hazard severity: moderate, high, and very high. At that time this mapping was performed, CAL FIRE was only required to map very high fire hazard severity zones (FHSZs) within Local Responsibility Areas, while the three fire FHSZs were mapped in State Responsibility Areas. As shown on Figure I-3, an area within the northwest portion of the town is mapped as a very high FHSZ, and areas surrounding the town include moderate, high, and very high FHSZs.<sup>73, 74</sup> None of the parcels listed in the Sites Inventory are located within very high FHSZ; however, one parcel (Christ Church) is adjacent to a very high FHSZ to its west and south (Figure I-3). CAL FIRE is currently updating the criteria for how the fire hazard severity zone maps are developed and will be including all zones (moderate, high, and very high FHSZ) for Local Responsibility Areas on future maps.<sup>75</sup>

In California, properties located within a CAL FIRE designated very high FHSZ are subject to the stringent requirements of Chapter 7A of the California Building Code (development in Wildland Urban Interface [WUI] areas) for buildings and property maintenance. Chapter 7A dictates the use of fire-resistant exterior materials and adherence to various design requirements. As of 2021, all properties in the town are required to adhere to Chapter 7A requirements regardless of location within a very high FHSZ. The Town adopted the Wildfire Preparedness Committee's recommended Building Code amendments on December 8, 2021. These amendments require additional "home hardening" measures including use of noncombustible exterior materials and construction for new construction and applicable remodels.

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<sup>72</sup> Town of Portola Valley, 2022a. Safety Element Update.

<sup>73</sup> CAL FIRE, 2008. San Mateo County, Very High Fire Hazard Severity Zones in LRA, November 24.

<sup>74</sup> CAL FIRE, 2007. San Mateo County, Fire Hazard Severity Zones in SRA, November 6.

<sup>75</sup> Town of Portola Valley, 2022a. Safety Element Update.



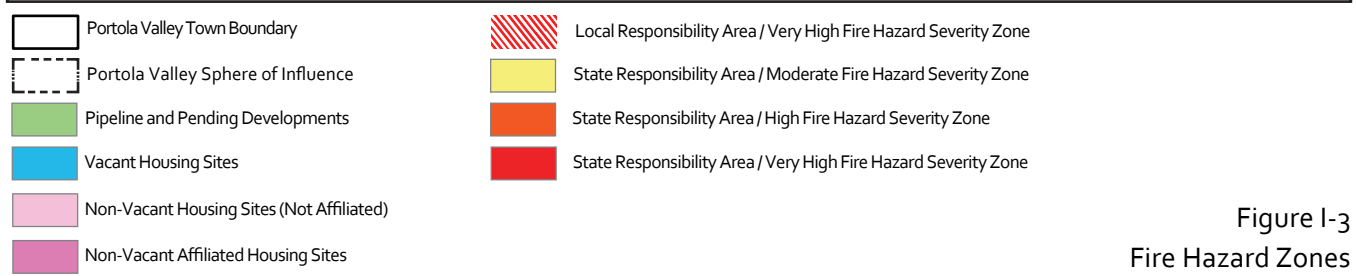
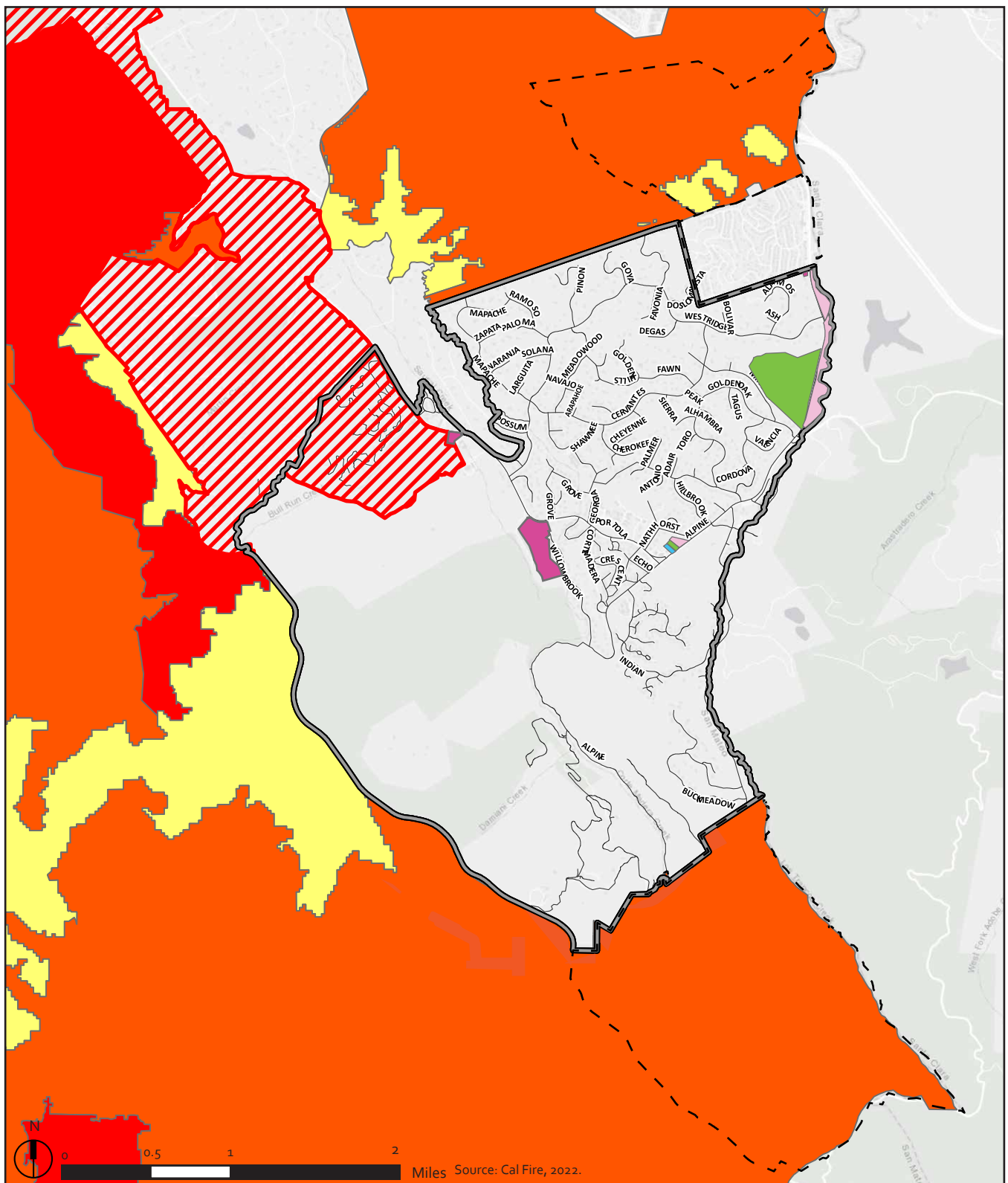


Figure I-3  
Fire Hazard Zones  
Portola Valley Housing and Safety Elements Update IS/MND

## Regulatory Setting

### *Federal*

#### United States Environmental Protection Agency

The United States EPA is the federal agency responsible for enforcement and implementation of federal laws and regulations pertaining to hazardous materials and hazardous waste. The federal regulations are primarily codified in Title 40 of the Code of Federal Regulations (CFR). The legislation includes the Resource Conservation and Recovery Act of 1976 (RCRA); TSCA; the Superfund Amendments and Reauthorization Acts (SARA) of 1986; and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980. The EPA provides oversight for certain site investigation and remediation projects, and has developed protocols for sampling, testing, and evaluation of solid wastes.

#### Resource Conservation and Recovery Act (RCRA)

RCRA is a combination of the first federal solid waste statutes and all subsequent amendments mandated by Congress. RCRA establishes the framework for a national system of solid waste control. Subtitle D of the Act is dedicated to non-hazardous solid waste requirements, and Subtitle C focuses on hazardous solid waste. Solid waste includes solids, liquids and gases and must be discarded to be considered waste. Under Subtitle C of RCRA, EPA has developed a comprehensive program to ensure that hazardous waste is managed safely from the moment it is generated to its final disposal (cradle-to-grave) and may authorize states to implement key provisions of hazardous waste requirements in lieu of the federal government. If a state program does not exist, EPA directly implements the hazardous waste requirements in that state. Subtitle C regulations set criteria for hazardous waste generators, transporters, and treatment, storage and disposal facilities. This includes permitting requirements, enforcement and corrective action or cleanup.<sup>76</sup>

#### Toxic Substances Control Act

The Toxic Substances Control Act (TSCA) provides the EPA with authority to require reporting, record-keeping, testing requirements, and restrictions relating to chemical substances and mixtures. The TSCA addresses the production, importation, use, and disposal of specific chemicals, including PCBs, asbestos, radon, and lead-based paint.

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<sup>76</sup> EPA, 2022c. Resource Conservation and Recovery Act (RCRA) Overview, Available: <https://www.epa.gov/rcra/resource-conservation-and-recovery-act-rcra-overview>, accessed June 3, 2022.

### Occupational Safety and Health Administration

Worker health and safety is regulated at the federal level by the Occupational Safety and Health Administration (OSHA). The federal Occupational Safety and Health Act of 1970 authorizes the states to establish their own safety and health programs with OSHA approval. Worker health and safety protections in California are regulated by the California Occupational Safety and Health Administration (Cal/OSHA), as described below. California standards for workers dealing with hazardous materials are contained in CCR Title 8; they include practices for all industries (General Industrial Safety Orders), as well as specific practices for construction. Workers at hazardous waste sites (or workers who may be exposed to hazardous wastes that might be encountered during excavation of contaminated soils) must receive specialized training and medical supervision according to OSHA Hazardous Waste Operations and Emergency Response regulations. Additional regulations have been developed for construction workers potentially exposed to lead and asbestos. Cal/OSHA enforcement units conduct on-site evaluations and issue notices of violation to enforce necessary improvements to health and safety practices.

### Hazardous Materials Transportation Act

The Hazardous Materials Transportation Act (HMTA) of 1975 is the statutory basis for the extensive body of regulations aimed at ensuring the safe transport of hazardous materials on water, rail, highways, through air, or in pipelines. It includes provisions for material classification, packaging, marking, labeling, placarding, and shipping documentation.

### Hazardous Materials Transportation Uniform Safety Act of 1990

In 1990, Congress enacted the Hazardous Materials Transportation Uniform Safety Act (HMTUSA) to clarify the maze of conflicting state, local, and federal regulations. Like the HMTA, the HMTUSA requires the Secretary of Transportation to promulgate regulations for the safe transport of hazardous material in intrastate, interstate, and foreign commerce. The Secretary also retains authority to designate materials as hazardous when they pose unreasonable risks to health, safety, or property. The statute includes provisions to encourage uniformity among different state and local highway routing regulations, to develop criteria for the issuance of federal permits to motor carriers of hazardous materials, and to regulate the transport of radioactive materials.<sup>77</sup>

### Department of Transportation

The United States Department of Transportation (DOT) developed hazardous materials regulations, which govern the classification, packaging, communication, transportation, and

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<sup>77</sup> OSHA, 2022. Transporting Hazardous Materials, Available: <https://www.osha.gov/trucking-industry/transporting-hazardous-materials>, accessed June 3, 2022.

handling of hazardous materials, as well as employee training and incident reporting. The transportation of hazardous materials is subject to both RCRA and DOT regulations. The California Highway Patrol, California Department of Transportation (Caltrans), and the DTSC are responsible for enforcing federal and State regulations pertaining to the transportation of hazardous materials.

### *State*

#### California Environmental Protection Agency/ Department of Toxic Substances Control

One of the primary agencies that regulate hazardous materials is the California Environmental Protection Agency (CalEPA). The State, through CalEPA, is authorized by the U.S. EPA to enforce and implement certain federal hazardous materials laws and regulations. California regulations pertaining to hazardous materials are equal to or exceed the federal regulation requirements. Most State hazardous materials regulations are contained in CCR Title 22. The DTSC, a department of the CalEPA, generally acts as the lead agency for soil and groundwater cleanup projects that affect public health, and establishes cleanup levels for subsurface contamination that are equal to or more restrictive than federal levels. The DTSC has also developed land disposal restrictions and treatment standards for hazardous waste disposal in California.

#### California Health and Safety Code

Health and Safety Code Division 20, Chapter 6.5 - Hazardous Waste Control is the primary hazardous waste statute in the State of California, and implements RCRA as a "cradle-to-grave" waste management system in the State of California. It specifies that generators have the primary duty to determine whether their wastes are hazardous and to ensure their proper management. It also establishes criteria for the reuse and recycling of hazardous wastes used or reused as raw materials. It exceeds federal requirements by mandating source reduction planning, and a much broader requirement for permitting facilities that treat hazardous waste. It also regulates types of wastes and waste management activities that are not covered by federal law with RCRA.

#### California Code of Regulations

Most State and federal regulations and requirements that apply to generators of hazardous waste are spelled out in the CCR, Title 22, Division 4.5. Title 22 contains the detailed compliance requirements for hazardous waste generators, transporters, and treatment, storage, and disposal facilities. Because California is a fully authorized State according to U.S. EPA, most RCRA regulations (those contained in 40 CFR 260 et seq.) have been duplicated and integrated into Title 22. However, because DTSC regulates hazardous waste more stringently than the U.S. EPA, the integration of California and federal hazardous waste regulations that make up Title 22 do not contain as many exemptions or exclusions as does 40 CFR 260. As with the California Health and Safety Code, Title 22 also regulates a wider range of waste types and waste management

activities than does the RCRA regulations in 40 CFR 260. To aid the regulated community, California compiled the hazardous materials, waste and toxics-related regulations contained in CCR, Titles 3, 8, 13, 17, 19, 22, 23, 24, and 27 into one consolidated CCR Title 26 'Toxics.' However, the California hazardous waste regulations are still commonly referred to as Title 22.

#### State Water Resources Control Board

Under the Porter-Cologne Water Quality Control Act (California Water Code, Division 7), the State Water Board has authority over State waters and water quality. "Waters of the state" are defined as "any surface water or groundwater, including saline waters, within the boundaries of the state" (Water Code Section 13050[e]). The State Water Board enforces regulations on implementation of UST programs. It also allocates funding to eligible parties that request reimbursement of cleanup costs for soil and groundwater pollution from UST leaks. The State Water Board also enforces the Porter-Cologne Water Quality Act through its nine Regional Water Quality Control Boards, including the San Francisco Bay Regional Water Quality Control Board (SFRWQCB) which has jurisdiction over the planning area. The State Water Board issued the National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Associated with Construction Activity (Construction General Permit), Order 2009-0009-DWQ as amended by 2010-0014-DWQ and 2012-006-DWQ, which addresses management of hazardous materials at construction sites that disturb over one acre of land (described in detail under *Section J. Hydrology and Water Quality*).

#### California Department of Public Health

The transportation and disposal of medical wastes are closely regulated under the California Department of Public Health, which regulates the generation, handling, storage, treatment, and disposal of medical waste by providing oversight for the implementation of the Medical Waste Management Act (California Health and Safety Code Sections 117600-118360). Local agencies can implement a medical waste management program pursuant to the Medical Waste Management Act.

#### California Air Resources Board

The California Air Resources Board (CARB) is responsible for coordination and oversight of State and local air pollution control programs in California, including implementation of the California Clean Air Act of 1988. CARB has developed State air quality standards, and is responsible for monitoring air quality in conjunction with the local air districts.

#### California Fire Code

The California Fire Code is Part 9 of Title 24, CCR, also referred to as the California Building Standards Code. The California Fire Code incorporates the latest International Fire Code of the International Code Council with necessary California amendments. The purpose of the

California Fire Code is to establish the minimum requirements consistent with nationally recognized good practices to safeguard the public health, safety, and general welfare from the hazards of fire, explosion or dangerous conditions in new and existing buildings, structures, and premises, and to provide safety and assistance to fire fighters and emergency responders during emergency operations.

The California Fire Code contains requirements for construction activities under Chapter 33 which includes the development and implementation of a site safety plan establishing a fire prevention program. The California Fire Code also contains specific requirements for welding and other hot work under Chapter 35. The requirements are intended to maintain the required levels of fire protection, limit fire ignition and spread, establish the appropriate operation of equipment, and promote prompt response to fire emergencies. Regulated features include fire protection systems, fire fighter access, water supply, means of egress, hazardous materials storage and use, and temporary heating equipment and other ignition sources.

#### California Division of Occupational Safety and Health

Worker health and safety protections in California are regulated by Cal/OSHA. California standards for workers dealing with hazardous materials are contained in CCR Title 8; they include practices for all industries (General Industrial Safety Orders), as well as specific practices for construction. Workers at hazardous waste sites (or workers who may be exposed to hazardous wastes that might be encountered during excavation of contaminated soils) must receive specialized training and medical supervision according to OSHA Hazardous Waste Operations and Emergency Response regulations. Additional regulations have been developed for construction workers potentially exposed to lead and asbestos. Cal/OSHA enforcement units conduct on-site evaluations and issue notices of violation to enforce necessary improvements to health and safety practices. Like OSHA at the federal level, Cal/OSHA is the responsible State-level agency for ensuring workplace safety. The Cal/OSHA assumes primary responsibility for the adoption and enforcement of standards regarding workplace safety and safety practices. In the event that a site is contaminated, a Site Safety Plan is prepared and implemented to protect the safety of workers. Site Safety Plans establish policies, practices, and procedures to prevent the exposure of workers and members of the public to hazardous materials originating from the contaminated site or building.

#### California Department of Transportation

Caltrans has the primary responsibility for enforcing federal and State regulations related to transportation emergencies, including the response to hazardous materials releases. Caltrans is the first responder for hazardous material spills and releases that occur on highway and freeway lanes and intercity rail services.

### California Highway Patrol

The California Highway Patrol (CHP) is responsible for assuring the safe, convenient, and efficient transportation of people and goods on the state highway system. The CHP implements the Commercial Vehicle Safety Program, which includes enforcement, education, and partnerships to minimize the disastrous results from collisions involving commercial vehicles. CHP's Commercial Vehicle Section provides assistance regarding the safe operation and enforcement of commercial vehicles.

Common carriers are licensed by the CHP, pursuant to the California Vehicle Code, Section 32000. This section requires licensing every motor (common) carrier who transports, for a fee, more than 500 pounds of hazardous materials at one time and every carrier who carries more than 1,000 pounds of hazardous materials that require placards. Common carriers conduct a large portion of their business in the delivery of hazardous materials.

Pursuant to Division 14.3 of the California Vehicle Code, the CHP has adopted regulations for the safe operation of vehicles transporting materials which are poisonous by inhalation. These regulations designate the routes, safe stopping places, and inspection stops to be used when transporting bulk shipments of these materials. Vehicle and equipment inspection, shipment preparation, container identification, and shipping documentation are all part of the responsibility of the CHP. The CHP conducts regular inspections of licensed transporters to assure regulatory compliance and responds to hazardous materials emergencies on roadways.

### California Department of Forestry and Fire Protection (CAL FIRE)

CAL FIRE provides fire protection services for over 31 million acres of California's privately-owned wildlands. In addition, CAL FIRE provides varied emergency services in 36 of the State's 58 counties via contracts with local governments. Preventing wildfires in State Responsibility Areas is a vital part of CAL FIRE's mission.<sup>78</sup> As shown in Figure IX.-3, CAL FIRE provides fire protection services to southern and northeastern portions of the planning area that are located outside of the town and within the Town's SOL.

CAL FIRE has mapped fire threat potential throughout California. CAL FIRE ranks fire threat based on fire history, existing and potential fuel (natural vegetation), predicted flame length, embers, topography, and typical fire weather in the area. The rankings include moderate, high, and very high fire hazard severity zones. Additionally, CAL FIRE produced the 2018 Strategic Fire Plan for California, which contains goals, objectives, and policies to prepare for and mitigate for the effects of fire on California's natural and built environments.<sup>79</sup>

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<sup>78</sup> CAL FIRE, 2022a. About Us. Available at: <https://www.fire.ca.gov/about-us/>, accessed June 24, 2022.

<sup>79</sup> CAL FIRE, 2018. 2018 Strategic Fire Plan for California, August 22.

### *Regional*

#### San Francisco Bay Regional Water Quality Control Board

The Porter-Cologne Water Quality Act established the State Water Board and divided the state into nine regions, each under the jurisdiction of a Regional Water Quality Control Board. The SFRWQCB (Region 2) regulates water quality in the planning area. The SFRWQCB has the authority to require groundwater investigations when the quality of groundwater or surface waters of the State is threatened, and to require remediation actions, if necessary. The SFRWQCB has developed Environmental Screening Levels to help expedite the preparation of environmental risk assessments at sites where contaminated soil and groundwater have been identified. The SFRWQCB issued the Municipal Regional Stormwater NPDES Permit (MRP), Order R2-2015-0049, NPDES Permit No CAS612008, which addresses the potential discharge of hazardous materials in municipal stormwater from the planning area and other municipalities in the Bay Area (described in detail under *Section J. Hydrology and Water Quality*).

#### Bay Area Air Quality Management District

The Bay Area Air Quality Management District (BAAQMD) has primary responsibility for control of air pollution from sources other than motor vehicles and consumer products (which are the responsibility of the EPA and CARB). BAAQMD is responsible for preparing attainment plans for non-attainment criteria air pollutants, control of stationary air pollutant sources, and the issuance of permits for activities including asbestos demolition and renovation activities.

BAAQMD Regulation 11-2 requires that prior to commencement of any demolition or renovation, the owner or operator must thoroughly survey the affected structure or portion thereof for the presence of ACMs. The survey must be performed by a person who is certified by the Division of Occupational Safety and Health, and who has taken and passed an EPA-approved Building Inspector course and who conforms to the procedures outlined in the course. The survey must include sampling and the reporting of results of laboratory analysis of the asbestos content of all suspected ACMs. This survey must be made available, upon request by the Air Pollution Control Officer, prior to the commencement of any regulated ACMs removal or any demolition. If ACMs are identified, the disturbance/removal and management of ACMs must be performed in accordance with BAAQMD Regulations under Rule 11-2 to ensure that asbestos would not be released into the environment.

#### San Mateo County Environmental Health

SMCEH is the CUPA for the planning area and enforces State and local regulations pertaining to hazardous waste generators and risk management prevention programs in San Mateo County. The purpose of the CUPA is to ensure that facilities properly manage and disclose hazardous materials used to minimize the risk of a hazardous materials release and improve emergency response actions in the event of a release. As established by Cal/EPA, the CUPA consolidates,



coordinates, and makes consistent the administrative requirements, permits, inspections, and enforcement activities for environmental and emergency response programs including the Hazardous Waste Generator Program, UST Program, AST Program, HMBP Program, and CalARP. An HMBP is required for businesses that handle and/or store a hazardous material equal to or greater than the minimum reportable quantities, which are 55 gallons for liquids, 500 pounds for solids, and 200 cubic feet (at standard temperature and pressure) for compressed gases. In addition, the SMCEH Groundwater Protection Program may act as lead agency to ensure proper remediation of LUST sites and other contaminated sites.

SMCEH manages the Medical Waste Program which is responsible for the regulation of medical waste generation, storage, transport, and disposal in San Mateo County in accordance with the Medical Waste Management Act. SMCEH enforces these regulations and additional requirements adopted by the County, such as Medical Waste Management Plans and closure requirements. Businesses that are located or provide services within San Mateo County must register for the program regardless of the volume or frequency of medical waste generated. There are five categories of Medical Waste: 1) biohazardous (e.g., red bag waste and infectious contaminated solids); sharps (e.g., needles, syringes, blades, and broken glass capable of cutting or piercing); pathology (e.g., human body parts, specimens, animals body parts and tissues); trace chemotherapeutic waste (e.g., items previously containing chemotherapeutic agents), and medicine or pharmaceuticals.<sup>80</sup>

### *Local*

#### General Plan

The Portola Valley General Plan includes the following relevant principles and standards that assist in reducing or avoiding potential impacts and hazards related to hazards and hazardous materials:

#### Land Use Element

*Residential Areas Standard 2106b.* The slope-intensity standards for the conservation residential and open residential categories recognize in part the overall problems of the development in areas with potential geologic instabilities. However, the intensity of development in individual developments should be further reduced as necessary to reflect specific geologic conditions encountered, to minimize significant visual impacts, to preserve scenic qualities and historic features, and to avoid high fire hazards and inadequate emergency access.

*Public Facilities and Services Principle 6:* Water supply systems must conform with established health and fire protection standards.

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<sup>80</sup> SMCEH, 2022. Website: Medical Waste Program, Available at: <https://www.smchealth.org/medwaste>, accessed October 10, 2022.

*Public Facilities and Services Principle 9:* A solid waste and hazardous waste program which will assure adequate services, protect health, reduce waste generation and conserve energy and resources without adversely affecting the environment should be supported. Wastes resulting from animal keeping should also be controlled and disposed of in a sanitary manner.

### Portola Valley Municipal Code

Chapter 2.24 of the Municipal Code describes the emergency organization and protection requirements for the Town to provide for the preparation and carrying out of plans for the protection of persons, property, and the environment within the Town in the event of an emergency. This chapter identifies the disaster council membership and director of emergency services and defines their powers and duties, and identifies requirements related to the Town's emergency operations plan.

Chapter 8.34 of the Municipal Code requires that gas-powered landscaping, construction, and gardening equipment not be operated in the Town when the National Weather Service issues red flag warnings for weather events that may result in extreme fire behavior. Electric-powered landscaping, construction, and gardening equipment may only be used if it can be safely operated without causing a fire or a spark, such as when hitting a stone or used near dry vegetation.

Chapter 8.36 of the Municipal Code prohibits the sale or use of fireworks in the Town.

Chapter 15.04 of the Municipal Code adopts the 2019 (most recent) California Fire Code and adopts and amends the 2019 (most recent) California Building Code. Many of the amendments to the California Building Code have to do with applying requirements of Chapter 7A (development in Wildland Urban Interface areas) for buildings and property maintenance, including the use of fire-resistant exterior materials and adherence to various design requirements for all properties in the Town. Other amendments related to fire hazards include requirements for fire sprinklers, use of Class A roofing materials (such as concrete, tile, metal or slate), use of noncombustible materials for exterior wall coverings and decks, and enclosing the undersides of eaves and cornices.

### **Discussion**

The following discussion provides an evaluation and analysis of the potential impacts of development under the project related to hazards and hazardous materials. The proposed policies, implementation actions, and programs related to wildfire hazards and emergency response/evacuation in the Safety Element and Housing Element Updates are discussed below and are similar and functionally equivalent to existing policies in the General Plan, and in some cases are more prescriptive than the existing policies which would further reduce the potential for impacts. The General Plan, and Safety Element and Housing Element Updates, do not address topics identified under the standard CEQA significance criteria (Appendix G of the CEQA Guidelines) for hazards and hazardous materials except for the topics of wildfire hazards and emergency response/evacuation plans. Therefore, no hazards or hazardous materials related impacts from updating the policies, implementation measures, and programs of the General Plan would occur. The incremental increase in development that may occur under the project would result in less-than-significant impacts related to hazards and hazardous materials as discussed below.

a) *Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?*

**Less than Significant.** Development under the project would result in an incremental increase in the transportation, use, and disposal of hazardous materials. However, planned for development under the project does not include industrial uses that would transport, use, or dispose of substantial quantities of hazardous materials as these land uses are not envisioned in the town. During construction activities under the project, hazardous materials (e.g., fuels, lubricants, solvents, adhesives, and paints) would be transported and used, and hazardous wastes may be generated for disposal. As such, construction activities could result in an increase in the transportation, use, and disposal of hazardous materials.

The routine transportation, use, and disposal of hazardous materials during construction and operation of developments under the project may pose health and safety hazards to people handling the hazardous materials if the hazardous materials are improperly handled, or to the nearby public and environment if the hazardous materials are accidentally released into the environment. Potential impacts associated with accidental releases of hazardous materials into the environment are discussed under *criterion b)* below.

#### *Transportation of Hazardous Materials*

As described in the *Regulatory Setting* section above, the transportation of hazardous materials on local roadways is regulated and monitored by multiple federal and State agencies. These agencies enforce federal and State regulations regarding the transportation of hazardous materials and also respond to hazardous material spills and releases that occur on roadways, railway lines, and at railroad crossings. Should an accidental release of hazardous materials occur during transport within the planning area, the Belmont Fire Protection District's Hazardous Materials Team would respond to the incident. Caltrans and the CHP would also respond if spills of hazardous materials occur on a State highway (e.g., Skyline Boulevard).

#### *Use of Hazardous Materials*

Hazardous materials would be routinely used during construction of developments under the project. Developments under the project that would result in disturbance of an acre or more of land would be required to manage soil and hazardous materials during construction activities in accordance with the requirements of the Construction General Permit, which requires preparation and implementation of a Stormwater Pollution Prevention Plan (SWPPP) that includes hazardous materials storage requirements. For example, construction site operators must store chemicals in watertight containers (with appropriate secondary containment to prevent any spillage or leakage) or in a storage shed (completely enclosed). Developments under the project that would result in disturbance of less than an acre would generally handle smaller quantities of hazardous materials, which reduces the likelihood for the accidental release of

significant quantities of hazardous materials. The Town performs inspections of all construction sites in accordance with the requirements of the MRP to ensure that potential sources of stormwater pollutants, including hazardous materials, are appropriately managed. Compliance with the existing regulations described above in the *Regulatory Setting* section would ensure that hazardous materials are properly handled during construction.

Operation of developments under the project would also involve the routine transportation, use, and disposal of hazardous materials for service/maintenance industries, commercial facilities, pest/weed management, agriculture, medical facilities, schools, and households. Businesses storing significant quantities of hazardous materials (e.g., in USTs or over threshold quantities for aboveground storage) would be regulated under the SMCEH's CUPA Programs which ensure the safe storage, use, and handling of hazardous materials.

#### *Disposal of Hazardous Materials*

The disposal of hazardous materials by businesses in the planning area is regulated and monitored by the SMCEH's CUPA Programs. The disposal of hazardous waste is also regulated by the DTSC consistent with the requirements of federal and State regulations including RCRA, Health and Safety Code Division 20, Chapter 6.5, and CCR Title 22. Household hazardous waste generated in the planning area can be safely disposed of at facilities operated by the San Mateo County Household Hazardous Waste Program.

#### *Conclusion*

The project does not envision any major land use changes that would substantially alter the basic land uses of the town. While residential development envisioned by the Housing Element Update could result in an incremental increase in the transportation, use, and disposal of hazardous materials within the planning area, that incremental increase is not expected to change the risks associated with routine hazardous materials transportation, use, and disposal compared to the existing condition. Compliance with the existing regulation described under the *Regulatory Setting* section above, including OSHA and Cal/OSHA regulations, the California Health and Safety Code Division 20, Chapter 6.5, CCR, DOT, RCRA, SMCEH's CUPA Programs, SMCEH's Medical Waste Program, and other federal, State, regional, and local regulations would ensure that residential development under the project would not create a significant hazard to the public or the environment associated with the routine transport, use, or disposal of hazardous materials by ensuring that these materials are properly handled during construction and operation of developments under the project. Therefore, this impact would be less than significant.

*b) 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?*

**Less than Significant with Mitigation.** Releases of hazardous materials into the environment from developments under the project could potentially affect the public and/or the environment

if: 1) hazardous building materials (e.g., lead paint, asbestos, PCBs, and mercury) are disturbed during demolition or renovation activities; 2) leakage, spills, or improper disposal of hazardous materials occur during construction or operation; or 3) contaminated soil or groundwater is disturbed during construction or operation.

### *Hazardous Building Materials*

If lead paint is present in structures to be renovated or demolished under the project, the stabilization and/or removal of lead paint would be required in accordance with applicable laws and regulations, including but not limited to: California OSHA's Construction Lead Standard, Title 8 CCR Section 1532.1, and Department of Health Services regulation 17 CCR Sections 35001 through 36100, as may be amended.

If ACMs are present in structures to be renovated or demolished under the project, the disturbance/removal and management of ACMs must be performed in accordance with BAAQMD Regulations under Rule 11-2 prior to the Town issuing demolition or renovation permits to ensure that asbestos would not be released into the environment.

Electrical and lighting equipment that may contain hazardous materials such as mercury and PCBs can be readily identified and, therefore, would be appropriately managed/disposed of in accordance with applicable regulations including TSCA, DTSC hazardous waste rules, and other federal and State regulations. Other types of PCBs-containing building materials such as caulks/sealants, rubber window seals/gaskets, specialized paints, mastics, and other adhesives require testing to evaluate whether these materials contain PCBs.

The MRP requires that all Bay Area municipalities address potential sources of PCBs including preventing certain building materials that may contain PCBs from entering storm drains as a result of building demolition activities. In order to obtain a demolition permit from the Town, applicants must conduct an assessment to screen for PCBs in priority building materials including caulks and sealants, thermal/fiberglass insulation and other insulating materials, adhesive/mastic, and rubber window seals/gaskets. The requirements apply to whole building demolition of commercial, multi-family residential, public, institutional, and industrial structures constructed or remodeled between 1950 and 1980. Single-family homes and wood-frame structures are exempt.<sup>81</sup>

Hazardous building materials removed during demolition or renovation activities must be transported in accordance with DOT regulations and disposed of in accordance with the RCRA, CCR, and/or California Universal Waste Rule at a facility permitted to accept the wastes. Compliance with the existing regulations described above would ensure that potential impacts

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<sup>81</sup> Portola Valley, 2022c. PCBs Screening Assessment Form, Available at: <https://www.portolavalley.net/departments/planning-building-department/resource-center/applications-checklists>, accessed October 10, 2022.

related to the release of hazardous building materials into the environment due to development under the project would be less than significant.

*Spills, Leaks, or Improper Disposal of Hazardous Materials*

An accidental release of hazardous materials (e.g., oils, fuels, solvents, paints, or contaminated soil or groundwater) during construction under the project could result in exposure of construction workers, the public, and/or the environment to hazardous materials. As discussed above, construction projects that disturb one-acre or more of land would be subject to the requirements of the Construction General Permit, which requires preparation and implementation of a SWPPP to reduce the risk of spills or leaks from reaching the environment, including procedures to address minor spills of hazardous materials. Measures to control spills, leakage, and dumping must be addressed through structural as well as nonstructural best management practices (BMPs). For example, equipment and materials for cleanup of spills must be available on site, and spills and leaks must be cleaned up immediately and disposed of properly. BMPs also include treatment requirements, operating procedures, and practices to control site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. As discussed above, smaller construction sites would generally handle smaller quantities of hazardous materials, which reduces the likelihood for the accidental release of significant quantities of hazardous materials, and the Town performs inspections of all construction sites as required by the MRP, which ensures that hazardous materials are appropriately managed.

As discussed above, the transportation of hazardous materials is subject to both federal and State regulations. If a discharge or spill of hazardous materials occurs during transportation, the transporter is required to take appropriate immediate action to protect human health and the environment (e.g., notify local authorities and contain the spill), and is responsible for the discharge cleanup.

The SMCEH's CUPA Programs and Medical Waste Management Program require that hazardous materials be properly labeled, stored, and disposed of; and requires training and planning to ensure appropriate responses to spills and emergencies.

Compliance with existing regulations regarding the management, transportation, and disposal of hazardous materials, as discussed under the *Regulatory Setting* section and discussion of routine transport, use, or disposal of hazardous materials (criterion a), would ensure that potential impacts related to spills, leaks, or improper disposal of hazardous materials that would be routinely handled during construction and operation of developments under the project would be less than significant.

### *Soil and Groundwater Contamination*

As discussed under *Existing Setting*, there are documented hazardous materials release sites within the planning area, and there is the potential for previously unidentified hazardous materials contamination to be present in the planning area, particularly in areas of past or existing commercial land use; areas of past agricultural land use; and areas with undocumented fill materials.

The disturbance of contaminated soil or groundwater during construction activities could potentially result in impacts to construction workers, the public, and the environment because dust or vapors laden with hazardous materials can be released into the environment; movement of contaminated soil can spread contamination to new areas; and construction of stormwater treatment/infiltration and other landscaping features over areas of contaminated soil or groundwater could increase the leaching of contaminants into groundwater or migration of contaminated groundwater. The potential release of hazardous materials into the environment during development or redevelopment of potentially contaminated properties is a potentially significant impact. Implementation of the following mitigation measure would reduce this impact to a less-than-significant level.

**Mitigation Measure HAZ-1: Phase I Environmental Site Assessment (ESA).** The following requirements related to potential hazardous materials contamination would not apply to residential renovations/additions (due to the limited soil disturbance involved with such projects) or properties where past land uses have included only residential or undeveloped open space (i.e., no previous agricultural, industrial, commercial, or transportation related use) and where placement of undocumented fill material has not occurred. Evidence of such past land use must be demonstrated to the Town through historic aerial photos, maps, and/or building department records.

Prior to the Town issuing demolition, grading, or building permits for a proposed redevelopment or development project that would disturb soil (except for residential renovations/additions), the project applicant shall prepare a Phase I Environmental Site Assessment (ESA) for the project site and shall submit the Phase I ESA to the Town for review. If any Recognized Environmental Conditions (RECs) or other environmental concerns are identified in the Phase I ESA, the project applicant shall prepare a Phase II ESA to evaluate the RECs or other environmental concerns and shall submit the Phase II ESA to the Town for review and approval. Phase I and II ESA reports shall be prepared by a qualified environmental professional and include recommendations for further investigation or remedial action, as appropriate, for hazardous materials contamination. Remedial actions may include, but not necessarily be limited to, the preparation and implementation of a Soil and Groundwater Management Plan, removal of hazardous materials containers/features (e.g., underground or aboveground storage tanks, drums, piping, sumps/vaults), proper destruction of water supply wells, removal and off-site disposal of contaminated soil or

groundwater, in-situ treatment of contaminated soil or groundwater, or engineering/institutional controls (e.g., capping of contaminated soil, installation of vapor intrusion mitigation systems, and establishing deed restrictions).

Prior to the Town issuing demolition, grading, or building permits, the project applicant shall implement any recommendations for additional investigation and/or remedial action planning identified in the Phase I and II ESAs and submit to the Town evidence of approvals from the appropriate federal, State, or regional oversight agency(ies) for any proposed remedial action plans. Prior to the Town issuing a certificate of occupancy, the project applicant shall submit to the Town evidence of approvals from the appropriate federal, State, or regional oversight agency(ies) for the completion of remedial action. If the project applicant indicates that in their view regulatory agency oversight/approval is not required for the proposed project based on the findings of the Phase II ESA and/or the proposed remedial actions, then the Phase I and II ESAs and proposed remedial action plans shall be reviewed by a third-party qualified environmental professional selected by the Town and funded by the project applicant. The third-party qualified environmental professional shall either approve of the proposed investigation and/or remedial actions or provide recommendations for further investigation, additional/alternative remediation actions, and/or regulatory agency oversight for the project site. The project applicant shall implement the recommendations of the third-party qualified environmental professional prior to the Town issuing demolition, grading, or building permits.

Implementation of **Mitigation Measure HAZ-1** would ensure that the risk of hazardous materials being released into the environment during development under the project due to soil or groundwater contamination would be less-than-significant.

*c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within ¼-mile of an existing or proposed school?*

**Less than Significant with Mitigation.** The planning area contains several schools. One school (Windmill School, a private preschool located at 900 Portola Road) is located within ¼-mile of a housing site (approximately 500 feet northwest of Christ Church). Given the distribution of schools in the Town, it is possible that future development under the project may increase the likelihood of hazardous emissions and handling of hazardous materials during construction activities within ¼-mile of schools. Compliance with the existing regulation described under *Regulatory Setting* section above (e.g., a SMCEH's CUPA Programs and Medical Waste Program, OSHA and Cal/OSHA regulations, the California Health and Safety Code Division 20, Chapter 6.5, CCR, DOT, RCRA, BAAQMD, and other federal, State, regional, and local regulations) and implementation of **Mitigation Measure HAZ-1** would ensure that potential impacts related to hazardous emissions within ¼-mile of schools as a result of development under the project would be less than significant.



d) *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 it create a significant hazard to the public or the environment?*

**Less than Significant with Mitigation.** The provisions of Government Code Section 65962.5 require the DTSC, the State Water Board, the California Department of Health Services, and the California Department of Resources Recycling and Recovery (formerly the California Integrated Waste Management Board) to submit information pertaining to sites associated with solid waste disposal, hazardous waste disposal, LUST sites, and/or hazardous materials releases to the Secretary of CalEPA. The known hazardous materials release sites identified within the planning area are discussed under the *Affected Environment* section above. The closed LUST sites identified on GeoTracker within the planning area are included on the list of hazardous materials release sites compiled pursuant to Government Code Section 65962.5.<sup>82</sup> Implementation of **Mitigation Measure HAZ-1** would ensure that if development under the project occurs on properties included on the list of hazardous materials release sites compiled pursuant to Government Code Section 65962.5, potential impacts related to past hazardous materials releases would be less-than-significant.

e) *For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 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?*

**No Impact.** The planning area is not located near any airports; therefore, no impacts would occur under this criterion.

f) *Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?*

**Less than Significant.** As described in the *Affected Environment* section, the Town has developed an Emergency Operations Plan<sup>83</sup> which describes organizational structures, roles and responsibilities, policies, and protocols for providing emergency support to ensure the effective management of emergency operations within the town during an extraordinary emergency or disaster. Development under the project could result in an incremental increase in population within the planning area, which could result in an incremental increase in the demand for emergency response resources and services; however, the development under the project would not impair or interfere with implementation of the Emergency Operations Plan.

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<sup>82</sup> CalEPA, 2022. Cortese List Data Resources. Available: <https://calepa.ca.gov/sitecleanup/corteselist/>, accessed October 10, 2022.

<sup>83</sup> Town of Portola Valley, 2017. Emergency Operations Plan, Adopted January 11.

The designated evacuation routes in the town are presented on Figure I-2 and all of the housing sites are located along designated evacuation routes; therefore, development facilitated by the project would be served by the existing emergency evacuation routes. Development under the project could require temporary closure of traffic lanes on emergency evacuation routes during construction activities (e.g., for utility connections). This could impede the implementation of emergency response and evacuation plans; however, any construction activities that would result in temporary roadway closures would be required to obtain traffic permits from the Town and prepare a traffic control plan which would maintain emergency response and evacuation access through appropriate traffic control measures and detours.

The Safety Element Update includes the following proposed policies and implementation actions related to emergency response/evacuation:

*Policy P-72:* Prioritize the needs of vulnerable populations affected disproportionately by hazards and disasters.

*Policy P-73:* Engage vulnerable populations in identifying potential hazards and program responses and priorities.

*Implementation Action A-73-1:* Use Community Emergency Response Team (CERT) resources to assist with identification, outreach, and engagement of vulnerable populations.

*Policy P-74:* Collaborate with local and regional agencies on hazard mitigation and emergency management projects and programs.

*Policy P-75:* Ensure infrastructure can accommodate changing conditions and effects associated with climate changes.

*Implementation Action A-75-1:* Look to Best Practices to develop and maintain resilient infrastructure standards.

*Policy P-76:* Require capital projects in high hazard areas to adhere to higher standards to reduce future potential hazard vulnerability.

*Implementation Action A-76-1:* Develop risk assessment guidance and resilience strategies.

*Implementation Action A-76-2:* As part of the capital planning and budgeting process evaluate and determine if capital projects located within high hazard areas need to adhere to risk assessment guidance and identify appropriate resilience strategies.

*Policy P-77:* Strengthen emergency management capacity and coordination with the San Mateo County Department of Emergency Management and the Woodside Fire Protection District (WFPD).

*Implementation Action A-77-1:* Regularly assess emergency management needs and identify resources to prepare for current and future hazard events.

*Implementation Action A-77-2:* Incorporate the likelihood of climate change impacts into Town emergency response planning and training.

*Implementation Action A-77-3:* Incorporate locations and operations responsibility for establishing cooling centers for extreme heat events as part of the next update of the Town's Emergency Operations Plan.

*Implementation Action A-77-4:* Incorporate the projected impacts of climate change, including extreme heat, drought, flooding, wildfire, and storm events, in the Multijurisdictional Local Hazard Mitigation Plan, the Housing Element, Sustainability Element, Emergency Operations Plan, and other comprehensive planning efforts.

*Policy P-78:* Continue to promote the Community Emergency Response Team (CERT) program to strengthen community cohesion and emergency preparedness through community engagement efforts.

*Implementation Action A-78-1:* Coordinate with Town sponsored advisory bodies/ committees and neighboring communities to ensure effective coordination with the Safety Element.

*Policy P-79:* Prepare the Town for post-disaster recovery through proactive planning.

*Implementation Action A-79-1:* Develop a post disaster recovery framework.

*Policy P-86:* Prepare and implement a Portola Valley Evacuation Plan

*Implementation Action A-86-1:* Work with public safety stakeholders and Town committees on the development of a Town-wide Evacuation Plan for adoption by the Town Council

*Implementation Action A-86-2:* Implement the Town of Portola Valley Evacuation Plan including all recommendations to support more effective evacuation

*Implementation Action A-86-3:* Explore the identification and construction of new evacuation rights of way throughout the Town

*Implementation Action A-86-4:* Study neighborhood level evacuation needs and recommendations to be adopted by Town Council.

*Policy P-87:* Conduct early hazard condition notifications to all residents and conduct early evacuation warnings for high-risk areas or areas where constrained conditions require lengthy evacuation.

*Policy P-88:* Require new developments, redevelopments, and major remodels to enhance the Town's evacuation network and facilities and comply with the Town's Evacuation Assessment.

*Implementation Action A-88-1:* Enhance existing town programs to further reduce fire hazards along public roads and rights of way. Vegetation management should focus on thinning low branches and dense trees to the maximum extent possible within the public right of way.

*Policy P-89:* Ensure street naming and numbering systems adequately identify properties, to avoid potential confusion for emergency response vehicles

*Policy P-90:* Require all new developments and redevelopments within the high and very high fire hazard severity zones, to provide a minimum of two points of access by means of publicly accessible roads that can be used for emergency vehicle response and evacuation purposes.

*Implementation Action A-90-1:* Design and maintain all private roads to permit unrestricted access for all emergency equipment and personnel.

*Implementation Action A-90-2:* Identify the feasibility of constructing additional emergency access improvements for existing developments that do not meet minimum road standards for emergency equipment, such as:

- a. Additional vehicle pullouts at key hillside locations.
- b. Limiting or restricting on-street parking at key hillside locations.
- c. Potential for construction of new or improved emergency access routes.
- d. Roadside clearance improvements.
- e. Creation of easements and emergency access roads for areas with constrained parcels.

*Implementation Action A-90-3:* Establish mitigations for properties in High and Very High Fire Hazard Safety Zones with restricted and single points of access including parking restrictions and investigating the feasibility of establishing special assessment districts to improve road capacity, and adequate water supply.

*Policy P-91:* Promote efficient and effective evacuation preparedness, where households rely on the following:

- Use of a single car for evacuation purposes, where feasible
- Coordinate with neighbors and tenants to expedite evacuation proceedings, and
- Partnering with community groups/organizations to help residents that need assistance

*Policy P-92:* Enhance information gathering and sharing resources to support future evacuation events.

*Policy P-93:* Continue supporting County Department of Emergency Management meetings with Town staff, stakeholders, and institutions to support the development and integration of school and private institution evacuation plans into Town efforts.

Development under the project would include implementation of the policies and implementation actions of the Safety Element Update, which would promote emergency response/evacuation planning and preparation efforts, improvement/maintenance of existing evacuation/access roads, and creation of more evacuation/access roads where feasible. Therefore, potential impacts related to impairing or interfering with the emergency response or evacuation plan would be less than significant.

*g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?*

**Less than Significant.** The planning area is susceptible to wildland fires due to the hilly topography, dense vegetation, and climatic conditions. As shown on Figure I-3, a Local Responsibility Area for fire suppression in the northwest portion of the planning area is mapped by CAL FIRE as a very high FHSZ. State Responsibility Areas for fire suppression surrounding the town include moderate, high, and very high FHSZs. None of the proposed housing sites are

located within a very high FHSZ; however, one parcel (Christ Church) is adjacent to a very high FHSZ to its west and south (Figure I-3).

In the event of a major fire, evacuation from some locations in the planning area could be challenging due to the topography, vegetation, and limited access roads. As described under *criterion f* above, the Town has developed an Emergency Operations Plan and has established emergency evacuation routes, and the proposed policies and implementation actions of the Safety Element Update would help to evacuate residents away from wildfire hazards to safer locations.

Development under the project would result in increased residential uses in areas that are prone to wildfires. The topography may limit the construction of new roadways in the areas of some developments, which could limit emergency evacuation/response access; however, new development could also result in the creation of additional access roads that could improve emergency evacuation/response route options for existing residents and emergency responders.

Construction activities under the project would use equipment that could generate sparks (e.g., jack hammers, saws, and mowers), hot work that can generate significant amounts of sparks, flame, or slag (e.g., grinders, acetylene torches, and welding equipment), and would involve storage and use of flammable and combustible materials (e.g., fuel, compressed gasses, building materials) which could temporarily increase fire risks in wildfire prone areas. As discussed under the *Regulatory Setting* section, the California Fire Code contains requirements for construction and demolition activities including specific requirements for welding and other hot work. The requirements are intended to maintain the required levels of fire protection, limit fire ignition and spread, establish the appropriate operation of equipment, and promote prompt response to fire emergencies. Regulated features include fire protection systems, fire fighter access, water supply, means of egress, hazardous materials storage and use, and temporary heating equipment and other ignition sources.

Operational vegetation management activities and maintenance/repair activities under the project could also involve the use of flammable liquids (e.g., fuels) and equipment that could generate sparks such as mowers, brush cutters, chainsaws for vegetation management; and saws, grinders, and welders for maintenance/repair activities.

As discussed under the *Regulatory Setting* section, Chapter 8.34 of the Municipal Code requires that when the National Weather Service issues red flag warnings when weather events may result in extreme fire behavior, gas-powered landscaping, construction, and gardening equipment shall not be operated in the town. Electric-powered landscaping, construction, and gardening equipment may only be used if it can safely be operated without causing a fire or a spark, such as when hitting a stone or used near dry vegetation.

As discussed under the *Regulatory Setting* section, Chapter 15.04 of the Municipal Code amends the California Building Code to apply requirements of Chapter 7A (development in Wildland Urban Interface areas) for all properties in the town and promote more fire resistance construction materials/methods. This code section included amendments made in December 2021 and October 2022 to further home hardening standards for new construction and substantial remodels beyond Chapter 7A.

The Safety Element Update includes the following proposed policies and implementation actions related to wildfire hazards:

*Policy P-37:* Promote new development outside of the Very High Fire Hazard Severity Zone. If development is proposed in the Very High Fire Hazard Severity Zone, require fire safe design and compliance with fire safe regulations contained in Title 14 of the California Code of Regulations. If vegetation management hazard mitigations are required as a condition of building permit approval, the developer shall sign a maintenance agreement or provide a funding source for future maintenance of the required mitigations.

*Implementation Action A-37-1:* Require developers to assign all "fuel modification" requirements on common land to the association or other common owner groups responsible upon development completion and occupancy.

*Policy P-38:* Prior to the approval of any subdivision of lands in a Very High Fire Hazard Severity Zone, the Planning Commission should review the results of a study that includes at least the following topics:

- A description of the risk and the factors contributing to the risk.
- Actions that should be taken to reduce the risk to an acceptable level.
- The costs and means of providing fire protection to the subdivision.
- The costs and means of providing ongoing vegetation management for the subdivision.
- An indication of who pays for the costs involved, and who receives the benefits.
- If a proposed building site requires access to adjoining parcels to maintain 100 feet of defensible space from the primary structure, an easement or other legal agreement for access should be required as permitted by law.

*Policy P-39:* Ensure new public/critical facilities (schools, hospitals, fire stations, etc.), are not located in High and Very High Fire Hazard Severity Zones, to the greatest extent feasible. If located in these areas, ensure full compliance with fire safe regulations and adequate fire response and evacuation capabilities.

*Policy P-40:* Continue to require new development to incorporate design measures that enhance fire protection in High and Very High Fire Hazard Severity Zones. This shall include but is not limited to incorporation of fire-resistant structural design, use of fire-resistant landscaping, and fuel modification around the perimeter of structures.

*Policy P-41:* Require fire protection plans for new development and major remodels in areas designated as High and Very High Fire Severity Hazard Zones by the California Department of Forestry and Fire Protection or equivalent hazard designation in Local Responsibility Areas.

*Policy P-42:* Require vegetation management plans in all new developments and major remodels.

*Implementation Action A-42-1:* Explore the feasibility of other vegetation management strategies, including:

- a. Elimination of use of fire-hazardous plants.
- b. Use of non-prolific landscaping species.
- c. Requiring project proponents in hillside areas to evaluate and upgrade as necessary fire flows and water supplies to hillside areas.

*Policy P-43:* Provide adequate clearance around structures to prevent spread of fire by direct exposure and to assure adequate access in times of emergency and for the suppression of fire.

*Policy P-44:* Vegetation management conducted by homeowners should remove the most hazardous plant materials while leaving adequate vegetation to reduce risks of erosion, habitat loss, and reduce the potential for invasive species introduction.

*A-44-1:* Conduct three-dimensional mapping of understory vegetation in a format which is compatible with predictive wildfire spread models in collaboration with WFPD.

*Policy P-45:* Ensure open space brush areas, susceptible to wildfire risk, are adequately maintained in accordance with WFPD and applicable state requirements.

*Policy P-46:* Encourage the use of fire-resistant vegetation for landscaping, especially in high fire hazard areas.

*Implementation Action A-46-1:* Provide information on methods for reducing fire hazards through the Town's website and newsletter, including information on clearing of plant debris and combustible materials, use of fire-safe landscaping and defensible space, and modifying buildings to make them fire-resistant.

*Policy P-47:* Require vegetation clearance and maintenance for all private roads and properties in the high and very high fire hazard severity zones.

*Policy P-48:* Maintain and adequately fund fuel breaks and other fire defense improvements on public property and require similar measures for private property in compliance with fire safe regulations where possible.

*Policy P-49:* Ensure access to privately owned sources of water, such as swimming pools, in or adjacent to high fire risk areas, for on-site fire protection use, if necessary.

*Policy P-50:* Ensure that landscaping, lighting, building siting and design, water pressure and peak load water storage capacity, and building construction materials meet current fire safe regulations.

*Policy P-51:* Prioritize development in areas with sufficient water supply infrastructure and roadway capacity to ensure adequate evacuation and emergency equipment access.

*Policy P-52:* Maintain and enhance water supply infrastructure to ensure adequate supplies for existing and future daily demands and firefighting suppression requirements.

*Policy P-53:* Educate residents and property owners on proper water shut off procedures during a hazard incident or evacuation order.

*Policy P-54:* Collaborate with WFPD to promote public awareness of fire hazards and safety measures, including outreach to at-risk populations, and identification of low-risk areas for temporary shelter and refuge during wildfire events

*Policy P-55:* Ensure adequate fire suppression resources in the local responsibility areas, and coordinate with WFPD and CAL FIRE to meet current and future fire suppression needs.

*Implementation Action A-55-1:* Portola Valley will update the Fire Hazard Severity Zones for Very High, High, and Moderate when hazard and fuels assessments by WFPD and the State complete their updates. The State update recognizes that fire hazard severity is changing and is currently updating maps to reflect changing conditions.

*Policy P-56:* Identify fire defense zones where firefighters can control wildfires without undue risks to their lives, and areas where firefighter safety prohibits ground attack firefighting.

*Policy P-57:* Pursue funding for fire prevention and suppression (State grant funds, hazard mitigation funds, etc.).

*Policy P-58:* Become a Fire Risk Reduction Community through the State Board of Forestry and Fire Protection.

*Policy P-59:* Building upon CAL FIRE's Fire Hazard Severity Zone maps, use local knowledge of wildfire hazard, landscape, housing, and infrastructure to develop a wildfire overlay for corresponding policies.

*Policy P-60:* Require compliance with Chapter 7A requirements of the California Building Code and the Town's Home Hardening Code for all development.

*Policy P-61:* Require new developments and major remodels or renovations to comply with the California Building Code, Fire Code, and local ordinances for construction and adequacy of water flow and pressure, ingress/egress, and other measures for fire protection. Require endowments or HOA-type assessments to fund long-term maintenance of wildfire mitigations.

*Policy P-62:* Require non-combustible roofs and exterior siding in all fire hazard areas.

*Policy P-63:* Work with WFPD to enforce regulations related to fire resistant construction, sprinkler systems, and early warning fire detection system installation and/or sirens.

*Policy P-64:* All developments shall comply with the WFPD Fire Code and incorporate recommendations from the Santa Cruz County - San Mateo County Community Wildfire Protection Plan, where applicable.

*Policy P-65:* New developments in fire-prone hillside areas, shall comply with statewide Fire Safe Regulations (see CCR, Title 14, Sections 1270 et seq.).

*Implementation Action A-65-1:* Increase structure setbacks along slopes to protect structures in wildfire prone areas.

*Policy P-66:* Expand home hardening throughout the Town to reduce fire hazard vulnerability

*Implementation Action A-66-1:* Update and expand the home hardening ordinance to existing buildings in high and very high fire hazard severity zone areas.

*Implementation Action A-66-2:* Develop a program to support residents with home hardening and defensible space actions. The program may include various resources, incentives, and educational components. Programs may include vegetation disposal assistance, home hardening guidance and resources, or support with development of local resident-focused educational organizations like Firewise Communities.

*Policy P-67:* Incorporate updated WFPD fire hazard and risk assessment findings into the Safety Element.



*Policy P-68:* Monitor new State laws that increase minimum building standards and expand the requirements to more areas within the Town, including high and moderate areas.

*Policy P-69:* Upon the completion of the Structure Separation Experiments being carried out by National Institute of Standards and Technology (NIST), the Insurance Institute for Business and Home Safety, and CAL FIRE on structure-to-structure ignition, consider science-backed approaches to addressing narrow setbacks. The Town may wait for State or WFPD guidance, implement findings into local building codes or provide voluntary guidance to residents.

*Policy P-70:* Develop, monitor, and regularly update a program to educate and inform the public on local and state fire code, and fire safe regulations. Ensure that this program provides the latest information as provided by the Town, County, and the State. Use community-appropriate languages to ensure greater understanding by residents and visitors.

*Policy P-71:* Support increased enforcement mechanisms and processes by WFPD to incentivize fire risk reduction activities and abatement.

The Housing Element Update includes the following proposed program related to wildfire hazards:

*Program 1-3:* Create a new voluntary upzoning program that allows property owners with sites one acre or greater to develop up to four dwelling units per acre, assuming they meet the following safety criteria:

- Accessible to two ways of ingress and egress.
- Located on a slope less than 30%.
- Outside of a very high fire hazard severity zone.
- Outside of a fault zone.
- Outside of areas identified with unstable soils or at risk of landslide or liquefaction.

Interested property owners would be required to go before Planning Commission to demonstrate all safety criteria would be met. Subsequently, the Architectural Site Control Commission (ASCC) would review the planning application for compliance with a set of objective design standards.

Implementation of Program 1-3 of the Housing Element Update would ensure that the proposed new voluntary upzoning program would not results in construction of additional housing units within a very high FHSZ.

Development under the project would include implementation of the proposed policies and implementation actions of the Safety Element Update, which would promote planning, preparation, and abatement activities for wildfire hazards. Implementation of the Emergency Operations Plan and the proposed policies and implementation actions of the Safety Element Update and compliance with the relevant sections of the Municipal Code and California Fire Code would ensure that potential impacts of development under the project related to exposure of people and structures to wildfires would be less than significant.

## J. HYDROLOGY AND WATER QUALITY

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) 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:				
i) result in substantial erosion or siltation on- or off-site;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) 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; or	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv) impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) In flood hazard, tsunami, or seiches zones, risk release of pollutants due to project inundation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

### Affected Environment

#### *Regional Hydrology*

#### Surface Waters

The planning area is located southwest of San Francisco Bay in the San Francisquito Watershed, which includes areas that drain to San Francisquito Creek and its tributaries.<sup>84</sup> Creeks within the planning area are shown on Figure J-1. The primary tributaries to San Francisquito Creek within the planning area are Sausal Creek, Corte Madera Creek, and Los Trancos Creek. Sausal Creek receives runoff from the northwest portion of the planning area and discharges into Searsville Lake to the north of the planning area. Corte Madera Creek receives runoff from the majority of

<sup>84</sup> Oakland Museum of California, 2022. Guide to San Francisco Bay Area Creeks, San Francisquito Watershed & Alluvial Fan, Available: <http://explore.museumca.org/creeks/1460-SFrancisquitoWS.html>, accessed October 13, 2022.

the planning area and also discharges into Searsville Lake. Searsville Lake discharges into San Francisquito Creek, which receives runoff from and crosses through the northeast portion of the planning area and ultimately discharges to San Francisco Bay at the shoreline of East Palo Alto. Los Trancos Creek receives runoff from the eastern portion of the planning area and follows the eastern boundary of the planning area until it discharges into San Francisquito Creek in the northeast portion of the planning area.

### Groundwater

Portions of the planning area located near San Francisquito Creek and Los Trancos Creek are within the San Mateo Plain Subbasin of the Santa Clara Valley Groundwater Basin. The majority of the planning area is not within a designated groundwater basin. Groundwater level mapping prepared by San Mateo County for the San Mateo Plain Subbasin has limited information regarding the depth to groundwater within the planning area. The only information available through San Mateo County's Groundwater Levels mapping program<sup>85</sup> within the planning area indicates that the depth to shallow groundwater has been measured at approximately 10 to 20 feet deep in the central portion of the planning area (at The Sequoias). Groundwater was encountered near a depth of 14 feet while performing remedial excavation activities near Los Trancos Creek,<sup>86</sup> as discussed above in *Section I, Hazards and Hazardous Materials*. The depth to groundwater can vary depending on factors such as proximity to creeks/surface water, seasonal rainfall, irrigation, groundwater extraction, leaking utilities, and subsurface conditions (e.g., clay layers that can cause perched groundwater or fault zones that can act as barriers to groundwater flow).

Well type mapping prepared by San Mateo County indicates that there are various types of groundwater wells within the planning area, including irrigation wells, a private water supply well, test wells, and environmental wells.<sup>87</sup> All groundwater basins within San Mateo County are designated as Very Low Priority and are not required to comply with the Sustainable Groundwater Management Act.<sup>88</sup>

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<sup>85</sup> San Mateo County, 2022a. Groundwater Levels, Available: <https://smcmaps.maps.arcgis.com/apps/webappviewer/index.html?id=2b1097f5afb94e6a81088383b3f01ff5>, Accessed October 14, 2022.

<sup>86</sup> Cardno, 2015. Soil and Groundwater Assessment Report, Ford Field, 3329 Alpine Road, Portola Valley, California, September 25.

<sup>87</sup> San Mateo County, 2022b. Well Types, Available: <https://smcmaps.maps.arcgis.com/apps/webappviewer/index.html?id=5244f966052348e1aa02eed4ad14f659>, Accessed October 14, 2022.

<sup>88</sup> San Mateo County, 2022c. Groundwater, Available: <https://www.smcsustainability.org/water/groundwater/> Accessed October 14, 2022.

## *Flooding*

### FEMA Flood Zones

Floodplain mapping prepared by the Federal Emergency Management Agency (FEMA) provides important guidance for the Town in planning for flooding events and regulating development within identified flood hazard areas. FEMA's National Flood Insurance Program (NFIP) is intended to encourage State and local governments to adopt responsible floodplain management programs and flood measures. As part of the program, the NFIP defines floodplain and floodway boundaries that are shown on Flood Insurance Rate Maps. The FEMA designated flood hazard zones are shown on Figure J-1.

An area along Corte Madera Creek in the northern portion of the planning area is mapped by FEMA as being within a 500-year floodplain, which are areas that have a 0.2 percent chance of being flooded in a given year. A few creeks and adjacent areas within the planning area have been identified as 100-year flood hazard zones, including segments of Corte Madera Creek and Los Trancos Creek in the central and northern portions of the planning area, and Westridge Creek in the northern portion of the planning area. The 100-year flood hazard zones are those areas with a one percent chance of being flooded in any given year. The 100-year flood hazard zones within the planning area are primarily within creek channels, with relatively limited areas adjacent to creeks designated as 100-year flood hazard zones. The most extensive 100-year flood hazard zones within the planning area are adjacent to Corte Madera Creek.<sup>89</sup> Three parcels identified in the Sites Inventory (The Sequoias, Glen Oaks, and Vacant Portion of Ford Field) are intersected by 100-year flood hazard zones as shown on Figure J-1.

### Dam Inundation

There are three dams located near the planning area which have the potential to cause flooding within the planning area in the event of dam failure. These are the Searsville Dam, Felt Lake Dam, and Foothill Park Dam. The dam failure inundation areas mapped for these dams are shown on Figure J-1. All three of these dams are under the jurisdiction of the Department of Water Resources (DWR), Division of Safety of Dams (DSOD), which provides oversight for the design, construction, and maintenance of many dams in California. The Searsville Dam and Felt Lake Dam are owned by Stanford University and are rated by DSOD as being in satisfactory condition (i.e., no existing or potential dam safety deficiencies are recognized) and having an extremely high downstream hazard in terms of the downstream population and property at risk from potential dam failure inundation. An extremely high downstream hazard is defined by DSOD as expected to cause considerable loss of human life or would result in an inundation area with a population of 1,000 or more.

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<sup>89</sup> FEMA, 2022. FEMA's National Flood Hazard Layer (NFHL) Viewer. Available at: <https://www.fema.gov/flood-maps/national-flood-hazard-layer>, accessed October 13, 2022.

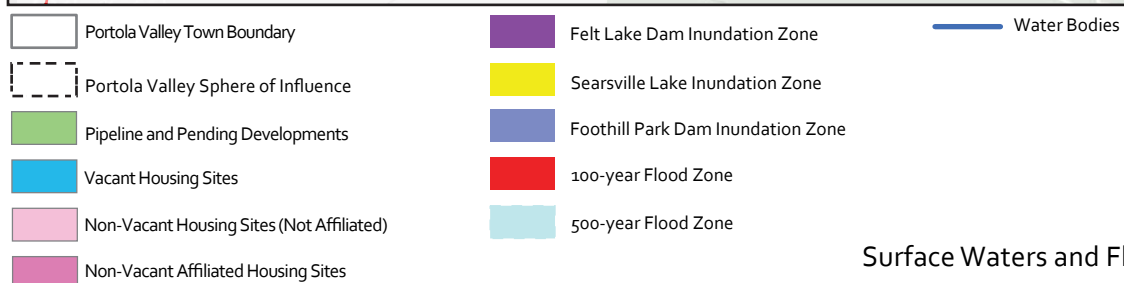
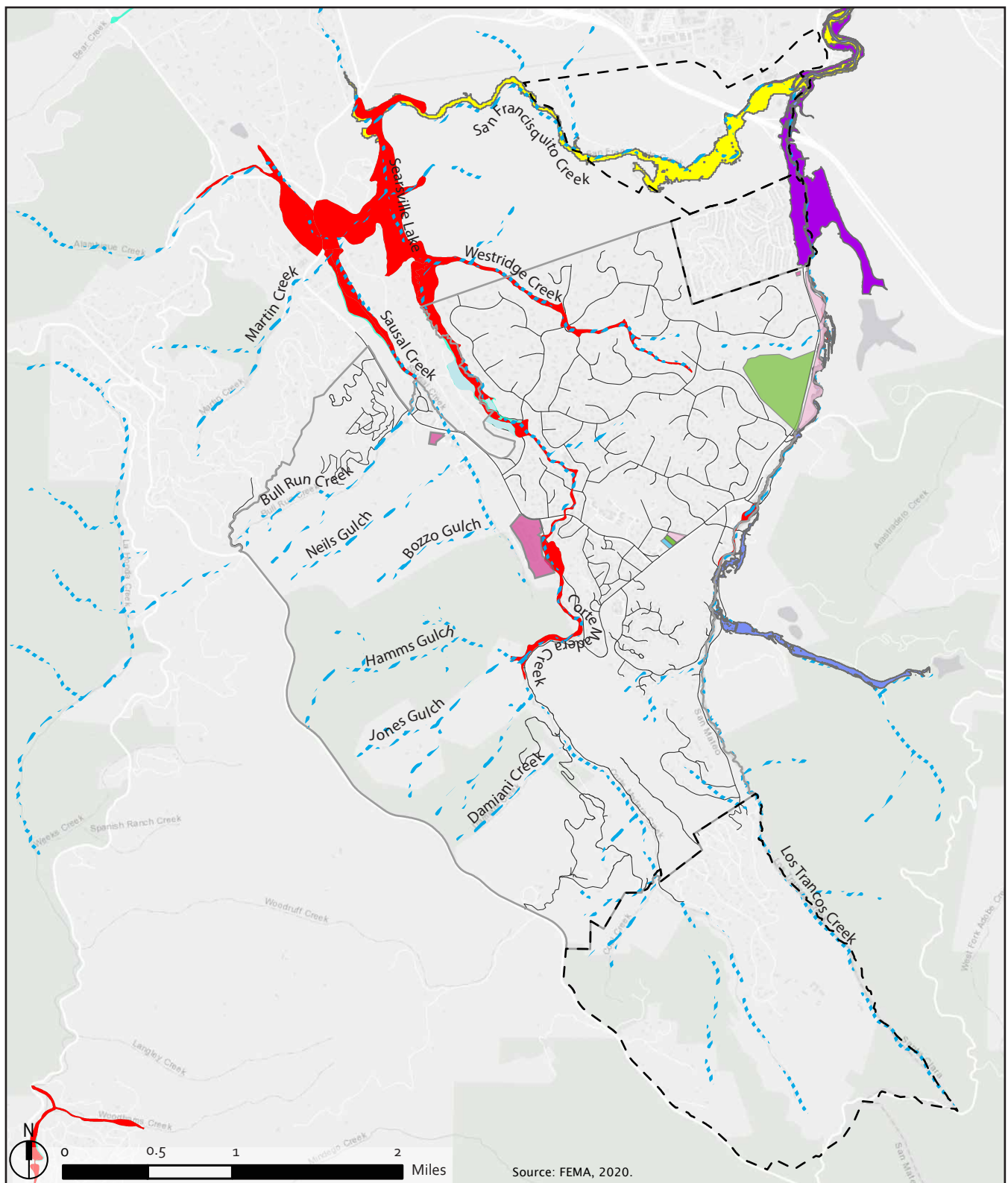


Figure J-1  
Surface Waters and Flood Hazard Zones  
Portola Valley Housing and Safety Elements Update IS/MND

The Foothill Park Dam is owned by the City of Palo Alto and is rated as having satisfactory condition and a significant downstream hazard. A significant downstream hazard is defined by DSOD as having no probable loss of human life but can cause economic loss, environmental damage, impacts to critical facilities, or other significant impacts.<sup>90</sup>

Failure of the Searsville Dam would result in flooding of areas near San Francisquito Creek in the northeast portion of the planning area, with inundation depths up to 10 feet in some areas outside of the creek banks.<sup>91</sup> Failure of the Felt Lake Dam would result in flooding of areas near Los Trancos Creek and San Francisquito Creek in the northeast portion of the planning area, with inundation depths between 20 to 40 feet in some areas outside of the creek banks.<sup>92</sup> Failure of the Foothill Park Dam would result in relatively minor flooding of areas near Los Trancos Creek, as the inundation would remain largely within the creek banks, with inundation depths between 1 to 3 feet in limited areas outside of the creek banks.<sup>93</sup> Two parcels identified in the Sites Inventory (Glen Oaks and Vacant Portion of Ford Field) are intersected by the Foothill Park Dam inundation area as shown on Figure J-1. It appears that dam failure inundation of these parcels would be limited in extent and 1 foot or less in depth.

### *Water Quality*

The quality of surface water and groundwater in the planning area is affected by past and current land uses within the planning area and surrounding areas, and by the composition of geologic materials in the area. The State Water Resources Control Board (State Water Board) and nine regional water quality control boards regulate the quality of surface water and groundwater bodies throughout California. The planning area is located within the jurisdiction of the San Francisco Bay Regional Water Quality Control Board (SFRWQCB), which is responsible for implementing the San Francisco Bay Basin (Region 2) Water Quality Control Plan (Basin Plan).<sup>94</sup> The Basin Plan establishes beneficial water uses for waterways, water bodies, and groundwater within the region and is a master policy document for managing water quality in the region.

Sausal Creek, Los Trancos Creek, San Francisquito Creek, and Searsville Lake are all listed in the Basin Plan as providing the beneficial uses of warm and cold freshwater habitats, wildlife habitat, and water contact and noncontact recreation. Searsville Lake also provides agricultural supply and fish spawning habitat. Los Trancos Creek and San Francisquito Creek also provide fish migration, preservation of rare and endangered species, and fish spawning habitat. Beneficial uses of Corte Madera Creek are not listed in the Basin Plan. The San Mateo Plain Groundwater

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<sup>90</sup> California Department of Water Resources, 2021. Dams within Jurisdiction of the State of California, Listed Alphabetically by County, September.

<sup>91</sup> Northwest Hydraulic Consultants, 2021. Searsville Dam Failure Inundation Analysis, January 28.

<sup>92</sup> Northwest Hydraulic Consultants, 2019. Felt Lake Dam Failure Inundation Analysis, December 4.

<sup>93</sup> ENGEO, 2022. Foothill Park Dam Breach HEC-RAS Maximum Inundation Map, January 14.

<sup>94</sup> San Francisco Bay Regional Water Quality Control Board, 2017. San Francisco Bay Basin (Region 2) Water Quality Control Plan (Basin Plan). Incorporating all amendments as of May 4.

Subbasin is listed in the Basin Plan as providing the existing beneficial uses of municipal, process, and industrial supply and potential beneficial use of agricultural supply.<sup>95</sup>

Under Section 303 (d) of the Clean Water Act (described in the *Regulatory Setting* section below), states must present the U.S. Environmental Protection Agency (USEPA) with a list of “impaired water bodies,” defined as those water bodies that do not meet water quality standards, which in some cases results in the development of a total maximum daily load (TMDL). On a broad level, the TMDL process leads to a “pollution budget” designed to restore the health of a polluted body of water. The TMDL process provides a quantitative assessment of the sources of pollution contributing to a violation of the water quality standards and identifies the pollutant load reductions or control actions needed to restore and protect the beneficial uses of the impaired waterbody.

San Francisquito Creek is listed under the SFRWQCB’s Section 303(d) list of impaired water bodies, and is listed as impaired by the pesticide diazinon, trash, and sedimentation/siltation. A TMDL has been established for diazinon but not for trash or sedimentation/siltation.<sup>96</sup>

### *Water Supply*

The Town receives its municipal water supply from the California Water Service Company (Cal Water) Bear Gulch District. Cal Water does not operate any groundwater wells to supply water for Bear Gulch District. All of the water supply is obtained from surface water sources.<sup>97</sup>

## **Regulatory Setting**

### *Federal*

#### Federal Clean Water Act of 1972

The Federal Clean Water Act of 1972 is the primary federal law that protects the quality of the nation’s surface waters, including lakes, rivers, and coastal wetlands. It is administered by the USEPA. The Clean Water Act operates on the principle that all discharges into the nation’s waters are unlawful unless specifically authorized by a permit. The USEPA has delegated its authority to implement and enforce most of the applicable water quality provisions of this law to the individual states. In California, the provisions are enforced by nine regional water boards under the auspices of the State Water Board.

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<sup>95</sup> San Francisco Bay Regional Water Quality Control Board, 2017. San Francisco Bay Basin (Region 2) Water Quality Control Plan (Basin Plan). Incorporating all amendments as of May 4.

<sup>96</sup> State Water Resources Control Board (State Water Board), 2018. Final 2018 California Integrated Report (Clean Water Act Section 303(d) List/305(b) Report), Available: [https://www.waterboards.ca.gov/water\\_issues/programs/water\\_quality\\_assessment/2018\\_integrated\\_report.html](https://www.waterboards.ca.gov/water_issues/programs/water_quality_assessment/2018_integrated_report.html), Accessed October 14, 2022.

<sup>97</sup> California Water Service, 2021. 2020 Urban Water Management Plan, Bear Gulch District, June.

#### National Pollutant Discharge Elimination System (NPDES) Permit Program

Under Section 402 of the Clean Water Act, the discharge of pollutants through a point source into waters of the United States is prohibited unless the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) permit. The NPDES program regulates the discharge of pollutants from municipal and industrial wastewater treatment plants and sewer collection systems, as well as stormwater discharges from industrial facilities, municipalities, and construction sites. In California, implementation and enforcement of the NPDES program is conducted through the State Water Board and the nine regional water boards. The regional water boards set standard conditions for each permittee in their region, which includes effluent limitations and monitoring programs.

#### Federal Flood Insurance Program

In 1968, Congress created the NFIP in response to the rising cost of taxpayer funded disaster relief for flood victims and the increasing amount of damage caused by floods. The NFIP makes federally backed flood insurance available for communities that agree to adopt and enforce floodplain management ordinances to reduce future flood damage. FEMA manages the NFIP and creates Flood Insurance Rate Maps that designate 100-year flood hazard zones and delineate other flood hazard areas.

#### *State*

#### Porter-Cologne Act and State Implementation of Clean Water Act Requirements

The Porter-Cologne Water Quality Control Act (California Water Code, Division 7, Water Quality) was promulgated in 1969. It established the State Water Board and divided the State into nine hydrologic regions, each overseen by a regional water board. The State Water Board is the primary State agency responsible for protecting the quality of the State's surface and groundwater supplies, but much of its daily implementation authority is delegated to the nine regional water boards. The Porter-Cologne Act also provides for the development and tri-annual review of Water Quality Control Plans that designate beneficial uses of California's major rivers and groundwater basins and establish narrative and numerical water quality objectives for those waters. The Planning Area is within the jurisdiction of the SFRWQCB, which enforces compliance with water quality objectives for beneficial uses of surface waters.

#### NPDES Construction General Permit

Construction projects disturbing more than 1 acre of land are required to comply with the NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities, Order No. 2009-0009-DWQ, NPDES No. CAS000002 (Construction General Permit).



To obtain coverage under the Construction General Permit, the project applicant must provide via electronic submittal, a Notice of Intent, a Storm Water Pollution Prevention Plan (SWPPP), and other documents required by Attachment B of the Construction General Permit. Activities subject to the Construction General Permit include clearing, grading, and disturbances to the ground, such as grubbing or excavation. The permit also covers linear underground and overhead projects, such as pipeline installations. Construction General Permit activities are regulated at a local level by the Regional Water Board.

The Construction General Permit uses a risk-based permitting approach and mandates certain requirements based on the project risk level (i.e., Level 1, Level 2, or Level 3). The project risk level is based on the risk of sediment discharge and the receiving water risk. The sediment discharge risk depends on the project location and timing (i.e., wet season versus dry season activities). The receiving water risk depends on whether the project would discharge to a sediment-sensitive receiving water. The determination of the project risk level would be made by the project applicant when the Notice of Intent is filed (and more details of the timing of the construction activity are known).

The performance standard in the Construction General Permit is that dischargers shall minimize or prevent pollutants in stormwater discharges and authorized non-stormwater discharges through the use of controls, structures, and best management practices (BMPs) that achieve Best Available Technology for treatment of toxic and non-conventional pollutants and Best Conventional Technology for treatment of conventional pollutants. A SWPPP must be prepared by a Qualified SWPPP Developer that meets the certification requirements in the Construction General Permit. The purpose of the SWPPP is (1) to identify the sources of sediment and other pollutants that could affect the quality of stormwater discharges; and (2) to describe and ensure the implementation of BMPs to reduce or eliminate sediment and other pollutants in stormwater as well as non-stormwater discharges resulting from construction activity. Operation of BMPs must be overseen by a Qualified SWPPP Practitioner that meets the requirements outlined in the permit.

The SWPPP must also include a construction site monitoring program. Depending on the project risk level, the monitoring program may include visual observations of site discharges, water quality monitoring of site discharges (pH, turbidity, and non-visible pollutants, if applicable), and receiving water monitoring (pH, turbidity, suspended sediment concentration, and bioassessment).

The Construction General Permit allows non-stormwater discharge of groundwater dewatering effluent if the water is properly filtered and treated to remove sediment and pollutants using appropriate technologies such filtration, settling, coagulant application with no residual coagulant discharge, minor odor or color removal with activated carbon, small scale peroxide addition, or other minor treatment. Testing of receiving waters would also be required prior to

and during the discharge. The discharge of dewatering effluent is authorized under the Construction General Permit if the following conditions are met:

- The discharge does not cause or contribute to a violation of any water quality standard.
- The discharge does not violate any other provision of the Construction General Permit.
- The discharge is not prohibited by the applicable Basin Plan.
- The discharger has included and implemented specific BMPs required by the Construction General Permit to prevent or reduce the contact of the non-stormwater discharge with construction materials or equipment.
- The discharge does not contain toxic constituents in toxic amounts or (other) significant quantities of pollutants.
- The discharge is monitored and meets the applicable numeric action levels.
- The discharger reports the sampling information in the annual report.

If any of the above conditions are not satisfied, the discharge of dewatering effluent is not authorized by the Construction General Permit. If the dewatering activity is deemed by the Regional Water Board not to be covered by the Construction General Permit or other NPDES permit, and discharge of groundwater to the storm drain system is planned, then the discharger would be required to prepare a Report of Waste Discharge, and if approved by the Regional Water Board, be issued site-specific Waste Discharge Requirements (WDRs) under NPDES regulations.

#### Division of Safety of Dams (DSOD)

The California Water Code entrusts dam safety regulatory authority to DSOD, which provides oversight of the design, construction, and maintenance of approximately 1,250 non-federally owned dams within its jurisdiction. DSOD inspects jurisdictional dams to assess if the dams and their related structures (e.g., gated spillways, saddle dams, etc.) are safe for continued use and performing as intended. After inspection and review, DSOD may direct dam owners to make necessary repairs. DSOD conducts independent engineering analyses to validate proposed designs of dam repairs, alterations, enlargements, new dam construction, and removals that are submitted by dam owners or their consultants. DSOD reevaluates existing dams as changes in the state-of-practice occur that could impact dam safety. When necessary, DSOD may immediately direct a dam owner to implement remedial means necessary to protect life and property; or DSOD may impose a reservoir restriction that limits the reservoir's water surface level until repairs or remediation work is completed.

*Regional*Municipal Regional Permit

Pursuant to Section 402 of the Clean Water Act and the Porter-Cologne Water Quality Control Act, municipal stormwater discharges in the town are regulated under the SFRWQCB's Municipal Regional Stormwater NPDES Permit, Order No. R2-2015-0049, NPDES Permit No. CAS612008, adopted October 14, 2009 (MRP).<sup>98</sup> The MRP is overseen by the SFRWQCB, and local municipalities (the permittees) are responsible for ensuring compliance with the MRP.

The MRP describes the following: discharge prohibitions under Provisions A.1 and A.2; receiving water limitations which are site-specific interpretations of water quality standards from applicable water quality control plans under Provisions B.1 and B.2; compliance with discharge prohibitions and receiving water limitations under Provision C.1; and municipal operations BMPs to control and reduce non-stormwater discharges and polluted stormwater to storm drains and watercourses during operation, compliance requirements inspection, and routine repair and maintenance activities of municipal facilities and infrastructure under Provision C.2. Additional provisions of the MRP that are pertinent to future development under the General Plan are discussed below.

Provision C.3 of the MRP addresses post-construction stormwater management requirements for regulated projects, which are new development and redevelopment projects that create or replace 10,000 square feet or more of impervious surface, and special land use categories that create or replace 5,000 square feet or more of impervious surface. Where a redevelopment project results in an alteration of more than 50 percent of the impervious surface of a previously existing development that was not subject to Provision C.3, the entire project, consisting of all existing, new, and/or replaced impervious surfaces, must be included in the treatment system design (i.e., stormwater treatment systems must be designed and sized to treat stormwater runoff from the entire redevelopment project). Provision C.3 requires regulated projects to implement Low Impact Development (LID) source control, site design, and stormwater treatment. LID employs principles such as preserving and recreating natural landscape features and minimizing impervious surfaces 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 rain gardens, bioretention areas, bioswales, and planter/tree boxes.

Provision C.3.g of the MRP pertains to hydromodification management, which requires regulated projects that create or replace one-acre or more of impervious surface and increase impervious

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<sup>98</sup> San Francisco Bay Regional Water Quality Control Board, 2015. San Francisco Bay Region Municipal Regional Stormwater NPDES Permit, Order No. R2-2015-0049, NPDES Permit No. CAS612008. November 19.

surface compared to the pre-project conditions to ensure that stormwater discharges from the project do not cause an increase in the erosion potential of the receiving stream over the existing condition.

Provision C.3.i of the MRP requires small projects which create and/or replace between 2,500 and 10,000 square feet of impervious surface and detached single family home projects which create and/or replace 2,500 square feet or more of impervious surface to install site design measures that reduce runoff and pollutants in runoff. Site design measures may include installing permeable pavements surfaces and directing runoff into cisterns, rain barrels, and vegetated areas.

Provision C.6 of the MRP pertains to construction site control and requires permittees to implement a construction site inspection and control program at all construction sites. Inspections must be performed to confirm implementation of appropriate and effective erosion and other construction pollutant controls by construction site operators/developers.

Provision C.7 of the MRP pertains to public information and outreach regarding the impacts of stormwater pollution on receiving waters and potential solutions to mitigate the pollution by encouraging implementation of appropriate solutions.

Provision C.8 of the MRP pertains to water quality monitoring through regional collaboration, countywide or area-wide programs, or third-party monitoring.

Provision C.9 of the MRP pertains to pesticide toxicity control and requires permittees to implement a pesticide toxicity control program that addresses their own and others' use of pesticides within their jurisdictions that pose a threat to water quality and that have the potential to enter the municipal conveyance system. This provision implements requirements of the TMDL for diazinon and pesticide-related toxicity for urban creeks in the region.

Provision C.10 of the MRP pertains to trash load reduction and requires permittees to reduce trash loads from municipal separate storm sewer systems by 100 percent (i.e., complete trash capture) by July 1, 2022.

Provision C.11, C.12, and C.13 of the MRP pertain to the control of mercury, polychlorinated biphenyls (PCBs), and copper, respectively. The MRP requires permittees to implement source and treatment control measures and pollution prevention strategies for mercury and PCBs, and requires permittees to prohibit the discharge of wastewater to storm drains generated from the installation, cleaning, treating, and washing of the surface of copper architectural features, including copper roofs.

Provision C.15 of the MRP pertains to exempted unpolluted non-stormwater discharges and conditionally exempted non-stormwater discharges that are potential sources of pollutants that

are permitted if appropriate control measures are implemented to eliminate adverse impacts to water quality.

### *Local*

#### General Plan

The Portola Valley General Plan includes the following relevant policies and principles that assist in reducing or avoiding potential impacts and hazards related to hydrology and water quality:

#### Land Use Element

*General Principles, 5.1:* In areas subject to flooding, including those identified in the safety element, development shall be precluded or designed to minimize risk.

*Public Facilities and Services, Principle 7:* Waste water must not pollute ground water or streams or cause public or private nuisance.

*Public Facilities and Services, Principle 8:* Vegetative ground cover should be sustained to prevent storm water erosion. Unobstructed natural drainage channels should remain the principal storm drainage system, and riparian vegetation along their sides should be maintained in order to reduce erosion and bank failure and preserve habitat. Publicly owned drainage structures should be provided and maintained in accordance with the current Storm Drainage Plan of Portola Valley.

#### Conservation Element

##### Principle Water-Creeks, Ponds and Ground Water:

2. Environmental impact reports or studies, prepared professionally, should be required of public and private projects that propose extensive grading or vegetation removal on watershed lands.
3. Dumping of waste materials into creeks or streams or within their established undeveloped drainage basins should be prohibited.
4. Use of agricultural fertilizers and chemicals in areas along creeks should be tightly controlled so as to avoid adverse impacts.
5. The town shall require that there be no significant alterations of stream channels or obstructions to the natural flow of water. Creeks should be maintained in their naturally meandering channels consistent with geomorphic processes. Where channels are damaged or property threatened, bank stabilization by biotechnical methods are preferable to engineered solutions such as concrete walls and similar structures.
6. The natural flow of streams should be maintained and not diverted for other uses.
7. To protect water quality, the town shall encourage development to maintain an undisturbed or enhanced protective buffer between all cut and fill slopes, non-native turf or areas under chemical management or impermeable surfaces, and any creek corridors.
8. To require management practices that will reduce the amount of pollution entering water bodies.
9. Development should be restricted in areas subject to flooding.

### Portola Valley Municipal Code

Chapter 8.28 of the Municipal Code, which is known as the Stormwater Management and Discharge Control Ordinance, assures consistency with the requirements of the Federal Clean Water Act and the MRP. This chapter includes requirements related to the discharge of pollutants, reduction of pollutants in stormwater, watercourse protection, and authority of the Town to inspect properties.

Chapter 18.32 of the Municipal Code addresses flood hazards and restricts or prohibits uses which are dangerous to health, safety, or property in times of flood or cause increased flood height or velocities; requires that uses vulnerable to floods, including public facilities which serve such uses, be provided with flood protection at the time of initial construction; protects individuals from buying lands which are unsuited for intended purposes because of flood hazard; and assures that eligibility is maintained for property owners in the community to purchase flood insurance in the Federal Flood Insurance Program. This chapter designates the Town's Director of Public Works as the Floodplain Administrator, who is responsible for reviewing development applications for special flood hazard areas and granting or denying permits in accordance with the requirements of the Municipal Code. A development permit must be obtained before any construction or other development begins within any area of special flood hazard as defined by FEMA. The applications must include: 1) plans showing the nature, location, dimensions, and elevation of the area in question; and 2) existing or proposed structures, fill, storage of materials, and drainage facilities and their locations/elevations. This chapter includes construction standards for FEMA designated 100-year Flood Hazard Zones, including requirements for anchoring, use of construction materials and methods and utility equipment that are resistant to flood damage, providing adequate drainage paths, placing residential lowest floor elevations at or above base flood elevations, floodproofing of non-residential structures, and requirements for recreational vehicles. No development, including landfill, may be permitted within 100-year Flood Hazard Zones unless the applicant has demonstrated that the proposed use, when combined with all other existing and reasonably anticipated uses, will not increase the water surface elevation of the one-hundred-year flood more than one foot on the average cross-section of the reach in which the development or landfill is located. In case any watercourse is allowed to be relocated or altered, the flood-carrying capacity within the altered or relocated portion of any watercourse shall be maintained. The Town would notify, in riverine situations, adjacent communities and DWR prior to any alteration or relocation of a watercourse, and submit copies of such notifications to the administrator of the Federal Insurance Administration.

Section 15.12.150 of the Municipal Code establishes grading standards including dust and dirt control, drainage, and erosion control and landscaping.

Chapter 15.32 of the Municipal Code (Water Conservation in Landscaping) includes requirements related to grading of developments to minimize soil erosion, runoff, and water waste, and it also includes requirements related to stormwater management and rainwater retention to minimize runoff and increase infiltration and groundwater recharge. This chapter strongly recommends that landscape areas be designed for capture and infiltration capacity that is sufficient to prevent runoff from impervious surfaces (e.g., roof and paved areas) from either: (1) the 1-inch, 24-hour rain event; (2) the 85<sup>th</sup> percentile, 24-hour rain event; and/or (3) additional capacity as required by any applicable local, regional, state or federal regulation.

Section 17.48.050 of the Municipal Code indicates that drainage and drainage structures shall be adequate for local drainage requirements necessary to protect lots and streets from flood hazards. Consideration shall be given to the drainage pattern of adjacent or upstream property as though they were fully improved. Wherever feasible, drainage of storm waters shall be accomplished with the minimum alteration to the natural character of water courses and streams consistent with optimum flow and minimum bank erosion. Planting within drainage ways may be required in order to minimize erosion. Wherever feasible, drainage from individual lots shall be to the street, provided this does not require grading in conflict with the purposes of this title.

## Discussion

The following discussion provides an evaluation and analysis of the potential impacts of development under the project related to hydrology and water quality. The Housing Element Update does not include any policies or implementation actions related to hydrology and water quality. The proposed policies and implementation actions related to hydrology and water quality in the Safety Element Update (which address flooding, erosion, and sedimentation) are very similar and functionally equivalent to previously existing policies in the General Plan. The incremental increase in development that may occur under the project would result in less-than-significant impacts related to hydrology and water quality as discussed below. The proposed policies and implementation actions in the Safety Element Update related to hydrology and water quality are discussed below.

a) *Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?*

**Less than Significant.**

### *Construction Period*

#### Water Quality from Stormwater Runoff and Construction Activities

Development under the project would involve construction activities including excavation and grading which can increase the potential for erosion and sedimentation from stormwater runoff and for the leaching/transport of potential contaminants from disturbed soil. Construction activities would also involve the use of construction materials, equipment, and hazardous materials that can be sources of stormwater and groundwater pollution. If stormwater contacts disturbed soil and/or improperly stored hazardous materials, sediments and contaminants could be entrained in stormwater runoff that could reach waterways and degrade water quality, potentially resulting in a violation of water quality standards.

All future development would be subject to existing water quality regulations and policies, as described in the *Regulatory Setting* section above. Specifically, construction activities for future developments that disturb more than one acre of land would be required to comply with the requirements of the Construction General Permit. In accordance with the Construction General Permit requirements, a SWPPP would be developed and implemented to identify all potential pollutants and their sources, including a list of BMPs to reduce discharges of construction-related stormwater pollutants. The SWPPP would include a detailed description of controls to reduce pollutants and outline maintenance and inspection procedures. The SWPPP would be required to be kept on-site and be made available to SFRWQCB inspectors. Typical sediment and erosion BMPs include protecting storm drain inlets, establishing and maintaining construction exits, and perimeter controls. The SWPPP would also define proper building material staging areas, paint and concrete washout areas, proper equipment/vehicle fueling and maintenance practices,

controls for equipment/vehicle washing, and allowable non-stormwater discharges, and would include a spill prevention and response plan.

The Safety Element Update includes the following proposed policies and implementation actions related to erosion and sedimentation:

*Policy P-31:* Maintain natural slopes and preserve existing vegetation, especially in hillside areas.

*Implementation Action A-31-1:* When change in natural grade or removal of existing vegetation is required, employ remedial measures to provide appropriate vegetative cover to control storm water runoff.

*Implementation Action A-31-2:* Give special attention to minimizing erosion problems resulting from the keeping of animals. In specific applications, these policies will be tempered by the need for fire safety.

*Policy P-32:* Enforce hillside protection measures that control runoff and erosion.

*Policy P-33:* Require drought-resistant vegetation with deep root systems where appropriate in new developments and major remodels to reduce over-irrigation in areas of the Town prone to slope instability.

*Policy P-34:* Continue to administer the provisions of the subdivision ordinance concerning landscaping and erosion control and the provisions of the site development ordinance concerning grading, giving special attention to the protective measures that are appropriate prior to the advent of seasonal rains.

Compliance with the requirements of the Municipal Code; implementation of the proposed policies and implementation actions in the Safety Element Update and existing water quality related principles in the General Plan; and implementation of the Town's construction site inspection and control program in accordance with Provision C.6 of the MRP would ensure protection of groundwater quality from construction activities and receiving water quality from stormwater runoff during construction activities, including construction activities that disturb less than one acre of land. Therefore, impacts related to water quality from construction activities and stormwater runoff during construction of developments under the project would be less than significant.

#### Water Quality from Groundwater Dewatering

Groundwater dewatering, which may need to occur for subsurface construction activities related to future development under the project, would generate effluent that would require special management. Dewatering effluent could have high turbidity (suspended sediment) and could contain other contaminants. Turbid or contaminated groundwater could cause degradation of the receiving water quality if discharged directly to storm drains without treatment. Any groundwater dewatering would be limited in duration and the discharge of dewatering effluent would be subject to permits from Silicon Valley Clean Water or the SFRWQCB, depending on whether the discharge would be to the sanitary sewer or storm drain system, respectively.



Under existing State law, it is illegal to allow unpermitted non-stormwater discharges to receiving water. As stated in the Construction General Permit, non-storm water discharges directly to receiving waters or the storm drain system have the potential to negatively impact water quality. The discharger must implement measures to control all non-stormwater discharges during construction, and from dewatering activities associated with construction. Discharging any pollutant-laden water from a dewatering site or sediment basin into any receiving water or storm drain that would cause or contribute to an exceedance of water quality objectives is prohibited (i.e., illegal).<sup>99</sup>

The Construction General Permit allows the discharge of non-contaminated dewatering effluent if the water is properly filtered or treated, using appropriate technology. These technologies include, but are not limited to, retention in settling tanks (where sediments settle out prior to discharge of water) and filtration using gravel and sand filters (to mechanically remove the sediment). If the dewatering activity is deemed by the SFRWQCB not to be covered by the Construction General Permit due to contamination from fuels or volatile organic compounds (VOCs), the discharge may be allowed under the NPDES Permit No. CAG912002 issued by the SFRWQCB under Order No. R2-2017-0048,<sup>100</sup> which covers the discharge or reclamation of extracted and treated groundwater resulting from the cleanup of groundwater polluted by VOCs, fuel leaks, fuel additives, and other related wastes. If the discharge is not covered by any existing general NPDES permits, then the discharger could potentially prepare a Report of Waste Discharge, and if approved by the SFRWQCB, be issued site-specific WDRs under the NPDES regulations. Site-specific WDRs contain rigorous monitoring requirements and performance standards that, when implemented, ensure that receiving water quality is not substantially degraded.

If the water is not suitable for discharge to the storm drain (receiving water), as discussed above, dewatering effluent may be discharged to the sanitary sewer system if Silicon Valley Clean Water discharge criteria are met. These include, but are not limited to, application of pretreatment technologies which would result in achieving compliance with the wastewater discharge limits. Discharges to Silicon Valley Clean Water's facilities must occur under a permit. Silicon Valley Clean Water manages the water it accepts into its facilities so that it can ensure proper treatment of wastewater prior to discharge.

If it is infeasible to meet the requirements of the Construction General Permit or other general NPDES permit, acquire site-specific WDRs, or meet the Silicon Valley Clean Water's

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<sup>99</sup> State Water Resources Control Board (SWRCB) Division of Water Quality, 2009. Construction General Permit Fact Sheet. 2009-0009-DWQ amended by 2010-0014-DWQ & 2012-0006-DWQ.

<sup>100</sup> San Francisco Bay Regional Water Quality Control Board, 2019. Order No. R2-2017-0048, NPDES Permit No. CAG912002, General Waste Discharge Requirements for Discharge or Reclamation of Extracted and Treated Groundwater Resulting from the Cleanup of Groundwater Polluted by Volatile Organic Compounds (VOCs), Fuel Leaks, Fuel Additives, and Other Related Wastes (VOC and Fuel General Permit), Effective January 1, 2019.

requirements, the construction contractor would be required to transport the dewatering effluent off-site for treatment.

Compliance with State, regional, and local regulations; implementation of the proposed policies and implementation actions Safety Element Update and other water quality related existing principles in the General Plan; and implementation of the Town's construction site inspection and control program would ensure protection of receiving water quality from groundwater dewatering during construction activities. Therefore, impacts related to water quality from groundwater dewatering during construction of developments under the project would be less than significant.

#### *Operational Period*

Development under the project would increase the amount and density of residential land uses in the planning area which can increase impervious surfaces and create additional sources of potentially polluted runoff which can affect both groundwater and surface water quality. Increases in impervious surfaces can increase the rate and volume of stormwater discharges which can result in erosion and sedimentation in receiving waters. Debris and particulates that gather on impervious surfaces such as paved areas and roofs of buildings can also add heavy metals and sediment to the pollutant load in runoff. Additional potential sources of polluted runoff associated with development under the project would include increases in motor vehicle traffic, the use of fertilizers/pesticides for landscaped areas, and trash generation. Pollutants that may be transported in runoff from parking areas, roadways, and residential developments that would be constructed under the project include sediment, metals, organic compounds (e.g., diesel, gasoline, and oil), trash, debris, fertilizers, and pesticides.

All future development would be subject to existing water quality regulations and policies, as described above under the *Regulatory Setting* section. Future developments under the project that would create or replace 10,000 square feet or more of impervious surface and special land use categories<sup>101</sup> that create or replace 5,000 square feet or more of impervious surface would be required to comply with the MRP Provision C.3 requirements for LID source control, site design, and stormwater treatment. Compliance with the MRP also requires future developments under the General Plan that would create and/or replace between 2,500 and 10,000 square feet of impervious surface to install site design measures that reduce runoff and pollutants in runoff, such as installing permeable pavements surfaces and directing runoff into cisterns, rain barrels, and vegetated areas.

Future developments under the project that create or replace 1 acre or more of impervious surface and increase impervious surface compared to the pre-project conditions would also be

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<sup>101</sup> Special land use categories include auto service facilities, retail gasoline outlets, restaurants, or stand-alone uncovered parking lots.

required to comply with hydromodification management requirements of Provision C.3.g of the MRP, which requires that stormwater discharges associated with new development or redevelopment do not cause an increase in the erosion potential of the receiving stream over the existing condition. This would also reduce potential impacts to water quality related to erosion and siltation of creeks.

Compliance with the Municipal Code and implementation of the proposed policies and implementation actions of the Safety Element Update and other existing principles in the General Plan would also prevent erosion and sedimentation during operation of developments.

In accordance with Provision C.9 of the MRP, the Town is required to implement a pesticide toxicity control program that addresses their own and others' use of pesticides within their jurisdiction that pose a threat to water quality and that have the potential to enter the municipal conveyance system. In accordance with Provision C.10 of the MRP, the Town is required to reduce trash loads in stormwater runoff, and is required to achieve 100 percent (i.e., complete trash capture) by July 1, 2022.

Compliance with the MRP and Municipal Code requirements, and implementation of the proposed policies and implementation actions of the Safety Element Update and other existing principles in the General Plan would ensure the protection of water quality during the operation of developments under the project. As such, implementation of the project would result in less-than-significant impacts to water quality.

*b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?*

**Less than Significant.** As discussed under *Criterion a)* above, groundwater dewatering may be performed during construction of future developments under the project. Groundwater dewatering is not likely to be required for construction activities throughout much of the Town, however if construction-related dewatering would be required, it would be temporary, limited to shallow groundwater, and localized in the areas of future developments; therefore, construction dewatering would not result in significant impacts related to the depletion of groundwater supplies.

Development under the project could lead to an increased demand for water; however, as discussed under the *Affected Environment* section above, the Town receives its water supply from surface water sources.<sup>102</sup> Therefore, the potential increase in water demand under the project would not deplete groundwater supplies.

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<sup>102</sup> California Water Service, 2021. 2020 Urban Water Management Plan, Bear Gulch District, June.

Development under the project could result in an increase in impervious surfaces, which could reduce rainwater infiltration and lead to reduced groundwater recharge. Future development could also result in alterations to drainage patterns and changes in topography from grading and excavation, which could lead to reduced groundwater recharge in those areas. As discussed under the *Regulatory Setting* section above, the Municipal Code and MRP include requirements and recommendations for the use of stormwater infiltration systems. Compliance with these requirements would ensure that development under the project would result in less-than-significant impacts related to interference with groundwater recharge. Therefore, implementation of the project would result in less-than-significant impacts related to depletion of groundwater supplies.

*c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?*

*i) result in substantial erosion or siltation on- or off-site;*

**Less than Significant.** Construction activities would involve excavation and grading, which could temporarily alter drainage patterns and expose soil to potential erosion. As described under *Criterion a)* above, required compliance with the Construction General Permit, MRP, and Municipal Code, and implementation of the proposed policies and implementation actions of the Safety Element Update and other existing principles in the General Plan would ensure that development under the project would have less-than-significant impacts related to erosion and siltation associated with changing drainage patterns

*ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;*

**Less than Significant.** Development under the project would increase the impervious surfaces in the planning area and could therefore increase stormwater discharges that could contribute to exceeding the capacity of existing or planned stormwater drainage systems and creeks, which could result in flooding on- or off-site of developments.

As described under *Criterion a)* above, stormwater runoff from developments that would create 2,500 square feet or more of impervious surface would be managed in accordance with Provision C.3 of the MRP, which would allow for infiltration of much of the stormwater runoff from impervious surfaces through LID stormwater control and treatment systems. This could potentially result in a reduction in stormwater runoff from existing developed sites that do not have LID stormwater control and treatment systems and would be redeveloped under the project. Future developments that create or replace 1 acre or more of impervious surface and increase impervious surface compared to the pre-project conditions would also be required to comply with hydromodification management requirements of Provision C.3.g of the MRP. Hydromodification management typically requires development to incorporate stormwater control systems that would ensure that post-development stormwater runoff conditions match

the pre-development conditions through the use of features such as retention basins/cisterns and infiltration.

If the stormwater control and treatment systems of future developments are not properly maintained, the systems could become clogged which could also result in localized flooding. In accordance with Provision C.3.h of the MRP, the Town must implement an Operation and Maintenance Verification Program to ensure that stormwater control systems that are regulated under the MRP are properly maintained, which ensures that the stormwater control systems continue to drain properly and would not result in flooding due to lack of maintenance.

Section 17.48.050 of the Municipal Code requires that drainage and drainage structures for subdivisions be adequate for local drainage requirements necessary to protect lots and streets from flood hazards. Chapter 15.32 of the Municipal Code includes requirements and recommendations related to stormwater management and rainwater retention to minimize runoff and increase infiltration.

The Safety Element Update includes the following proposed policies and implementation actions related to flooding from changes to draining patterns:

*Policy P-19:* Minimize injury, loss of life, property damage, and economic and social disruption caused by flooding and inundation hazards.

*Implementation Action A-19-1:* Evaluate the Portola Valley Master Storm Drainage Report to identify areas of the Town's drainage system that may require update or modification.

*Policy P-20:* Review all applications for subdivisions, building permits and other similar applications in the vicinity of major drainage channels with respect to potential flooding.

*Policy P-24:* Replace or improve existing drainage structures such as culverts and pipes deemed to be inadequate to meet acceptable standards. Where possible restore natural systems to convey water.

*Implementation Action A-24-1:* Develop a drainage improvement program that identifies culverts and pipes that do not meet current standards and/or natural drainages that can benefit from natural systems enhancements.

Compliance with the requirements of the MRP and Municipal Code, and implementation of proposed policies and implementation actions of the Safety Element Update would ensure that the potential for increased runoff due to development under the project would result in less-than-significant impacts related to exceeding the capacity of existing or planned stormwater drainage systems and creeks or contributing to flooding on- or off-site of developments.

*iii) 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; or*

**Less than Significant.** As described under *Criterion a)* and *Criterion c.ii)* above, compliance with the requirements of the Construction General Permit, MRP, and Municipal Code, and implementation of proposed policies and implementation actions of the Safety Element Update and existing water quality related principles in the General Plan would ensure that the potential impacts from polluted runoff or increased runoff exceeding the capacity of stormwater drainage systems due to development under the project would be less than significant.

*iv) impede or redirect flood flows?*

**Less than Significant.** As described in the *Affected Environment* section above, there are FEMA designated 100-year flood hazard zones in the planning area, and three parcels identified in the Sites Inventory (The Sequoias, Glen Oaks, and Vacant Portion of Ford Field) are intersected by 100-year flood hazard zones as shown on Figure J-1. Development of parcels intersected by 100-year flood hazard zones must be performed in accordance with the requirements in Chapter 18.32 of the Municipal Code, which would ensure that developments would not impede or redirect flood flows in a manner that would result in an increase in the base flood elevation by more than one foot when the cumulative effect of the proposed development is combined with all other existing and reasonably anticipated development.

The Safety Element Update includes the following proposed policies and implementation actions related to flooding and development near creeks in addition to those listed under *Criterion c.iii)* above:

*Policy P-21:* Do not erect structures in areas determined to be subject to “100-year floods” in accordance with FEMA requirements, unless appropriate measures will mitigate potential adverse effects on the structures and nearby properties and will not adversely affect natural riparian zones. Minor structures where there is no threat to life and little threat to property may be allowed.

*Policy P-22:* Rely upon Federally issued Flood Insurance Rate maps to define the “100-year flood” area along the relevant portions of Corte Madera Creek, Sausal Creek and Los Trancos Creek unless professionally prepared hydrological reports indicate that the subject site is not within an area that is subjected to “100-year floods.”

*Policy P-23:* Ensure flood plain regulations in the municipal code meet the latest FEMA requirements regarding new construction, redevelopment, and major remodels.

*Policy P-25:* Regulate development in drainages, especially in designated 100-Year Flood Zones, according to FEMA regulations.

*Implementation Action A-25-1:* Do not erect structures which will impede the flow of flood waters in a flood channel.

*Implementation Action A-25-2:* All development along Los Trancos Creek, Corte Madera Creek and Sausal Creeks should comply with the Town's Creek Setback Ordinance (18.59).

*Policy P-26:* Encourage owners of buildings that are in flood-prone areas to take appropriate measures to reduce the likelihood of flood damage to their property.

*Implementation Action A-26-1:* Control any such measures so as to not increase the flood or erosion hazards to other properties or have adverse impacts on the natural riparian zone.

*Implementation Action A-26-2:* Investigate and identify potential funding sources to assist property owners in flood hazard retrofits where feasible.

*Policy P-27:* Maintain appropriate vegetation on the terrain in the Portola Valley planning area to minimize runoff of rainfall consistent with other safety practices.

*Policy P-28:* Continue participation in the National Flood Insurance Program and encourage all owners of properties located within the 100-year floodplain Zones A and AE, and X (including any repetitive loss properties), to purchase and keep flood insurance for those properties.

*Policy P-29:* Require all essential and critical facilities in or within 200 feet of 100-Year or 500-Year Flood Zones to develop disaster response and evacuation plans that address the actions that will be taken in the event of flooding.

*Policy P-30:* Administer setback requirements to ensure adequate room between developed areas and natural creek channels to not impede the flow of water and to limit the extent of development that could be affected by creekbank failure

*Policy P-80:* Require floodproofing for new development in flood hazard zones.

*Implementation Action A-80-1:* Identify areas of a parcel subject to flooding by type of flooding, including inundation, creek, and groundwater and by the potential depth of flooding.

*Implementation Action A-80-2:* Encourage increased freeboard above current 100-year base flood elevation requirements.

*Implementation Action A-81-1:* Continue to collaborate with Town advisory bodies/ committees, in conjunction with Town's water service provider, to identify opportunities for water conservation and efficiencies.

*Policy P-82:* Continue to work with San Mateo County Flood and Sea Level Rise Resiliency District on developing and implementing adaptation options for San Francisquito Creek.

*Implementation Action A-82-2:* Continue to identify opportunities to reduce down-stream flooding from town wastewater.

Compliance with the requirements of the Municipal Code and implementation of proposed policies and implementation actions of the Safety Element Update and existing principles in the General Plan would ensure that development under the project would result in less-than-significant impacts related to impeding or redirecting flooding.

d) *In flood hazard, tsunami, or seiches zones, risk release of pollutants due to project inundation?*

**Less than Significant.** A tsunami is a sea wave caused by a submarine earthquake, landslide, or volcanic eruption. Tsunamis can cause catastrophic damage to shallow or exposed shorelines. The planning area is located approximately 6 miles from San Francisco Bay and approximately 8 miles from the Pacific Ocean, and is located at a sufficient elevation and distance from these waterbodies such that it would not be subject to inundation by a tsunami.

Seiches are waves that are created in an enclosed body of water such as a bay, lake, or harbor and go up and down or oscillate and do not progress forward like standard ocean waves. Seiches are also referred to as standing waves and are triggered by strong winds, changes in atmospheric pressure, earthquakes, tsunamis, or tidal influence. The height and frequency of seiches are determined by the strength of the triggering factor(s) and the size of the basin. Triggering forces that set off a seiche are most effective if they operate at specific frequencies relative to the size of an enclosed basin. There are no enclosed water bodies of significant size within planning area; however, there are reservoirs located upstream from portions of the planning area including Searsville Lake, Felt Lake, and Baronda Lake at Foothill Park. Based on their proximity to the San Andreas Fault, a seismically induced seiche could potentially occur at these reservoirs. If a seiche occurred, it could cause overtopping of the reservoir's dams, which could result in inundation of downstream areas. The potential for inundation due to overtopping of these dams would be far less significant than the inundation that could occur due to failure of the dams, which was discussed in the *Affected Environment* section above. Potential inundation within the planning area caused by a seiche overtopping these dams would be expected to remain primarily within the banks of the downstream creeks. Therefore, potential inundation due to seiches is not a concern for the planning area.

As described in the *Affected Environment* section above, potential failure of the Searsville Lake, Felt Lake, or Foothill Park Dam would result in inundation of portions of the planning area that are near creeks downstream of these dams. The likelihood of dam failure affecting the planning area is extremely low as these dams are regularly inspected by DSOD, and DSOD has not identified existing or potential dam safety deficiencies for these dams.

There are creeks and adjacent areas in the planning area that have been identified as 100-year flood hazard zones. Inundation of urban areas inherently results in the release of pollutants into flood waters. Inundation of commercial/industrial facilities that store significant quantities of hazardous materials creates a much higher risk of releasing pollutants in flood waters than inundation of residential properties which typically do not store significant quantities of hazardous materials. There are no sites within the planning area that are used or designated for industrial purposes, which reduces the risk for the release of pollutants into flood waters as industrial activities typically include the storage of larger quantities of hazardous materials than commercial facilities. The project does not propose new zoning for commercial land use;



therefore, development under the project would not create any areas of commercial land use within flood hazard zones that were not allowed under the previous General Plan.

Compliance with Chapter 18.32 of the Municipal Code would ensure that development within 100-year flood hazard zones would include appropriate construction materials and methods to resist flood damage, including floodproofing of non-residential structures. Compliance with hazardous materials storage requirements of SMCEH's CUPA program, as discussed in *Section I, Hazards and Hazardous Materials*, would also ensure that hazardous materials are stored in appropriate containers and in safe locations, which would further reduce potential impacts related to the release of hazardous materials in flood waters.

Compliance with the requirements of the Municipal Code and SMCEH's CUPA Programs, and implementation of the proposed policies and implementation actions of the Safety Element Update and existing principles in the General Plan would ensure that development under the project would result in less-than-significant impacts related to the release of pollutants due to inundation.

*e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?*

**Less than Significant.** Development under the project would be required to comply with NPDES permit requirements to protect water quality (e.g., the Construction General Permit and MRP); the Municipal Code; and the proposed policies and implementation actions of the Safety Element Update and existing principles in the General Plan, as described under *Criterion a)* above. Therefore, development under the project would protect water quality and would have less-than-significant impacts related to conflicts with the water quality objectives of the Basin Plan.

All of the water supply for the Town is obtained from surface water sources.<sup>103</sup> All groundwater basins within San Mateo County are designated as Very Low Priority and are not required to comply with the Sustainable Groundwater Management Act.<sup>104</sup> Therefore, a groundwater management plan has not been prepared for the San Mateo Plain Subbasin of the Santa Clara Valley Groundwater Basin, and development under the project would have no impact related to conflicting with an established groundwater management plan.

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<sup>103</sup> California Water Service, 2021. 2020 Urban Water Management Plan, Bear Gulch District, June.

<sup>104</sup> San Mateo County, 2022c. Groundwater, Available: <https://www.smcsustainability.org/water/groundwater/> Accessed October 14, 2022.

## K. LAND USE AND PLANNING

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

### Affected Environment

The General Plan planning area includes approximately 12,000 acres of mountainous and hilly land in the southern bayside portion of San Mateo County and northern Santa Clara County. The planning area includes considerable area outside the incorporated boundary of the Town of Portola Valley. In addition to the Town of Portola Valley (5,785 acres), the planning area includes the unincorporated communities of Ladera, Los Trancos Woods-Vista Verde, and large undeveloped open and wooded areas in unincorporated portions of San Mateo County. Portions of the Town of Woodside, the City of Menlo Park, the City of Palo Alto, and unincorporated areas in Santa Clara County have also been included because these areas are either functionally or visually related to Portola Valley.

The Town of Portola Valley General Plan serves as a guide for land use development within the planning area. The General Plan includes a Comprehensive Plan Diagram, which identifies the location of land uses within the planning area. Land uses shown in the diagram generally fall within the following categories: (1) Park, Recreation Areas and Open Spaces; (2) Residential Areas; (3) Institutions; and (4) Commercial and Research – Administrative.

### Regulatory Setting

#### *State*

#### General Plan Law

Government Code Sections 65300-65404 set forth the requirements for each city and county in California to adopt a comprehensive, long-term general plan for the physical development of the county or city, and of any land outside its boundaries which in the planning agency's judgment bears relation to its planning. Government Code Section 65302 identifies the mandatory general plan elements and the information they must provide. Required general plan elements include the following: land use element; circulation element; housing element; conservation element; open-space element; noise element; safety element; and environmental justice element.

### State Housing Element Law

California Government Code (Sections 65580-65589.11) requires cities and counties to update the Housing Element of their General Plans every 5 or 8 years (depending on location/jurisdiction) to ensure that they meet their responsibilities in helping the State of California meet its housing goals and in addressing regional housing needs.

California's housing element law, codified at Government Code Sections 65580-65589.11, establishes the Legislature's intention to ensure the availability of suitable, decent housing for every Californian, including farmworkers, and ensure the provision of housing that is affordable to low- and moderate-income households. State planning law requires cities and counties to prepare and implement general plan housing elements that, along with federal and State programs, will move toward attainment of those housing goals, which were established in 1969.

Housing elements are required to provide an identification and analysis of existing and projected housing needs and a statement of goals, policies, quantified objectives, financial resources, and scheduled programs for the preservation, improvement, and development of housing. The housing element must identify adequate sites for housing, including rental housing, factory-built housing, mobile homes, and emergency shelters, and must include adequate provision for the existing and projected needs of all economic segments of the community. Projected housing needs are to be based on an analysis of population and employment trends and projections for the jurisdiction, and these needs must include the locale's share of the regional housing need as established by the California Department of Housing and Community Development (HCD) (discussed further below).

### Housing Accountability Act (HAA)

One State law that is likely to influence housing and land use development in California in the future is the Housing Accountability Act (HAA). Originally enacted in 1982 with limited effect, it has been modified in recent years to expand and strengthen its provisions. One key revision in 2017 gave the HCD authority to refer HAA violations to the Attorney General for enforcement. The Legislature's intent in adopting the HAA is to significantly increase the approval and construction of new housing for all economic segments of California's communities.

The HAA prohibits a local government from denying, reducing the density of, or making infeasible housing development projects that are consistent with applicable, objective general plan, zoning, and subdivision standards and criteria, including design review standards, in effect at the time that the application was deemed complete. A "housing development project" as defined in Government Code Section 65589.5(h)(2) means a use consisting of residential units only, mixed use developments consisting of residential and non-residential uses with at least two-thirds of the square footage designated for residential use, or transitional or supportive housing.

A local agency may disapprove a project that is consistent with applicable development standards, or impose a condition that the project be developed at a lower density, only if it can make the following written findings supported by a preponderance of evidence on the record that both of the following conditions exist:

- A. The housing development project would have a specific, adverse impact upon the public health or safety unless the project is disapproved or approved upon the condition that the project be developed at a lower density. As used in this paragraph, a “specific, adverse impact” means a significant, quantifiable, direct, and unavoidable impact, based on objective, identified written public health or safety standards, policies, or conditions as they existed on the date the application was deemed complete.
- B. There is no feasible method to satisfactorily mitigate or avoid the adverse impact, other than the disapproval of the housing development project or the approval of the project upon the condition that it be developed at a lower density.

The HAA provides additional protections for projects that contain housing affordable to very low-, low-, or moderate-income households. Government Code Section 65589.5(h)(3) establishes the qualifications for housing affordable to very low-, low-, or moderate-income households as a housing development that meets one of the following two criteria:

- At least 20 percent of the total units shall be sold or rented to lower income households. Lower-income households are those persons and families whose income does not exceed that specified by Health and Safety Code Section 50079.5, established by the HCD as 80 percent of area median income, adjusted for family size and revised annually.
- 100 percent of the units shall be sold or rented to persons and families of moderate income, or persons and families of middle income. Moderate-income households are those persons and families whose incomes are 80 percent to 120 percent of area median income (Health and Safety Code Section 50093.) Middle-income households are those persons and families whose income does not exceed 150 percent of area median income (Government Code Section 65008(c)).

A local agency may not deny or reduce the density of a proposed housing development project that is affordable to very low-, low-, or moderate-income households unless it makes one of the following written findings, based upon a preponderance of the evidence in the record:

- A. The jurisdiction has adopted a housing element that meets the current requirements of the State’s Housing Element Law, and the jurisdiction has met or exceeded its RHNA share for the planning period for the income category proposed for the housing development project, subject to limitations set forth in Government Code Section 65008. If the housing development project includes a mix of income categories, and the jurisdiction has not met or exceeded its share of the regional housing need for one or more of those categories, then the agency may not use this finding to disapprove or conditionally approve the housing development project. In the case of an emergency shelter, the jurisdiction must have met or

exceeded the need for emergency shelter, as established in Government Code Section 65583(7)(a).

- B. The housing development project or emergency shelter as proposed would have a specific, adverse impact upon the public health or safety, and there is no feasible method to satisfactorily mitigate or avoid the specific adverse impact without rendering the development unaffordable to low- and moderate-income households or rendering the development of the emergency shelter financially infeasible. Inconsistency with the zoning ordinance or general plan land use designation does not constitute a specific, adverse impact upon the public health or safety.
- C. The denial of the housing development project or imposition of conditions is required in order to comply with specific State or federal law, and there is no feasible method to comply without rendering the development unaffordable to low- and moderate-income households or rendering the development of the emergency shelter financially infeasible.
- D. The housing development project or emergency shelter is proposed on land zoned for agriculture or resource preservation that is surrounded on at least two sides by land being used for agricultural or resource preservation purposes, or which does not have adequate water or wastewater facilities to serve the project.
- E. The housing development project or emergency shelter is inconsistent with both the jurisdiction's zoning ordinance and general plan land use designation as specified in any element of the general plan as it existed on the date the application was deemed complete, and the jurisdiction has adopted a revised housing element in accordance with Section 65588 that is in substantial compliance with this article. A change to the zoning ordinance or general plan land use designation subsequent to the date the application was deemed complete may not constitute a valid basis to disapprove or condition approval of the housing development project or emergency shelter.

The HAA also imposes parameters and limits on the fees and exactions that can be imposed on a proposed housing development project, as well as on the type of development standards, conditions, and policies that the project can be required to comply with.

#### Streamlined Ministerial Approval Process

Government Code Section 65913.4 provides for a streamlined, ministerial approval<sup>105</sup> process for a multi-family residential development of two or more units on a site that is zoned for residential use or residential mixed-use development, or that has a general plan designation that allows residential use or a mix of residential and non-residential uses, and at least two-thirds of the square footage of the development is designated for residential use. Any additional square footage granted pursuant to the Density Bonus Law (see below) must be included in the square

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<sup>105</sup> Ministerial approvals are those that don't involve the discretion of the local agency. If objective standards and conditions are met, they must automatically be approved.

footage calculation. This streamlined process does not apply in a jurisdiction that has met its RHNA (see RHNA discussion below).

To qualify for a streamlined ministerial approval, the project site must be in an urbanized area, and at least 75 percent of the site perimeter must adjoin parcels that are developed with urban uses (separation by a road or highway is allowed). The project must be consistent with objective zoning standards, subdivision standards, and design review standards in effect at the time that the development is submitted to the local government. A certain percentage of the proposed housing units, depending on conditions in the jurisdiction where the project will be developed, must be affordable to low- and moderate-income households for a period of 55 years for rental units and 45 years for purchased units.

#### Density Bonus Law

The Density Bonus Law (California Government Code Sections 65915 – 65918) provides residential developers incentives to develop affordable and senior housing by allowing them to substantially increase the density of their projects when they meet stipulated affordability thresholds. The Density Bonus Law (DBL) can increase the allowable density of a project by up to 50 percent, depending on the amount of affordable housing provided. It allows an 80-percent increase in density for projects which are completely affordable. A local jurisdiction must allow the density bonus and other benefits provided by the DBL if the project meets the requirements of the law.

To qualify for a density bonus or other concessions (addressed below), a proposed housing development must include one of the following:

- At least 5 percent of the housing units are restricted to very low-income residents.
- At least 10 percent of the housing units are restricted to low-income residents.
- At least 10 percent of the housing units in a for-sale common interest development are restricted to moderate-income residents.
- 100 percent of the housing units (other than manager's units) are restricted to very low-, low-, and moderate-income residents (with a maximum of 20 percent moderate).
- At least 10 percent of the housing units are for transitional foster youth, disabled veterans, or homeless persons, with rents restricted at the very low-income level.
- At least 20 percent of the housing units are for low-income college students in housing dedicated for full-time students at accredited colleges.
- The project donates at least 1 acre of land to the city or county for very low-income units, and the land has the appropriate general plan designation, zoning, permits and approvals, and access to public facilities needed for such housing.
- The project is a senior citizen housing development (no affordable units required).

- The project is a mobile home park age-restricted to senior citizens (no affordable units required).

Rental units must include a recorded affordability restriction for at least 55 years. For-purchase units must include recorded restrictions requiring homes that are resold to be sold to families of very low-, low-, or moderate-income for a period of at least 45 years.

The amount of density bonus is determined on a sliding scale that depends on the percentage of affordable units at each income level included in the proposed development, with the bonus ranging from 5 percent to 50 percent. As previously noted, projects that are 100-percent affordable receive an 80-percent density bonus. In addition, DBL provides a process for seeking concessions and waivers of development standards and reduced parking ratios for qualifying projects. A city or county may not apply any development standard that will have the effect of physically precluding the construction of a development project qualifying for a density bonus under the DBL.

### *Local*

#### Regional Housing Needs Allocation (RHNA)

The HCD prepares and adopts a RHNA Plan that allocates a share of the regional housing needs to each city and county. The RHNA Plan specifies the number of units, by affordability level, which need to be accommodated within the region during the Housing Element planning period. The regional councils of government (COGs) then distribute a share of the region's housing need to each city, town, and county in the region. Each local government must then update the Housing Element of its general plan to inventory housing sites—zoned for residential use—sufficient to meet their RHNA. The COG assigning RHNA goals to each local jurisdiction in the nine-county San Francisco Bay Area is the Association of Bay Area Governments (ABAG).

ABAG adopted its final 2023-2031 RHNA plan for the Bay Area on December 16, 2021, and the HCD approved the plan on January 12, 2022. The region's nine counties and 101 cities are collectively responsible for developing 441,176 new housing units during the 2023-2031 period; Portola Valley's allocation is for 253 housing units during the 2023-2031 6<sup>th</sup> Cycle Housing Element Update.

#### Plan Bay Area 2050

*Plan Bay Area 2050*, adopted jointly on October 21, 2021, by the Metropolitan Transportation Commission (MTC) and ABAG, is the Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) for the San Francisco Bay Area, mandated by Senate Bill (SB) 375, the Sustainable Communities and Climate Protection Act of 2008. SB 375 required each of the State's 18 Metropolitan Planning Organizations (MPOs) to prepare an RTP/SCS that will enable the affected region to achieve the GHG reduction goals established by Assembly Bill 32, passed in

2006, and ensure the provision of adequate housing for growth projected during the planning period.

*Plan Bay Area 2050* is a 30-year plan that charts a course for continued development of a Bay Area that is affordable, connected, diverse, healthy, and vibrant for all residents, employing 35 strategies for achieving these goals. Strategies were added or adjusted to respond to the COVID-19 pandemic, and financial and population projections were revised to reflect slower short-term growth. The Plan was crafted to respond to three different sets of potential future conditions, referenced as Futures, in order adapt to sea level rise and other natural hazards, as well as varying population growth rates and emerging technologies, such as autonomous vehicles. *Plan Bay Area 2050* focuses on four key issues—the economy, the environment, housing, and transportation—while integrating the cross-cutting issues of equity and resilience.

To accommodate new families and meet the needs of those living in the Bay Area today, *Plan Bay Area 2050* plans for sufficient housing growth that does not result in an increase in traffic congestion and long-distance commuters traveling to the Bay Area from outside of the region. The population in the region is expected to grow from around 7.8 million residents today to over 10 million residents by 2050. The region is forecasted to add 1.4 million new jobs, for a total of 5.4 million Bay Area workers. Household growth is anticipated to roughly follow pace, adding slightly fewer than 1.36 million new households for a total of 4 million households by 2050. *Plan Bay Area 2050* states that the Bay Area will need to build 1.36 million new homes by 2050 to meet this forecasted future demand.

*Plan Bay Area 2050's* core strategy is “focused growth” in existing communities along the existing transportation network. This strategy is intended to leverage existing infrastructure, complement, and integrate with existing community characteristics, and minimize impacts to less developed areas. The focused growth strategy targets four types of Growth Geographies:

- **Priority Development Areas (PDAs)** that are identified by local governments for housing and job growth. PDAs are generally near existing job centers or in proximity to frequent public transit options.
- **Priority Production Areas (PPAs)**, also identified by local governments, these areas are targeted for job growth in middle-wage industries, such as manufacturing or logistics. PPAs must be zoned for industrial use or have existing land use dominated by industrial uses.
- **Transit-Rich Areas (TRAs)** are areas located in proximity to rail, ferry, or frequent bus service that have not been identified as PDAs. TRAs must have at least 50 percent of the land area within one-half mile of an existing or planned rail station or ferry terminal that includes bus and/or rail service. Alternatively, they can be located within one-half mile of a bus stop with peak service frequency of 15 minutes or less.



- **High-Resource Areas (HRAs)** are identified by the State HCD as areas that meet a minimum transit service threshold and have good access to schools, jobs, and open space. They must meet a baseline transit service threshold of bus service with peak headways of 30 minutes or better.

*Plan Bay Area 2050* is also intended to improve the jobs-housing balance throughout the Bay Area. It includes economic strategies encouraging greater commercial densities in targeted growth areas and providing incentives for employers to locate in housing-rich communities with frequent transit service.

#### San Mateo County Local Agency Formation Commission (LAFCo)

San Mateo Local Agency Formation Commission (LAFCo) is a State-mandated, independent agency with countywide jurisdiction over changes in organization and boundaries of cities and special districts including annexations, detachments, incorporations, and formations. LAFCo is an independent commission with jurisdiction over the boundaries of the 20 cities, 22 independent special districts, and many of the 33 active county-governed special districts serving San Mateo County. LAFCos were created by the State Legislature in 1963 in response to the rapid growth and sporadic formation of cities and special districts in California in the years following World War II. LAFCo has responsibility in the following areas affecting local government in the county:

- To discourage urban sprawl and encourage the orderly growth and development of local government agencies.
- To prevent premature conversion of agricultural and open space lands.
- To review and approve or disapprove proposals for changes in the boundaries and organization of the 20 cities, 24 independent special districts and approximately 44 county-governed special districts plus incorporations of cities and formations of special districts.
- To establish and periodically update spheres of influence--future boundary, organization and service plans--for the county's cities and special districts.
- To perform and assist in studies of local government agencies with the goal of improving efficiency and reducing costs of providing urban services.

#### General Plan

The Portola Valley General Plan is a long-range, comprehensive, and general guide to the future physical development of Portola Valley. The plan is comprehensive in that it addresses land uses, services and facilities needed to make Portola Valley a functioning component of the Midpeninsula and the San Francisco Bay Area. Space has been allotted for all presently foreseen uses of land needed within the planning area to achieve the goals of the residents. These land

uses and the necessary circulation facilities have been considered one in relation to the other to form a balanced and complete whole.

This plan includes the seven general plan elements required by State law: land use, open space, housing, circulation, safety, conservation, and noise. The plan also includes, as permitted by State law, a recreation element, a historic element, a scenic roads and highways element and a trails and paths element. In addition, the plan includes four sub-area plans: the Nathhorst Triangle Area Plan, the Alpine Scenic Corridor Plan, the Town Center Area Plan, and the Portola Road Corridor Plan.

The General Plan contains the following objectives and policies related to land use in Portola Valley:

*Introduction – Major Community Goals*

*Goal 2: To allow use of the planning area by residents and others but to limit that use so that the natural attributes of the planning area can be sustained over time.*

*Goal 4: To guide the location, design and construction of all development so as to:*

- a. Minimize disturbances to natural surroundings and scenic vistas.
- b. Reduce the exposure of people and improvements to physical hazards such as earthquakes, landslides, fire, floods, traffic accidents and to provide evacuation routes for emergencies.
- c. Protect the watershed of the planning area.
- d. Ensure that projects complement and are subordinate to their natural surroundings.
- e. Minimize the use of non-renewable energy resources, conserve water, and encourage energy conservation and the use of renewable energy sources.

*Goal 6: To ensure that growth and development within the planning area is evaluated against required regional environmental standards.*

*Goal 7: To subject new developments with potential for adverse fiscal and other effects on the delivery of essential public services to an impact analysis to avoid unreasonable financial burdens on the town and other affected local governmental agencies and ensure the continued availability of essential public services.*

*Goal 12: To limit growth in order to minimize the need for additional governmental services and thereby maintain and preserve the town's predominately volunteer local government, a government which fosters a sense of community.*

*Goal 14: To ensure that development will produce a maximum of order, convenience and economy for local residents consistent with other stated goals and objectives.*

*Goal 16: To control the size, siting and design of buildings so that they, individually and collectively, tend to be subservient to the natural setting and serve to retain and enhance the rural qualities of the town.*

### Land Use Element

*General Objective 1:* To provide for residential uses and related facilities and services that will preserve and enhance the quality of living enjoyed by local residents.

*General Objective 5:* To encourage and, where appropriate, require the conservation of water in new and existing developments and buildings.

*General Objective 6:* To ensure that development in areas subject to geologic, fire and flooding hazards is controlled so that people and structures are not exposed to unacceptable levels of risk.

*General Principle 1:* The planning area should have the low intensity of development which is appropriate to its location on the fringe of the urban area of the Peninsula and should provide a transition between urban densities of adjoining communities and non-intensive land uses west of the skyline.

*General Principle 2:* Uses of land should include homes, open spaces, agricultural pursuits and such other private, office and commercial uses as are required to serve the frequent needs of local residents.

*General Principle 3:* In addition to uses serving primarily local residents, public, private and limited commercial recreational facilities serving a broader area would be appropriate in locations on the periphery of the planning area but so located as not to encourage traffic through the town.

*General Principle 5:* In any development within the planning area, full consideration should be given to the geologic conditions so that development on unstable land can be avoided or minimized.

*General Principle 5.1:* In areas subject to flooding, including those identified in the safety element, development shall be precluded or designed to minimize risk.

*General Principle 6:* In order to maintain the rural atmosphere of Portola Valley, all buildings should be subordinate to their natural surroundings in size, scale and siting. Monumental buildings should be avoided.

*General Principle 9.1:* Development should be limited in areas when fire risk cannot be reduced to an acceptable level and adequate emergency access cannot be provided. Also, recognizing fire protection measures could have adverse effects on native vegetation, development should be configured to minimize damage as well as fire hazard.

*General Principle 10:* The rate of development and location of projects should not exceed the capacity of the town, special districts and utility companies to provide all needed services and facilities in an orderly and economic manner.

*General Principle 13:* Where feasible, development proposals should incorporate unified planning for the largest land area practically possible in order to preserve open space, conserve unique natural features of the area, allow logical extensions of the trail and paths system, maximize the opportunities for controlling the extent and impacts of development and otherwise help ensure the application of good land use planning principles.

*General Principle 14:* Grading shall normally be the minimum necessary to accommodate development; however, in those instances where increased grading can provide for greater compatibility of development with the natural setting and not cause significant adverse effects on the environment, such grading shall be preferred.

General Principle 15: For all new developments within the planning area, full consideration shall be given to the fiscal ability of the town and other affected local governmental agencies to provide essential services. When fiscal impact will exceed tax revenue to be generated, provisions may be made to require offsetting fiscal impact fees.

*Residential Areas Objective 1:* To assure that all building sites and residences are developed in a manner minimizing disturbance to natural terrain and vegetation and maximizing preservation of natural beauty and open space.

*Residential Areas Objective 2:* To organize residential areas in a manner providing maximum convenience in the daily use of local facilities such as parks, recreation area, commercial facilities and access to major roads, consistent with the attainment of other objectives stated within the general plan.

*Residential Areas Objective 3:* To provide for the grouping or clustering of residential buildings where this will maximize the opportunity to preserve natural beauty, habitat and open space without generally increasing the intensity of development otherwise possible.

*Residential Areas Objective 5:* To control the occupancy of parcels so as to:

- a. Prevent overcrowding of dwellings.
- b. Insure that occupancy of land and dwellings will be in balance with service facilities such as on-site parking, traffic capacity of access streets and capacity of utilities such as water and sewage disposal.
- c. Insure against adverse impact on neighboring residences.
- d. Fix responsibility for use, occupancy and conduct on the premises in relation to town standards and requirements. That is, on each parcel and in each main dwelling, someone must be "in charge" as owners or tenant of the owner.

Residential Areas Principle 1: Lands indicated for residential use on the comprehensive plan diagram should be used primarily for residential living, a use of land characterized by a single household occupying a main detached dwelling as the principal use of a parcel, together with uses and structures customarily accessory to a main dwelling in a rural residential community.

Residential Areas Principle 2: In addition to other accessory uses and structures, accessory living quarters within the main dwelling or in a separate structure should be deemed an appropriate accessory use on parcels large enough and under conditions adequate to insure the objectives cited in Sec. 2104.5 are met. Specific limits on accessory living quarters should be included in the zoning ordinances.

Residential Areas Principle 3: Population densities within the planning area should be guided by considerations of topography, geology, vegetative cover, access to transportation and services, fire hazards, emergency access, impact on preexisting residential development and other factors such as:

- a. The highest densities should be located on relatively level land close to local shopping and service areas, other local facilities and transportation facilities. Densities should decrease as the distance from these facilities increases.
- b. Population density should decrease as steepness of terrain increases.
- c. The lowest densities and largest lots should be located on the steepest hillsides on which the town allows development and in mountainous areas where it is necessary to limit storm runoff, prevent erosion, preserve existing vegetation, protect watersheds, avoid potentially unstable ground and maintain the scenic quality of the terrain.

Residential Areas Principle 4.1: When residences are grouped or clustered in areas where intensity standards require one acre or more per dwelling unit:

- a. Each residence should have substantial direct frontage on a common open space of sufficient size to convey a feeling of being on the edge of a large and significant open space.
- b. Clusters should generally consist of a small number of detached residences, and each cluster should be well-separated from adjacent clusters rather than interconnected in a linear form.

Residential Areas Principle 7: To the extent feasible, all structures (including residences) should complement and blend in with the natural setting of the planning area; and to this end, the following principles should be adhered to:

- a. Structures may be located in existing tree covered areas to the extent possible and still be consistent with slope, geologic and related conditions and the need to preserve locally unique or especially beautiful wooded areas.
- b. Largely bare slopes and sparsely wooded ridges visible from large portions of the town or planning area should be kept free of structures to the maximum extent possible.
- c. If development does take place on highly visible barren slopes or ridges, it must be unobtrusive and of a scale and design to maintain the character of the natural setting, and with required planting of native trees and plants where appropriate.

Residential Areas Principle 8: In all residential areas of the town, or its spheres of influence, particular attention must be given to the effects of approaching the maximum amount of development permitted on individual parcels. The cumulative effect of buildout under appropriate ordinances and policies should be examined and steps taken to ensure that its effect will not be injurious to the unique and desirable characteristics of each area. Overall development levels as measured by floor area ratios and impervious surfaces should be limited so as to preserve the rural setting.

Residential Areas Principle 9: To the extent feasible, the design of subdivisions should retain a representative composition of habitats on the site and their interrelationships.

### Open Space Element

Principle 3: Structures and land uses should be subordinate to the dominant natural land forms and vegetation of the planning area. Only in the confines of individual sites should structures be allowed to be dominant. To preserve open space in the residential open space preserve areas, clustering of housing units outside these areas should be required to the maximum extent possible.

Principle 11: Environmental impact studies should take into consideration the impact of development proposals on wildlife habitats.

Principle 12: Land use regulations should be used to prevent damage to vegetative ground cover.

Principle 18: New residential developments should provide for the clustering of residences so as to leave larger natural areas (residential open space preserves and other open space preserves) as undisturbed open space with limited local use by trails and paths. (When considering residential open space preserves, see also Section 2109 of the general plan.)

### Existing Housing Element

Policy 1A: Accommodate new residential development in a manner compatible with the rural character of existing residential development.

Policy 1B: Continue to control the location, design and density of new residential development in order to preserve regional open spaces, avoid areas of seismic and geologic hazards, have minimal visual impact, create minimal discernable effect on infrastructure capacity, and ensure the adequate provision of safe and convenient access to public services.

Policy 1C: Require all housing units in the town to conform to the principles and standards set forth in the general plan and town regulations, including that all housing be subservient to the natural environment.

Policy 2A: Accept and fulfill responsibility for a reasonable share of the regional need for affordable housing.

Policy 2B: Encourage the creation of a diversity of housing options to meet the needs of people in different stages of the life cycle and with different income levels.

Policy 2C: Allow in-lieu funds to be used to reduce town fees for affordable or mixed income housing developments, as well as for the purchase of land and the construction of below market rate units.

Policy 2E: Continue to encourage affordable housing that can be produced in association with market rate housing and otherwise.

Policy 2F: Distribute diverse and affordable housing options throughout the community.

Policy 3B: Continue to encourage cluster development in order to preserve resources and encourage sustainability.

Policy 3E: Design and locate housing to minimize impacts on wildlife and be subservient to the environment.

Policy 4A: Continue to participate in regional and county efforts to increase the availability of affordable housing in the region and county, including housing for people with special needs, while working to ensure that factors such as size, geographical and seismic hazards, fire risks, and land dedicated to open space are considered in establishing housing requirements.

Policy 4B: Support regional efforts to address the need for emergency and transitional shelter.

Policy 4C: Preserve local control over zoning, diversified housing locations and design

### Scenic Highways and Roads Element

Principle 1: Regulate density and land use, as provided in the general plan and zoning ordinances, with special attention to the view from the road.

Principle 2: Give special consideration to site development, including controlled access for driveways and special setbacks for buildings.

Principle 7: Control the design of all structures abutting scenic routes, including review by the Architectural and Site Control Commission.

Principle 8: Landscape all development along scenic routes and maintain such landscaping.

### Conservation Element

Water Principle 2: Environmental impact reports or studies, prepared professionally, should be required of public and private projects that propose extensive grading or vegetation removal on watershed lands.

Soils and Geology Principle 1: Zoning and other land use regulations should be used to limit, and in some cases prohibit, development in geologically hazardous areas. The degree of development limitation provided for in such regulations should be commensurate with the degree of hazard involved and the public costs likely to be incurred if emergency or remedial public action becomes necessary in these areas.

Soils and Geology Principle 2: Land use regulations should allow for and encourage using the best soils for agriculture when appropriate.

Wildlife Principle 1: An environmental impact report or study, prepared by a qualified biologist, should be required to determine if the habitat of wildlife is being impacted, particularly of endangered species, by any proposed public or private project where such encroachment appears likely.

Wildlife Principle 2: All subdivision and site development proposals should be reviewed to ensure that they do not obstruct wildlife access to important water, food and breeding areas.

Wildlife Principle 3: Designate creek corridors as sensitive areas which provide important aquatic and terrestrial wildlife habitat. Setback requirements should be established by zoning for all new development along creeks. All new subdivisions and site development proposals should contain setback area sufficient to buffer wildlife inhabiting the creek corridor from the impacts of development.

### Noise Element

*Goal 1: Develop Land Uses Compatible with the Noise Environment.*

*Policy 1:* The town will utilize the noise contours in Figure 1 and noise/land use compatibility standards on Figure 2.

*Policy 2:* New development of residential or other noise-sensitive land uses are discouraged in noise impacted areas unless effective mitigation measures are incorporated into the project design to reduce noise levels in outdoor activity areas to 55 dBA Ldn or less.

*Policy 3:* Interior noise levels shall not exceed 45 Ldn in all new residential units (single- and multi-family). Residential development sites exposed to exterior noise levels exceeding 55 Ldn shall be analyzed following protocols in the 2007 California Building Code (Chapter 12, Appendix Section 1207.11.2) or the most recent revision.

*Policy 4:* New development of noise-sensitive land uses are discouraged where the noise level due to non-transportation noise sources will exceed the standards of Table 3. Where noise sensitive land uses exist or are proposed in areas exposed to existing or proposed exterior non-transportation noise levels exceeding the performance levels of Table 3, an acoustical analysis shall be submitted by an applicant so that the noise mitigation may be included in the design of the new development.

## Discussion

*a) Physically divide an established community?*

**Less than Significant.** Physically dividing an existing community typically occurs when a physical barrier is constructed that impedes movement within a community. For example, construction of a freeway or rail line through an existing community would substantially impair movement between the two portions of the bisected community. Such an impact could also result from the removal of a bridge linking two areas of a community.

Implementation of the proposed project would result in adoption of Housing Element and other General Plan and Zoning amendments to plan for new higher density and mixed-use housing development, adoption of the Safety Element Update, and include the rezoning of some sites to allow residential development, more intense residential development or mixed-use development. The proposed project does not plan for or include any roadway or infrastructure changes and would not physically divide an existing community.

*b) 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?*

**Less than Significant.** The proposed project includes the Housing Element Update, the Safety Element Update, General Plan Amendments, Zoning Amendments and rezoning of selected parcels within the town. The Housing Element Update would comply with State planning law and the HAA and would help the Town meet its RHNA obligation as determined by ABAG. The project is a policy and planning document that, if adopted, would identify sites for future housing development. The proposed Housing Element Update policies would encourage development of new housing units and rehabilitation of existing housing units. Additional policies would reduce constraints to housing development and would include zoning code amendments to facilitate meeting this objective.

It should be noted that policy conflicts do not, in and of themselves, constitute a significant environmental impact unless it is a policy adopted for the purpose of avoiding or mitigating an environmental effect and the inconsistency would result in a significant adverse physical impact. Please note that planning documents that pertain to specific technical topics (e.g., Air Quality) are discussed in those topical sections of this environmental document.

### *General Plan and Zoning*

The proposed Housing Element Update and the Safety Element Update would be adopted as part of the General Plan and would be generally considered consistent with those General Plan policies. The updated elements would comply with State Planning Law requirements for these general plan elements, and the proposed housing sites would meet the RHNA allocations for the Town assigned by ABAG in compliance with California Housing Element Law.



The General Plan Amendments include the creation of a new “Gateway” district in the General Plan that allows affordable housing, recreation, and open space uses. The General Plan would also be amended with two new multi-family land use classifications allowing up to four and 20 dwelling units per acre, respectively, and a new mixed-use land use classification to allow for up to six dwelling units per acre.

The Zoning Amendments include the creation of three new zoning districts: 1) a new multi-family district allowing up to four dwelling units per acre; 2) a new multi-family district allowing 20 dwelling units per acre; and 3) a mixed-use district allowing residential uses up to six dwelling units per acre. Several housing sites would need to be rezoned to allow for development potential consistent with the Town’s RHNA requirements. Additionally, the Town is amending the Zoning Ordinance to codify the Affiliated Housing program that is currently implemented through the Housing Element and create an Opt-in-Single-Family Rezoning Program to further increase housing development. These new programs and zoning districts would allow for mixed-use residential development at greater densities than currently permitted.

Future development of the parcels with new housing would be consistent with the amended General Plan and zoning designations. Where adverse physical effects on the environment could result from the future development of housing on the proposed housing sites, those potential impacts are addressed in the appropriate environmental resource section. Additionally, potential conflicts with planning documents pertaining to a specific environmental resource, such as Air Quality, are discussed in the technical sections pertaining to those resources.

Future housing development pursuant to the proposed Housing Element Update would be required to be consistent with the General Plan, including objective and principles adopted for the purpose of avoiding or reducing adverse physical effects on the environment. As future housing projects are proposed, they would be reviewed for consistency with the General Plan and the applicable zoning regulations. The General Plan contains many policies, some of which may compete with one another. The Planning Commission and Town Council, in deciding whether to approve a proposed project, will decide whether, on balance, a project is consistent with the General Plan.

The project would not eliminate or modify any policies or measures from the General Plan that are intended for environmental protection and any potential conflicts with General Plan policies or measures that are intended for environmental protection would not result in a significant impact.

#### *Plan Bay Area 2050*

The project is consistent with the regional and sub-regional growth projections contained in *Plan Bay Area 2050*. Plan Bay Area 2050 encourages both market-rate and affordable housing development in identified growth areas. ABAG and MTC have provided an interactive online GIS

map of the nine-county Bay Area that allows users to zoom in to specific localities.<sup>106</sup> While there are no growth geographies within Portola Valley, there are growth geographies in areas in the vicinity of the town. Since one of the purposes of the growth geographies is to encourage the development of housing in proximity to existing and future employment centers and/or public transit, housing developed within and in proximity to a growth area would contribute to meeting this objective.

The proposed housing sites would further new housing development in Portola Valley in compliance with its RHNA, which would advance residential growth promoted in *Plan Bay Area 2050*. The housing sites identified in the proposed Housing Element are generally supportive of and consistent with the residential growth fostered in *Plan Bay Area 2050*, which demonstrates the project's consistency with *Plan Bay Area 2050*.

The project has been developed specifically for the Town to meet its RHNA obligation as assigned to it by ABAG. In fact, the Housing Element Update demonstrates that the town has capacity to accommodate 293 housing units, which is 40 housing units beyond its RHNA of 253 housing units. The project is inherently consistent with RHNA, and RHNA, as explained above, is consistent with *Plan Bay Area 2050*. Thus, the project is consistent with *Plan Bay Area 2050*.

As demonstrated in the preceding discussions, the proposed project would not conflict with a land use plan or policy adopted for the purpose of avoiding or reducing an adverse environmental effect. This would be a less-than-significant impact.

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<sup>106</sup> Association of Bay Area Governments and Metropolitan Transportation Commission, Plan Bay Area 2050 Growth Geographies. Available at: <https://opendata.mtc.ca.gov/datasets/plan-bay-area-2050-growth-geographies/explore>, accessed September 1, 2022.

**L. MINERAL RESOURCES**

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

*a-b) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State? Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?*

**No Impact.** Mineral resources of concern include metals, industrial minerals (e.g., aggregate, sand, and gravel), oil and gas, and geothermal resources that would be of value to the region and residents of the state.

Loss of mineral resources would primarily be the result of conversion of lands underlain by these resources to other uses, or within close proximity to the resources, such that the construction and occupancy of residential projects would restrict or eliminate sage and environmentally sound measures to implement extractive operations. Loss of access could also be the result of changes in land ownership.

Important mineral resource areas are recognized at the federal and State levels through environmental resource management plans and adopted mineral resource mapping, and at the local level through land use planning documents such as General Plans that incorporate such information.

Mineral resources in the region include gold, silver, lead, mercury, magnesium, and aggregate (traprock), but there are no known mineral resources at the housing sites close enough as to cause interference.<sup>107</sup> The housing sites have not been delineated as a locally important mineral recovery sites on the Town of Portola Valley General Plan, on any specific plan, or on any other land use plan. Therefore, the project would have no impact on mineral resources.

<sup>107</sup> United States Geological Survey, 2022. Available at: <https://mrddata.usgs.gov/general/map-us.html#help>, accessed on September 18.

## M. NOISE

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project result in:				
a) 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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Generation of excessive ground borne vibration or ground borne noise levels?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) 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 2 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### Affected Environment

This section provides background information on noise and vibration, how to quantify the sound level associated with noise, and how to evaluate the possible impact associated with noise and vibration that could result from implementation of the project.

#### *General Information on Noise*

Noise is defined as unwanted sound that annoys or disturbs people and can have an adverse psychological or physiological effect on human health. Sound produced by the vibration of sound pressure waves in the air. Sound pressure levels are used to measure the intensity of the sound and are described in terms of decibels. The decibel (dB) is based on a logarithmic scale and express the ratio of the sound pressure level being measured to a standard reference level. The starting point on the dB scale is based on the lowest sound level that the healthy, unimpaired human ear can detect. The human ear is only capable of hearing sound within a limited frequency range. To better characterize noise levels perceived by a human ear, a decibel scale called A-weighting (dBA) is typically used. On this scale, the low and high frequencies are given less weight than the middle frequencies. Decibels and other acoustical terms are defined in Table M-1. Typical A-weighted noise levels at specific distances are shown for different noise sources in Table M-2.

**TABLE M-1 DEFINITION OF ACOUSTICAL TERMS**

<b>Term</b>	<b>Definition</b>
Decibel (dB)	A unit describing the amplitude of sound on a logarithmic scale. Sound described in decibels is usually referred to as sound or noise “level.” This unit is not used in this analysis because it includes frequencies that the human ear cannot detect.
Frequency (Hz)	The number of complete pressure fluctuations per second above and below atmospheric pressure.
A-Weighted Sound Level (dBA)	The sound pressure level in decibels as measured on a sound level meter using the A-weighting filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound, in a manner similar to the frequency response of the human ear, and correlates well with subjective reactions to noise. All sound levels in this report are A-weighted.
Equivalent Noise Level ( $L_{eq}$ )	The average A-weighted noise level during the measurement period. For this CEQA evaluation, $L_{eq}$ refers to a 1-hour period unless otherwise stated.
Community Noise Equivalent Level (CNEL)	The average A-weighted noise level during a 24-hour day, obtained after addition of 5 decibels to sound levels during the evening from 7:00 to 10:00 p.m. and after addition of 10 decibels to sound levels during the night between 10:00 p.m. and 7:00 a.m.
Day/Night Noise Level ( $L_{dn}$ )	The average A-weighted noise level during a 24-hour day, obtained after addition of 10 decibels to sound levels during the night between 10:00 p.m. and 7:00 a.m.
Ambient Noise Level	The existing level of environmental noise at a given location from all sources near and far.
Vibration Decibel (VdB)	A unit describing the amplitude of vibration on a logarithmic scale.
Peak Particle Velocity (PPV)	The maximum instantaneous peak of a vibration signal.
Root Mean Square (RMS) Velocity	The average of the squared amplitude of a vibration signal.

Source: Charles M. Salter Associates, Inc., 1998. Acoustics – Architecture, Engineering, the Environment, William Stout Publishers. Federal Transit Administration, 2018. Transit Noise and Vibration Impact Assessment Manual, FTA Report No.0123, September.

**TABLE M-2 TYPICAL SOUND LEVELS MEASURED IN THE ENVIRONMENT AND INDUSTRY**

<b>Noise Source (Distance in Feet)</b>	<b>A-Weighted Sound Level in Decibels (dBA)</b>
Jet Aircraft (200)	112
Subway Train (30)	100
Truck/Bus (50)	85
Vacuum Cleaner (10)	70
Automobile (50)	65
Normal Conversation (3)	65
Whisper (3)	42

Source: Charles M. Salter Associates Inc., 1998. Acoustics – Architecture, Engineering, the Environment, William Stout Publishers.

Noise as a pressure wave decreases in intensity over distance from its source. Noise attenuation is generally described as a reduction in decibel level per doubling of distance from the source. Noise is reduced by 6 dB per doubling of distance from the source when traveling over a generally flat and hard surface outdoors, such as water, concrete, asphalt, or hard-packed soil. Natural factors such as topography, vegetation, and temperature can further reduce noise over distance. Dense vegetation can reduce noise levels by as much as 5 dB for every 100 feet of vegetation, up to a maximum reduction of 10 dB over 200 feet.<sup>108</sup> Atmospheric conditions can also affect the rate of noise attenuation. Noise travels farther during periods of higher humidity and also in colder temperatures.<sup>109</sup> Wind can reduce noise levels by as much as 20 to 30 dB at long distances.<sup>1</sup> The influences of vegetation, topography, and atmospheric conditions as noise reduction factors can vary greatly and are difficult to include in an analysis. Therefore, these factors are generally not taken into account in environmental noise analyses, and consequently such analyses are conservative and likely to overestimate noise levels.

A typical method for determining a person's subjective reaction to a new noise is by comparing it to existing conditions. The following describes the general effects of noise on people:<sup>110</sup>

- A change of 1 dBA cannot typically be perceived except in carefully controlled laboratory experiments.
- A 3-dBA change is considered a just-perceivable difference.
- A minimum of 5-dBA change is required before any noticeable change in community response is expected.
- A 10-dBA change is subjectively perceived as approximately a doubling or halving in loudness.

Because sound pressure levels are based on a logarithmic scale, they cannot be added or subtracted using linear methods. For instance, if one noise source emits a sound level of 90 dBA, and a second source at the same location also emits a sound level of 90 dBA, the combined sound level will be 93 dBA, not 180 dBA. In other words, a doubling of sound source is equivalent to an increase of 3 dBA. When the second noise source is lower than the first noise source by at least 10 dBA, the contribution from the second noise source to the overall sound level is negligible (i.e., close to zero). For example, when adding an 80-dBA source to a 95-dBA source, the higher noise source dominates, and the combined noise level will be 95 dBA.

Traffic noise levels are often expressed in terms of hourly dBA. The noise levels generated by vehicular sources mainly depend on traffic volume, the speed, and the percent of trucks within the fleet. Increases in these three factors will lead to higher noise levels. As mentioned above,

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<sup>108</sup> USDOT 1995.

<sup>109</sup> USDI 2003.

<sup>110</sup> Charles M. Salter Associates, Inc., 1998. *Acoustics – Architecture, Engineering, the Environment*, William Stout Publishers.

doubling the number of sources, such as traffic volume, increases the noise level by approximately 3 dBA<sup>111</sup> due to the logarithmic nature of noise levels.

### *General Information on Vibration*

Vibration is an oscillatory motion through a solid medium in which the motion's amplitude can be described in terms of displacement, velocity, or acceleration. Several different methods are used to quantify vibration. Typically, groundborne vibration generated by human activities attenuates rapidly with distance from the source of the vibration. Sensitive receptors to vibration include structures (especially older masonry structures), people (especially residents, the elderly, and sick), and vibration-sensitive equipment. Vibration amplitudes are usually expressed as either Peak Particle Velocity (PPV) or as Root Mean Square (RMS) velocity. PPV is appropriate for evaluating potential damage to buildings, but it is not suitable for evaluating human response to vibration because it takes the human body time to respond to vibration signals. The response of the human body to vibration is dependent on the average amplitude of a vibration event. Thus, RMS is more appropriate for evaluating human response to vibration. PPV and RMS are described in units of inches per second (in/sec), and RMS is also often described in vibration decibels (VdB).

### *General Information on Groundborne Noise*

Groundborne vibration can transmit energy into buildings and structures. This vibration can cause a rumbling sound and audible noise within the buildings, which is referred to as groundborne noise. Like noise that travels through the air, groundborne noise is usually measured in decibels (dB or dBA). The human ear is not equally sensitive to all frequencies within the audible sound spectrum. Groundborne noise is typically dominated by low-frequency components, which is perceived by human ear as a louder sound than the same-sound-level noise with higher frequency components. Thus, groundborne noise has the potential to disturb people even at low sound levels than broadband noise.

The relationship between groundborne vibration and groundborne noise depends on the frequency content of the vibration. For example, the groundborne noise measured in dBA will be approximately 40 dBA less than the groundborne vibration measured in VdB if the spectrum peak is around 30 Hz, and 25 dBA lower if the spectrum peak is around 60 Hz. Environmental vibration is rarely of sufficient magnitude to be perceptible or cause audible groundborne noise unless there is a specific vibration source close by, such as a railroad line.

### *Noise-Sensitive Receptors*

Noise-sensitive receptors are defined as land uses where noise-sensitive people may be present or where noise-sensitive activities may occur. Noise-sensitive receptors include residences,

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<sup>111</sup> Federal Highway Administration (FHWA), 2018. Techniques for Reviewing Noise Analyses and Associated Noise Reports.

schools, churches, hospitals, elderly-care facilities, hotels, libraries, auditoriums, parks, and outdoor recreation areas are generally more sensitive to noise than are commercial and industrial land uses.

### *Existing Noise Sources and Levels*

According to the Noise Element of the Portola Valley General Plan,<sup>112</sup> motor vehicles constitute the primary source of consistent noise pollution in the town. Traffic noise levels depend primarily on vehicular speed and total traffic volume, but also the type of vehicle. The primary source of noise from automobiles is high-frequency tire noise. Trucks, older automobiles, and motorcycles produce significant engine and exhaust noise, and trucks can also generate wind noise.

In 2008, existing traffic noise levels in the town were assessed using noise measurements, average daily traffic (ADT) counts, and the Federal Highway Administration's Highway Traffic Noise Model.<sup>113</sup> As shown in Table M-3, the highest ADT and associated noise levels were modeled along Alpine Road and Portola Road, with noise levels as high as about 68 dBA Ldn and 65 dBA Ldn, respectively, at 50 feet of the roadway. The resulting noise contours from the traffic noise modeling are shown in Figure M-1 with proposed housing sites.

**TABLE M-3 EXISTING TRAFFIC NOISE LEVELS**

Roadway – Segment	2005 ADT	dBA Ldn at 50 feet
Alpine Road - North town limits to 586' s/o Westridge Drive	11,825	68
Alpine Road – s/o Westridge Drive to 684' n/o Arastradero Road	8,907	67
Alpine Road - 684' n/o Arastradero Road to 505' n/o Creek Park Drive	9,981	67
Alpine Road - 505' n/o Creek Park Drive to Portola Road	7,582	66
Alpine Road – Portola Road to Madera Road	3,607	63
Cervantes Road – All	995	51
Los Trancos Road - Alpine Road to Los Trancos Creek	2,628	61
Los Trancos Road - Los Trancos Creek to Town Limits	2,068	60
Portola Road – Alpine Road to Westridge Drive	4,678	63
Portola Road - 600' n/o Wyndan Drive to Westridge Drive	5,140	63
Portola Road - 600' n/o Wyndan Drive to Woodside Town Limits	5,537	65
Westridge Drive - Alpine Road to Cervantes Drive	2,860	57
Westridge Drive - Cervantes Drive East to Cervantes Drive West	1,372	54
Westridge Drive - Portola Road to Cervantes Drive West	2,354	57

<sup>112</sup> Portola Valley General Plan Noise Element, 2009. <https://www.portolavalley.net/town-government/general-plan>. Accessed October 7, 2022.

<sup>113</sup> Illingworth & Rodkin, Inc., 2008. Noise Technical Report Supporting the Updates of the Portola Valley Noise Element and Noise Ordinance. June 18.



Roadway – Segment	2005 ADT	dBA Ldn at 50 feet
Willowbrook Drive – All	495	48

Note: Average daily traffic (ADT) based on weekday traffic counts in December 2005.

Source: Illingworth & Rodkin, Inc., 2008. Noise Technical Report Supporting the Updates of the Portola Valley Noise Element and Noise Ordinance. June 18.

According to the General Plan, average daytime noise levels in the town were about 45 dBA  $L_{eq}$ . Noise levels at night were typically 25 to 30 dBA  $L_{90}$  throughout the town, except overlooking I-280 where noise levels were slightly higher ranging from 30 to 35 dBA  $L_{90}$  during the nighttime and in the very center of the quietest portion of the community where noise levels were 20 to 25 dBA  $L_{90}$  during the nighttime.

### Regulatory Setting

In California, noise is primarily regulated at the local level, through the implementation of general plan policies and local noise ordinances.

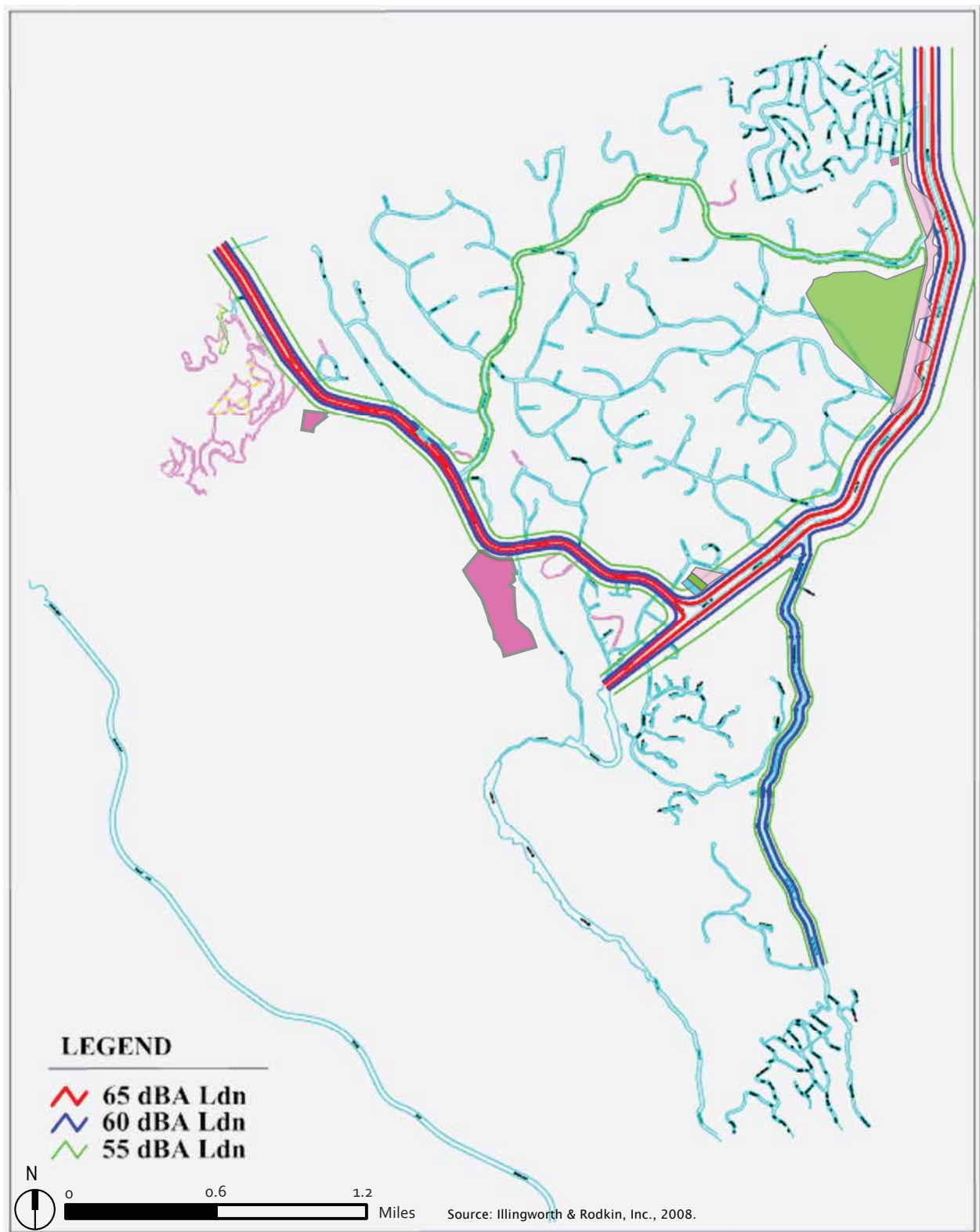
#### *State Regulations*

##### California Noise Control Act

Sections 46000 to 46080 of the California Health and Safety Code codify the California Noise Control Act of 1973. The Act established the Office of Noise Control under the California Department of Health Services. It requires that the Office of Noise Control adopt, in coordination with the Office of Planning and Research, guidelines for the preparation and content of noise elements for general plans. The most recent guidelines are contained in the California Office of Planning and Research's General Plan Guidelines. The document provides land use compatibility guidelines for cities and counties to use in general plans to reduce conflicts between land use and noise.

##### California Building Standards Code

The 2019 California Building Standards Code specifies interior noise levels attributable to exterior noise sources for both residential and nonresidential uses during operation. Specifically, it specifies that interior noise levels attributable to exterior sources shall not exceed 45 dBA in any habitable room (e.g., residential homes for living, sleeping, eating, or cooking). The noise metric used (either Ldn or CNEL) shall be consistent with the noise element of the local general plan. The 2019 California Building Standards Code also specifies that buildings containing non-residential uses (e.g., retail spaces and offices) that are exposed to exterior noise levels at or above 65 dBA  $L_{eq}$  or CNEL shall maintain interior noise levels below 50 dBA  $L_{eq}$  in occupied



- Pipeline and Pending Developments
- Vacant Housing Sites
- Non-Vacant Housing Sites (Not Affiliated)
- Non-Vacant Affiliated Housing Sites

Figure M-1  
Noise Contours Map

areas during any hour of operation. The buildings are required to comply with this interior sound level by either a prescriptive or performance method. A prescriptive method requires the use of building assemblies and components with appropriate Sound Transmission Class (STC) values and Outdoor-Indoor Sound Transmissions Class (OITC) values. A performance method requires an acoustical analysis documenting compliance with this interior sound level, to be prepared by personnel approved by the architect or engineer of record before the building is built.

### *Local*

#### General Plan

The following policies in the General Plan are related to noise and are applicable to the project.

#### Noise Element

##### *Goal 1: Develop Land Uses Compatible with the Noise Environment*

##### Transportation Generated Noise (Policies 1–3)

1. The town will utilize the noise contours in Figure 1 (Figure M-1 in this document) and noise/land use compatibility standards in Figure 2 (Figure M-2 in this document).
2. New development of residential or other noise-sensitive land uses are discouraged in noise impacted areas unless effective mitigation measures are incorporated into the project design to reduce noise levels in outdoor activity areas to 55 dBA Ldn or less.
3. Interior noise levels shall not exceed 45 Ldn in all new residential units (single- and multi-family). Residential development sites exposed to exterior noise levels exceeding 55 Ldn shall be analyzed following protocols in the 2007 California Building Code (Chapter 12, Appendix Section 1207.11.2) or the most recent revision.

##### Non-Transportation Noise (Policy 4)

4. New development of noise-sensitive land uses are discouraged where the noise level due to non-transportation noise sources will exceed the standards of Table 3 (Table M-4 in this document). Where noise sensitive land uses exist or are proposed in areas exposed to existing or proposed exterior non-transportation noise levels exceeding the performance levels of Table 3 (Table M-4 in this document), an acoustical analysis shall be submitted by an applicant so that the noise mitigation may be included in the design of the new development.

##### *Goal 3: Mitigate Noise from New Projects*

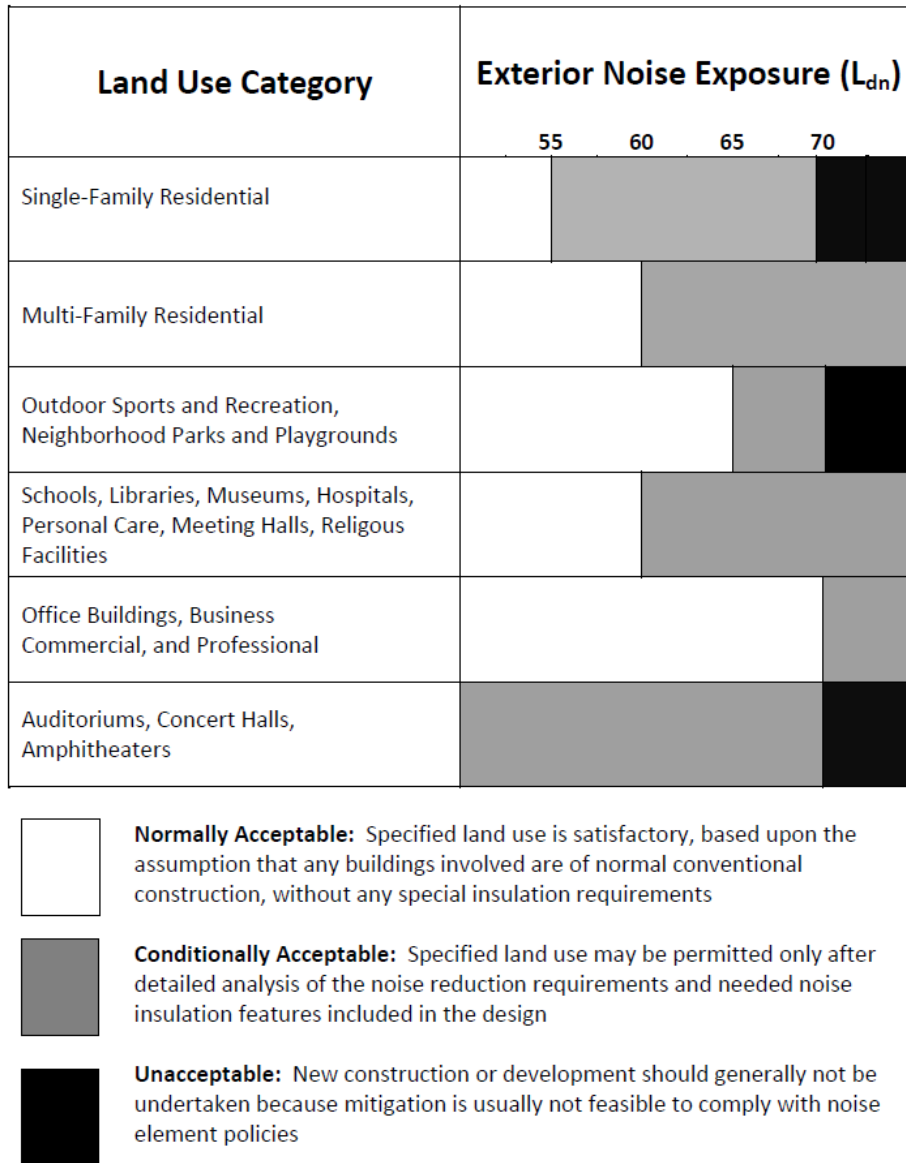
1. Noise created by new transportation noise sources (e.g., increased traffic or a new roadway) shall be mitigated so as to not cause the following criteria to be exceeded or to cause a significant adverse community response:
  - Cause the Ldn at noise-sensitive uses to increase by 3 dBA or more and exceed the “normally acceptable” level. See Figure 2 (Figure M-2 in this document) for the definition of “normally acceptable.”
  - Cause the Ldn at noise-sensitive uses to increase by 5 dBA or more and remain “normally acceptable.”

Where a proposed transportation noise source is likely to produce noise levels that would exceed the above standards, an acoustical analysis shall be required as a part of project review or as part of the environmental review process so that noise mitigation may be included in the project design.

2. Noise created by new non-transportation noise sources shall be mitigated so as to not cause the land use receiving the noise to exceed interior and exterior noise level standards of Table 3 (Table M-4 in this document). Where proposed non-transportation noise sources are likely to produce noise levels that would exceed the standards of Table 3 (Table M-4 in this document), an acoustical analysis shall be required as a part of project review or as part of the environmental review process so that noise mitigation may be included in the project design.
3. All acoustical analyses shall:
  - Be the responsibility of the applicant for the project.
  - Be prepared by a qualified person experienced in the fields of environmental noise assessment and architectural acoustics.
  - Include representative noise level assessments with sufficient sampling periods and locations to adequately describe local conditions.
  - Estimate existing and projected (20 years) noise levels in terms of Ldn and/or the standards of Table 3 (Table M-4 in this document), and compare those levels to the policies of this Element.
  - Recommend mitigation to achieve compliance with the adopted policies and standards of this Element. Where the noise source in question consists of intermittent single events, the report must address the effects of maximum noise levels in sleeping rooms in terms of possible sleep disturbance.
  - Describe a post-project assessment program that could be used to evaluate the effectiveness of the proposed mitigation measures.

*Goal 4: Control Noise from Construction and Yard Maintenance Activities*

1. Implement appropriate standard controls for all construction projects carried out by contractors or homeowners.
2. Implement appropriate standard controls for yard maintenance activities carried out by commercial companies and homeowners.
3. Require ASCC (Architectural and Site Control Commission) review for all construction projects scheduled for or lasting more than 24 months and submittal of construction staging, timing and noise management plans.

**Figure M-2 Land Use Compatibility for Transportation Noise.**

Source: Figure 2, Noise Element, Portola Valley General Plan

**TABLE M-4 NON-TRANSPORTATION NOISE STANDARDS**

Land Use Receiving the Noise	Hourly Noise-Level Descriptor	Exterior Noise-Level Standard in Any Hour (dBA)		Interior Noise-Level Standard in Any Hour (dBA)	
		Daytime (7am-10pm)	Nighttime (10pm-7am)	Daytime (7am-10pm)	Nighttime (10pm-7am)
Residential	Leq	50	40	40	30
	Lmax	65	55	55	45
Medical, convalescent	Leq	55	45	45	35
	Lmax	70	60	55	45
Theater, auditorium	Leq	--	--	35	35
	Lmax	--	--	50	50
Religious Facility, meeting hall	Leq	55	--	40	40
	Lmax	--	--	55	55
Office building	Leq	--	--	45	--
School, library, museum	Leq	55	--	40	--
	Lmax	--	--	55	--
Playground, park	Leq	55	--	--	--

Notes:

- a) The Residential standards apply to all residentially zoned properties.
- b) Each of the noise levels specified above shall be lowered by 5 dBA for tonal noises characterized by a whine, screech, or hum, noises consisting primarily of speech or music, or recurring impulsive noises.
- c) The exterior noise standards are measured at the property line of the receiving property.
- d) The thresholds for speech interference indoors are about 45 dBA if the noise is steady and above 55 dBA if the noise is fluctuating. Outdoors, the thresholds are about 15 dBA higher. Steady noise of sufficient intensity, above 35 dBA, and fluctuating noise levels above about 45 dBA have been shown to affect sleep.

Source: Table 3 Non-Transportation Noise Standards, General Plan Noise Element.

### Portola Valley Municipal Code

The following standards from the Portola Valley Municipal Code are related to noise and are applicable to the project.

9.10.030 - Noise Standards.

It is unlawful for any person in any location in the town from the effective date of this chapter to create or cause to be created any noise that exposes properties in the vicinity to noise levels that exceed the levels indicated in Table 9.10-1 (Table M-4 in this document), provided that, if the noise is generated by a structure or integral part of a structure, such compliance is required within twelve months after the effective date of the ordinance, August 21, 2009. Noises permitted by Sections 9.10.040 and 9.10.070 are not subject to Table 9.10-1 (Table M-4 in this document).

9.10.040 - Permitted Sources of Noise.

No person shall do, cause or suffer or permit to be done on any premises owned, occupied or controlled by such a person, any of the following acts except as provided below. All vehicles, equipment and machines associated with the enumerated activities shall incorporate design features in good operating order that meet current industry standards for noise muffling and noise reduction. Permitted sources of noise described in this section shall be subject to applicable conditional use permit conditions, construction program agreements, town noise reduction guidelines, and other forms of regulation.

- A. Construction Activities. Commercial construction activities may take place between eight a.m. and five-thirty p.m., Monday through Friday. Any resident may personally (including with the help of immediate family members) undertake construction activities during the following hours: Monday through Friday between eight a.m. and five-thirty p.m. and Saturday and Sunday between ten a.m. and five p.m. Commercial and resident construction activities are prohibited on holidays. Exceptions to these hours may be permitted in unusual circumstances pursuant to written authorization from the director of public works. No radios or other amplified sound devices shall be audible beyond the property line of the construction site.
- B. Domestic Garden Tools. Domestic garden tools, including electric-powered leaf blowers, may be used by commercial companies only Monday through Friday between eight a.m. and five-thirty p.m. and Saturday between ten a.m. and five p.m.; provided that chippers and chain saws may not be used on Saturday. Any resident may personally (including with the help of immediate family members) use domestic garden tools during the following hours: Monday through Friday between eight a.m. and five-thirty p.m. and Saturday and Sunday between ten a.m. and five p.m. Domestic garden tools may be used by property owners only for the purpose of removing seasonal grasses and plant materials that pose a fire hazard on all days, except holidays, between eight a.m. and eight p.m. from April 15 to June 15; however, this provision does not allow the use of chain saws and chippers on Sundays. The commercial and resident use of domestic garden tools is prohibited on holidays.
- C. Large Vehicle Delivery and Loading. For other than construction activities, the loading, unloading or delivery of goods, merchandise, vehicles or supplies by large trucks, tractor-trailers, or other similar vehicles is restricted to the hours between eight a.m. and five-thirty p.m., Monday through Friday, unless otherwise authorized by a conditional use permit.
- D. Garbage Collection. Collection of garbage and other refuse is restricted to the hours between eight a.m. and five p.m., Monday through Friday, unless authorized otherwise by a franchise agreement with the town.
- E. Residential Emergency Generators. The testing of home generators used for emergency power is permitted only on weekdays, no more frequently than once a week and for a duration not exceeding twenty minutes restricted to the hours between ten a.m. and four p.m. Home generators shall not be tested on holidays. Home generators shall not produce a sound exceeding sixty-five dBA when measured twenty-two feet from the generator, and shall have mufflers and generator enclosures in good condition and appropriate for the generator. Emergency generators shall be located as far as possible from adjoining properties.

9.10.050 - Special circumstances.

While the noise standards in this chapter are consistent with generally accepted community noise limitations, there may be circumstances where the standards do not reduce noise from non-transportation noise sources to a level appropriate for the use and the surrounding area. In such instances, and where the noise generator is controlled by a conditional use permit, the conditional use permit may establish conditions for such use to achieve noise levels that are lower than the standards in this chapter.

9.10.060 - Prohibited Sources of Noise.

Notwithstanding any other provision of this chapter, the following sources of noise are prohibited:

- A. Animals and Fowl. The keeping of any animal, including but not limited to, dogs, fowl and crowing roosters, which by any persistent sound or cry disturbs a reasonable person owning, using, or occupying property in the neighborhood.
- B. Sounding Horns and Signal Devices. The sounding of any horn or signal device on any automobile, motorcycle, bus, or other vehicle in any other manner or circumstance or of any other purpose than required or permitted by the California Vehicle Code or other laws of the state.
- C. Racing Engine. The racing of an engine of any motor vehicle, except when necessary to do so in the course of repairing, adjusting or testing but not so that a reasonable person owning, using or occupying property in the neighborhood is disturbed.
- D. Musical Instruments, Sound Amplifiers and Sounds in General. The making of any recurring and excessive sound or noise by any method so that the sound is plainly audible and a reasonable person owning, using, or occupying property in the neighborhood is disturbed. This prohibition includes, but is not limited to, the use or operation of any musical instrument or any device, machine, apparatus, or instrument for intensification or amplification of the human voice or music.
- E. Outdoor Amplified Sound on Town Property. The use of amplified sound outdoors on property owned by the town for any purpose unless authorized in writing by the town.
- F. Explosives, Firearms, and Similar Devices. The use or firing of explosives, firearms, or similar devices which create impulsive sound so as to cause a noise disturbance across a real property boundary or on a public space or right-of-way, except when part of a government-authorized honor guard.
- G. Motor Vehicle Maintenance. Work on motor vehicles, at other than service facilities approved by the town, that is plainly audible and a reasonable person owning, using, or occupying property in the neighborhood is disturbed.
- H. Leaf Blowers. Leaf blowers shall not produce a sound that exceeds sixty-five dBA when measured from a distance of fifty feet utilizing American National Standard Institute methodology. No person shall operate any leaf blower which does not bear an affixed manufacturer's label indicating the model number of the leaf blower and designating a noise level not in excess of sixty-five dBA. Any leaf blower that bears such a manufacturer's label shall be presumed to comply with any noise level limit of this chapter provided that it is operated with all mufflers and full extension tubes supplied by the manufacturer for that leaf blower. No person shall operate any leaf blower without attachment of all mufflers and full extension tubes supplied by the manufacturer for that leaf blower. This requirement becomes effective one year after the adoption of this revised chapter.
- I. Gas-Powered Leaf Blowers. Notwithstanding the prohibition against gas-powered leaf blowers in Section 8.32, such leaf blowers will be permitted for emergency use if authorized by the town manager in writing for a specified duration.



9.10.070 - Exemptions.

Sound or noise emanating from the following sources and activities are exempt from the provisions of this ordinance:

- A. Emergencies involving the execution of the duties of duly authorized governmental personnel and others providing emergency response to the general public including, but not limited to, sworn peace officers, emergency personnel, utility personnel, and the operation of emergency response vehicles and equipment.
- B. Emergencies that pose a threat to property or safety of persons or animals and require action by a resident, including with the help of immediate family members or a commercial company.
- C. Safety, warning and alarm devices, including house and car alarms, and other warning devices that are designed to protect the health, safety, and welfare, provided such devices are well-maintained, and designed with automatic shutoffs or a direct connection to a security service, both of which turn off the device after a reasonable time limit.
- D. Gas-powered devices may be used in emergency situations and/or as needed for major storm cleanup, creekside maintenance, prevention of traffic obstructions and other health or safety reasons as authorized by the town manager in writing for a specified duration. The town manager has the authority to adopt regulations implementing this exception.
- E. Graduation ceremonies at the town's public and private schools.
- F. Opening day and championship sports games, not to exceed three weekends a year.

**Discussion**

This section analyzes environmental impacts related to noise and vibration that could result from the implementation of the project. The Housing Element and Safety Element Updates do not include any new policies related to noise and vibration; therefore, no noise related impacts from updating the policies of the General Plan would occur.

In accordance with existing policies in the Noise Element of the General Plan and the Town Municipal Code, individual developments under the project would result in a potentially significant impact if they would:

- Generate noise from traffic that increases the outdoor Ldn at noise-sensitive receptors by 3 dBA or more and exceed the "normally acceptable" levels defined in Figure M-2;
- Generate noise from traffic that increases the outdoor Ldn at noise-sensitive uses by 5 dBA or more in areas and remain at the "normally acceptable" levels defined in Figure M-2; or
- Generate noise from non-transportation sources to exceed interior and exterior noise level standards defined in Table M-4.

The Town has not adopted criteria for construction groundborne vibration impacts. In this Initial Study, the Federal Transit Administration (FTA) vibration impact criteria are used to evaluate potential vibration impacts associated with the implementation of the project. Table M-5 and Table M-6 summarize the vibration criteria established by the FTA to prevent disturbances to building occupants and to prevent damage to structures, respectively. Vibration impacts from future residential developments under the project would be considered potentially significant if they would exceed the FTA's recommended vibration thresholds to prevent disturbance of building occupants or damage to buildings.

**TABLE M-5 VIBRATION CRITERIA TO PREVENT DISTURBANCE – RMS (VdB)**

Land Use Category	Frequent Events <sup>a</sup>	Occasional Events <sup>b</sup>	Infrequent Events <sup>c</sup>
Buildings where vibration would interfere with interior operations	65	65	65
Residences and buildings where people normally sleep	72	75	80
Institutional land uses with primarily daytime use	75	78	83

<sup>a</sup> More than 70 vibration events of the same kind per day or vibration generated by a long freight train.

<sup>b</sup> Between 30 and 70 vibration events of the same kind per day.

<sup>c</sup> Fewer than 30 vibration events of the same kind per day.

Source: Federal Transit Administration, 2018. Transit Noise and Vibration Impact Assessment Manual, FTA Report No.0123, September.

**TABLE M-6 VIBRATION CRITERIA TO PREVENT DAMAGE TO STRUCTURES – PPV (IN/SEC)**

Building Category	Peak Particle Velocity
Reinforced-concrete, steel or timber (no plaster)	0.5
Engineered concrete and masonry (no plaster)	0.3
Non-engineered timber and masonry buildings	0.2
Buildings extremely susceptible to vibration damage	0.12

Source: Federal Transit Administration, 2018. Transit Noise and Vibration Impact Assessment Manual, FTA Report No.0123, September.

a) *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?*

**Less than Significant with Mitigation.**

*Temporary Noise from Construction*

The primary source of temporary noise from the construction of future developments under the project would be the operation of heavy construction equipment. Construction noise levels would vary from day to day depending on the quantity, type, and condition of the equipment being used; the type and duration of activity being performed; the distance between the noise source and the receptor; and the presence or absence of barriers, if any, between the noise source and receptor. Demolition, excavation/grading, and foundation work are typically the noisiest phases of construction and would occur during the initial construction phases. The later phases of construction include activities that are typically quieter and that occur within the buildings under construction, thereby providing a noise barrier between the construction activity and any nearby receptors. Pile driving may also be required for some projects, which can generate extremely high levels of noise.

The Town Municipal Code limits the days and hours of construction equipment operation to avoid generating noise when it would be most objectionable to neighboring receptors. This requirement would prevent the disturbance of nighttime sleep for nearby residences. However, construction activities could still generate noise exceeding ambient noise levels at nearby sensitive receptors that also exceed the Town's noise standards established in the Municipal Code.

Typical noise levels at various distances from construction equipment are shown in Table M-7. As discussed above, noise levels at a known distance from point sources are decreased by 6 dBA and 7.5 dBA for every doubling of that distance for hard and soft surfaces, respectively. According to Table M-7, certain construction activities, such as pile driving (impact or sonic) and rock drilling, could generate exterior noise levels that exceed the non-transportation noise standards established in the Town's General Plan and Municipal Code (Lmax of 65 dBA) at unobstructed residential properties up to 1,600 feet away from the noise source.

In accordance with Noise Element policy 4 of Goal 1 and policies 2 and 3 of Goal 3, an acoustical analysis must be prepared for any projects that generate noise levels exceeding the Town's non-transportation noise standards (Table M-4). The acoustical analysis must be prepared by a qualified professional, identify noise control measures to reduce noise levels below the non-transportation noise standards, and be submitted by the project applicant to the Town for review and approval prior to construction. Common noise control measures during construction include the installation of temporary plywood noise barriers around equipment, use of "quiet" pile driving technology (e.g., silent pile driver or pre-drilling), and utilizing the best available noise control

techniques (e.g., improved mufflers, intake silencers, and acoustical-attenuating shields or shrouds). Implementation of an acoustical analysis would ensure that temporary noise impacts from construction of individual residential developments under the project to be less than significant.

**TABLE M-7 TYPICAL NOISE LEVELS FROM CONSTRUCTION EQUIPMENT AT VARIOUS DISTANCES**

Type of Equipment	Maximum Sound level (dBA) <sup>b</sup>					
	50 feet <sup>a</sup>	100 feet	200 feet	400 feet	800 feet	1,600 feet
Pile Drivers (Impact)	101	95	89	83	77	71
Pile Drive (Sonic)	95	89	83	77	71	65
Rock Drill	95	89	83	77	71	65
Rail Saw	90	84	78	72	66	60
Crane, Derrick	88	82	76	70	64	58
Crane, Mobile	83	77	71	65	59	53
Jackhammer	88	82	76	70	64	58
Grader	85	79	73	67	61	55
Roller	85	79	73	67	61	55
Paver	85	79	73	67	61	55
Dozer	85	79	73	67	61	55
Concrete Mixer	85	79	73	67	61	55
Scraper	85	79	73	67	61	55
Pneumatic Tool	85	79	73	67	61	55
Truck	84	78	72	66	60	54
Concrete Pump	82	76	70	64	58	52
Compactor	82	76	70	64	58	52
Generator	82	76	70	64	58	52
Air Compressor	80	74	68	62	56	50
Backhoe	80	74	68	62	56	50
Loader	80	74	68	62	56	50

<sup>a</sup> Lmax measured at 50 feet away from operating equipment. Data source: Federal Transit Administration, 2018. Transit Noise and Vibration Impact Assessment Manual. FTA Report No. 0123. September.

<sup>b</sup> The noise levels at 100 feet to 1,600 feet were estimated by a decrease of 6 dBA every doubling of distance for a hard surface.

### *Permanent Noise from Operation*

During the operation phase of future developments under the project, the primary noise generation sources would include the introduction of new stationary sources such as heating,

ventilation, and air conditioning (HVAC) systems and emergency backup generators, and increased vehicular traffic on roadways.

### Stationary Sources

Noise generated from stationary sources would be subject to the Town's Municipal Code section 9.10.030 *Noise Standards*, which requires developments to not generate noise levels that exceed the non-transportation noise standards established in Table M-4. Municipal Code Section 9.10.040.E identifies noise level and testing time restrictions for residential emergency generators. As discussed above, the General Plan policies of the Noise Element require the project applicant to prepare an acoustical analysis and implement noise control measures to reduce noise levels below the non-transportation noise standards established in Table M-4. Compliance with Municipal Code sections and General Plan policies mentioned above would ensure that future housing development under the project would not result in a substantial permanent increase in ambient noise levels from stationary sources, and this impact would be less than significant.

### Vehicle Traffic

The sites planned for development under the project are adjacent to segments of Alpine Road and Portola Road, which generate noise levels ranging from about 63 to 68 dBA Ldn at 50 feet from the roadway (Table M-3). These noise levels already exceed the "normally acceptable" levels defined in Figure M-2 for various sensitive receptors (e.g., residential). Therefore, traffic from a development under the project that would increase the outdoor Ldn at noise-sensitive receptors by 3 dBA or more would result in a potentially significant impact. As discussed in the *Affected Environment* section above, a project would need to double the existing traffic volume on a roadway to increase the ambient noise level by approximately 3 dBA. The lowest ADT reported along the segments of Alpine Road and Portola Road adjacent to the proposed development sites is about 4,700 vehicles per day. Therefore, at the minimum, an increase of about 4,700 vehicles per day would be required to result in a 3 dBA increase in ambient noise levels along the key roadway segments in the planning area. The maximum net daily vehicle trips that would be generated by planned development under the project is about 477 vehicle trips per day (Vacant Portion of Ford Field housing site);<sup>114</sup> therefore, future developments are not expected to generate traffic that would create a substantial increase in noise (3 dBA or more) in areas exposed to existing traffic noise levels exceeding the "normally acceptable" levels defined in Figure M-2. Therefore, future developments under the project would not result in a substantial permanent increase in ambient noise levels from project-generated traffic trips, and this impact would be less than significant.

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<sup>114</sup> The maximum net daily vehicle trips is calculated based on 50 dwelling units on the housing site and 9.54 trips per day from Table G20 Mobile Trip Rates and Trip Type Percentages by Land Use, Appendix 8 of CalEEMod version 2022.1.

b) *Generation of excessive ground borne vibration or ground borne noise levels?*

**Less than Significant Impact with Mitigation.**

*Construction Phase*

Construction activities can result in varying degrees of ground vibration, depending on the equipment, activity, and relative proximity to sensitive receptors. Typical vibration levels for construction equipment at a distance of 25 feet are shown in Table M-8 below.

**TABLE M-8 VIBRATION SOURCE LEVELS FOR CONSTRUCTION EQUIPMENT**

Equipment	PPV at 25 feet, in/sec	RMS at 25 feet, VdB
Pile Driver (Impact), Typical	0.644	104
Pile Driver (Sonic), Typical	0.17	93
Vibratory Roller	0.21	94
Large Bulldozer	0.089	87
Caisson Drilling	0.089	87
Loaded Trucks	0.076	86
Jackhammer	0.035	79
Small Bulldozer	0.003	58

Source: Federal Transit Authority (FTA), 2018.

As indicated in Table M-8, construction activities could generate groundborne vibration that exceeds the criteria established by the FTA (Table M-5 and Table M-6) at vibration-sensitive receptors. A typical impact pile driver would generate the highest levels of vibration. Under a worst-case scenario for typical conditions, an impact pile diver could result in the following impacts to vibration-sensitive receptors:

- Potential disturbance to vibration-sensitive activities within about 500 feet (based on the most conservative threshold of 65 VdB as presented in Table M-5);<sup>115</sup> and

<sup>115</sup> The buffer distance was calculated based on the following equation:

$$D_2 = D_1 * 10^{((RMS_1 - RMS_2) / 30)}$$

Where:

RMS<sub>1</sub> is the reference vibration level at reference distance, and RMS<sub>2</sub> is the vibration threshold for vibration-sensitive activities.

D<sub>1</sub> is the reference distance (in this case 25 feet), and D<sub>2</sub> is the buffer distance to vibration threshold for vibration-sensitive activities.

- Potential damage to structures within about 115 feet (based on the most conservative threshold of 0.12 in/sec for extremely fragile historic buildings as presented in Table M-6).<sup>116</sup>

If sensitive receptors are located within these worst-case screening distances, future developments under the project could generate excessive vibration levels that result in a potentially significant impact. The following mitigation measure should be implemented.

**Mitigation Measure NOISE-1: Screening-Level Vibration Analysis.** Where new development is proposed in the vicinity of vibration-sensitive receptors, require a screening-level vibration analysis. If a screening-level analysis shows that the project has the potential to substantially disturb vibration-sensitive activities or result in damage to structures, then a qualified professional shall prepare a detailed vibration impact assessment to determine appropriate design standards and methods of construction to avoid potential vibration impacts, if feasible.

Implementation of Mitigation Measure NOISE-1 would ensure that construction of future housing developments under the project would not generate excessive groundborne vibration levels, and this impact would be less than significant.

### *Operation Phase*

Future development under the project would be mostly residential. This land use does not involve equipment or activities that generate excessive groundborne vibration or groundborne noise levels. Therefore, operation of future developments under the project would not generate excessive groundborne vibration or groundborne noise levels, and this impact would be less than significant.

*c) 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 2 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?*

**No Impact.** The Town is located about 8.5 miles from the Pala Alto Airport and about 9 miles from the San Carlos Airport. Because the planning area is not located within the area governed by an airport land use plan and is not within 2 miles of a public or private-use airport, the project would have no impact related to the exposure of people to excess noise levels from airports.

<sup>116</sup> The buffer distance was calculated based on the following equation:

$$D_2 = (PPV_1 / PPV_2)^{1/1.1} * D_1$$

Where:

PPV<sub>1</sub> is the reference vibration level at reference distances, and PPV<sub>2</sub> is the vibration threshold for building damage.

D<sub>1</sub> is the reference distance (in this case 25 feet), and D<sub>2</sub> is the buffer distance to vibration threshold for building damage.

## N. PARKS AND RECREATION

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

### Environmental Setting

The Town of Portola Valley offers a wide variety of recreational facilities and programs for residents to enjoy. In addition to the recreational amenities offered at Town Center, Portola Valley boasts a comprehensive trails system with nearly the same number of miles as its roadways. Numerous open space areas are located within Portola Valley as well as the Town-owned 544-acre Coal Mine Ridge and Blue Oaks Trail. Additional open space areas are located within and near the Town of Portola Valley.

#### *Regional Parks*

##### Windy Hill Open Space Preserve

The Midpeninsula Regional Open Space District owns and maintains more than 65,000 acres of land across the San Francisco Peninsula to the San Mateo County Coastside and South Bay.<sup>117</sup> The Windy Hill Open Space Preserve, owned by the Midpeninsula Regional Open Space District, provides an extensive open space and trail system with opportunities for nature study as well as cycling, equestrians, hikers, and scenic enjoyment. The property encompasses approximately 1,414 acres and features open grassland ridges and forest of redwood, fir, and oak.<sup>118</sup>

#### *Local Parks*

##### Portola Valley Town Center

The Portola Valley Town Center includes a community park in addition to a variety of other recreational amenities including a County owned and operated library, Community Hall where classes are offered, community rooms available for rental by residents, multiple recreational

<sup>117</sup> Midpeninsula Regional Open Space, 2022. Preserve & Protect. Available at: <https://www.openspace.org/what-we-do/preserve>. Accessed October 11.

<sup>118</sup> Midpeninsula Regional Open Space, 2022. Preserve & Protect. Available at: <https://www.openspace.org/preserves/windy-hill>. Accessed October 11.



playing fields, and a children's play area. The Town coordinates recreation programs through soliciting instructors, establishing instructor agreements, and providing the physical space (Town facilities). The Town also coordinates program enrollment, including payments, and pays the instructors. The programs are run by the instructors; but ultimately, the recreation programs are Town sponsored.<sup>119</sup>

### Triangle Park

Located at the intersection of Portola and Alpine Roads, Triangle Park is used as a rest stop for cyclists and those who are out walking in the area. Picnic tables are available, with delicatessens and markets located nearby.<sup>120</sup>

### Ford Field

Ford Field, across from Westridge Drive and within the Alpine Scenic Corridor, includes a little league baseball diamond, parking, trails and paths, and extensive natural areas for non-intensive recreation. It is 200 feet deep and is adjacent to Los Trancos Creek and the Alpine Trail. Picnic tables are also available.<sup>121</sup>

### Rossotti Field

Rossotti Field is a natural turf, standard size soccer field used for youth and adult league practices and games. It is adjacent to the Alpine Inn, Los Trancos Creek, and the Alpine Trail.<sup>122</sup>

### *Institutions*

The elementary and intermediate schools in the town have important recreation facilities and should be fully utilized in recreation programs. Similarly, the athletic facilities of the Priory school are of great importance to the town.

### *Trails and Paths*

With nearly the same number of miles of trails as there are of roads, Portola Valley is committed to providing opportunities for walking, cycling, and equine riding. Laid out, built by and, for many years, maintained by volunteers, trails are one of the Town's most important assets.

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<sup>119</sup> Gaines, Melvin, Assistant Town Manager, 2022. Written communication with Urban Planning Partners. October 12.

<sup>120</sup> Town of Portola Valley, 2022. Parks & Recreation. <https://www.portolavalley.net/for-residents/parks-recreation/public-parks-athletic-fields/triangle-park>. Accessed October 11.

<sup>121</sup> Town of Portola Valley, 2022. Parks & Recreation. <https://www.portolavalley.net/for-residents/parks-recreation/public-parks-athletic-fields/ford-field>. Accessed October 11.

<sup>122</sup> Town of Portola Valley, 2022. Parks & Recreation. <https://www.portolavalley.net/for-residents/parks-recreation/public-parks-athletic-fields/rossotti-field>. Accessed October 11.

## Regulatory Setting

### *State*

#### Quimby Act

California Government Code Section 66477, within the Subdivision Map Act, referred to as the Quimby Act, permits local jurisdictions to require the dedication of land and/or the payment of in-lieu fees solely for park and recreation purposes. The dedication of land or in-lieu fees may be required for land or condominium subdivisions. The dedication of land or in-lieu fees is not to exceed the proportionate amount necessary to provide 3 acres of neighborhood and community parkland per 1,000 persons. Dedication requirements may be increased if the existing ratio of parkland per 1,000 persons at the time of adoption of a city's local park and land dedication, and fees collected pursuant to the Quimby Act may only be used for developing new or rehabilitating existing park or recreational facilities. The Quimby Act requires a city or county to adopt standards for recreational facilities in its general plan to adopt a parkland dedication or fee ordinance.

### *Local*

#### General Plan

The Portola Valley General Plan includes the following relevant objectives and standards that assist in reducing or avoiding potential impacts related to parks and recreation:

#### Land Use Element

*General Objective 1:* To provide for residential uses and related facilities and services that will preserve and enhance the quality of living enjoyed by local residents.

*General Objective 2:* To maintain the natural character of the planning area and to provide for limited park, recreation and open space uses in appropriate scenic areas where the uses will be compatible with the maintenance of the residential nature and quality of the planning area.

#### Recreation Element

Standard 1: All residential areas should be served by a public park within a distance of 1/4 to 1/2 mile.

Standard 2: The requirement of 1. Above may be met by a park, open space preserve, a portion of a greenway or scenic corridor, a public school with playground, or a combination of these. In established areas where this requirement cannot be met, efforts should be made to provide public trails leading to at least one of these areas.

Standard 3: Where possible, the acreage in parks, open space preserves and portions of greenways or scenic corridors serving residential areas should be not less than five percent of the total acreage of the residential areas served. For example, a 400 acre residential development should be served by no less than 20 acres of public park of the classes enumerated above.

### Portola Valley Municipal Code

#### Section 17.20.200 (Dedication of land – Park or recreational purposes)

Per Section 17.20.200 of the Portola Valley Municipal Code, a subdivider, as a condition of approval of a final subdivision map, shall dedicate land, pay a fee in lieu thereof, or both, at the option of the town, for park or recreational purposes. The standards set forth in this section of the code are:

1. For subdivisions containing fifty lots or less, the subdivider shall pay a fee determined by multiplying .005 times the land value per acre times the projected number of new residents of the subdivision. The average size of household used to estimate the projected number of residents shall be taken from the most recent federal census or a census taken pursuant to Chapter 17, commencing with Section 40200, of Part 2, Division 3, Title 4 of the Government Code of California. The fee shall be based on the market value of the land in the subdivision at the time of approval of the final subdivision map as determined by an appraiser retained by the town and paid from a deposit made by the subdivider. The subdivider may, if he desires, and with the concurrence of the planning commission, dedicate five percent of the total land area rather than pay the fee. However, the planning commission must find that such land conforms with provisions of paragraph A(3) of this section.
2. For subdivisions of more than fifty lots, the subdivider shall dedicate an amount of land determined by multiplying .005 acres times the projected number of residents of the subdivision or pay a fee, or both, in such ratio as the planning commission deems most desirable. The bases for projecting the number of residents of the subdivision and determining the market value of land shall be as stipulated in paragraph A(1) of this section.
3. All land to be dedicated for park or recreation purposes must be found to be suitable by the planning commission as to location, parcel size and topography for the park and recreation purposes considered desirable by the planning commission, and such may include land for any of the following, or other park and recreation purposes, as approved by the planning commission and provided for in the general plan:
  - a. Neighborhood preserves and neighborhood parks;
  - b. Community preserves and community parks;
  - c. Parkways and greenways;
4. Areas of particular natural beauty, including open space preserves, wooded conservation areas, residential open space preserves to be developed or left in their original state.
5. Land to be dedicated may include all of a proposed park and/or recreational facility, or may include only part of a facility. Such partial dedication may be added to by public land purchase or by dedication of additional land on adjoining property whether or not owned by the subdivider.

## Discussion

- a) 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? And;*
- b) 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?*

**Less Than Significant.** The project does not require the construction or expansion of recreational facilities. However, development under the project would result in an incremental increase in the number of residents (736 total) using local parks and recreational facilities but is not expected to result in substantial deterioration of existing facilities or to by itself result in the need for new or expanded facilities.

One of the housing sites identified in the Sites Inventory is located on the northern vacant portion of Ford Field, a Town-owned site. However, development is only proposed on the vacant portion of Ford Field in order to preserve the baseball field.

Since the passage of the 1975 Quimby Act, cities and counties have been authorized to pass ordinances requiring that developers set aside land, donate conservation easements, or pay for park improvements. Per Portola Valley Municipal Code Section 17.20.200, developers must pay a fee to be used toward parks or other recreational purposes for subdivisions containing 50 lots or less. Furthermore, the project proposes open space requirements within new multi-family and mixed-use zoning districts which would reduce the overall demand and use on local recreation facilities. Given the abundance of amenities in the town and requirements for payment of fees towards park and recreational purposes, the project would have a less-than-significant impact related to parks and recreation.

**O. POPULATION AND HOUSING**

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) 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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Discussion**

The following section provides existing Portola Valley population, housing, and employment information.

***Population***

The California Department of Finance (DOF) estimates that Portola Valley had a population of 4,289 persons as of January 1, 2022.<sup>123</sup> As described in the Housing Element Update, Portola Valley's 2019 population breaks down as follows:

White	82.0%
Hispanic/Latino	6.7%
Asian/Pacific Islander	6.5%
Black/African American	0.4%
Other/Multiple Races	<u>4.4%</u>
	100%

As shown in Table O-1, Portola Valley's population grew from 4,195 people in 1990 to 4,607 people in 2020, an increase of approximately 10 percent.

<sup>123</sup> California Department of Finance, Demographic Research Unit, 2022. Population Estimates for California Cities, May 2. Available at: [https://dof.ca.gov/wp-content/uploads/Forecasting/Demographics/Documents/E-1\\_2022PressRelease.pdf](https://dof.ca.gov/wp-content/uploads/Forecasting/Demographics/Documents/E-1_2022PressRelease.pdf), accessed September 1, 2022.

**TABLE O-1 PORTOLA VALLEY'S HISTORICAL POPULATION, 1990-2020**

Year	Portola Valley Population	Percent Increase/(Decrease) from Previous 5 Years	San Mateo County Population	Share of County Population
1990	4,195	--	649,623	0.65%
1995	4,372	4.2%	685,354	0.64%
2000	4,462	2.0%	707,163	0.63%
2005	4,523	1.4%	719,844	0.63%
2010	4,353	(3.8%)	718,451	0.61%
2015	4,582	5.3%	761,748	0.60%
2020	4,607	0.5%	773,244	0.60%

Source: Portola Valley Housing Element Update, Appendix B.

### *Housing*

According to DOF estimates, Portola Valley had 1,917 housing units in as of January 1, 2022.<sup>124</sup> This included 1,554 detached single-family homes and 363 multi-family units.<sup>125</sup> As described in the Housing Element Update, 77.4 percent of units are owner-occupied, and 22.6 percent are renter-occupied.

The Town has a vacancy rate of 8.5 percent.<sup>126</sup> The average household size in Portola Valley has slightly declined in the last few decades; it was 2.58 persons per household in 2000, 2.47 persons per household in 2010, and 2.51 persons per household in 2020.<sup>127</sup>

In the Bay Area, the costs of housing have long been among the highest in the nation. As described in the Housing Element Update, as of 2020 the typical home value in the Town of Portola Valley was \$4,109,050, with a majority of homes valued above \$2,000,000. This represents a 185 percent increase in home value since 2001, when the typical home value was \$1,443,590. Portola Valley's home values are significantly higher than San Mateo County (\$1,418,330) and the Bay Area (\$1,077,230).

<sup>124</sup> State of California, Department of Finance, 2022. Table 2:E-5 Population and Housing Estimates for Cities, Counties, and the State, January 2021-2022, with 2020 Benchmark, May.

<sup>125</sup> State of California, Department of Finance, 2022. Table 2:E-5 Population and Housing Estimates for Cities, Counties, and the State, January 2021-2022, with 2020 Benchmark, May.

<sup>126</sup> State of California, Department of Finance, 2022. Table 2:E-5 Population and Housing Estimates for Cities, Counties, and the State, January 2021-2022, with 2020 Benchmark, May

<sup>127</sup> California Department of Finance, Demographic Research Unit, Report E-8: Historical Population and Housing Estimates for Cities, Counties, and the State 2000 to 2010, November 2012; and Report E-5, Population and Housing Estimates for Cities, Counties, and the State, January 2021-2022, with 2020 Benchmark, May 2022.

The Association of Bay Area Governments (ABAG) is responsible for forecasting changes to the Bay Area population and economy. *Plan Bay Area 2050*<sup>128</sup> was adopted by the ABAG Executive Board and the Metropolitan Transportation Commission on October 21, 2021, and shows the plan's projected household and job growth for the region looking out to 2050. ABAG no longer develops growth projections for population, housing, and employment at the local level, but does provide sub-regional forecasts projections. ABAG projects San Mateo County to provide 9 percent of the region's growth in households by 2050, growing from 265,000 households in 2015 to 394,000 households in 2050, an increase of 129,000 households.<sup>129</sup>

Portola Valley is located in the South San Mateo County superdistrict (Superdistrict No. 7) used by ABAG for sub-regional growth projections, as presented in *Plan Bay Area 2050*. The number of households in this superdistrict is projected to grow by 32 percent between 2015 and 2050, from 80,000 households to 106,000 households, representing 2 percent of growth in the San Francisco Bay region.<sup>130</sup>

### *Employment*

As detailed in the Housing Element Update, there were approximately 1,712 employed residents in Portola Valley. A breakdown of the employees by type of occupation is shown in Table O-2. As shown in the table, the majority of employed residents are within the financial and professional services or health and educational services.

**TABLE O-2 EMPLOYED POPULATION IN THE PORTOLA VALLEY BY INDUSTRY TYPE**

<b>Industry Category</b>	<b>Estimated No. of Employed Residents</b>	<b>Percentage of Total</b>
Financial and Profession Services	645	37.7%
Health and Educational Services	426	24.9%
Manufacturing, Wholesale and Transportation	272	15.9%
Information	168	9.8%
Construction	93	5.4%
Retail/Other	108	6.3%
<b>Total</b>	<b>1,712</b>	<b>100%</b>

Source: Portola Valley Housing Element Update, Appendix B.

<sup>128</sup> Association of Bay Area Governments and Metropolitan Transportation Commission, Plan Bay Area 2050, Adopted October 21, 2021.

<sup>129</sup> Association of Bay Area Governments and Metropolitan Transportation Commission, Plan Bay Area 2050, Final Blueprint Growth Pattern, updated January 21, 2021.

<sup>130</sup> Association of Bay Area Governments and Metropolitan Transportation Commission, Plan Bay Area 2050, Final Blueprint Growth Pattern, updated January 21, 2021.

*Plan Bay Area 2050* projects the overall regional count of employment to grow from around 4.0 million jobs in 2015 to almost 5.4 million jobs by 2050, an increase of about 35 percent.<sup>131</sup> *Plan Bay Area 2050* also projects that implementation of the full bundle of strategies adopted in the Plan would produce approximately 1.36 million new housing units by 2050, well above the regional 441,000-unit need identified for the 2023-2031 RHNA cycle. This would achieve a regional jobs-housing ratio of approximately 1.3.<sup>132</sup> While *Plan Bay Area 2050* identifies growth geographies and strategies for the next 30 years, the RHNA is a short- to medium-term housing allocation process. However, the two efforts are coordinated, with RHNA's near-term focus setting the stage for early implementation of *Plan Bay Area 2050*'s envisioned growth pattern, and the Housing Element Update is a key component of that planning process.

## Regulatory Setting

### *State*

#### State Housing Element Law

California Government Code (Sections 65580-65589.11) requires each city and county in California to prepare and implement a general plan housing element that identifies and analyzes the jurisdiction's existing and projected housing needs, based on population and employment projections, and identifies sites where new housing can be developed to meet the projected demand. The State Housing Element Law requires cities and counties to update the Housing Element of their General Plans every 5 or 8 years (depending on location/jurisdiction) in order to ensure that they meet their responsibilities in helping the State of California meet its housing goal and in addressing regional housing needs.

#### Housing Accountability Act (HAA)

The Housing Accountability Act (HAA) is intended to significantly increase the approval and construction of new housing for all economic segments of California's communities. This law is described in detail in *Section K, Land Use and Planning*, as is the Density Bonus Law, which provides residential developers with incentives to develop affordable and senior housing by allowing them to increase the density of their projects when they meet stipulated affordability thresholds.

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<sup>131</sup> Association of Bay Area Governments and Metropolitan Transportation Commission, *Plan Bay Area 2050, Final Blueprint Growth Pattern*, updated January 21, 2021.

<sup>132</sup> Association of Bay Area Governments and Metropolitan Transportation Commission, *Plan Bay Area 2050, Final Blueprint Growth Pattern*, updated January 21, 2021.



*Local*Regional Housing Needs Allocation

The California Housing Element Law referenced above includes a requirement, promulgated at Government Code Section 65584, for the California Department of Housing and Community Development (HCD) to determine the existing and projected need for housing in each region of the State. The HCD must prepare and adopt a RHNA Plan that allocates a share of the regional housing need to each city and county. The RHNA Plan specifies the number of units, by affordability level, which need to be accommodated within the region during the Housing Element planning period. The regional councils of government (COGs) then distribute a share of the region's housing need to each city, town, and county in the region. Each local government must then update the Housing Element of its general plan to inventory housing sites—zoned for residential use—sufficient to meet their RHNA.

The COG assigning RHNA goals to each local jurisdiction in the nine-county San Francisco Bay Area is the Association of Bay Area Governments (ABAG). The Portola Valley's allocation is for 253 housing units during the 2023-2031 6<sup>th</sup> Cycle Housing Element Update. The Town of Portola Valley proposes a 16 percent buffer of 40 housing units (for a total of 293 units), to ensure an ongoing, adequate supply of land resources for housing development is available through the 6<sup>th</sup> Cycle planning period. The breakdown of Portola Valley's RHNA is presented in Table O-3.

**TABLE O-3 6<sup>TH</sup> CYCLE (2023-2031) ABAG HOUSING ALLOCATIONS FOR PORTOLA VALLEY**

Income Category	Number of Housing Units	Portion of Total Allocation
<b>Very Low Income</b> (<50% of Median Area Income)	73	29%
<b>Low Income</b> (51-80% of Median Area Income)	42	17%
<b>Moderate Income</b> (81-120% of Median Area Income)	39	15%
<b>Above Moderate Income</b> (>120% of Median Area Income)	99	39%
<b>Total</b>	<b>253</b>	<b>100%</b>

Source: Final Regional Housing Needs Allocation (RHNA) Plan: San Francisco Bay Area, 2023-2031.

Plan Bay Area 2050

*Plan Bay Area 2050* is a 30-year plan for the Bay Area that presents 35 strategies for improving housing, the economy, transportation, and the environment across the nine-county region. *Plan Bay Area 2050* helps guide the new State-mandated RHNA numbers for Bay Area jurisdictions. The integrated Implementation Plan includes over 80 actions that can be implemented at the city, county, regional, or state level within the next five years to advance each of the 35 strategies. With respect to housing strategies, the Plan projects that the Bay Area will need to add more than 441,000 new affordable housing units by 2050 to meet the region's housing needs.

The following housing strategies in *Plan Bay Area 2050* are relevant to and would be supported by the proposed Housing Element:

*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.

*H2. Preserve existing affordable housing.* Acquire homes currently affordable to low and middle-income residents for preservation as permanently deed-restricted affordable housing.

*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.

*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.

*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.

*H6. Transform aging malls and office parks into neighborhoods.* Permit and promote the reuse of shopping malls and office parks with limited commercial viability as neighborhoods with housing for residents at all income levels.

*H7. Provide targeted mortgage, rental and small business assistance to Equity Priority Communities.* Provide assistance to low-income communities and communities of color to address the legacy of exclusion and predatory lending, while helping to grow locally owned businesses.

*H8. Accelerate reuse of public and community-owned land for mixed-income housing and essential services.* Help public agencies, community land trusts and other non-profit landowners accelerate the development of mixed-income affordable housing.

### General Plan

The General Plan contains the following objectives and policies related to population and housing in Portola Valley:

### Land Use Element

Residential Areas Principle 3: Population densities within the planning area should be guided by considerations of topography, geology, vegetative cover, access to transportation and services, fire hazards, emergency access, impact on pre-existing residential development and other factors such as:

- a. The highest densities should be located on relatively level land close to local shopping and service areas, other local facilities and transportation facilities. Densities should decrease as the distance from these facilities increases.
- b. Population density should decrease as steepness of terrain increases.
- c. The lowest densities and largest lots should be located on the steepest hillsides on which the town allows development and in mountainous areas where it is necessary to limit storm runoff, prevent erosion, preserve existing vegetation, protect watersheds, avoid potentially unstable ground and maintain the scenic quality of the terrain.

Residential Areas Principle 8: In all residential areas of the town, or its spheres of influence, particular attention must be given to the effects of approaching the maximum amount of development permitted on individual parcels. The cumulative effect of buildout under appropriate ordinances and policies should be examined and steps taken to ensure that its effect will not be injurious to the unique and desirable characteristics of each area. Overall development levels as measured by floor area ratios and impervious surfaces should be limited so as to preserve the rural setting.

### Housing Element

The Housing Element is one of seven mandatory elements of a general plan required by State Planning Law (Government Code Section 65300 *et seq.*). California Government Code Section 65580-65589.8 requires local jurisdictions to update the housing element of their General Plans every eight years to adequately plan for the regional housing needs of residents of all income groups. Housing Elements are required to contain a series of goals, policies and implementing programs that are intended to promote housing production within a community. These goals, policies and programs are required to be accompanied by a list of eligible land resources identified for planned residential development to accommodate the State-mandated RHNA. This list of eligible land resources is referred to as a community's Housing Sites Inventory (Sites Inventory). The goals and policies of the Housing Element will be revised and updated as part of the project, so the existing policies are not listed here.

### **Discussion**

*a) 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)?*

**Less than Significant.** Implementation of the proposed Housing Element Update could result in the creation of 293 new housing units in Portola Valley if all identified housing sites are developed. Although Portola Valley's RHNA share for the 2023-2031 6<sup>th</sup> Cycle Housing Element Update is 253 housing units, the HCD recommends that each jurisdiction provides a buffer to avoid non-compliance. The capacity provided by Portola Valley's proposed housing sites would provide an approximately a 16-percent buffer above the 6<sup>th</sup> Cycle RHNA.

The project would include the creation of new zoning districts, as well as rezoning several sites to allow more intense residential development and amending the zoning ordinance and general plan. The physical environmental effects of these rezonings and the greater density of development that could result are addressed in other topical sections of this environmental checklist. The project would accommodate residential growth and associated population growth in accordance with the Town's policies for location, type, and intensity of residential development, as set forth in the Housing Element Update and the General Plan.

While the Housing Element Update encourages the development of new housing, the actual construction of new units will be driven by market forces, the motivation of property owners, subsidies for affordable housing, and other factors outside the control of the town. Nonetheless,

this theoretically possible number of 293 new housing units is used as a basis for estimating the environmental effects associated with implementation of the project.

Based on the DOF population estimates, Portola Valley had an average 2020 household size of 2.51 persons. Applying this average, development of 293 new housing units would increase the population in Portola Valley by approximately 736 people. This population estimate is likely conservative given the RHNA is 253 housing units and many of the new units would be ADUs added to existing residential properties, studio apartments, and one-bedroom apartments, all of which would typically provide a residence for one or two people.

The Housing Element Update is intended to accommodate anticipated growth and facilitate development of new housing to meet the Town's RHNA share determined by ABAG for the 2023-2031 planning period. As such, the population growth associated with the creation of up to 293 new housing units would not be unplanned; to the contrary, it is specifically being planned for, with suitable sites for development identified as required by State law. The project would be consistent with the General Plan, including the Housing Element Update, as amended by the project. The population growth would also be consistent with *Plan Bay Area 2050*, a regional plan intended to guide the regional population growth anticipated by 2050. Consequently, the project would not induce substantial unplanned population growth. This would be a less-than-significant impact.

*b) Would the project displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?*

**Less than Significant.** Some of the housing sites identified in the Housing Element Update are currently non-vacant/underutilized and support some degree of existing land use; however, none of the sites included within the Sites Inventory list include existing residential uses, except for the Sequoias housing site which is under the Affiliated Housing program; however, the Sequoias are seeking additional units for the retirement community (without removing any existing housing). Therefore, all of the non-vacant parcels are considered underutilized and good candidates for redevelopment.

Although existing housing units could be displaced as part of a property's redevelopment, displaced units would be replaced by higher-density residential development resulting in a net increase in housing. Implementation of the Housing Element Update would result in the net increase of units within the town and would not result in displacement of substantial numbers of population or housing. Therefore, this would be a less-than-significant impact.

**P. PUBLIC SERVICES**

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) 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 performance objectives for any of the public services:				
Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Environmental Setting***Fire Protection*

Portola Valley is located within the service area of the Woodside Fire Protection District (WFPD), which also serves the communities of Woodside, Emerald Hills, Ladera, Los Trancos, Skyline, and Vista Verde. WFPD provides fire suppression, emergency medical services, fire prevention, and fire-related public education to a population of about 25,000 out of their fire stations. About 13 personnel are on shift at any given time.<sup>133</sup>

The fire station in closest proximity to Portola Valley is Station 8, located at 135 Portola Road in Portola Valley. However, should a fire event(s) require response from additional stations, mutual aid response from Menlo Park Fire Protection District or Palo Alto Fire Department Stations may be required depending on the scope of the incident and resources needed. Cal Fire may also respond depending on the scope of the incident and resources needed.

*Police Protection*

Police services for Portola Valley are contracted out to the San Mateo County Sheriff's Office (SMCSO). At current, Portola Valley's contract with SMCSO provides one patrol deputy 24 hours

<sup>133</sup> Woodside Fire Protection District, 2022. About Section. Available at: <https://www.woodsidefire.org/about>, accessed on October 2.

a day, and a shared deputy with Woodside. Officers serving Portola Valley are based out of the Sheriff's Office North Fair Oaks Substation, located at 3121 Middlefield Road in Redwood City. In the latest data available for the first quarter of 2022 (January, February, March), the SMCSO responded to a total of 456 calls for service (including traffic incidents) in Portola Valley.<sup>134</sup> SMCSO reports that the average response time for calls representing an imminent threat remains within their target of five minutes.

### *Schools*

The Portola Valley School District (PVSD) provides public schooling for students enrolled in Transitional Kindergarten (TK) through 8<sup>th</sup> grade. The PVSD serves approximately 500 students in two schools located near Stanford University. Ormondale Elementary serves students in TK through 3<sup>rd</sup> grade. Corte Madera serves students in 4<sup>th</sup> through 8<sup>th</sup> grades. In 2020, the PVSD reported an expected student yield of 0.5 TK to 8<sup>th</sup> grade students per residential unit. Currently, the PVSD does not exceed its maximum capacity, which stands at 280 students for Ormondale School and 360 students for Corte Madera School. The projected enrollment is 249 students at Ormondale School, and 275 at Corte Madera School.<sup>135</sup> Students grades 9 through 12 are served by the Sequoia Union High School District (SUHSD) at Woodside High School. The SUHSD reported a yield of high school students per residential unit at 0.2 for the same year.

As authorized by California Government Code Sections 65995, 65996(a), and 65996(b), PVSD and SUHSD also collect school impact fees from developers of new residential and non-residential building space to provide necessary funding for capital facilities. Fees collected by both SUHSD and PVSD stand at \$0.66 per square foot for commercial development and \$4.08 per square foot for residential development.<sup>136, 137</sup>

### *Parks*

The Town of Portola Valley offers a variety of recreational facilities and programs for residents of the Town, including various recreational playing fields and a Community Hall for classes and activities at the Town Center. A comprehensive trails system – with nearly the same number of miles as the Town's roadways - provides additional recreational opportunities for pedestrians, equestrians, and bicyclists.

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<sup>134</sup> Myers, Mark; SWAT Commander – San Mateo County Sheriff's Office. 2022. Written communication with Urban Planning Partners. August.

<sup>135</sup> Zarea, Roberta; Superintendent – Portola Valley Unified School District. 2022. Written communication with Urban Planning Partners. August.

<sup>136</sup> Sequoia Union High School District, 2022. School Developer Fees. Available at: <https://www.seq.org/documents/Maintenance/SEQUOIA-UNION-HIGH-SCHOOL-DISTRICT-updated-02-04-22.pdf>, accessed on October 20.

<sup>137</sup> Jack Schreder & Associates, Inc., 2020. Level I Developer Fee Study for Portola Valley School District. Available at: [https://cdn5-s511.sharpschool.com/UserFiles/Servers/Server\\_60962/File/2020%20PVSD%20Developer%20Fee%20Justification%20Study.pdf](https://cdn5-s511.sharpschool.com/UserFiles/Servers/Server_60962/File/2020%20PVSD%20Developer%20Fee%20Justification%20Study.pdf), accessed on October 11, 2022.

Additionally, numerous open space areas are located within Portola Valley that provide additional recreational opportunities, including the 1,132-acre Windy Hill Open Space (within Portola Valley limits but part of the Midpeninsula Regional Open Space District lands), and the Town-owned 544-acre Coal Mine Ridge & Blue Oaks Trails. Additional open space areas are located within and near the Town of Portola Valley.

Since the passage of the 1975 Quimby Act (California Government Code Section 66477), cities and counties have been authorized to pass ordinances requiring that developers set aside land, donate conservation easements, or pay fees for park improvements.

### *Library*

San Mateo County Library provides library services at its Portola Valley branch in addition to is twelve other branches located in the cities of Atherton, Belmont, Brisbane, East Palo Alto, Foster City, Half Moon Bay, Millbrae, North Fair Oaks, Pacifica, Portola Valley, Sanchez, and Woodside.

## **Regulatory Setting**

### *State*

#### 2019 California Fire Code, Title 24, Part 9

The California Fire Code establishes the minimum requirements consistent with nationally recognized good practices to safeguard the public health, safety, and general welfare from the hazards of fire, explosion or dangerous conditions in new and existing buildings, structures, and premises, and to provide safety and assistance to fire fighters and emergency responders during emergency operations. Construction of residential units associated with the project would be expected to comply with the requirements outlined in the California Fire Code.

#### Leroy F. Green School Facilities Act (SB 50)

The California Legislature passed SB 50 in 1998 adding Government Code Sections 65995.5-65885.7, which authorized school districts to impose fees on developers of new residential construction. SB 50 also restricts the ability of local agencies to deny project approvals on the basis that public school facilities (classrooms, auditoriums, etc.) are inadequate.

Under SB 50, school districts may collect fees to offset the costs associated with increasing school capacity as a result of development. Payment of school development fees is considered, for the purposes of CEQA, to mitigate in full any impacts to school facilities associated with a development project.

## *Local*

### Measure S

In 2021, Portola Valley residents voted on Measure S, authorizing the PVSD to impose an eight-year parcel tax of \$471 per parcel. Implementation of Measure S is expected to raise an estimated \$997,000 per year in revenue. Development associated with the Housing Element Update would be required to comply the provisions of Measure S.

### General Plan

The Portola Valley General Plan includes the following relevant objectives and standards that assist in reducing or avoiding potential impacts to public services:

### Land Use Element

*General Objective 1:* To provide for residential uses and related facilities and services that will preserve and enhance the quality of living enjoyed by local residents.

*General Objective 2:* To maintain the natural character of the planning area and to provide for limited park, recreation and open space uses in appropriate scenic areas where the uses will be compatible with the maintenance of the residential nature and quality of the planning area.

### Recreation Element

Standard 1: All residential areas should be served by a public park within a distance of 1/4 to 1/2 mile.

Standard 2: The requirement of 1. Above may be met by a park, open space preserve, a portion of a greenway or scenic corridor, a public school with playground, or a combination of these. In established areas where this requirement cannot be met, efforts should be made to provide public trails leading to at least one of these areas.

Standard 3: Where possible, the acreage in parks, open space preserves and portions of greenways or scenic corridors serving residential areas should be not less than five percent of the total acreage of the residential areas served. For example, a 400 acre residential development should be served by no less than 20 acres of public park of the classes enumerated above.

### Portola Valley Municipal Code

17.20.200 - Dedication of land—Park or recreational purposes.

A Pursuant to Section 66477 of the Government Code, and in conformity with the recreation element, and the park and recreational facilities standards and principles in the Portola Valley general plan, as adopted, and as may be amended, or to any general plan that may hereafter be adopted by the town, a subdivider, as a condition of approval of a final subdivision map, shall dedicate land, pay a fee in lieu thereof, or both, at the option of the town, for park or recreational purposes according to the standards set forth in this section. The dedication of easements shall not be construed as complying with the requirements of this section.



## Discussion

a) *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 performance objectives for any of the public services: fire protection, police protection, schools, parks, or other public facilities?*

**Less Than Significant.** The project would not have a substantial adverse impact on service ratios, response times, or other performance objectives for fire protection, police protection, schools, parks, or other public facilities.

### *Fire Protection*

The increase in development intensity and overall density in the town would result in an increase in demand for fire protection and emergency services. The project would provide for the development of up to 293 new residential units, resulting in an estimated increase of 736 new residents and a minimal number of additional employees in town with potential mixed-use development. With buildout of potential residential units, the population of the town would grow by about 17 percent, from 4,289 residents in 2022 to 5,025 residents at full buildout.<sup>138</sup> Implementation of these programs would allow for higher intensity development than the Town has previously seen. A *Wildfire Traffic Evacuation Capacity Study* was conducted with the intention of helping the Town to understand the amount of time potentially needed under “stress test” scenarios for a wildfire evacuation, understanding the most vulnerable areas where evacuations would occur, and identify strategies to improve emergency egress during these events.<sup>139</sup> The project only identifies sites deemed appropriate for high density development per the *Wildfire Traffic Evacuation Capacity Study*. The characteristics of sites appropriate for high density development per the *Wildfire Traffic Evacuation Capacity Study* were sites well-served by evacuation routes and sites that do not have constrained access.

Additionally, the Safety Element Update includes several policies and implementation actions to ensure adequate emergency access (e.g., P-43, P-51), maintain response times (e.g., P-55), and reduce fire severity and intensity (e.g., P-40, P-41, P-54, P-57, P-61). Moreover, construction of residential units associated with the Housing Element Update would be required to comply with all applicable federal, State, and local regulations governing the provision of fire protection services, including the 2019 California Fire Code, 2019 California Building Code, and Portola Valley Municipal Code. The 2019 California Fire Code contains project-specific requirements such as construction standards in new structures and remodels, road widths and configurations

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<sup>138</sup> California Department of Finance, Demographic Research Unit, 2022. Population Estimates for California Cities, May 2. Available at: [https://dof.ca.gov/wp-content/uploads/Forecasting/Demographics/Documents/E-1\\_2022PressRelease.pdf](https://dof.ca.gov/wp-content/uploads/Forecasting/Demographics/Documents/E-1_2022PressRelease.pdf), accessed September 1, 2022.

<sup>139</sup> Fehr & Peers, 2022. Portola Valley Wildfire Traffic Evacuation Capacity Study. July 26.

designed to accommodate the passage of fire trucks and engines, and requirements for the minimum fire flow rates for water mains. The 2022 California Fire Code will be going into effect in January 2023. The 2019 California Building Code establishes requirements for construction, access, water mains, fire flows, and hydrants. Chapter 15.04 of the Municipal Code codifies standards for the construction of new buildings in Portola Valley. Consistency with the standards established in the 2019 California Fire Code, 2019 California Building Code, and Chapter 15.04 would enhance fire safety and support the efficiency and effectiveness of local fire protection services. Also, all new residential development would be subject to plan checks and inspections by the WFPD.

Therefore, the project would have a less-than-significant impact with respect to fire protection services that would create the need for new or physically altered fire facilities, the construction of which could cause significant environmental impacts, to maintain acceptable service ratios, response times or other performance objectives for fire protection.<sup>140</sup>

#### *Police Protection*

The current average response time for police services in Portola Valley is approximately two to five minutes depending on the type of call. While development under the project would result in the incremental increase in the current demand for police services, the Sheriff's Office does not expect the project to result in the need for additional staff or facilities or impact response times.<sup>141</sup> Future residents would pay any relevant annual fees, which could go toward any future increases in services. Therefore, the project would have a less-than-significant impact on police protection.

#### *Schools*

Students residing in Portola Valley are served by schools in the PVSD and SUHSD. Currently, the PVSD is undertaking a major reconstruction and modernization initiative as a part of a local facilities bond passed in 2018. The purpose of the reconstruction and modernization initiative is not to expand capacity but instead to update existing facilities. Work associated with the initiative is expected to be completed during the 2023-2024 school year.<sup>142</sup>

As described in *Section O, Population and Housing*, the project assumes that up to 293 residential units. The addition of 293 residential units would add approximately 147 students to PVSD and 59 students to SUHSD that were not planned for in previous planning efforts (see *Environmental Setting*). Both Ormondale School and Corte Madera School are under capacity and could

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<sup>140</sup> Russell, Laura, Town of Portola Valley Planning & Building Director. 2022. Written communication with Urban Planning Partners. October.

<sup>141</sup> Myers, Mark, SWAT Commander – San Mateo County Sheriff's Office. 2022. Written communication with Urban Planning Partners. August.

<sup>142</sup> Zarera, Roberta, PVSD Superintendent. 2022. Written communication with Urban Planning Partners. July.

accommodate this number of students. Residents of new dwelling units associated with the Housing Element Update would be served by PVSD and SUHSD. According to the PVSD Office of the Superintendent, population growth accommodated under the project may slightly change the teacher-student ratio but would not necessitate the need for expanded school services or facilities.<sup>143</sup>

As described above in *Leroy F. Greene School Facilities Act of 1998 (Senate Bill 50)*, development under the project would be expected to pay for school impact fees, which operates as complete mitigation of impacts, if any. As of 2022, both PVSD and SUHSD collect a developer fee of \$4.08 per square foot of residential development and \$0.66 per square foot of commercial development. With implementation of the payment of fees, impacts associated with implementation of the project would result in a less-than-significant impact related to schools.

### *Parks*

Development under the project would result in an incremental increase in the number of residents using local parks, but it would not be expected to result in substantial deterioration of existing facilities or to by itself result in the need for new or expanded facilities. Furthermore, Portola Valley's Municipal Code Section 17.20.200 and open space requirements within new multi-family and mixed-use zoning districts would reduce the overall demand and use on local parks. Therefore, the project would not result in a need for new or physically altered facilities, the provision and/or construction of which would result in a significant impact to the environment.

### *Library*

Development under the project may create an increased demand for public facilities such as libraries. New development can affect the need for new or physically altered libraries when residential units are constructed, and demand increases beyond existing capacity. Such an increase in demand for services offered by libraries would necessitate the construction of a new or physically altered library which would have physical impacts on the environment.

Potential future residents would likely utilize the use of the Portola Valley branch thereby increasing the number of library facility users. However, the Library Manager confirmed the incremental increase in residents would not result in the need to expand library facilities or hire additional staff.<sup>144</sup> Thus, it is concluded that project impacts related to library services would be less than significant.

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<sup>143</sup> Zarera, Roberta, PVSD Superintendent. 2022. Written communication with Urban Planning Partners. July.

<sup>144</sup> Garrett Kuramoto, Library Manager Portola Valley & Woodside. 2022. Written communication with Urban Planning Partners. July.

## Q. TRANSPORTATION

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict or be inconsistent with CEQA Guidelines Section 15-64.3, Subdivision (b)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

### Affected Environment

The existing transportation-related context in which the project would be implemented is described below, beginning with a description of the street network that serves Portola Valley. This section also describes existing transit, bicycle network, and pedestrian facilities; current conditions for roadways; planned transportation changes; and applicable planning policies.

#### *Existing Road Network*

Regional access to the planning area is provided by Interstate 280 (I-280). Local access to the planning area is provided on Alpine Road, Arastradero Road, and Portola Road.

#### Regional Highway

*Highway 280* is an eight-lane freeway in the vicinity of the site. I-280 extends northward through San Francisco and southward to US 101 in San Jose. East of US 101, it makes a transition into I-680 to Oakland.

#### Local Roadways

*Alpine Road* is a north-south two-lane road that transitions from Santa Cruz Avenue at Junipero Serra Boulevard in the north and transitions into Ciervos Street in the south. Striped shoulders exist along both sides of Alpine Road, between Corte Madera Road and Junipero Serra Boulevard. On-street parking is prohibited along the project frontage on the west side of the street. The speed limit ranges from 35 miles per hour (mph) to 40 mph.

*Portola Road* is a two-lane arterial that mainly runs in a north-south direction from Alpine Road in the south to Mountain Home Road in the north, where it transitions into Sand Hill Road. Striped shoulders exist along both sides of the street. On-street parking is prohibited. The speed limit is 35 mph.

*Westridge Drive* is an east-west two-lane major collector from Portola Road in the west to Alpine Road in the east. On-street parking is prohibited along both sides of the street. The speed limit is 30 mph.

*Arastradero Road* is an east-west two-lane road from Alpine Road in the west to Page Mill Road in the east. A bike route is designated between Alpine Road and Tracy Court in the City of Palo Alto, where it transitions into bike lanes along both sides of the street for the rest of the street. However, the Town does not have any official bike lanes on its roadways. On-street parking is prohibited along both sides of the street. The speed limit is 35 mph.

#### *Pedestrian and Equestrian Facilities*

The town's pedestrian path system is limited in extent. It is mostly comprised of trails and crosswalks.

An extensive system of equestrian/hiking trails exists in the developed part of the town. It is primarily a roadside system on the road rights-of-way and adjacent private easements.

#### *Bicycle Facilities*

Although the Town has not designated any bicycle facilities on its roadways, bicycle usage is allowed on Town roadways.

#### *Public Transportation*

Existing public transit services in the study area are provided by the San Mateo County Transit District (SamTrans). SamTrans operates bus services in San Mateo County. SamTrans Routes 87 and 85 run along Alpine and Portola Roads.

### **Regulatory Setting**

#### *State*

##### Senate Bill 375

Senate Bill (SB) 375 provides guidance regarding curbing emissions from cars and light trucks. There are four major components to SB 375. First, SB 375 requires regional greenhouse gas (GHG) emission targets. These targets must be updated every 8 years in conjunction with the revision schedule of the housing and transportation elements of local general plans. Second, Metropolitan

Planning Organizations are required to create a Sustainable Communities Strategy (SCS) that provides a plan for meeting regional targets. Third, SB 375 requires housing elements and transportation plans to be synchronized on 8-year schedules. Finally, Metropolitan Planning Organizations must use transportation and air emissions modeling techniques that are consistent with the guidelines prepared by the California Transportation Commission.

### Senate Bill 743

Passed in 2013, California Senate Bill (SB) 743 changes the focus of transportation impact analysis in CEQA from measuring impacts to drivers, to measuring the impact of driving. The change is being made by replacing Level of Service (LOS) as a performance metric with a vehicle miles traveled (VMT) approach. This shift in transportation impact focus is intended to better align transportation impact analysis and mitigation outcomes with the State's goals to reduce greenhouse gas (GHG) emissions, encourage infill development, and improve public health through development of multimodal transportation networks. LOS or other delay metrics may still be used to evaluate the impact of projects on drivers as part of land use entitlement review and impact fee programs.

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 now in effect statewide.

To help aid lead agencies with SB 743 implementation, the Governor's Office of Planning and Research (OPR) produced the Technical Advisory on Evaluating Transportation Impacts in CEQA (Technical Advisory)<sup>145</sup> that provides guidance about the variety of implementation questions they face 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 15 percent below that of existing development may be a reasonable threshold. In other words, an office project that generates VMT per employee that is more than 85 percent of the regional VMT per employee 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.

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<sup>145</sup> Governor's Office of Planning and Research (OPR), 2018. Technical Advisory on Evaluating Transportation Impacts in CEQA (Technical Advisory). Available online: [https://opr.ca.gov/docs/20190122-743\\_Technical\\_Advisory.pdf](https://opr.ca.gov/docs/20190122-743_Technical_Advisory.pdf), accessed May 19, 2022.

- 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.

#### California Department of Transportation (Caltrans)

Caltrans issued the VMT-Focused Transportation Impact Study Guide (TISG)<sup>146</sup> in May 2020, providing the process by which Caltrans will review and assess VMT impacts of land development projects. The TISG generally aligns with the guidance in the OPR Technical Advisory.

Caltrans also issued the Transportation Analysis Framework (TAF)<sup>147</sup> in September 2020, which details methodology for calculating induced travel demand for capacity increasing transportation projects on the State Highway System. Caltrans also issued the Transportation Analysis Under CEQA (TAC) guidance in September 2020 which describes significance determinations for capacity increasing projects on the State Highway System. It is noted that the project does not propose any changes to the Caltrans owned and operated network.

Caltrans also issued Traffic Safety Bulletin 20-02-R1: Interim Local Development Intergovernmental Review Safety Review Practitioner Guidance<sup>148</sup> in December 2020, describing the methods with which Caltrans will assess the safety impacts of projects on the Caltrans owned and operated network. This guidance states that Caltrans will provide its safety assessment to lead agencies for inclusion in environmental documents.

Finally, Caltrans has adopted procedures to oversee construction activities on and around its facilities. The Caltrans Construction Manual<sup>149</sup> describes best practices for construction activities, including personnel and equipment safety requirements, temporary traffic control, signage, and other requirements aimed at reducing construction-related hazards and constructing projects safely and efficiently. Any work proposed on Caltrans facilities would be required to abide by these requirements.

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<sup>146</sup> Caltrans, 2020. VMT-Focused Transportation Impact Study Guide (TISG). Available online: <https://dot.ca.gov/-/media/dot-media/programs/transportation-planning/documents/sb-743/2020-05-20-approved-vmt-focused-tisg-a11y.pdf>, accessed May 19, 2022.

<sup>147</sup> Caltrans, 2020. Transportation Analysis Framework (TAF). Available online: <https://dot.ca.gov/-/media/dot-media/programs/transportation-planning/documents/sb-743/2020-09-10-1st-edition-taf-fnl-a11y.pdf>, accessed May 19, 2022.

<sup>148</sup> Caltrans, 2020. Traffic Safety Bulletin 20-02-R1: Interim Local Development Intergovernmental Review Safety Review Practitioner Guidance. Available online: <https://dot.ca.gov/-/media/dot-media/programs/safety-programs/documents/policy/interim-lidgr-safety-guidance-memo-revision1-and-guidance-a11y.pdf>, accessed May 19, 2022.

<sup>149</sup> Caltrans, 2019-2022. Construction Manual. Available online: <https://dot.ca.gov/programs/construction/construction-manual>, accessed May 19, 2022.

## *Regional*

### Metropolitan Transportation Commission

The Metropolitan Transportation Commission (MTC) is responsible for planning, coordinating, and financing transportation projects in the nine-county Bay Area. The local agencies that comprise these nine counties help the MTC prioritize projects based on need, feasibility, and conformance with federal and local transportation policies. In addition to coordinating with local agencies, the MTC distributes State and federal funding through the Regional Transportation Improvement Program.

### Plan Bay Area

Plan Bay Area 2050 is a State-mandated, integrated long-range transportation and land use plan. As required by SB 375, all metropolitan regions in California must complete an SCS as part of a Regional Transportation Plan. This strategy integrates transportation, land use and housing to meet GHG reduction targets set by the California Air Resource Board (CARB). The plan meets those requirements. In addition, the plan sets a roadmap for future transportation investments and identifies what it would take to accommodate expected growth. The plan neither funds specific transportation projects nor changes local land use policies.

In the Bay Area, the MTC and the Association of Bay Area Governments (ABAG) adopted Plan Bay Area 2050 in October 2021.<sup>150</sup> To meet the GHG reduction targets, the plan identifies four Growth Geographies where future growth in housing and jobs should be focused: priority development areas (PDAs), priority production areas (PPAs), transit-rich areas (TRAs), and high-resource areas (HRAs). The agencies estimate more than 80 percent of housing growth would occur within TRAs and nearly 30 percent would occur within HRAs, and more than 60 percent of job growth would be located within walking distance of high-quality transit between 2015 and 2050.

### City/County Association of Governments of San Mateo Congestion Management Program

The purpose of the Congestion Management Plan (CMP) is to identify strategies to respond to future transportation needs, develop procedures to alleviate and control congestion, and promote countywide transportation solutions. To monitor attainment of the CMP, the City/County Association of Governments of San Mateo County (C/CAG) adopted the roadway LOS standards. The LOS standards established for San Mateo County vary by roadway segments

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<sup>150</sup> While *Plan Bay Area 2050* has been adopted, it will take up to three years for the plan's growth forecast to be integrated into MTC's transportation model, after which updates to each county's transportation model will take place. For these reasons, and for purposes of this analysis, *Plan Bay Area 2040 (2017)* is the regional plan that forms the basis for population, housing and employment projections in this analysis.



and conform to current land use plans and development differences among the coast, bayside, older downtowns, and other areas of San Mateo County. C/CAG has a countywide threshold of 100 added peak-hour trips when determining if any CMP roadway facilities should be included as part of the TIA.

#### San Mateo Countywide Transportation Plan 2040

The San Mateo Countywide Transportation Plan 2040 is a long-range, comprehensive transportation planning document intended to articulate clear transportation planning goals and objectives that promote consistency and compatibility among all transportation plans and programs within the county. The plan supports an integrated system-wide approach to transportation planning that gives proper consideration to the countywide transportation network as a whole, not just in its constituent parts, and sets forth a coordinated planning framework for systematic transportation planning and identifying and resolving transportation issues.

#### San Mateo County Comprehensive Bicycle and Pedestrian Plan

The San Mateo County Comprehensive Bicycle and Pedestrian Plan was developed by the C/CAG with support from the San Mateo County Transportation Authority to address the planning, design, funding, and implementation of bicycle and pedestrian projects countywide. The following lists relevant goals and policies:

*Goal 2: More People Riding and Walking for Transportation and Recreation.*

*Policy 2.6:* Serve as a resource to county employers on promotional information and resources related to bicycling and walking.

*Goal 4: Complete Streets and Routine Accommodation of Bicyclists and Pedestrians.*

*Policy 4.1:* Comply with the complete streets policy requirements of Caltrans and the Metropolitan Transportation Commission concerning safe and convenient access for bicyclists and pedestrians, and assist local implementing agencies in meeting their responsibilities under the policy.

*Policy 4.5:* Encourage local agencies to adopt policies, guidelines, standards, and regulations that result in truly bicycle-friendly and pedestrian-friendly land use developments, and provide them technical assistance and support in this area.

*Policy 4.6:* Discourage local agencies from removing, degrading or blocking access to bicycle and pedestrian facilities without providing a safe and convenient alternative.

#### *Local*

#### General Plan

The Portola Valley General Plan includes the following relevant standards related to transportation:

### Circulation Element

Standard 1: Standards of curvature, grade, alignment and sight distance should be conducive to safe, convenient travel on the following classes of trafficways: freeways, arterial roads, major collectors, minor collectors, and land service roads. Within limits imposed by safety, these standards should be modified in steep and difficult terrain to ensure that the scenic qualities of the area are not damaged. Also, the "country lane" quality of roads should be fostered to the maximum extent feasible and still meet an acceptable level of safety.

Standard 2: Adequate provision should be made for pedestrian, bicycle and equestrian crossings at appropriate locations. Specific locations should be controlled to provide adequate sight distance and minimize hazard. Such crossings should be clearly distinguished by signs and lane markings.

Standard 3: All traffic entering thoroughfares or major collector roads should be controlled by stop signs, channelization or other appropriate devices.

Standard 4: Where warranted by traffic volume and physical conditions, appropriate means of traffic control should be employed on roads other than thoroughfares and major collectors in order to provide safe, expeditious movement of traffic.

### Sustainability Element

*Goal: Transportation - Provide for transportation needs by methods that reduce greenhouse gas emissions.*

### **Discussion**

a) *Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?*

**Less Than Significant.** Implementation of development under the project would be subject to and implement all applicable goals, policies, plans, and programs for transit, roadway, bicycle, and pedestrian facilities and services. Additionally, development projects under the project would be subject to all applicable Town guidelines, standards, and specifications related to transit, roadway, bicycle, or pedestrian facilities.

Specifically, any modifications or new transit, bicycle, and pedestrian facilities would be subject to and designed in accordance with all applicable General Plan policies. In particular, Circulation Element Standard 1 calls for curvature, grade, alignment, and sight distance that are conducive to safe, convenient travel on the following classes of trafficways: freeways, arterial roads, major collectors, minor collectors, and land service roads. In addition, Standard 2 states adequate provision should be made for pedestrian, bicycle, and equestrian crossings at appropriate locations. Standard 3 encourages all traffic entering thoroughfares or major collector roads be controlled by stop signs, channelization, or other appropriate devices. Lastly, where warranted by traffic volume and physical conditions, Standard 4 states traffic control on roads other than thoroughfares and major collectors in order to provide safe, expeditious movement of traffic.

Because implementation of residential development under the project would be subject to all applicable Town guidelines, standards, and specifications, the project would not conflict with

adopted policies, plans, or programs for transit, bicycle, or pedestrian facilities. Therefore, the project would result in a less-than-significant impact to transit, bicycle, and pedestrian facilities.

b) *Conflict or be inconsistent with CEQA Guidelines Section 15-64.3, Subdivision (b)?*

**Less Than Significant.** As shown in Table Q-1, the residential development associated with the project would provide a net increase of 12 single-family units, 202 multifamily units, and 92 ADUs within the Town.<sup>151</sup>

**TABLE Q-1 PROPOSED PROJECT SUMMARY**

Single-Family Units	Multi-Family Units	Accessory Dwelling Units
12	202	92

Source: Urban Planning Partners, 2022.

The project does not include changes to the roadway, transit, pedestrian, or bicycle transportation network.

#### VMT Assessment Overview

Senate Bill (SB) 743 changed how transportation impacts under CEQA are analyzed. SB 743 removed the use of automobile delay or traffic congestion for determining transportation impacts in environmental review. The latest *CEQA Statute & Guidelines* (January 2022) now specify that VMT is the appropriate metric to evaluate transportation impacts. In short, SB 743 changes the focus of transportation impact analysis in CEQA from measuring impacts to drivers to measuring the impact of driving.

In response to this recent legislation, the Town of Portola Valley reviewed the information and options presented in the *SB 743 Implementation Decisions* white paper prepared for the City/County Association of Governments (C/CAG) of San Mateo County and its member agencies, including Portola Valley.<sup>152</sup> A summary of the options considered and a description of the VMT assessment approach are provided in Appendix Q-1. To implement an SB 743 VMT assessment, the following methods were chosen:

- Select a VMT calculation tool:
- C/CAG and Santa Clara Valley Transportation Authority (VTA) Bi-County transportation model ("C/CAG travel model").

<sup>151</sup> When preparing the VMT analysis, the Public Draft Housing Element Update contemplated 306 housing units (13 more than the current project). However, analyzing more units would not change the conclusions of this analysis.

<sup>152</sup> Fehr & Peers, 2021. *SB 743 Implementation Decisions*, September 29. Available at: [https://ccag.ca.gov/wp-content/uploads/2021/11/1\\_20210929\\_CCAG\\_SB\\_743\\_Implementation\\_Decisions\\_Cln.pdf](https://ccag.ca.gov/wp-content/uploads/2021/11/1_20210929_CCAG_SB_743_Implementation_Decisions_Cln.pdf), accessed September 19, 2022.

- Select the VMT accounting method(s):
  - Project generated VMT.
  - Project's effect on VMT evaluated using boundary VMT.
- Calculate the VMT estimates:
  - Total VMT from all trip purposes and vehicle types.
  - Home-based VMT from residential trip purposes using light-duty vehicle types.
  - Boundary VMT from all trip purposes and vehicle types.
- Set a VMT threshold(s):
  - Cumulative (baseline) total VMT per service population rate for the Town (to assess project-specific impacts).
  - Cumulative (baseline) home-based VMT per resident rate for the Town (to assess project-specific impacts).
  - No change in the cumulative conditions (future) boundary VMT per service population for the region<sup>153</sup> (to assess cumulative impacts, or project's effect on VMT).

To assess direct impacts, total VMT per service population and home-based VMT per resident are the metrics used to evaluate VMT, considering both VMT increases due to growth and VMT reductions due to changes in travel behavior. Specifically, they evaluate how the project VMT changes (increases or decreases) between Cumulative (2040) Conditions (Baseline Conditions) and Cumulative (2040) with Project Conditions. Total VMT per service population<sup>154</sup> and home-based VMT per resident are used to evaluate if the VMT rate due to the project (i.e., the direct impact) is greater than a specified VMT threshold; however, it does not evaluate a project's effect on VMT on the entire roadway system, which is evaluated as part of the cumulative analysis.

To assess cumulative impacts (the project's effect on VMT on the entire roadway system), the change in boundary VMT per service population for the region is evaluated. The project's land use changes are relatively small in the context of the regional residential population and employment; therefore, it is to be expected that the project's effect on VMT would have predominately localized VMT effects. The project's effect on VMT, as evaluated by the cumulative effects of the project's land use and transportation changes, compares the changes in

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<sup>153</sup> The region is defined as the nine Bay Area counties: San Francisco County, San Mateo County, Santa Clara County, Alameda County, Contra Costa County, Solano County, Napa County, Sonoma County, and Marin County.

<sup>154</sup> For this analysis, service population is defined as the sum of all residents and employees.

boundary VMT per service population<sup>155</sup> between Cumulative (2040) Conditions and Cumulative (2040) with Project Conditions. Each scenario is described below.

### VTM Analysis Scenarios

The VMT analysis was conducted for a typical weekday for the following scenarios:

- *Cumulative (2040) Conditions (Baseline Conditions)*: Year 2040 travel behavior using the C/CAG travel model and the 2017 ABAG land use projections for adjacent jurisdictions and planned and funded transportation system improvements in the *San Mateo Countywide Transportation Plan 2040*.<sup>156</sup> The Town of Portola Valley has approximately 1,630 employees and 4,289 residents. However, for purposes of the VMT analysis, the population was adjusted to be 5,040 residents after adding 290 households in the Los Trancos Woods community given these residents use Portola Valley roadways.
- *Cumulative (2040) with Project Conditions*: Cumulative Conditions with the Town of Portola Valley Housing Element Update with an additional 12 single-family homes, 202 multi-family homes, and 92 ADUs. The proposed land use changes in the Town of Portola Valley results in approximately 5,730 residents townwide.<sup>157</sup>

### VTM Analysis Methods

The most common method of calculating VMT metrics is through a travel forecasting model. A travel forecasting model uses specialized software and is designed to reflect the interactions between different land use and roadway elements in a large area. The C/CAG travel model was used to prepare daily VMT estimates for this analysis. To understand the VMT forecasts and VMT impact analysis, this section details analysis methods and VMT significance thresholds.

The C/CAG travel model includes the regional roadways and major arterials of the nine-county Bay Area, the Association of Monterey Bay Area Governments (AMBAG) region (Santa Cruz County, Monterey County, and San Benito County), and portions of the San Joaquin (Central) Valley. There are additional transportation network details and refined transportation analysis zones (TAZs)<sup>158</sup> in San Mateo County. The C/CAG travel model land use inputs are based on

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<sup>155</sup> Boundary VMT captures all VMT on a roadway network within a specified geographic area, including local trips plus interregional travel, that does not have an origin or destination within the area.

<sup>156</sup> Metropolitan Transportation Commission and Association of Bay Area Governments, 2017. *Plan Bay Area 2040*, July. Available at: <http://files.mtc.ca.gov/library/pub/30060.pdf>, accessed September 19, 2022.

<sup>157</sup> The transportation analysis zones which represent the Town of Portola Valley in the C/CAG travel model also encompass portions of surrounding communities. As a result, the population and number of households in these transportation analysis zones are higher than ABAG land use projections for the Town.

<sup>158</sup> Transportation analysis zones, also referred to as TAZs, are small geographic areas within the VTA Model. As defined by *NCHRP Report 716, Travel Demand Forecasting: Parameters and Techniques*, TRB, 2012, "TAZ boundaries are

Association of Bay Area Governments (ABAG) 2017 land use projections (*Plan Bay Area 2040* land use projections), 2010 Census socio-economic data (with some additional refinements in 2019), and a future regional transportation infrastructure consistent with *Plan Bay Area 2040*.<sup>159</sup> The C/CAG travel model has a 2040 horizon year.

The Year 2040 C/CAG travel model is used to develop VMT estimates for Cumulative (2040) Conditions (this project's baseline condition) and Cumulative (2040) with Project Conditions and includes projected growth to Year 2040.

The TAZ size influences the types of streets vehicle traffic is typically assigned to. For the C/CAG travel model, an arterial or minor arterial is the lowest street level that traffic is assigned to because the TAZ structure in Portola Valley has moderate detail. The C/CAG travel model has a mode share model that can be used to express changes in mode share.

The C/CAG travel model has four time periods to address travel during congested morning and evening peak periods and uncongested mid-day and midnight time periods. During congested times, the average trip length and speed of travel change.

#### Model Input Adjustments

For this VMT analysis, the Baseline Conditions scenario is the Cumulative (2040) Conditions scenario from the C/CAG travel model. For the Cumulative (2040) with Project Conditions scenario, the change in housing units included in the project is added to Cumulative (2040) Conditions. The C/CAG travel model input assumptions for both scenarios are included in Appendix Q-2. Table Q-2 shows the additional land use associated with the Cumulative (2040) with Project Conditions scenario. The project would provide a total of 12 new single-family units and 294 new multi-family units within the Town.

**TABLE Q-2 PROPOSED PROJECT LAND USE ADDITIONS SUMMARY BY TAZ**

TAZ <sup>a</sup>	Single-Family Units	Multi-Family Units <sup>b</sup>
1620	12	239
1998	0	55
<b>Total:</b>	<b>12</b>	<b>294</b>

<sup>a</sup> TAZ = C/CAG travel model Traffic Analysis Zone.

<sup>b</sup> ADUs are included here and in the C/CAG travel model as multi-family units.

Source: Urban Planning Partners, 2022.

usually major roadways, jurisdictional borders, and geographic boundaries and are defined by homogenous land uses to the extent possible.

<sup>159</sup> Metropolitan Transportation Commission and Association of Bay Area Governments, 2017. *Plan Bay Area 2040*, July. Available at: <http://files.mtc.ca.gov/library/pub/30060.pdf>, accessed September 19, 2022.

Service population is the sum of the number of employees and residents within a designated geographic area. Table Q-3 shows the service populations used in the VMT metrics for the Town of Portola Valley and the Bay Area Region under each study scenario.

**TABLE Q-3 SERVICE POPULATIONS<sup>1</sup>**

Population	Cumulative (2040) Conditions [A]	Cumulative (2040) with Project Conditions [B]	Change [B - A = C]
<b>Town of Portola Valley</b>			
Residents (A)	5,040	5,730	690
Employees (B)	1,630	1,630	0
Service Population <sup>2</sup> (A + B = C)	6,670	7,350	690
<b>Bay Area Region</b>			
Residents (D)	9,661,650	9,662,330	690
Employees (E)	4,717,520	4,717,520	0
Service Population <sup>2</sup> (D + E = F)	14,379,170	14,379,850	690

Notes:

1. Rounded resident population, employee population, and service population to the nearest 10.

2. Service population is defined as the sum of all employees and residents.

Source: Urban Planning Partners, 2022.

### Including Inter-Regional Travel for VMT Analysis

The OPR *Technical Advisory*<sup>160</sup> cites the importance of not truncating (i.e., ending or omitting a trip outside of the geographic boundary; truncating has the effect of shortening a trip to/from a destination) trip lengths based on travel forecasting model or political boundaries:

**Considerations for All Projects.** *Lead agencies should not truncate any VMT analysis because of jurisdictional or other boundaries, for example, by failing to count the portion of a trip that falls outside the jurisdiction or by discounting the VMT from a trip that crosses a jurisdictional boundary. CEQA requires environmental analyses to reflect a "good faith effort at full disclosure." (CEQA Statute & Guidelines, § 15151.) Thus, where methodologies exist that can estimate the full extent of vehicle travel from a project, the lead agency should apply them to do so. Where those VMT effects will grow over time, analyses should consider both a project's short-term and long-term effects on VMT. (Quote from page 6 of the Technical Advisory: On Evaluating Transportation Impacts in CEQA, December 2018).*

<sup>160</sup> Governor's Office of Planning and Research (OPR), 2018. Technical Advisory on Evaluating Transportation Impacts in CEQA, December. Available at: [https://opr.ca.gov/docs/20190122-743\\_Technical\\_Advisory.pdf](https://opr.ca.gov/docs/20190122-743_Technical_Advisory.pdf), accessed September 19, 2022.

The C/CAG travel model extends beyond the Bay Area regional boundary to the south into the AMBAG region (Santa Cruz County, Monterey County, and San Benito County) and east into San Joaquin County. However, the travel model stops at the Bay Area regional boundary and does not include inter-regional travel to Mendocino County, Lake County, Yolo County, and Merced County, which shortens the vehicle travel to those counties. This truncation results in a lower total project generated VMT estimate for the region and San Mateo County and affects regional or county baseline VMT values used to establish VMT thresholds. The California statewide travel demand model (CSTDm) was used to estimate and forecast trip lengths that occur outside the C/CAG travel model boundary. These trip lengths have been appended to the external stations and are reflected in the VMT estimates and forecasts contained in this analysis. The adjustments made to external stations in the C/CAG travel model are included in Table Q-4.

**TABLE Q-4 EXTERNAL STATION ADJUSTMENTS AT BAY AREA REGIONAL BOUNDARY**

External Station (Connecting County)	Distance (Miles)
SR 1 – Mendocino County	9.4
US 101 – Mendocino County	48.4
SR 29 – Lake County	21.4
I-505 – Yolo County	101.2
SR 113 – Yolo County	12.9
I-80 – Yolo County	39.2
SR 12 – San Joaquin County	No adjustment made to these external station distances because the C/CAG travel model area includes San Joaquin County.
SR 4 – San Joaquin County	
I-205 – San Joaquin County	
SR 152 – Merced County	162.9
SR 25 – San Benito County	No adjustment made to these external station distances because the C/CAG travel model area includes San Benito County.
US 101 – San Benito County	
SR 152 – Santa Cruz County	
SR 17 – Santa Cruz County	No adjustment made to these external station distances because the C/CAG travel model includes Santa Cruz County.
SR 9 – Santa Cruz County	
SR 1 – Santa Cruz County	

Note:

1. External station adjustments rounded to nearest tenth of a mile.

Source: California statewide travel demand model (CSTDm) was used to develop the external station adjustments. Fehr & Peers, 2022.

#### Project Generated VMT Estimation Method

Project generated VMT is calculated by summing the “VMT from” and “VMT to” a specified area, as follows:



$$\text{Project Generated VMT} = \text{VMT From} + \text{VMT To} = (\text{II} + \text{IX}) + (\text{II} + \text{XI}) = 2 * \text{II} + \text{IX} + \text{XI}$$

- Internal-internal (II): The full length of all trips made entirely within the geographic area limits.
- Internal-external (IX): The full length of all trips with an origin within the geographic area and destination outside of the area.
- External-internal (XI): The full length of all trips with an origin outside of the geographic area and destination within the area. Total VMT and home-based VMT are project generated VMT metrics.

There are two additional adjustments that should be made to reach a project generated VMT. First, because most VMT calculation methods multiply the number of trip ends by the trip length, the internal-internal VMT in the project area is double counted; convention generally divides the internal-internal VMT by two to compensate for this. The total VMT is divided by the service population (residential population and employment population), the generator of both trip ends of the VMT. Home-based VMT is divided by the residential population. The VMT metrics are expressed as VMT rates to account for both the effects of population and/or employment growth and the effects of changes in personal travel behavior. For example, population growth may cause an increase in VMT, while travelers changing their behavior by using different travel modes or decreasing their vehicle trip lengths (such as a higher percentage of Portola Valley residents working or shopping in Portola Valley) would cause decreases in VMT.

Second, an adjustment to the project generated VMT should be made to include the full length of trips that leave the travel forecasting model area to fully capture interregional travel (this adjustment is described in the previous section). An example may be a trip from the Bay Area to Sacramento; Sacramento is not included in any of the Bay Area travel models.

#### *Project's Effect on VMT Estimation Method (Using Boundary VMT)*

The project's effect on VMT (also referred to as "boundary VMT") is the VMT that occurs within a selected geographic boundary (e.g., town, county, or region) by any type of vehicle.<sup>161</sup> Boundary VMT captures all on-road vehicle travel on a roadway network (i.e., VMT on the centroid connectors and all other streets and freeway segments in the travel model within the physical limits of the selected geographic boundary) for any trip purpose, and includes local trips as well as trips that pass through the area without stopping. The use of boundary VMT is a more complete evaluation of the potential effects of the project because it captures the combined effect of new

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<sup>161</sup> An often-cited example of how a project can affect VMT is the addition of a grocery store in a food desert. Residents of a neighborhood without a grocery store need to travel a great distance to an existing grocery store. Adding the grocery store to that neighborhood will shorten many of the grocery shopping trips and reduce the VMT to/from the neighborhood.

VMT, shifting existing VMT to/from other jurisdictions, and/or shifts in existing traffic to alternate travel routes or modes.

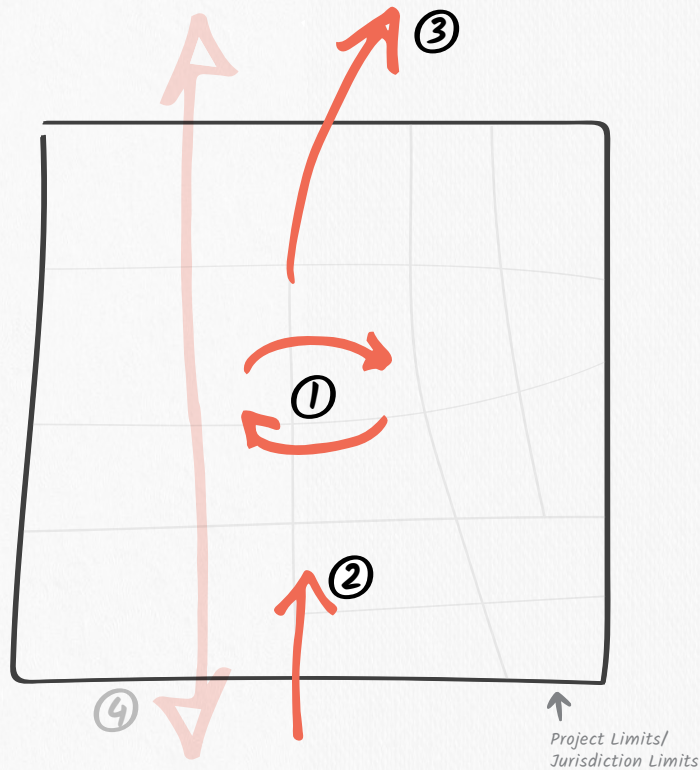
The boundary VMT (within the Bay Area Region) per service population is used to evaluate the project's effect on VMT between the Cumulative (2040) Conditions and Cumulative (2040) with Project Conditions scenarios. The boundary VMT is divided by the service population to account for the effects of population and/or employment growth between scenarios and the effects of changes in personal travel behavior within the specified geographic area. For illustrative purposes, Figure Q-1 presents a representation of both project generated VMT and boundary VMT.

#### VMT Significance Thresholds

Analysis in CEQA documents typically identifies impacts by comparing conditions with the proposed project to existing conditions. However, this initial study assumes that if the Housing Element Update is not adopted, housing development would continue to occur under the policies and measures of the existing Housing Element. In addition, impacts from the Housing Element Update would not take hold immediately; impacts would manifest over years and decades as new housing is constructed consistent with the Housing Element or consistent with planning code amendments adopted in response to the Housing Element Update. As such, the environmental impact analysis in the initial study uses Cumulative (2040) Conditions as the baseline condition, not Existing Conditions, against which the significance of environmental impacts of the Housing Element Update are assessed.

Smaller rural communities, such as Portola Valley, find it difficult to significantly decrease VMT. This is because smaller communities lack public transit, neighborhood serving uses, retail and job centers that traditionally impact VMT rates. VMT is just one aspect of GHG emissions. Because Portola Valley is not able to feasibly reduce VMT rates like larger cities, the Town's approach to GHG emissions has focused less on VMT and more on other measures. As a result of the Town's efforts to significantly reduce GHG emissions through early and aggressive implementation of other programs, the Town is expected to achieve State GHG emission reduction goals even without reduction in VMT. As many of these programs are tied to new development, these reduction goals are also achieved under full buildout of the Housing Element. Accordingly, Portola Valley's VMT goal is to ensure that full buildout of the Housing Element does not increase its current VMT baseline and does not undercut the work the Town has done in other areas. (See *Section H, Greenhouse Gas Emissions*.) The VMT impact significance thresholds for determining the direct impact of the project under Cumulative (2040) with Project Conditions are as follows.

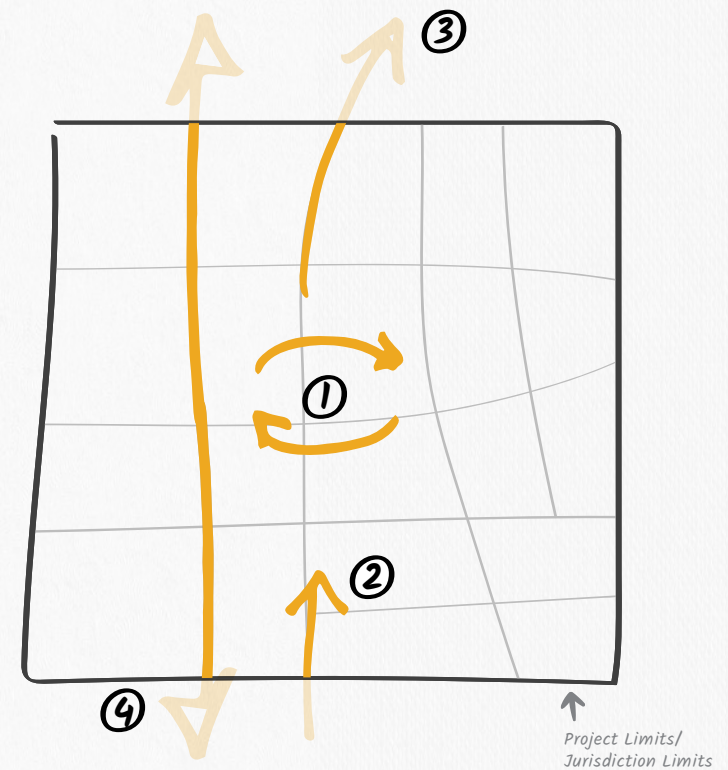
## Project Generated VMT



- ① 2x Internal to Internal (2xII) VMT      ③ Internal to External (IX) VMT
- ② External to Internal (XI) VMT      ④ External to External (XX) VMT

Notes: External to External (XX) trips (shown as transparent arrow 4) are excluded from this VMT metric. Adjustments to project generated VMT made to include the full length of trips that leave the jurisdiction to capture inter-jurisdiction travel.

## Project Effect on VMT (Boundary VMT)



- ① Internal to Internal VMT      ③ Internal to External (IX) VMT
- ② External to Internal (XI) VMT      ④ External to External (XX) VMT

Notes: Boundary VMT is all the VMT on the streets within the Project Limits / Jurisdiction Limits. Transparent portions of arrows 2, 3 and 4 are not included in the VMT metric.

Source: Fehr & Peers, 2022.

Figure Q-1  
Measuring Vehicle Miles Traveled (VMT)  
Portola Valley Housing and Safety Elements Update IS/MND

### Project Generated VMT

The VMT impact analysis presented in this report considers the project's direct impacts relative to total VMT per service population and home-based VMT per resident. The project would result in a VMT-related impact as described below (refer to Table Q-5 for the full threshold calculations):

- The project would result in a significant project-specific impact if the project's townwide total VMT per service population under Cumulative (2040) with Project Conditions is greater than **68.5** miles.
- The project would result in a significant project-specific impact if the project's townwide home-based VMT per resident under Cumulative (2040) with Project Conditions is greater than **38.5** miles.

**TABLE Q-5 PROJECT GENERATED VMT THRESHOLD CALCULATIONS**

<b>Town of Portola Valley Total VMT per Service Population Threshold Calculation</b>	<b>Amount<sup>a</sup></b>
Total VMT (A)	456,830
Service Population (B) <sup>b</sup>	6,670
Total VMT per Service Population (A/B=C)	68.5
Total VMT per Service Population Threshold (C)	<b>68.5</b>
<b>Town of Portola Valley Home-Based VMT per Resident Threshold Calculation</b>	
Home-Based VMT (D)	194,050
Resident Population (E)	5,040
Home-Based VMT per Resident (D/E=F)	38.5
Home-Based VMT per Resident Threshold (F)	<b>38.5</b>

<sup>a</sup> Rounded resident population and service population to the nearest 10. Rounded VMT to the nearest one-tenth.

<sup>b</sup> Service population is defined as the sum of all employees and residents.

Source: Fehr & Peers, 2022.

### Project's Effect on VMT (Using Boundary VMT)

The impact threshold for the project's effect on VMT, or the project's cumulative impact, is the regional boundary VMT per service population, or **14.3** miles (refer to Table Q-6 for an illustration of how the 14.3 miles are calculated).<sup>162</sup> Therefore, the project's effect on VMT would result in a significant cumulative impact if it causes the cumulative regionwide daily boundary VMT per service population to be greater than **14.3** miles.

<sup>162</sup> The region is defined as the nine Bay Area counties: San Francisco County, San Mateo County, Santa Clara County, Alameda County, Contra Costa County, Solano County, Napa County, Sonoma County, and Marin County.

**TABLE Q-6 PROJECT'S EFFECT ON VMT (USING BOUNDARY VMT) THRESHOLD CALCULATIONS**

<b>Bay Area Region</b>	<b>Amount<sup>a</sup></b>
Boundary VMT (A)	205,947,230
Service Population (B) <sup>b</sup>	14,379,170
Total Boundary VMT per Service Population (A/B=C)	14.3
Total Boundary VMT per Service Population Threshold (C)	<b>14.3</b>

<sup>a</sup> Rounded resident population, employee population, service population, and VMT to the nearest 10.

<sup>b</sup> Service population is defined as the sum of all employees and residents.

Source: Fehr & Peers, 2022.

### VMT Analysis

This section presents an analysis of the project's impacts relative to VMT, including the daily VMT estimates for the VMT analysis.

#### Total VMT Per Service Population

The project's townwide total VMT would increase in absolute terms between Cumulative (2040) Conditions (456,830 miles; refer to Table Q-5) and Cumulative (2040) with Project Conditions (493,440 miles; refer to Table Q-7), which is expected due to the planned residential growth and the associated increase in related vehicle travel.

However, on a per service population basis, which is the metric relative to assessing impacts under CEQA, VMT would *decrease* by approximately 2 percent between Cumulative (2040) Conditions (68.5 miles) and Cumulative (2040) with Project Conditions (67.1 miles). This decrease is due to the increase in lower income residential housing whose residents, on average, travel less than residents in market rate housing.

As shown in Table Q-7, the townwide total VMT per service population under Cumulative (2040) with Project Conditions of **67.1** miles is less than the total VMT per service population threshold of **68.5** miles. Therefore, the Project's townwide total VMT rate impact would be less than significant.

#### Home-Based VMT Per Resident

A similar result emerges when looking at the townwide home-based VMT. The project's townwide home-based VMT would increase in absolute terms between Cumulative (2040) Conditions (194,050 miles; refer to Table Q-5) and Cumulative (2040) with Project Conditions (215,820 miles; refer to Table Q-7), which is expected due to the planned residential growth and the associated increase in related vehicle travel.

However, on a per residential population basis, which is the metric relative to assessing impacts under CEQA, VMT would *decrease* by approximately 2 percent between Cumulative (2040) Conditions (38.5 miles) and Cumulative (2040) with Project Conditions (37.7 miles). This decrease is due to the increase in lower income residential housing which on average travels less than residents in market rate housing.

The project generated VMT impact analysis under Cumulative (2040) with Project Conditions based on the townwide total VMT thresholds are determined as follows (refer to Table Q-7 for impact calculations:

As shown in Table Q-7, the townwide home-based VMT per resident under Cumulative (2040) Conditions with Project Conditions of **37.7** miles is less than the home-based VMT threshold of **38.5** miles. Therefore, the project's townwide home-based VMT rate impact would less than significant.

**TABLE Q-7 PROJECT GENERATED VMT RESULTS FOR THE TOWN OF PORTOLA VALLEY**

<b>Town of Portola Valley Total VMT</b>	<b>Amount<sup>a</sup></b>
Total VMT (A)	493,440
Service Population (B) <sup>b</sup>	7,350
Total VMT per Service Population (A/B=C)	<b>67.1</b>
Total VMT per Service Population Threshold (D)	<b>68.5</b>
<b>Town of Portola Valley Home-Based VMT</b>	
Total Residential VMT (E)	215,820
Resident Population (F)	5,730
Home-Based VMT per Resident (E/F=G)	<b>37.7</b>
Home-Based VMT per Resident Threshold (H)	<b>38.5</b>

<sup>a</sup> Rounded resident population and service population to the nearest 10. Rounded VMT to the nearest one-tenth.

<sup>b</sup> Service population is defined as the sum of all employees and residents.

Source: Fehr & Peers, 2022.

#### **Boundary VMT Per Service Population**

The results of the analysis addressing the project's effect on VMT under Cumulative (2040) with Project Conditions are presented in Table Q-8. The growth in boundary VMT captures the combined effects of:

- Shifting existing VMT due to the new project land use,
- Shifts in existing traffic to alternate travel routes or modes, and
- New VMT from additional residential development in the Town of Portola Valley.

Under Cumulative (2040) with Project Conditions the regional boundary VMT per service population of **14.3** miles is equal to the applicable threshold of **14.3** miles. Therefore, the impact of the Project's effect on VMT under Cumulative (2040) with Project Conditions would be less than significant.

**TABLE Q-8 PROJECT'S EFFECT ON VMT (USING BOUNDARY VMT) RESULTS FOR THE BAY AREA REGION**

Bay Area Region Boundary VMT	Amount <sup>a</sup>
Boundary VMT (A)	205,917,860
Service Population (B) <sup>b</sup>	14,379,850
Boundary VMT per Service Population (A/B=C)	<b>14.3</b>
Boundary VMT per Service Population Threshold (D)	<b>14.3</b>

<sup>a</sup> Rounded resident population, employee population, service population, and VMT to the nearest 10.

<sup>b</sup> Service population is defined as the sum of all employees and residents.

Source: Fehr & Peers, 2022.

*c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?*

**Less Than Significant.** Subsequent projects under the project, including any new roadway, bicycle, pedestrian, and transit infrastructure improvements associated with these development projects, would be subject to, and designed in accordance with Town standards and specifications which address potential design hazards including grades, curves and sight distances and right-of-way and pavement widths. Additionally, any new transportation facilities, or improvements to such facilities associated with subsequent projects would be constructed based on industry design standards and best practices consistent with the Town's Zoning Code and building design and inspection requirements. Therefore, the project would result in a less-than-significant impact to transportation hazards.

*d) Result in inadequate emergency access?*

**Less Than Significant.** The Town maintains the roadway network which would provide emergency access to new development sites. Emergency access to new development sites proposed under the project would be subject to review by Portola Valley and responsible emergency service agencies, ensuring the projects would be designed to meet all emergency access and industry design standards and that the physical network would be free of obstructions to emergency responders. The Town also requires the preparation of construction management plans that minimize temporary obstruction of traffic during site construction.

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.

A traffic evacuation capacity study was prepared in parallel with the Safety Element Update as required by Assembly Bills (AB) 747 and 1409 to identify evacuation routes and evacuation locations, and evaluate their capacity, safety, and viability under a range of emergency scenarios.<sup>163</sup> Subsequently, Fehr & Peers prepared a *Portola Valley Housing Element Evacuation Time Estimates* (October 19, 2022) memorandum (Appendix Q-3) to estimate Evacuation Time Estimates (ETEs) that could be generated by the housing units proposed in the Housing Element Update. The ETEs were prepared for the following three scenarios.

- Scenario 1 – All Evacuation Routes Open
- Scenario 2 – North Evacuation Routes Open (i.e., Portola Road-Woodside Road, Sand Hill Road, Whisky Hill Road)
- Scenario 3 – South Evacuation Routes Open (i.e., Alpine Road, Arastradero Road)

The proposed housing sites are forecast to generate a total of 401 additional vehicle trips during a full town-wide evacuation (or 8 percent of the 4,760 evacuation trips from the existing households in Portola Valley and surrounding unincorporated areas). The addition of these proposed housing units would result in a minimal incremental increase in evacuation times (maximum of 15 minutes) under Scenarios 2 and 3.

Based on the above considerations, adequate emergency access would be provided to new development sites, and the impact would be less than significant.

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<sup>163</sup> Fehr & Peers, 2022. Portola Valley Wildfire Traffic Evacuation Capacity Study. July 26.



**R. TRIBAL CULTURAL RESOURCES**

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) 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:				
i) 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	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ii) 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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Regulatory Setting***Federal*Native American Graves Protection and Repatriation Act (NAGPRA) of 1990

The NAGPRA of 1990 sets provisions for the intentional removal and inadvertent discovery of human remains and other cultural items from federal and tribal lands. It clarifies the ownership of human remains and sets forth a process for repatriation of human remains and associated funerary objects and sacred religious objects to the Native American groups claiming to be lineal descendants or culturally affiliated with the remains or objects. It requires any federally funded institution housing Native American remains or artifacts to compile an inventory of all cultural items within the museum or with its agency and to provide a summary to any Native American tribe claiming affiliation.

*State*Tribal Cultural Resources

As of 2015, CEQA established 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, Section 21084.2). In order to be considered a “tribal cultural resource,” a resource must be either:

1. listed, or determined to be eligible for listing, on the national, state, or local register of historic resources, or
2. a resource that the lead agency chooses, in its discretion, to treat as a tribal cultural resource.

To help determine whether a project may have such an effect, the lead agency must consult with any California Native American tribe that requests consultation and is traditionally and culturally affiliated with the geographic area of a proposed project. If a lead agency determines that a project may cause a substantial adverse change to tribal cultural resources, the lead agency must consider measures to mitigate that impact. Public Resources Code Section 21084.3 (b)(2) provides examples of mitigation measures that lead agencies may consider to avoid or minimize impacts to tribal cultural resources.

## Discussion

### *Native American Consultation*

A Sacred Lands File (SLF) search was requested from the Native American Heritage Commission (NAHC) on June 24, 2022. On July 20, 2022, the NAHC responded that the SLF search was completed with negative results and provided a list of nine Native American tribal organizations and individuals that may have information about the Town (Appendix E-2). The Town of Portola Valley completed Native American consultation in accordance with Assembly Bill (AB) 52 and Senate Bill (SB) 18.

Cogstone sent consultation letters to the nine Native American tribal organizations and individuals on September 19, 2022, via United States Postal Service (USPS) certified mail (Appendix E-2, Table E-1). As of the publication of this IS/MND, no tribal organizations have requested consultation.

*a) 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:*

- i. 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*
- ii. 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?*

**Less Than Significant with Mitigation.** While no known tribal cultural resources have been identified within the proposed housing sites, the following mitigation measure is proposed to address the possible presence of previously unidentified tribal cultural resources.

**Mitigation Measure TRIBE-4:** Implement Mitigation Measures CULT-3a and CULT-3b.

Implementation of Mitigation Measure TRIBE-4 would reduce the impacts associated with possible disturbance of unidentified tribal cultural resources within the proposed housing sites to a less-than-significant level.

## S. UTILITIES AND SERVICE SYSTEMS

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

### Affected Environment

This section provides background information on utilities and services systems and summarizes the existing environmental setting within the Town of Portola Valley.

#### *Water Supply*

The water system in Portola Valley is owned and operated by the California Water Service Company's (Cal Water) Bear Gulch District. The District's service area encompasses 45.3 square miles of southern San Mateo County including the communities of Woodside and Atherton as well as portions of Menlo Park and Redwood City. The District's water supply is comprised of a combination of local surface water and water purchased from its wholesaler, the City and County of San Francisco's Regional Water System, operated by the San Francisco Public Utilities Commission (SFPUC). The local surface water comprises about nine percent of total supply. It is collected and treated at the Bear Gulch District's reservoir and treatment plant in Atherton. The remaining 91 percent of the Bear Gulch District supply is purchased from the SFPUC. Purchased SFPUC potable supply is predominantly from the Hetch Hetchy Reservoir. This regional supply is delivered through a network of pipelines, tunnels, and treatment plants and is treated by SFPUC prior to delivery to Cal Water. A recycled water system for beneficial use within the Bear Gulch District is not planned at this time due to low demand and high unit cost, though Cal Water will continue to evaluate the potential over time.

SFPUC is under contractual obligation to supply 184 million gallons a day (mgd) to wholesale customers, which includes Cal Water.<sup>164</sup> In 2020, of the water provided to Cal Water by SFPUC, Bear Gulch District delivered roughly 12 mgd to more than 18,000 service connections and a service area population of 60,814. Total system demand in 2020 was 12,972 acre-feet, of which 84 percent went to residential customers. Total gallons per capita in the District for 2020 was 190 gallons.

### Purchased Water

California State law requires that Cal Water prepare an Urban Water Management Plan (UWMP) to identify existing and projected water supply sources, develop demand projections for each of its districts, and identify strategies for ensuring that long-term water supplies are sufficient to meet demand under all future demand conditions, including during single- and multiple-year droughts. Cal Water's most recent UWMP outlines water supply trends for 2015-2020 and compares projected water supplies to project water demands through a 2045 planning horizon.

The 2020 UWMP projects that water use will decrease slightly over time, from 12,796-acre feet in 2020 to 12,694-acre feet in 2045.<sup>165</sup> This reflects increasing water efficiency and conservation paired with development and population growth in the District and is within both the existing water rights and reasonable available volume through the planning horizon of 2045. During drought periods, however, shortfalls up to 20 percent or more are projected. Drought conditions trigger implementation of Cal Water's Water Shortage Contingency Plan (WSCP). Consistent with system-wide planning, drought periods would require temporary water use reductions depending on the "tier" of drought level, with Tier One requiring incremental reductions up to 20 percent and Tier Two requiring reductions greater than 20 percent. Water shortage contingency planning is frequently updated as new information and regulations come into play, including the Bay-Delta Plan Amendment, if fully implemented (it was adopted in 2018 but has been in litigation and does not include implementation procedures).

### *Wastewater*

West Bay Sanitary District (WBSD) provides wastewater collection and treatment services in portions of Portola Valley, while other portions of Portola Valley are served by private septic systems. All of Portola Valley is within the WBSD sphere of influence.<sup>3</sup> WBSD also serves the City of Menlo Park, portions of Atherton, East Palo Alto, Woodside, portions of unincorporated south San Mateo County, and several parcels in Santa Clara County near Los Trancos Creek.<sup>166</sup> Its

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<sup>164</sup> Bear Gulch District, 2021. Urban Water Management Plan. June.

<sup>165</sup> Bear Gulch District, 2021. Urban Water Management Plan. June.

<sup>166</sup> A sphere of influence (SOI) is a plan that designates an agency's probable future boundary and service area. SOIs are intended to encourage efficient provision of organized community services and prevent duplication of service delivery. Annexation of a territory to a city or district cannot occur unless the territory is within that agency's SOI.

service area encompasses nearly 13 square miles with a total population of 52,900.<sup>167</sup> The District is comprised of approximately 20,000 service connections including eight miles of force main and 200 miles of public sewer mains. All wastewater collected within the WBSD is transported via main line trunk sewers to the WBSD Menlo Park Pumping Station located at Bayfront Park and from there to the Silicon Valley Clean Water (SVCW) Wastewater Treatment Plant (formerly South Bayside System Authority), located in the Redwood Shores area of Redwood City.<sup>168</sup>

WBSD completed a sewer collection system Master Plan in June 2011 and is currently seeking bids to update their plan.<sup>169</sup> According to the 2011 Master Plan, the average age of the District's collection system is 50 years, with an expected life span of approximately 90 years. WBSD has planned for the eventual end of the useful lives of the existing septic systems, and the eventual required connections to the public sewage collection system. Annexations to the WBSD are typically triggered by the need to abandon existing septic systems or to serve new development, and the WBSD has an adopted ordinance requiring connection to the sewer after annexation.

The daily per capita flow for the WBSD is 200 gallons per day per household. The current average daily out flow is 3.5 mgd. There are no projects or planned improvements for wastewater infrastructure supporting the Town of Portola Valley. Currently, individuals wanting to connect to the public sewer system for the benefit of their property must install the sewer system at their expense to their development (if one does not exist). Once the sewer system is constructed to the WBSD standards, they will dedicate that portion of the system to the WBSD as a public sewer system.<sup>170</sup>

### *Solid Waste*

Solid waste collection and disposal services in Portola Valley are provided by GreenWaste Recovery. GreenWaste Recovery provides the weekly collection of mixed compostable, recyclable materials, and yard trimmings for the Town of Portola Valley. GreenWaste owns and operates a Materials Recovery Facility (MRF) located in San Jose. The MRF is comprised of three facilities: Recyclables (Single Stream), Garbage and Mixed Materials (MSW), and Yard Trimmings.<sup>171</sup> Any materials that are not recovered by GreenWaste's MRF is diverted to Zanker

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<sup>167</sup> West Bay Sanitary District, Wastewater Collection System Master Plan and Update, July 2011 and February 2013. Available at: <https://westbaysanitary.org/about-us/documents/>, accessed on October 11, 2022.

<sup>168</sup> As of 2014, the new name of South Bayside System Authority is Silicon Valley Clean Water.

<sup>169</sup> Wastewater Collection System Master Plan Update. Available at: <https://westbaysanitary.org/wp-content/uploads/2022/10/RFP.WestBaySanitary.pdf>, accessed on October 12, 2022.

<sup>170</sup> Ramirez, Sergio, General Manager, West Bay Sanitary District. 2022 Written communication with Urban Planning Partners, October 27.

<sup>171</sup> GreenWaste Processing Facility, 2022. Available at: <https://www.greenwaste.com/about-us/processing-facility/>, accessed on October 12.

Material Processing Facility in San Jose. The landfill is permitted for a maximum throughput of 350 tons/day. The maximum permitted capacity for the landfill is 640,000 cubic yards.<sup>172</sup>

### *Storm Drainage*

Public storm drains are maintained by the Town's Public Works Department and its maintenance staff. The Town has 350 drainage inlets that must be maintained to convey water through miles of ditches and pipes into the creeks flowing to San Francisco Bay.<sup>173</sup> All new subdivisions are required to prepare a study if any additional storm drains and connections to the Town's system are proposed.

### *Electric Power, Natural Gas, Telecommunications*

Natural gas and electricity are currently provided within Portola Valley by the Pacific Gas and Electric Company (PG&E) and Peninsula Clean Energy (PCE). Since 2017, PCE has been Portola Valley's official electricity provider, utilizing PG&E electrical lines for distribution. Households in Portola Valley are automatically enrolled in PCE's ECO 100 program, with 100 percent of electricity from renewable, carbon-free sources like wind, solar, geothermal and hydropower. Households can opt down to ECOplus, a program that delivers at least 50 percent renewable electricity to customers or opt out and return to PG&E electricity service. Only approximately 6 percent of accounts opt out of the PCE ECO 100 program.

Telecommunications services are provided by AT&T, Comcast, Viasat, HughesNet, Ultra, Dish, or other providers, at the resident's discretion.<sup>174</sup>

## **Regulatory Setting**

### *Federal*

#### Clean Water Act

The Clean Water Act established the basic structure for regulating discharges of pollutants into the waters of the U.S. and gave the U.S. Environmental Protection Agency the authority to implement pollution control programs, such as setting wastewater standards for industry. The Clean Water Act sets water quality standards for all contaminants in surface waters. The statute employs a variety of regulatory and non-regulatory tools to reduce direct pollutant discharges into waterways, finance municipal wastewater treatment facilities, and manage polluted runoff.

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<sup>172</sup> CalRecycle, Solid Waste Information System Facility/Site Database, 2022. Available at: <https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/1359?siteID=3386>, accessed October 12.

<sup>173</sup> Portola Valley, Town of. Available at: <https://www.portolavalley.net/departments/public-works/sewer-storm-drains-septic-system-information>, accessed on October 19.

<sup>174</sup> Broadband Search. 2022. Available at: <https://www.broadbandsearch.net/service/california/portola-valley>, accessed on October 27.

The Army Corps of Engineers has jurisdiction over all waters of the U.S. including, but not limited to, perennial and intermittent streams, lakes, and ponds, as well as wetlands in marshes, wet meadows, and side hill seeps. Under Section 401 of the Clean Water Act, every applicant for a federal permit or license for any activity which may result in a discharge to a water body must obtain State Water Quality Certification that the proposed activity will comply with State water quality standards.

#### National Pollutant Discharge Elimination System

The National Pollutant Discharge Elimination System (NPDES) permit program under the Clean Water Act controls water pollution by regulating point and non-point sources that discharge pollutants into "waters of the U.S." California has an approved State NPDES program. The U.S. Environmental Protection Agency has delegated authority for NPDES permitting to the State Water Resources Control Board (State Water Board), which has nine regional boards. The RWQCB regulates water quality in the Plan Area.

#### *State*

#### Water Conservation in Landscaping Act (AB 1881, AB 2006)

The Water Conservation in Landscaping Act of 2006 (Assembly Bill [AB] 1881, Laird) requires cities, counties, and charter cities and charter counties to adopt landscape water conservation ordinances by January 1, 2010. Pursuant to this law, the Department of Water Resources has prepared a Model Water Efficient Landscape Ordinance for use by local agencies. Most new and rehabilitated landscapes are subject to a water efficient landscape ordinance. Public landscapes and private development projects, including developer-installed single-family and multi-family residential landscapes with at least 2,500 square feet of landscape area, are subject to the model water ordinance. Homeowner-provided landscaping at single-family and multi-family homes is subject to the ordinance if the landscape area is at least 5,000 square feet. However, the ordinance does not apply to registered local, State, or federal historic sites; ecological restoration projects; mined-land reclamation projects; or plant collections.

#### Water Supply Consultation

Sections 10910 to 10915 of the California Public Resources Code require local water providers to conduct a water supply assessment for projects proposing over 500 housing units, 250,000 square feet of commercial office space (or more than 1,000 employees), a shopping center or business establishment with over 500,000 square feet (or more than 1,000 employees), or equivalent usage. Local water suppliers must also prepare (or have already prepared) an urban water management plan to guide planning and development in the water supplier's service area, and specifically to pursue efficient use of water resources. Issuance of a water supply assessment determination by the local water supplier for a proposed project verifies that the supplier has previously considered a project in its plan and has adequate capacity to serve a project in addition



to its existing service commitments (or, alternatively, measures that would be required to adequately serve the project).

#### California Integrated Waste Management Act

In 1989, the California Legislature enacted the California Integrated Waste Management Act, which requires the diversion of waste materials from landfills in order to preserve landfill capacity and natural resources. Cities and counties in California were required to divert 25 percent of solid waste by 1995 and 50 percent of solid waste by 2000. This Act further requires every city and county to prepare two documents demonstrating how the mandated rates of diversion will be achieved. The Source Reduction and Recycling Element must describe the chief source of the jurisdiction's waste, the existing diversion programs, and current rates of waste diversion and new or expanded diversion programs. The Household Hazardous Waste Element must describe each jurisdiction's responsibility in ensuring that household hazardous wastes are not mixed with nonhazardous solid wastes and subsequently deposited at a landfill.

#### California Solid Waste Reuse and Recycling Access Act of 1991

Public Resources Code Sections 42900–42901, also known as the California Solid Waste Reuse and Recycling Access Act, are part of the California Integrated Waste Management Act. In addition to the solid waste diversion requirements of AB 939, this legislation required the California Integrated Waste Management Board, on or before March 1, 1993, to adopt a model ordinance for adoption by a local agency relating to adequate areas for collecting and loading recyclable materials in development projects. A local agency is required to adopt and enforce that model ordinance if it did not adopt an ordinance providing for collection and loading by September 1, 1994. In 2010, the California Integrated Waste Management Board was replaced by CalRecycle.

#### SB 1383 State Organics Law

Senate Bill 1383 is a statewide effort to reduce emissions of short-lived climate pollutants (SLCP) by establishing methane reduction targets for California. The bill sets goals to reduce disposal of organic waste in landfills such as food scraps, yard trimmings, paper, and cardboard. Specifically, the law sets the following targets: reduce statewide disposal of organic waste by 50 percent by January 1, 2020, and by 75 percent by January 1, 2025 (based on 2014 levels); and rescue at least 20 percent of currently disposed edible food for human consumption by 2025. CalRecycle is the State agency responsible for creating the regulatory standards for SB 1383. Starting in 2022, all jurisdictions will need to provide organic waste collection services to all residents and businesses

and recycle these organic materials using recycling facilities such as anaerobic digestions facilities that create biofuel and electricity, and composting facilities that make soil amendments.<sup>175</sup>

California Code of Regulations, Title 23: California Model Water Efficient Landscape Ordinance

Title 23, California's Model Water Efficient Landscape Ordinance, requires new construction and rehabilitated landscape project applicants to submit a Landscape Documentation Package to the local agency or designated agency for approval. The Landscape Documentation Package includes project and water supply information, and a Water Efficient Landscape Worksheet.

California Code of Regulations, Title 24, Part 11: California Building Standards (CALGreen)

CALGreen is a Statewide regulatory code for all residential, commercial, hospital, and school buildings. The regulations are intended to encourage more sustainable and environmentally friendly building practices, require low-pollution-emitting substances that cause less harm to the environment, conserve natural resources, and promote the use of energy-efficient materials and equipment. Title 24 standards require all new residential and nonresidential development to comply with several energy conservation standards through the implementation of various energy conservation measures—including ceiling, wall, and concrete slab insulation; vapor barriers; weather stripping on doors and windows; closeable doors on fireplaces; insulated heating and cooling ducts; water heater insulation blankets; and certified energy-efficient appliances. CALGreen became mandatory on January 1, 2011, for new residential and commercial construction. Please refer to the regulatory framework subsection of *Section IV.D, Greenhouse Gas Emissions*, for a detailed discussion of AB 32, and other energy-related State regulations.

California Porter-Cologne Water Quality Control Act

Under the Porter-Cologne Water Quality Control Act (Porter-Cologne), which was passed in California in 1969, the State Water Board has the ultimate authority over State water rights and water quality policy. Porter-Cologne also establishes nine RWQCBs to oversee water quality on a day-to-day basis at the local and regional level. The RWQCBs engage in several water quality functions in their respective regions and regulate all pollutant or nuisance discharges that may affect either surface water or groundwater.

California Water Code

Division 6 of the California Water Code requires that any urban water supplier providing over 3,000 acre/feet (AF) of water annually or serving more than 3,000 urban connections prepare an UWMP. The purpose of an UWMP is to identify existing and projected water supply sources, develop demand projections for each of its districts, and identify strategies for ensuring that

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<sup>175</sup> CalRecycle, California's Short-Lived Climate Pollutant Reduction Strategy, 2022. Available at: <https://calrecycle.ca.gov/organics/slcp/>, accessed October 20.

long-term water supplies are sufficient to meet demand under all future demand conditions, including during single- and multiple-year droughts. The UWMP must be updated every five years. The normal UWMP submittal cycle requires that the plans be prepared and submitted in December of years ending in five and zero.

The water system in Portola Valley is owned and operated by the California Water Service Company (Cal Water), a San Jose-based water utility serving 494,500 customer connections across 23 districts throughout the state. Cal Water most recently prepared a UWMP in 2020. According to Cal Water's 2020 UWMP, the Town of Portola Valley is serviced by Cal Water's Bear Gulch District.

#### California Water Service Development Offset Program

To account for projected delivery shortfalls during dry years and the need for new water supplies, the California Water Service (Cal Water) established the Developer Offset Program to ensure continued water supply reliability. The Development Offset Program will implement a new, non-refundable special facilities fee of \$15,400 per acre-foot of net demand increase, which is the difference between projected annual potable water use for the development and the average annual, existing potable water use on the property over the previous five years. The fee only applies to developments with a net demand increase of 50 acre-feet per year or more. Funds collected from the Development Offset Program will be used for water supply projects and expanded conservation programs designed to offset the net demand increase of the proposed development.

#### *Local*

#### Water Quality Control Board – San Francisco Bay Basin Plan

The Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) is the Water Board's master water quality control planning document. It designates beneficial uses and water quality objectives for waters of the State, including surface waters and groundwater. It also includes programs of implementation to achieve water quality objectives. The Basin Plan was duly adopted by the Water Board and approved by the State Water Resources Control Board (State Board), Office of Administrative Law and the USEPA, where required.

The Water Board finds stormwater discharges from urban and developing areas in the San Francisco Bay Region to be significant sources of certain pollutants that cause or may be causing or threatening to cause or contribute to water quality impairment in waters of the Region. Furthermore, as delineated in the CWA section 303(d) list, the Water Board has found that there is a reasonable potential that municipal stormwater discharges cause or may cause or contribute to an excursion above water quality standards for the following pollutants: mercury, PCBs, furans, dieldrin, chlordane, DDT, and selenium in San Francisco Bay segments; pesticide associated toxicity in all urban creeks; and trash and low dissolved oxygen in Lake Merritt, in Alameda

County. In accordance with CWA section 303(d), the Water Board is required to establish TMDLs for these pollutants to these waters to gradually eliminate impairment and attain water quality standards. Therefore, certain early pollutant control actions and further pollutant impact assessments by the Permittees are warranted and required pursuant to this Order.

#### Bear Gulch District - Urban Water Management Plan

The Bear Gulch District released a draft of their 2020 UWMP in June 2021. The 2020 UWMP evaluates sources of the water supply for the District's project population and future water demand until 2045, the planning horizon.

#### General Plan

The General Plan contains the following goals, objectives, and policies related to utilities and service systems in Portola Valley:

#### Land Use Element

*General Objective 5:* To encourage and, where appropriate, require the conservation of water in new and existing developments and buildings.

*General Principle 16:* In the planning, design, construction and operation of development within the planning area, water conservation should be a high priority.

*General Principle 17:* In all new developments, the undergrounding of utilities should be considered a high priority.

*Residential Areas Objective 5b:* Insure that occupancy of land and dwellings will be in balance with service facilities such as on-site parking, traffic capacity of access streets and capacity of utilities such as water and sewage disposal.

#### Public Facilities and Services Principles:

1. All lines and facilities related to the transmission and distribution of power and telecommunications should be placed underground. If this is not practical and such lines or facilities are to be placed aboveground, the impact should be compensated by the undergrounding of lines or facilities in other locations within the planning area. The undergrounding of lines and facilities should be balanced against adverse effects on native vegetation.
2. A program should be developed for progressively placing existing overhead lines underground.
3. All utility installations should be sited, designed, developed and landscaped so as to blend with the natural scenery of the area.
4. All utility installations should be designed to minimize damage from identified geologic hazards.
5. Water, electric and gas supply lines should be loop systems where feasible.
6. Water supply systems must conform with established health and fire protection standards.
7. Waste water must not pollute ground water or streams or cause public or private nuisance.
8. Vegetative ground cover should be sustained to prevent storm water erosion. Unobstructed natural drainage channels should remain the principal storm drainage system, and riparian vegetation along their sides should be

maintained in order to reduce erosion and bank failure and preserve habitat. Publicly owned drainage structures should be provided and maintained in accordance with the current Storm Drainage Plan of Portola Valley.

9. A solid waste and hazardous waste program which will assure adequate services, protect health, reduce waste generation and conserve energy and resources without adversely affecting the environment should be supported. Wastes resulting from animal keeping should also be controlled and disposed of in a sanitary manner.

10. The planting of native vegetation in developments should be encouraged as a water conservation measure.

11. Utilities should first serve adjoining areas and then be incrementally extended to serve contiguous new development rather than be extended so as to allow development to "leap-frog" over intervening lands.

12. Whenever there is a known limited supply of a public facility or service which is beyond the control or ability of the town to overcome, such limited facility or service shall be allocated approximately evenly over the time period of the anticipated shortage.

### Sustainability Element

*Overarching Goal 2: To encourage the use of renewable resources and minimize the use of nonrenewable resources.*

*Overarching Goal 4: To encourage and provide for enhanced resource efficiency and the use of sustainable materials in all building projects.*

*Overarching Goal 5: To employ the principles of "green" building.*

*Community Education and Involvement Objective 5: To link interested residents with sustainable products and practices such as energy efficient products, water conservation measures, and waste reduction practices such as composting so that people have the tools they need to implement sustainable lifestyles.*

*Goal: New Buildings - Encourage, and where feasible, require new buildings to adhere to "green" building design standards.*

*New Buildings Objective 1: To require all new buildings to achieve a minimum level of sustainability based on an accepted "green" rating system.*

The above objective addresses many topics including: use of passive and active solar energy as well as geothermal energy in the siting, design and construction of buildings; conservation of water through the use of drought-tolerant plant materials and recycling; reduced use of non-renewable resources in design and construction of buildings.

*Goal: Water Resources - Protect and conserve water resources in the town including imported water.*

*Water Resources Objective 2: To reduce consumption of water through conservation and more efficient appliances and fixtures.*

*Water Resources Objective 4: To maximize the collection and recycling of natural-sourced and public water.*

### Conservation Element

*Water - Creeks, Ponds, Ground Water, and Imported Water Objective 7: To encourage the conservation of water resources.*

*Water - Creeks, Ponds, Ground Water, and Imported Water* Objective 8: To encourage the recycling of water, both domestic and imported.

### Portola Valley Municipal Code

#### Chapter 8.08 – Garbage

Chapter 8.08 of the Portola Valley Municipal Code outlines health and sanitation rules and regulations related to the disposal of solid waste. The project would be required to comply with the provisions outlined in this chapter where applicable.

#### Chapter 8.09 – Recycling and Diversion of Construction and Demolition Debris

Chapter 8.09 of the Portola Valley Municipal Code outlines solid waste diversion requirements from landfill through source reduction, recycling, and composting activities. The project would be required to comply with the provisions outlined in this chapter where applicable.

#### Chapter 8.28 – Stormwater Management and Discharge Control

Chapter 8.28 of the Portola Valley Municipal Code, also known as the Portola Valley Stormwater Management and Discharge Control Ordinance, outlines regulations for stormwater management within Portola Valley. Per Chapter 8.28, all new development is required to comply with the provisions of an NPDES permit.

#### Chapter 15.30 – Indoor Water Conservation

All new construction, regardless of classification, requiring a building permit, plan check, or design review must comply with the provisions outlined in Chapter 15.30 of the Portola Valley Municipal Code for the purpose of promoting indoor water conservation and ensuring adequate water supply for future years.

#### Chapter 15.32 - Water Conservation In Landscaping

All new construction projects with an aggregate landscape area equal to or greater than five hundred square feet requiring a building or landscape permit, plan check or design review must comply with provisions outlined in Chapter 15, 32 of the Portola Valley Municipal Code for the purpose of promoting water conservation in landscaping and ensuring adequate water supply for future years.

### **Discussion**

*a) 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?*

**Less Than Significant.** Housing and mixed-use sites identified in the Sites Inventory are located in existing urbanized portions of Portola Valley, already serviced by existing utilities and infrastructure. Some sites may require lateral connections or expansions of existing utilities; however, these improvements are considered standard improvements and are done at the expense of the property owner or developers.

Additionally, as a standard condition, future developments under the project would be required to present "Will Serve" letters from the applicable utility providers demonstrating availability of services prior to construction.

Operation and occupancy of new development under project would result in energy demand from new buildings and transportation fuel from new vehicle trips. It is anticipated that development under the project would increase demand for electricity, natural gas, and transportation fuel compared to existing conditions. However, as discussed in *Section F, Energy*, increased development density would not impact the capacities of local utilities infrastructure or require the expansion or construction of new facilities.

Because the project would not require or result in any off-site improvements related to the relocation or construction of new or expanded utilities infrastructure, the project has a less-than-significant impact.

*b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?*

**Less Than Significant.** Development under the project would result in an incremental increase in demand for water relative to that associated with existing uses across project sites. Construction and occupancy of up to 293 residential units would require additional water be supplied by Cal Water. At an average use rate of 190 gpcpd (see *Setting*), the estimated 736 project residents could be expected to use a total of 139,840 gallons of water a day. This represents a very small fraction of average daily water consumption within the Cal Water service area, which is currently approximately 12 mgd.

Cal Water's UWMP, which plans for provision of water, anticipates future growth in the region based on 2017 ABAG growth forecasts.<sup>176</sup> Construction of new residential units on project sites would not necessitate the preparation of a Water Supply Assessment under Senate Bill 610 because the project proposes less than 500 new residential units and can instead rely upon the planning within the current UWMP. The UWMP outlines water supply projections for normal, dry, and multiple dry years. These projections are estimated as a function of expected service growth and a forecast of average water use per service.

The project is not required to prepare a separate Water Supply Assessment under Senate Bill 610 because less than 500 new residential units are proposed and the project can instead rely upon the planning within the current UWMP, which indicates available supply for area development. Based on Cal Water's adopted UWMP, there would be sufficient water supplies to continue serving the needs of Portola Valley, though temporary system-wide usage reductions would continue to be required during drought periods. Cal Water considers existing and projected future

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<sup>176</sup> Bear Gulch District, 2021. Urban Water Management Plan. June.

land uses in the Bear Gulch District when making water demand projections for purposes of planning future water supply. Furthermore, new developments with a net demand increase of 50 acre-feet per year or more would be required to comply with Cal Water's Service Development Offset Program to help fund water supply projects and expanded conservation programs.

Based on the adopted UWMP for the Cal Water Bear Gulch District, there would be sufficient water supplies to serve the needs of the project, and impacts on water supply would be less than significant.

*c) 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?*

**Less Than Significant.** Development under the project would result in the generation of additional wastewater volume to the WBSD system; however, that increase would not exceed existing treatment capacity or require the construction of new or expanded treatment facilities.<sup>177</sup> With average daily flow at 200 gallons per day per household and 1,917 housing units in Portola Valley, average flow is estimated to be 383,400 gallons per day or approximately 140 million gallons per year. However, with the addition of up to 293 units average flow would incrementally increase to approximately 442,000 gallons per day or 161 million gallons per year. Based on the WBSD's existing average daily out flow (3.5 mgd), there is sufficient capacity within the existing main to support development under the project.

In addition, when specific projects are developed, relevant Town departments would review the environmental documentation and plans and specifications to ensure sewer or septic service can be provided and to ensure compliance with Municipal Code relating to construction standards. Additionally, it is worth noting that these developments, if developed, would incur incrementally over time. Therefore, the project would have a less-than-significant impact on wastewater collection and treatment.

*d) 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; and*

*e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?*

**Less Than Significant.** Development under the project would add up to 293 residential units to the Town and an additional 736 residents and potentially some mixed-use development. This would result in an incremental increase in demand for solid waste disposal. Average per capita

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<sup>177</sup> Ramirez, Sergio, General Manager, West Bay Sanitary District. 2022 Written communication with Urban Planning Partners, October 27.



disposal stands at 3.4 pounds of solid waste per person per day in Portola Valley.<sup>178</sup> Should average per capita disposal remain consistent throughout the planning period, the addition of 736 new residents to the town would result in an additional 2,502.4 pounds of solid waste per day which adds up to 913,376 pounds per year. Thus, the project is estimated to generate an additional 457 tons of solid waste per year, which would amount to approximately 0.00357 percent of the permitted daily throughput. As the project would not exceed the capacity of the Zanker Material Processing Facility, the project would have a less-than-significant impact on the generation or disposal of solid waste.

A significant impact could occur if the project would conflict with any statutes and regulations governing solid waste. In compliance with State legislation, any development project under the Housing Element would be required to divert at least 75 percent of the construction and demolition debris. Any new project is required to subscribe to the Town's franchised garbage hauler. Reasonably foreseeable development under the Housing Element would comply with federal, State, and local statutes and regulations related to solid waste, such as the California Waste Integrated Waste Management Act (AB 939), SB 1383, and the Town's recycling program. Since future development under the project would comply with applicable federal, State, and local regulations involving solid waste, the project would have a less-than-significant impact related to conflict with statutes and regulations governing solid waste.

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<sup>178</sup> CalRecycle, Solid Waste Jurisdiction Review Reports. 2020-2021. Available at: <https://www2.calrecycle.ca.gov/LGCentral/AnnualReporting/ReviewReports>, accessed October 12.

## T. WILDFIRE

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a) Substantially impair an adopted emergency response plan or emergency evaluation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

### Affected Environment

Wildfire hazards typically occur in areas, adjacent or proximate to open space which contains grass, trees, shrubs, or other vegetation that can combine with natural or man-made conditions such as winds, droughts, or human activity to cause a wildfire. Wildfires often spread and pose hazards far beyond the area of their origin. Because of this, wildfires are extremely costly events that pose a serious threat to the preservation of the health and safety of California property owners, residents, and local agencies. Consequently, California Government Code Section 51175 establishes prevention of wildfire hazards as a matter of statewide concern and entrusts the Office of the State Fire Marshall, the California Department of Forestry and Fire Prevention (Cal Fire) to identify areas throughout the state at risk of wildfire for identification as moderate, high, and very high fire hazard severity zones (FHSZs). This statewide identification and classification of areas is based on a consistent criterion that considers various factors such as an area's fire history, climate, vegetative coverage, and predicted flame length, among others. Areas throughout California where the state assumes financial responsibility for wildfire protection and prevention are referred to as "State Responsibility Areas" (SRAs). Many incorporated municipalities or jurisdictions have separate "Local Responsibility Areas" (LRAs) where they assume responsibility for providing wildfire protection and prevention services in local areas.

Portola Valley is characterized by steep canyons and gullies, with dense vegetation, including thick brush and trees, interspersed throughout its residential neighborhoods. The town is bounded to the south, east, and west by open space land uses: Windy Hill Open Space Preserve, Pearson-Arastradero Preserve, and Thornwood Open Space Preserve, respectively. The broken

nature of the topography creates difficult-to-access areas where vegetation management is difficult to accomplish; in addition, east-west oriented canyons create funnels for strong autumn winds, which tend to blow from the east or west and amplify wildfire hazards.

As depicted in Figure I-3 in *Section I. Hazards and Hazardous Materials*, the area within the northwest portion of the town is mapped as a very high FHSZ (within an LRA), and areas surrounding the town include moderate, high, and very high FHSZs (within an SRA). At the time the Cal Fire map was finalized for the town, local agencies were not required to adopt such maps. Instead of adopting the Cal Fire map, the Town Council at the time elected to take several alternative steps to proactively increase the town's fire resiliency. First, it commissioned a more detailed vegetative fire risk map from Ray Moritz (of Moritz Arboriculture Consulting). This map was designed to identify hazardous vegetative fuels located on both public and privately owned lots and to recommend appropriate, phased mitigation. Second, the Town Council adopted the uniform Chapter 7A building requirements for wildland urban interface areas (WUI) and applied them townwide. None of the proposed housing sites are located within a very high FHSZ; however, one parcel (Christ Church) is adjacent to a very high FHSZ to its west and south. Cal Fire is currently updating the criteria for how the fire hazard severity zone maps are developed and will be including all zones (moderate, high, and very high FHSZ) for LRAs on future maps.<sup>179</sup>

In the event of a fire emergency, the Portola Valley planning area is served by the Woodside Fire Protection District (WFPD), Cal Fire, and Stanford University. Northern and eastern portions of the planning area are also served by the Menlo Park Fire Protection District and the Palo Alto Fire Department. WFPD Station #8 serves Portola Valley. All of these fire protection services fight both structural and wildland fires, although the equipment operated by Cal Fire is designed to be most effective against grass, brush, and forest fires, rather than structural fires carrying less water than urban fire engines, and capable of off-road driving.

## Regulatory Setting

### *Federal*

#### National Fire Protection Association 1710

The National Fire Protection Association (NFPA) is the international nonprofit organization devoted to establishing industry standards related to eliminating death, injury, property, or economic loss due to fire, electrical and related hazards. The NFPA recommends that fire departments respond to fire calls within 6 minutes of receiving the request for assistance for 90 percent of incidents. These time recommendations are based on the demands created by a structural fire. It is crucial to attempt to arrive and intervene at a fire scene prior to the fire spreading beyond the room of origin. Total structural destruction typically starts within 8 to 10

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<sup>179</sup> Town of Portola Valley, 2022a. Safety Element Update.

minutes after ignition. Response time is generally defined as 1 minute to receive and dispatch the call, 1 minute to prepare to respond to the fire station or field, and 4 minutes (or less) travel time. (NFPS, 2020.)

### *State*

#### California Department of Forestry and Fire Protection

California Government Code Section 51175 establishes prevention of wildfire hazards as a matter of statewide concern and entrusts the Office of the State Fire Marshall, Cal Fire to identify areas throughout the state at risk of wildfire for identification as moderate, high, and very high FHSZs. This statewide identification and classification of areas is based on a consistent criterion that considers various factors such as an area's fire history, climate, vegetative coverage, and predicted flame length, among others. FHSZ designations are tied to regulations regarding how buildings are constructed, and property protected in these areas to reduce wildland fire risks. Areas throughout California where the state (Cal Fire) assumes legal and financial responsibility for wildfire protection and administers fire hazard classifications and building standard regulations, are referred to as SRAs. SRAs are defined as land that meets the following criteria:

- Are county unincorporated areas.
- Are not federally owned.
- Have wildland vegetation cover rather than agricultural or ornamental plants.
- Have watershed and/or range/forage value.
- Have housing densities not exceeding three units per acre.

Where SRAs contain built environment or development, the responsibility for fire protection of those improvements (non-wildland) is that of a local government agency.

Many incorporated municipalities or jurisdictions have separate LRAs that do not meet the above criteria of SRAs. Therefore, fire protection of LRAs is typically provided by fire departments, fire protection districts, and counties, or by Cal Fire under contract to local governments. LRAs may include flammable vegetation and wildland urban interface areas where the financial and jurisdictional responsibility for improvement and wildfire protection is that of a local government agency.

The proposed housing sites are not within a LRA or SRA and are served by the WFPD as discussed above.

#### California Emergency Services Act

Under the Emergency Services Act, Government Code Section 8550, et seq., the state developed an emergency response plan to coordinate emergency services provided by federal, state, and local agencies. Rapid response to incidents involving wildfire and other natural and/or human-

caused incidents is an important part of the plan, which is administered by the Governor's Office of Emergency Services (OES). The office coordinates the responses of other agencies, including the California Environmental Protection Agency (CalEPA), the California Highway Patrol (CHP), regional water quality control boards, air quality management districts, and county disaster response offices.

### California Fire Code

The 2019 California Fire Code (CCR Title 24, Part 9) establishes regulations to safeguard against the hazards of fire, explosion, or dangerous conditions in new and existing buildings, structures, and premises. The Fire Code also establishes requirements intended to provide safety for and assistance to firefighters and emergency responders during emergency operations. The provisions of the Fire Code apply to the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal, and demolition of every building or structure throughout California. The Fire Code includes regulations regarding fire-resistance-rated construction, fire protection systems such as alarm and sprinkler systems, fire service features such as fire apparatus access roads, means of egress, fire safety during construction and demolition, and wildland-urban interface areas.

### *Local*

#### Woodside Fire District Fire Code (Ordinance 11)

The Woodside Fire District has adopted a Fire Code used in review of project applications within the Woodside Fire District and code enforcement. The California Fire Code is incorporated into the Fire Code with local amendments. The Portola Valley Town Council ratified this Code.

### General Plan

The General Plan contains the following goals, principles, and standards related to wildfire in Portola Valley:

#### Land Use Element

*General Principle 5.1:* In areas subject to flooding, including those identified in the safety element, development shall be precluded or designed to minimize risk.

*General Principle 9:* In all developments in the planning area, full consideration should be given to fire protection needs, including those identified in the safety element, and adequate measures should be taken to ensure that these needs are met.

*General Principle 9.1:* Development should be limited in areas when fire risk cannot be reduced to an acceptable level and adequate emergency access cannot be provided. Also, recognizing fire protection measures could have adverse effects on native vegetation, development should be configured to minimize damage as well as fire hazard.

*Residential Areas, Principle 4:* Steep slopes, potentially unstable ground, canyons and ravines should be left undisturbed as residential open space preserves.

*Residential Areas Standard 2106b.* The slope-intensity standards for the conservation residential and open residential categories recognize in part the overall problems of the development in areas with potential geologic instabilities. However, the intensity of development in individual developments should be further reduced as necessary to reflect specific geologic conditions encountered, to minimize significant visual impacts, to preserve scenic qualities and historic features, and to avoid high fire hazards and inadequate emergency access.

*Public Facilities and Services Principle 6:* Water supply systems must conform with established health and fire protection standards.

*Public Facilities and Services Principle 9:* A solid waste and hazardous waste program which will assure adequate services, protect health, reduce waste generation and conserve energy and resources without adversely affecting the environment should be supported. Wastes resulting from animal keeping should also be controlled and disposed of in a sanitary manner.

### Portola Valley Municipal Code

Chapter 2.24 of the Municipal Code describes the emergency organization and protection requirements for the Town to provide for the preparation and carrying out of plans for the protection of persons, property, and the environment within the Town in the event of an emergency. This chapter identifies the disaster council membership and director of emergency services and defines their powers and duties, and identifies requirements related to the Town's emergency operations plan.

Chapter 8.34 of the Municipal Code requires that gas-powered landscaping, construction, and gardening equipment not be operated in the Town when the National Weather Service issues red flag warnings for weather events that may result in extreme fire behavior. Electric-powered landscaping, construction, and gardening equipment may only be used if it can be safely operated without causing a fire or a spark, such as when hitting a stone or used near dry vegetation.

Chapter 8.36 of the Municipal Code prohibits the sale or use of fireworks in the Town.

Chapter 15.04 of the Municipal Code adopts the 2019 (most recent) California Fire Code and adopts and amends the 2019 (most recent) California Building Code. Many of the amendments to the California Building Code have to do with applying requirements of Chapter 7A (development in Wildland Urban Interface areas) for buildings and property maintenance, including the use of fire-resistant exterior materials and adherence to various design requirements for all properties in the Town. Other amendments related to fire hazards include requirements for fire sprinklers, use of Class A roofing materials (such as concrete, tile, metal or slate), use of noncombustible materials for exterior wall coverings and decks, and enclosing the undersides of eaves and cornices.

The Town adopted the Wildfire Preparedness Building Code amendments on December 8, 2021. These amendments require additional "home hardening" measures including use of noncombustible exterior materials and construction to exclude of embers, among others.

#### Section 17.48.101 - Utility Easements – Underground Installation

All communications and electric transmission and distribution facilities and appurtenances thereto, must be installed underground.

## Section 18.36.010 - Uses Permitted in All Districts

All transmission, distribution, and service lines for electricity and communication shall be installed underground.

**Fuel Hazard Assessment Study**

In 2008, the Town of Portola Valley commissioned a study by Moritz Arboriculture Consulting to provide information on relative wildfire hazards posed by different vegetation types. This study categorized the vegetation into eleven different vegetation fuel types and assigned a hazard rating to each, based on fuel models. The study assigned flame lengths to the fuel models but did not explain how they were determined. Mapping of areas, each larger than 5 acres, was done using aerial imagery, and ground reconnaissance.

The conclusions of this study formed the basis of the Town's Safety Element and a suite of programs and measures. It recommended general standards and specific recommendations for vegetative treatments along eight main roads (including Alpine Road) that would serve as evacuation routes.

**Discussion**

a) *Substantially impair an adopted emergency response plan or emergency evaluation plan?*

**Less Than Significant.** The WFPD keeps on file an Evacuation Plan for the Town of Portola Valley to provide for the orderly and coordinated evacuation of all or any part of the population of Portola Valley and identifies evacuation routes (as shown in Figure I-2 in *Section I, Hazards and Hazardous Materials*). The plan provides that evacuation movement will be controlled by local law enforcement agencies. This plan was not formally adopted by the town council; but the major evacuation routes in WFPD's plan are the same routes identified in the town's current Safety Element and the 2022 *Portola Valley Wildfire Traffic Evacuation Capacity Study* adopted by the town on July 13, 2022.

The San Mateo County Sheriff's Office has provided police services for the Town since before incorporation in 1964. The Sheriff's Office has a plan for managing an evacuation of the Town (or portions of the Town) if there is a wildfire event requiring such an order. Sheriff deputies would be assigned to identified intersections to provide traffic control; should the need arise, additional police services, through mutual aid agreements, would be provided from other jurisdictions. Such a plan was utilized during the CZU fire in 2020, and were also activated for the Edgewood Fire in 2022.

As described in *Section Q, Transportation*, the *Portola Valley Wildfire Traffic Evacuation Capacity Study* was prepared in parallel with the Safety Element Update as required by Assembly Bills (AB) 747 to identify evacuation routes and evaluate their capacity, safety, and viability under a range

of emergency scenarios.<sup>180</sup> Subsequently, Fehr & Peers prepared a *Portola Valley Housing Element Evacuation Time Estimates Memo* to estimate Evacuation Time Estimates (ETEs) that could be generated by the housing units proposed in the Housing Element Update. The ETEs were prepared for the following three scenarios.

- Scenario 1 – All Evacuation Routes Open
- Scenario 2 – North Evacuation Routes Open (i.e., Portola Road-Woodside Road, Sand Hill Road, Whisky Hill Road)
- Scenario 3 – South Evacuation Routes Open (i.e., Alpine Road, Arastradero Road)

The proposed housing sites are forecast to generate a total of 401 additional vehicle trips during a full town-wide evacuation (or 8 percent of the 4,760 evacuation trips from the existing households in Portola Valley and surrounding unincorporated areas). Ultimately, the addition of these proposed housing units would result in a minimal incremental increase in evacuation times (maximum of 15 minutes) under Scenarios 2 and 3. The multifamily and mixed use sites on the Sites Inventory were selected in accordance with the 2022 *Portola Valley Wildfire Hazards Memo* to identify areas in Portola Valley with the least wildfire risk.<sup>181</sup> The memo concludes the safest option for new multifamily housing development is in areas along Alpine and Portola Roads to be close to a major evacuation route. The sites are all generally close to a major evacuation route. With the exception of the Christ Church site, none of the multi-family or mixed-use sites are within or adjacent to SRAs or very high FHSZ areas. The *Portola Valley Wildfire Traffic Evacuation Capacity Study* was adopted by the Town on July 13, 2022. On October 26, 2022, the Town Council will review recommendations from the Emergency Preparedness Committee on prioritization of mitigation measures identified in the Study for adoption.

The Safety Element Update builds from the *Portola Valley Wildfire Traffic Evacuation Capacity Study* by including Emergency Management policies and implementation actions. Proposed policies include implementing an Evacuation Plan (P-86), requiring developments enhance the Town's evacuation network and facilities to comply with the Town's Evacuation Assessment (P-88), and requiring all new developments and redevelopments within the high and very high FHSZ, to provide a minimum of two points of access by means of publicly accessible roads that can be used for emergency vehicle response and evacuation purposes (P-90). Additional policies are focused on evacuation readiness through partnering with community groups/organizations to help residents that need assistance (P-91) and continuing to support County Department of Emergency Management meetings with Town staff, stakeholders, and institutions to support the development and integration of school and private institution evacuation plans into Town efforts (P-93).

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<sup>180</sup> Fehr & Peers, 2022. Portola Valley Wildfire Traffic Evacuation Capacity Study. July 26.

<sup>181</sup> Deer Creek Resources, 2022. Portola Valley Wildfire Hazards Memo. February.



For these reasons, the project would not impair evacuation planning and would instead work in tandem with ongoing efforts to improve emergency response and evacuation. Impacts from the project would be less than significant.

*b) 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?*

**Less Than Significant.** As depicted in Figure I-1 in *Section I, Hazards and Hazardous Materials*, an area within the northwestern portion of the town is located within a very high FHSZ, but no portion of the town is located within a SRA. Adoption and implementation of the project would increase residential densities in several areas throughout the town of Portola Valley identified as housing sites; however, these housing sites are intentionally proposed within existing developed areas of the town and along major arterials to avoid exacerbating wildfire risks throughout the town. Additionally, both future ministerial and discretionary review of proposed housing site developments would be required to comply with existing regulations as described in the *Regulatory Setting* above, which are intended to address and mitigate for wildfire risks throughout Portola Valley.

Location within the very high FHSZ in the LRA requires new development to comply with defensible space, Building Code Chapter 7A requirements as well as make findings before approving new subdivisions. The Town's local regulations extend these building and defensible space requirements to all properties in town, regardless of location in a very high FHSZ. In December 2021 and October 2022, the Town updated the Building Code to exceed Chapter 7A standards. Effective July 1, 2021, new development in the very high FHSZ in the LRA are also required to comply with the California Fire Safe Regulations.

The Safety Element Update includes policies and implementation actions to reduce fire risk, including but not limited to: continuing to require new development to incorporate design measures that enhance fire protection in high and very high FHSZs (P-40), requiring fire protection plans for new development and major remodels in high and very high FHSZs (P-41), and requiring vegetation management plans in all new development and major remodels (P-42). Such policies and actions, which future developments would be required to implement, would reduce the risk of loss, injury, or death due to wildfire rather than exacerbate the existing wildfire risk.

The Housing Element Update also includes several programs to manage wildfire vulnerability including:

Program 6-1: Update the building code, evaluate the code and include latest best practices for fire resiliency in collaboration with Woodside Fire Protection District.

Program 6-2: Update the Town's landscaping regulations and guidelines with science-based best practices with respect to fire safety and water usage.

Program 6-3: Consider adding supportive programs to assist households with vegetation management.

Program 6-4: Review and adopt, as appropriate, fire hazard maps developed by the Woodside Fire Protection District and/or CalFire. Once new fire hazard maps are available, reevaluate sites to determine if any new sites are needed or if new fire prevention measures are needed.

Program 6-5: Once new fire hazard maps are available from Woodside Fire Protection District and/or CalFire, evaluate ADU and Senate Bill 9 ordinances to determine if any new fire prevention measures are needed.

Program 6-6: Work with local fire officials to educate homeowners and landlords through community meetings, mailers, and participation in community events on how to reduce fire risk to structures and landscaping as wildfire risk continues to increase due to climate change.

In an addition to new wildfire risk reduction programs, the Housing Element Update sites selection process included the preparation of the 2022 *Portola Valley Wildfire Hazards Memo* to identify areas in Portola Valley with the least wildfire risk. The Memo recommends avoiding building in areas with slopes over 20 percent (where natural vegetation creates elevated wildfire hazards) and in hillside areas (where property lines, terrain, or other factors constrain access for vegetation management on slopes below a structure). The Memo also concludes the safest option for new multifamily housing development is in areas along Alpine and Portola Roads to avoid poor ingress and egress along narrow roads common in other parts of the town. Following this guidance, all of the housing sites in the Sites Inventory are 1) located along Alpine and Portola Roads, 2) in areas with slopes under 30 percent, and 3) accessible to two ways of ingress and egress. In addition, per the Town's Municipal Code, all future development would be subject to Chapter 7A Building Codes which are applicable to development in Wildland Urban Interface areas. For these reasons, this impact is considered less than significant.

*c) 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?*

**Less Than Significant.** Adoption and implementation of the project would increase residential densities in several areas throughout the town of Portola Valley identified in the Sites Inventory. However, these housing sites are intentionally proposed within existing urbanized portions of the town, already serviced by existing infrastructure. Further, any future ministerial or discretionary development of housing sites as identified by the project would be required to adhere to all regulatory requirements regarding development and associated infrastructure improvements that are intended to minimize wildfire hazards throughout the Town of Portola Valley. This includes applicable sections of the Town's General Plan, Municipal Code, and relevant State fire and building codes as described within the *Regulatory Setting*. For discretionary development of housing sites identified by the project, impacts associated with infrastructure improvements including any required measures to address fire safety would be evaluated in their respective subsequent environmental documents. For ministerial development of housing sites identified by the project, review will include consistency with objective design standards developed by the

Town to reduce physical impacts to the extent feasible. Accordingly, the project is not anticipated to exacerbate fire risk or result in temporary or ongoing impacts on the environment. Impacts for both ministerial and discretionary development on housing sites would be less than significant.

*d) 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?*

**Less Than Significant.** Construction and operation of future development under the project would not create conditions that cause runoff, post-fire slope instability, or drainage changes that would expose people or structures to significant risks. The project would be required to implement construction-related and post-development best management practices and comply with regulatory requirements that manage stormwater runoff and erosion. *Section G, Geology and Soils*, and *Section J, Hydrology and Water Quality*, provide a detailed discussion of stormwater runoff, slope stability, and drainage changes and a summary is provided below.

The Town of Portola Valley has both 1 percent and 0.2 percent annual chance flood zones as defined by FEMA (as shown in Figure J-1 in *Section J, Hydrology and Water Quality*). Three parcels identified in the Sites Inventory (The Sequoias, Glen Oaks, and Vacant Portion of Ford Field) are intersected by 100-year flood hazard zones as shown on Figure J-1. However, they would be subject to requirements in Chapter 18.32 of the Municipal Code, which would ensure that developments would not impede or redirect flood flows in a manner that would result in an increase in the base flood elevation by more than 1 foot when the cumulative effect of the proposed development is combined with all other existing and reasonably anticipated development.

There are three dams located near the planning area which have the potential to cause flooding within the planning area in the event of dam failure. These are the Searsville Dam, Felt Lake Dam, and Foothill Park Dam. The dam failure inundation areas mapped for these dams are shown on Figure J-1. Two parcels identified in the Sites Inventory (Glen Oaks and Vacant Portion of Ford Field) are intersected by the Foothill Park Dam inundation area. As described in *Section J, Hydrology and Water Quality*, it appears that dam failure inundation of these parcels would be limited in extent and 1 foot or less in depth. Furthermore, the Safety Element Update includes policies and actions to reduce the risks related to flooding (see policies P-19 through P-30).

Much of the western and southern portions of the planning area and some areas in the eastern and northeastern portions of the planning area have been mapped by CGS as seismically induced landslide hazard zones, as described in *Section G, Geology and Soils*. One of the housing sites listed in the Sites Inventory (The Sequoias) is intersected by landslide hazard zones (as shown on Figure G-4). However, the Safety Element Update includes several policies and implementation actions to reduce landslide risk (see policies P-10 through P-16). The risks associated with development in areas susceptible to landslides are further reduced through adherence to recommendations in site-specific geotechnical reports. Site-specific geotechnical reports must be

prepared for proposed developments as discussed under *Section G, Geology and Soils*. This would include preparation of a site-specific geotechnical evaluation of landslide hazards which must include recommendations to mitigate the landslide hazards in accordance with the guidelines of CGS Special Publication 117A.<sup>182</sup> The Town's General Plan also discourages development on steep slopes where landslide and ground failure are a greater concern (see Residential Areas, Principle 4 in the Land Use Element). Consistency with local and State policies, including the California Building Code, would ensure future development under the project is designed to reduce landslide risks.

Therefore, the project would not expose people or structures to significant risks as a result downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes in the planning area and the impact would be less than significant.

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<sup>182</sup> California Geological Survey, 2008. Special Publication 117A, Guidelines for Evaluating and Mitigating Seismic Hazards in California, Revised and Re-adopted September 11.

**U. MANDATORY FINDINGS OF SIGNIFICANCE**

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
a) <i>Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?</i>				

**Less Than Significant with Mitigation.** The Housing and Safety Element Updates and conforming General Plan and Zoning Code Amendments would not facilitate development that would eliminate or threaten wildlife habitats or eliminate important examples of the major periods of California history or prehistory. The above analysis identifies potentially significant impacts to air quality, cultural resources, geology, greenhouse gas emissions, hazards, noise, and tribal cultural resources which could degrade the quality of the natural environment. However, each potential impact would be mitigated to a less-than-significant level through implementation of the mitigation measures identified within in each section.

Therefore, as discussed in more detail in *Sections D, Biological Resources, E, Cultural Resources, and R, Tribal Cultural Resources*, the project would result in a less-than-significant impact related to biological and cultural resources.

*b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)*

**Less Than Significant.** Cumulatively, the project combined with other past, present, and reasonably foreseeable future projects, would result in a physical change to the by increasing the number of residential units in Portola Valley and adding population. For example, the increase in the residential population, as discussed in *Section P, Public Services*, will result in an incremental increased pressure on existing police, fire, and park services when combined with other foreseeable projects. However, State and federal regulations, General Plan objectives, principles, and standards, and mitigation measures included in this IS/MND would reduce potential cumulative impacts to less-than-significant levels. Development under the project would also be incremental over the eight-year planning period, and so potential impacts would not occur all at once. Although the project may have a cumulative contribution to the potential cumulative impacts, the contribution would not be considerable.

*c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?*

**Less Than Significant with Mitigation.** The project would not result in adverse effects on human beings. Rather, as discussed throughout this document, the project would serve as a pathway to improve housing, reduce safety concerns, and address other positive environmental and sustainability effects. Furthermore, mitigation measures included in this IS/MND would ensure that impacts to air quality, cultural resources, geology, greenhouse gas emissions, hazards and hazardous materials, noise, and tribal cultural resources would be reduced to less than significant. Therefore, the project would result in a less-than-significant impact related to potential for adverse effects on human beings.

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n/a

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**Mandatory Findings of Significance**

n/a





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