# FINAL – CERTIFIED
# Environmental Impact Report
# Mill Valley 2040 General Plan
# City of Mill Valley, Marin County, California

State Clearinghouse No. 2013052005

Prepared for:

**City of Mill Valley**
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Contact: Mary Bean, Project Director
Grant Gruber, Project Manager

Report Date: October 7, 2013

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# ACRONYMS AND ABBREVIATIONS

| | |
|---|---|
| AB | Assembly Bill |
| ABAG | Association of Bay Area Governments |
| ADA | Americans with Disabilities Act |
| AQP | Air Quality Plan |
| ARB | California Air Resources Board |
| BAAQMD | Bay Area Air Quality Management District |
| BCDC | Bay Conservation and Development Commission |
| BMP | Best Management Practices |
| C | Celsius |
| Cal OSHA | California Occupational Health and Safety Administration |
| CalEPA | California Environmental Protection Agency |
| Caltrans | California Department of Transportation |
| CAP | Climate Action Plan |
| CDFW | California Department of Fish and Wildlife |
| CEQA | California Environmental Quality Act |
| CESA | California Endangered Species Act |
| $CH_4$ | methane |
| CHL | California Historical Landmarks |
| CNDDB | California Natural Diversity Database |
| CNEL | Community Noise Equivalent Level |
| CNPS | California Native Plant Society |
| CO | carbon monoxide |
| $CO_2$ | carbon dioxide |
| $CO_2e$ | carbon dioxide equivalent |
| CPHI | California Points of Historical Interest |
| CPUC | California Public Utilities Code |
| CWA | Clean Water Act |
| dB | decibel |
| DPM | diesel particulate matter |
| EIR | Environmental Impact Report |
| EPA | United States Environmental Protection Agency |
| ESA | Endangered Species Act |
| F | Fahrenheit |
| FCS | FirstCarbon Solutions |
| FHWA | Federal Highway Administration |

| | |
|---|---|
| GWh/y | gigawatt-hours per year |
| HCM | Highway Capacity Manual |
| $L_{dn}$ | day/night average sound level |
| $L_{eq}$ | equivalent sound level |
| LOS | Level of Service |
| MEA | Marin Energy Authority |
| mgd | million gallons per day |
| $MMTCO_2e$ | million metric tons of carbon dioxide equivalents |
| MMWD | Marin Municipal Water District |
| mph | miles per hour |
| MTC | Metropolitan Transportation Commission |
| $N_2O$ | nitrous oxide |
| NHPA | National Historic Preservation Act |
| NMFS | National Marine Fisheries Service |
| $NO_2$ | nitrogen dioxide |
| NOC | Notice of Completion |
| NOP | Notice of Preparation |
| $NO_x$ | nitrogen oxides |
| NPDES | National Pollutant Discharge Elimination System |
| NRHP | National Register of Historic Places |
| $O_3$ | ozone |
| PCE | perchloroethylene |
| PG&E | Pacific Gas and Electric Company |
| $PM_x$ | particulate matter |
| ppb | parts per billion |
| ppm | parts per million |
| PPV | peak particle velocity |
| RCRA | Federal Resource Conservation and Recovery Act |
| RMP | Risk Management Plan |
| ROG | reactive organic gases |
| RWQCB | Regional Water Quality Control Board |
| SASM | Sewerage Agency of Southern Marin |
| SCWA | Sonoma County Water Agency |
| SEMPS | Southern Marin Emergency Medical Paramedic System |
| $SF_6$ | sulfur hexafluoride |
| $SO_2$ | sulfur dioxide |
| SR | State Route |
| SWRCB | State Water Resources Control Board |

| | |
|---|---|
| TDS | total dissolved solids |
| Tg | teragram |
| therms/y | therms per year |
| USACE | United States Army Corps of Engineers |
| USFWS | United States Fish and Wildlife Service |
| UST | underground storage tank |
| VMT | vehicle miles traveled |
| WDR | Waste Discharge Requirements |

# EXECUTIVE SUMMARY

## Preface

This Final – Certified Environmental Impact Report represents the final, amended version of the Draft Environmental Impact Report (Draft EIR) that was certified by the Mill Valley City Council on October 7, 2013. The Draft EIR was released for public review on July 10, 2013 and circulated for public review until August 26, 2013. Following closure of the public review period, various minor clarifications and revisions were made to the Draft EIR text, which were documented in the Errata contained in the Final EIR (issued on September 12, 2013). For ease of readership, the Draft EIR volume has been updated to incorporate the text changes in the Errata. Changes to the Draft EIR text are shown in underline/~~strikeout~~ format.

## Purpose

This Draft Environmental Impact Report (Draft EIR) is prepared in accordance with the California Environmental Quality Act (CEQA) to evaluate the potential environmental impacts associated with the implementation of the Mill Valley 2040 General Plan (State Clearinghouse No. 2013052005). This document is prepared in conformance with CEQA (California Public Resources Code, Section 21000, et seq.) and the CEQA Guidelines (California Code of Regulations, Title 14, Section 15000, et seq.).

The purpose of this Draft EIR is to inform decision makers, representatives of affected and responsible agencies, the public, and other interested parties of the potential environmental effects that may result from implementation of the proposed project. This Draft EIR describes potential impacts relating to a wide variety of environmental issues and methods by which these impacts can be mitigated or avoided.

## Project Summary

### Project Location

The General Plan area consists of the City of Mill Valley, Marin County, California (Exhibit 2-1). The City of Mill Valley is generally bounded by Mount Tamalpais State Park (west); Corte Madera and Kentfield (north); US 101 and Strawberry (east); and the unincorporated communities of Homestead, Tam Valley, and Almonte (south) (Exhibit 2-2). The project site is located on the San Rafael, California, United States Geological Survey 7.5-minute topographic quadrangle map, Township 1 North, Range 7 West, Sections 28 through 33 (Latitude 37°54’22” North; Longitude 122°32’39” West).

### Project Description

The City of Mill Valley is undertaking an update of its General Plan, which was last updated in 1989. The planning horizon for the updated General Plan is 2040 (hence the “2040 General Plan” title). The 2040 General Plan contains the following elements:

- Land Use
- Mobility
- Community Vitality
- Natural Environment
- Climate Action
- Hazards and Public Safety
- Noise
- General Plan Administration
- Housing (Under Separate Cover)

Each element begins with a purpose statement and a summary of existing conditions, followed by goals and policies programs for action. Several elements contain a "Trends to Watch" section that outlines relevant data points and forces at work that pertain to Mill Valley.

The 2040 General Plan acknowledges that Mill Valley is essentially built out and, thus, maintains the land use designations and allowable densities set forth within the 1989 General Plan.

A key change contained in the Mobility Element of the 2040 General Plan includes amending the minimum Level of Service (LOS) values to accept LOS E-plus conditions at E. Blithedale Avenue/Camino Alto, and LOS D at all other signalized intersections. This change reflects the desire to avoid widening intersections in such a manner that may adversely affect other modes of transportation (e.g., bicycles, pedestrians, or transit), or negatively affect the City's character.

Finally, the 2040 General Plan includes an updated Housing Element for the 2009–2014 period.

## Project Objectives

The objectives of the proposed 2040 General Plan are to:

1. Provide a user-friendly General Plan that guides policy making and actions that are consistent with identified community values and Mill Valley's small-town character.
2. Provide a comprehensive update of the City of Mill Valley in accordance with state law.
3. Revise and update the General Plan map, policies, and text to reflect changes that have occurred since the plan was last comprehensively updated.
4. Maintain the existing land use pattern of Mill Valley in a manner that respects the existing mostly built-out character of the community, but also allowing development where appropriate.
5. Recognize lower Level of Service values at select locations in order to avoid requiring improvements that may adversely affect other modes of transportation or negatively affect the City's small-town character.
6. Use the General Plan as a vehicle to implement a Climate Action Plan that will guide the City of Mill Valley in meeting its greenhouse gas reduction targets.
7. Achieve a certified Housing Element that meets state and regional housing requirements without diminishing local control or Mill Valley's small-town character.

## Significant Unavoidable Adverse Impacts

The proposed project would result in the following significant unavoidable impacts:

- **Exposure of Persons to Excessive Noise:** Development and land use activities contemplated by the City of Mill Valley 2040 General Plan may expose residential land uses to excessive exterior noise as a result of additional vehicle trips on local roadways. Although the General Plan contains policies requiring new residential uses to comply with California Building Standards Code requirements for interior noise attenuation, there is no feasible mitigation to reduce exterior noise levels at new residential development sites along major roadways to "normally acceptable" levels due to existing noise levels; therefore, the residual significance of this impact is significant and unavoidable.
- **Permanent Increase in Ambient Noise Levels:** Development and land use activities contemplated by the City of Mill Valley 2040 General Plan may expose residential land uses adjacent to major roadways to a permanent increase in ambient noise levels as a result of additional vehicle trips on local roadways. Although the General Plan contains policies requiring new residential uses to comply with California Building Standards Code requirements for noise attenuation, there is no feasible mitigation to reduce exterior noise levels at new residential development sites to "normally acceptable" levels; therefore, the residual significance of this impact is significant and unavoidable.

## Summary of Project Alternatives

Below is a summary of the alternatives to the proposed project considered in Section 5, Alternatives to the proposed project.

### No Project/1989 General Plan Alternative

Under No Project/1989 General Plan Alternative, the 1989 General Plan would remain the comprehensive planning document for the City of Mill Valley. The 1989 General Plan requires higher level of service (LOS) values for roadway facilities compared to the 2040 General Plan and does not contain a Climate Action Element. However, there is no significant difference in residential or commercial buildout potential between the two plans.

### Increased Population Alternative

Under the Increased Population Alternative, policies would be added to the 2009–2014 Housing Element and Mill Valley 2040 General Plan ~~to incentivize the development of second units and senior housing units~~ in order to accommodate increased ~~anticipated~~ population growth resulting ~~that results~~ from demographic shifts in Mill Valley.

### Mobility Improvements Alternative

Under the Mobility Improvements Alternative, the 2040 General Plan Mobility Element would be amended to identify various mobility improvements that would allow higher LOS standards to be achieved at three major intersections.

## Areas of Controversy

Pursuant to CEQA Guidelines Section 15123(b), a summary section must address areas of controversy known to the lead agency, including issues raised by agencies and the public, and it must also address issues to be resolved, including the choice among alternatives and whether or how to mitigate the significant effects.

A Notice of Preparation (NOP) for the proposed project was issued on May 2, 2013. The NOP describing the original concept for the project and issues to be addressed in the EIR was distributed to the State Clearinghouse, responsible agencies, and other interested parties for a 30-day public review period extending from May 2, 2013 through May 31, 2013. The NOP identified the potential for significant impacts on the environment related to the following topical areas:

- Aesthetics, Light, and Glare
- Air Quality/Greenhouse Gas Emissions
- Biological Resources
- Cultural Resources
- Geology, Soils, and Seismicity
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use
- Noise
- Public Services, Recreation, and Utilities
- Transportation

### Disagreement Among Experts

This Draft EIR contains substantial evidence to support all the conclusions presented herein. It is possible that there will be disagreement among various parties regarding these conclusions, although the City of Mill Valley is not aware of any disputed conclusions at the time of this writing. Both the CEQA Guidelines and case law clearly provide the standards for treating disagreement among experts. Where evidence and opinions conflict on an issue concerning the environment, and the lead agency knows of these controversies in advance, the EIR must acknowledge the controversies, summarize the conflicting opinions of the experts, and include sufficient information to allow the public and decision makers to make an informed judgment about the environmental consequences of the proposed project.

### Potentially Controversial Issues

Below is a list of potentially controversial issues that may be raised during the public review and hearing process of this Draft EIR:

- Air Quality
- Biological Resources
- Climate Change/Greenhouse Gases
- Land Use
- Level of Service/Mobility
- Population Growth
- Public Services
- Transportation

It is also possible that evidence will be presented during the 45-day, statutory Draft EIR public review period that may create disagreement. Decision makers would consider this evidence during the public hearing process.

In rendering a decision on a project where there is disagreement among experts, the decision makers are not obligated to select the most environmentally preferable viewpoint. Decision makers are vested with the ability to choose whatever viewpoint is preferable and need not resolve a dispute among experts. In their proceedings, decision makers must consider comments received concerning the adequacy of the Draft EIR and address any objections raised in these comments. However, decision makers are not obligated to follow any directives, recommendations, or suggestions presented in comments on the Draft EIR, and can certify the Final EIR without needing to resolve disagreements among experts.

## Public Review of the Draft EIR

Upon completion of the Draft EIR, the City of Mill Valley filed a Notice of Completion (NOC) with the State Office of Planning and Research to begin the public review period (Public Resources Code, Section 21161). Concurrent with the NOC, this Draft EIR was distributed to responsible and trustee agencies, other affected agencies, surrounding cities, and interested parties, as well as all parties requesting a copy of the Draft EIR in accordance with Public Resources Code 21092(b)(3). During the public review period, the Draft EIR, including the technical appendices, is available for review at Mill Valley City Hall and the Mill Valley Public Library. The address for each location is provided below:

Mill Valley City Hall
26 Corte Madera Avenue
Mill Valley, CA 94941
Hours:
Monday–Friday: 8 a.m. to 12 p.m.
1 p.m. to 5 p.m.
(Note that City Hall is closed on alternate Fridays. Please visit the Calendar page of the City's website to determine which Fridays it is open).

Mill Valley Public Library
375 Throckmorton Avenue
Mill Valley, CA 94941
Hours:
Monday–Thursday: 10 a.m. to 9 p.m.
Friday: 12 p.m. to 6 p.m.
Saturday: 10 a.m. to 5 p.m.
Sunday: 1 p.m. to 5 p.m.

The Draft EIR is also posted electronically on the City of Mill Valley's website: www.cityofmillvalley.org /generalplan.

Agencies, organizations, and interested parties have the opportunity to comment on the Draft EIR during the 45-day public review period. Written comments on this Draft EIR should be addressed to:

Mr. Mike Moore, Director of Planning & Building
City of Mill Valley
26 Corte Madera Avenue
Mill Valley, CA 94941
Phone: (415) 388-4033
Fax: (415) 381-1736
Email: mmoore@cityofmillvalley.org

Submittal of electronic comments in Microsoft Word or Adobe PDF format is encouraged. Upon completion of the public review period, written responses to all significant environmental issues

raised will be prepared and made available for review by the commenting agencies at least 10 days prior to the public hearing before the Mill Valley Planning Commission and Mill Valley City Council on the 2040 General Plan, at which the certification of the Final EIR will be considered. Comments received and the responses to comments will be included as part of the record for consideration by decision makers for the project.

## Executive Summary Matrix

Table ES-1 below summarizes the impacts, mitigation measures, and resulting level of significance after mitigation for the relevant environmental issue areas evaluated for the proposed project. The table is intended to provide an overview; narrative discussions for the issue areas are included in the corresponding section of this EIR. Table ES-1 is included in the EIR as required by CEQA Guidelines Section 15123(b)(1).

## Table ES-1: Executive Summary Matrix

| Impacts | Mitigation Measures | Level of Significance After Mitigation |
|---|---|---|
| **Section 3.1 - Aesthetics, Light, and Glare** | | |
| **Impact AES-1:** Implementation of the Mill Valley 2040 General Plan would not have substantial adverse impacts on scenic vistas. | No mitigation is necessary. | Less than significant impact. |
| **Impact AES-2:** Implementation of the Mill Valley 2040 General Plan would not degrade the visual character of the Planning Area or its surroundings. | No mitigation is necessary. | Less than significant impact. |
| **Impact AES-3:** Implementation of the Mill Valley 2040 General Plan would not create new sources of light and glare that may adversely affect views. | No mitigation is necessary. | Less than significant impact. |
| **Section 3.2 - Air Quality/Greenhouse Gases** | | |
| **Impact AIR-1:** Implementation of the 2040 General Plan would not conflict with or obstruct implementation of the applicable air quality plan. | No mitigation is necessary. | Less than significant impact. |
| **Impact AIR-2:** Implementation of the 2040 General Plan would not violate any air quality standard or contribute substantially to an existing or projected air quality violation. | No mitigation is necessary. | Less than significant impact. |
| **Impact AIR-3:** Implementation of the 2040 General Plan may result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors). | No mitigation is necessary. | Less than significant impact. |

## Table ES-1 (cont.): Executive Summary Matrix

| Impacts | Mitigation Measures | Level of Significance After Mitigation |
|---|---|---|
| **Impact AIR-4:** Implementation of the 2040 General Plan would not expose sensitive receptors to substantial pollutant concentrations. | No mitigation is necessary. | Less than significant impact. |
| **Impact AIR-5:** Implementation of the 2040 General Plan would not create objectionable odors affecting a substantial number of people. | No mitigation is necessary. | Less than significant impact. |
| **Impact AIR-6:** Implementation of the 2040 General Plan would not generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment, or conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases. | No mitigation is necessary. | Less than significant impact. |
| **Section 3.3 - Biological Resources** | | |
| **Impact BIO-1:** Implementation of the 2040 General Plan would not have a substantial adverse effect on special-status plant or wildlife species. | No mitigation is necessary. | Less than significant impact. |
| **Impact BIO-2:** Implementation of the 2040 General Plan would not have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service. | No mitigation is necessary. | Less than significant impact. |

## Table ES-1 (cont.): Executive Summary Matrix

| Impacts | Mitigation Measures | Level of Significance After Mitigation |
|---|---|---|
| **Impact BIO-3:** Implementation of the 2040 General Plan would not have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means. | No mitigation is necessary. | Less than significant impact. |
| **Impact BIO-4:** Implementation of the 2040 General Plan would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of wildlife nursery sites. | No mitigation is necessary. | Less than significant impact. |
| **Impact BIO-5:** Implementation of the 2040 General Plan would not conflict with any local policies or ordinances. | No mitigation is necessary. | Less than significant impact. |
| **Section 3.4 - Cultural Resources** | | |
| **Impact CUL-1:** Implementation of the City of Mill Valley 2040 General Plan would not damage or destroy previously undiscovered historic resources. | No mitigation is necessary. | Less than significant impact. |
| **Impact CUL-2:** Implementation of the City of Mill Valley 2040 General Plan would not damage or destroy previously undiscovered archaeological resources. | No mitigation is necessary. | Less than significant impact. |
| **Impact CUL-3:** Implementation of the City of Mill Valley 2040 General Plan would not damage or destroy previously undiscovered paleontological resources. | No mitigation is necessary. | Less than significant impact. |

## Table ES-1 (cont.): Executive Summary Matrix

| Impacts | Mitigation Measures | Level of Significance After Mitigation |
|---|---|---|
| **Impact CUL-4:** Implementation of the City of Mill Valley 2040 General Plan would not damage or destroy previously undiscovered human burial sites. | No mitigation is necessary. | Less than significant impact. |
| **Section 3.5 – Geology, Soils, and Seismicity** | | |
| **Impact GEO-1:** Implementation of the City of Mill Valley 2040 General Plan would not expose people or structures to potential substantial adverse effects associated with seismic hazards. | No mitigation is necessary. | Less than significant impact. |
| **Impact GEO-2:** Implementation of the 2040 General Plan would not result in substantial soil erosion or the loss of topsoil. | No mitigation is necessary. | Less than significant impact. |
| **Impact GEO-3:** Implementation of the City of Mill Valley 2040 General Plan would not expose persons or property to hazards associated with unstable geologic units or soils. | No mitigation is necessary. | Less than significant impact. |
| **Impact GEO-4:** Implementation of the City of Mill Valley 2040 General Plan would not be exposed to unacceptable risks associated with expansive soils. | No mitigation is necessary. | Less than significant impact. |
| **Section 3.6 – Hazards and Hazardous Materials** | | |
| **Impact HAZ-1:** Implementation of the City of Mill Valley 2040 General Plan would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. | No mitigation is necessary. | Less than significant impact. |

## Table ES-1 (cont.): Executive Summary Matrix

| Impacts | Mitigation Measures | Level of Significance After Mitigation |
|---|---|---|
| **Impact HAZ-2:** Implementation of the City of Mill Valley 2040 General Plan would not create significant hazards to the public associated with sites included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. | No mitigation is necessary. | Less than significant impact. |
| **Impact HAZ-3:** Implementation of the City of Mill Valley 2040 General Plan would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. | No mitigation is necessary. | Less than significant impact. |
| **Impact HAZ-4:** Implementation of the City of Mill Valley 2040 General Plan would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. | No mitigation is necessary. | Less than significant impact. |
| **Impact HAZ-5:** Implementation of the City of Mill Valley 2040 General Plan would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires. | No mitigation is necessary. | Less than significant impact. |
| **Section 3.7 – Hydrology and Water Quality** | | |
| **Impact HYD-1:** Implementation of the 2040 General Plan would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade water quality. | No mitigation is necessary. | Less than significant impact. |

## Table ES-1 (cont.): Executive Summary Matrix

| Impacts | Mitigation Measures | Level of Significance After Mitigation |
|---|---|---|
| **Impact HYD-2:** Implementation of the 2040 General Plan would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge. | No mitigation is necessary. | Less than significant impact. |
| **Impact HYD-3:** Implementation of the 2040 General Plan would not substantially alter the existing drainage pattern in a manner which would result in substantial erosion or siltation. | No mitigation is necessary. | Less than significant impact. |
| **Impact HYD-4:** Implementation of the 2040 General Plan would not substantially alter the existing drainage pattern or substantially increase the rate or amount of surface runoff in a manner, which would result in downstream flooding or require new or expanded storm drainage facilities. | No mitigation is necessary. | Less than significant impact. |
| **Impact HYD-5:** Implementation of the 2040 General Plan would not place housing or structures within a 100-year flood hazard area. | No mitigation is necessary. | Less than significant impact. |
| **Impact HYD-6:** Implementation of the 2040 General Plan would not result in inundation by seiche, tsunami, or mudflow. | No mitigation is necessary. | Less than significant impact. |
| **Section 3.8 – Land Use** | | |
| **Impact LU-1:** Implementation of the City of Mill Valley 2040 General Plan would not divide an established community. | No mitigation is necessary. | Less than significant impact. |

## Table ES-1 (cont.): Executive Summary Matrix

| Impacts | Mitigation Measures | Level of Significance After Mitigation |
|---|---|---|
| **Impact LU-2:** Implementation the City of Mill Valley 2040 General Plan would not conflict with applicable plans adopted for the purpose of avoiding or mitigating an environmental effect. | No mitigation is necessary. | Less than significant impact. |
| **Section 3.9 - Noise** | | |
| **Impact NOI-1:** Implementation of the City of Mill Valley 2040 General Plan may expose persons to noise levels in excess of adopted standards for residential uses along major roadways. | No feasible mitigation is available. | Significant unavoidable impact. |
| **Impact NOI-2:** Implementation of the City of Mill Valley 2040 General Plan would not expose persons to excessive vibration levels. | No mitigation is necessary. | Less than significant impact. |
| **Impact NOI-3:** Implementation of the City of Mill Valley 2040 General Plan may expose persons to a permanent increase in ambient noise levels for residential uses along major roadways. | No feasible mitigation is available. | Significant unavoidable impact. |
| **Impact NOI-4:** Implementation of the City of Mill Valley 2040 General Plan would not expose persons to temporary increases in ambient noise levels. | No mitigation is necessary. | Less than significant impact. |
| **Section 3.10 – Public Services and Utilities** | | |
| **Impact PSU-1:** Implementation of the 2040 General Plan would not create a need for new or expanded fire protection or emergency medical services facilities. | No mitigation is necessary. | Less than significant impact. |

## Table ES-1 (cont.): Executive Summary Matrix

| Impacts | Mitigation Measures | Level of Significance After Mitigation |
|---|---|---|
| **Impact PSU-2:** Implementation of the 2040 General Plan would not create a need for new or expanded police protection facilities. | No mitigation is necessary. | Less than significant impact. |
| **Impact PSU-3:** Implementation of the 2040 General Plan would not create a need for new or expanded schools. | No mitigation is necessary. | Less than significant impact. |
| **Impact PSU-4:** Implementation of the 2040 General Plan would not create a need for new or expanded parks, recreation, or other public facilities. | No mitigation is necessary. | Less than significant impact. |
| **Impact PSU-5:** Implementation of the 2040 General Plan would not result in the construction of new or expanded water treatment facilities or require additional supplies or entitlements. | No mitigation is necessary. | Less than significant impact. |
| **Impact PSU-6:** Implementation of the 2040 General Plan would not exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board or result in the construction of new or expanded wastewater treatment facilities. | No mitigation is necessary. | Less than significant impact. |
| **Impact PSU-7:** Implementation of the 2040 General Plan would not result in the construction of new or expanded storm drainage facilities. | No mitigation is necessary. | Less than significant impact. |
| **Impact PSU-8:** Implementation of the 2040 General Plan would not result in a need for additional landfill capacity or conflict with federal, state, and local statutes and regulations related to solid waste. | No mitigation is necessary. | Less than significant impact. |

## Table ES-1 (cont.): Executive Summary Matrix

| Impacts | Mitigation Measures | Level of Significance After Mitigation |
|---|---|---|
| **Impact PSU-9:** Implementation of the 2040 General Plan would not result in inefficient, wasteful, or unnecessary consumption of energy. | No mitigation is necessary. | Less than significant impact. |
| **Section 3.11 – Transportation** | | |
| **Impact TRANS-1:** Implementation of General Plan 2040 would not conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system. | No mitigation is necessary. | Less than significant impact. |
| **Impact TRANS-2:** Implementation of the 2040 General Plan would not conflict with an applicable congestion management program. | No mitigation is necessary. | Less than significant impact. |
| **Impact TRANS-3:** Implementation of the 2040 General Plan would not substantially increase hazards due to a design feature or incompatible uses. | No mitigation is necessary. | Less than significant impact. |
| **Impact TRANS-4:** Implementation of the 2040 General Plan would not result in inadequate emergency access. | No mitigation is necessary. | Less than significant impact. |
| **Impact TRANS-5:** Implementation of the 2040 General Plan would not conflict with plans, programs, or policies intended to support public transit, bicycles, or pedestrians. | No mitigation is necessary. | Less than significant impact. |

# SECTION 1: INTRODUCTION

## 1.1 - Overview of the CEQA Process

This Draft Environmental Impact Report (Draft EIR) is prepared in accordance with the California Environmental Quality Act (CEQA) to evaluate the potential environmental impacts associated with the implementation of the Mill Valley 2040 General Plan (State Clearinghouse No. 2013052005). This document is prepared in conformance with CEQA (California Public Resources Code, Section 21000, et seq.) and the CEQA Guidelines (California Code of Regulations, Title 14, Section 15000, et seq.). This Draft EIR is intended to serve as an informational document for the public agency decision makers and the public regarding the proposed project.

### 1.1.1 - Overview

The proposed project consists of an update the City of Mill Valley General Plan and Housing Element, which were last updated in 1989 and 2003, respectively. The 2040 General Plan and 2009–2014 Housing Element acknowledge that Mill Valley is essentially built out and thus maintains the land use designations and allowable densities set forth within the 1989 General Plan. A key change contained in the Mobility Element of the 2040 General Plan includes amending the minimum Level of Service (LOS) values to accept LOS E-plus conditions at select locations. This change reflects the desire to avoid requiring improvements that may adversely affect other modes of transportation (e.g., bicycles, pedestrians, or transit), or negatively affect the City's character. Finally, the City of Mill Valley intends to use the 2040 General Plan as its Climate Action Plan. Various 2040 General Plan policies and programs that promote greenhouse gas emissions reductions are flagged to denote their significance in terms of assisting the City in meeting its greenhouse gas emissions targets. Section 2, Project Description provides a complete description of the project.

### 1.1.2 - Purpose and Authority

This Draft EIR provides a program-level analysis of the environmental effects of the Mill Valley 2040 General Plan. The environmental impacts of the 2040 General Plan are analyzed in the EIR to the degree of specificity appropriate, in accordance with CEQA Guidelines Section 15146. This document addresses the potentially significant adverse environmental impacts that may be associated with implementation of the 2040 General Plan. It also identifies appropriate and feasible mitigation measures and alternatives that may be adopted to significantly reduce or avoid these impacts.

CEQA requires that an EIR contain, at a minimum, certain specific elements. These elements are contained in this Draft EIR and include:

- Table of Contents
- Introduction
- Executive Summary
- Project Description
- Environmental Setting, Significant Environmental Impacts, and Mitigation Measures
- Cumulative Impacts

- Significant Unavoidable Adverse Impacts
- Alternatives to the Proposed Project
- Growth-Inducing Impacts
- Effects Found Not To Be Significant
- Areas of Known Controversy

### 1.1.3 - Lead Agency Determination

The City of Mill Valley is designated as the lead agency for the project. CEQA Guidelines Section 15367 defines the lead agency as ". . . the public agency, which has the principal responsibility for carrying out or approving a project." Other public agencies may use this Draft EIR in the decision-making or permit process and consider the information in this Draft EIR along with other information that may be presented during the CEQA process.

This Draft EIR was prepared by FirstCarbon Solutions (FCS), an environmental consultant. This Draft EIR reflects the independent judgment and analysis of the City of Mill Valley as required by CEQA. Lists of organizations and persons consulted and the report preparation personnel are provided in Section 8 of this Draft EIR.

## 1.2 - Scope of the EIR

This Draft EIR addresses the potential environmental effects of the 2040 General Plan. The City of Mill Valley issued a Notice of Preparation (NOP) for the 2040 General Plan on May 2, 2013, which circulated between May 2, 2013 and May 31, 2013 for the statutory 30-day public review period. The scope of this Draft EIR includes the potential environmental impacts identified in the NOP and issues raised by agencies and the public in response to the NOP. The NOP is contained in Appendix A of this Draft EIR.

Four comment letters were received in response to the NOP. They are listed in Table 1-1 and provided in Appendix A of this Draft EIR.

**Table 1-1: NOP Comment Letters**

| Status | Affiliation | Signatory | Date |
|---|---|---|---|
| Public Agencies | Governor's Office of Planning and Research, State Clearinghouse and Planning Unit | Scott Morgan, Director | May 2, 2013 |
| | California Department of Transportation, District 4 | Erik Alm, District Branch Chief – Local Development/ Intergovernmental Review | May 17, 2013 |
| | Bay Conservation and Development Commission | Lindsey Fransen, Coastal Planner | May 30, 2013 |
| Private Parties | Mill Valley Streamkeepers | Betsy Bikle, President | May 31, 2013 |
| | Watershed Alliance of Marin | Laura Chariton, Director | May 31, 2013 |
| Source: City of Mill Valley, 2013. | | | |

### 1.2.1 - Scoping Meeting

Pursuant to CEQA Guidelines Section 15082(c)(1), the City of Mill Valley held a public scoping meeting at 6:30 p.m. Tuesday, May 21, 2013 in the Mill Valley City Council Chambers to solicit comments on the scope and content of the EIR.

### 1.2.2 - Environmental Issues Determined Not To Be Significant

The NOP identified topical areas that were determined not to be significant. An explanation of why each area is determined not to be significant is provided in Section 7, Effects Found Not To Be Significant. These topical areas are as follows:

- Agriculture and Forest Resources
- Mineral Resources
- Population and Housing

In addition, certain subjects with various topical areas were determined not to be significant. Other potentially significant issues are analyzed in these topical areas; however, the following issues are not analyzed:

- State Scenic Highways (Section 3.1, Aesthetics, Light, and Glare)
- Conservation Plans (Section 3.3, Biological Resources)
- Septic and Alterative Wastewater Disposal Systems (Section 3.5, Geology, Soils, and Seismicity)
- Airports (Section 3.6, Hazards and Hazardous Materials)
- Private Airstrips (Section 3.6, Hazards and Hazardous Materials)
- Levee or Dam Failure (Section 3.7, Hydrology and Water Quality)
- Conservation Plans (Section 3.8, Land Use)
- Aviation Noise (Section 3.9, Noise)
- Air Traffic Patterns (Section 3.11, Transportation)

An explanation of why each issue is determined not to be significant is provided in Section 7, Effects Found Not To Be Significant.

### Potentially Significant Environmental Issues

The NOP found that the following topical areas may contain potentially significant environmental issues that will require further analysis in the EIR. These sections are as follows:

- Aesthetics, Light, and Glare
- Air Quality/Greenhouse Gas Emissions
- Biological Resources
- Cultural Resources
- Geology, Soils, and Seismicity
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use
- Noise
- Public Services, Recreation, and Utilities
- Transportation

## 1.3 - Organization of the EIR

This Draft EIR is organized into the following main sections:

- **Section ES: Executive Summary.** This section includes a summary of the proposed project and alternatives to be addressed in the Draft EIR. A brief description of the areas of controversy and issues to be resolved, and overview of the Mitigation Monitoring and Reporting Program, in addition to a table that summarizes the impacts, mitigation measures, and level of significance after mitigation, are also included in this section.
- **Section 1: Introduction.** This section provides an introduction and overview describing the purpose of this Draft EIR, its scope and components, and its review and certification process.
- **Section 2: Project Description.** This section includes a detailed description of the proposed project, including its location, site, and project characteristics. A discussion of the project objectives, intended uses of the Draft EIR, responsible agencies, and approvals that are needed for the proposed project are also provided.
- **Section 3: Environmental Impact Analysis.** This section analyzes the environmental impacts of the proposed project. Impacts are organized into major topic areas. Each topic area includes a description of the environmental setting, methodology, significance criteria, impacts, mitigation measures, and significance after mitigation. The specific environmental topics that are addressed within Section 3 are as follows:
  - **Section 3.1 - Aesthetics, Light, and Glare:** Addresses the potential visual impacts of development intensification and the overall increase in illumination as a result of development and land use activities contemplated by the 2040 General Plan.
  - **Section 3.2 - Air Quality/Greenhouse Gas Emissions:** Addresses the potential criteria pollutant and greenhouse gas emissions as a result of development and land use activities contemplated by the 2040 General Plan.
  - **Section 3.3 - Biological Resources:** Addresses the potential impacts on habitat, vegetation, and wildlife as a result of development and land use activities contemplated by the 2040 General Plan.
  - **Section 3.4 - Cultural Resources:** Addresses potential impacts on historical resources, archaeological, paleontological resources, and burial sites as a result of development and land use activities contemplated by the 2040 General Plan.
  - **Section 3.5 - Geology, Soils, and Seismicity:** Addresses potential impacts the project may have on seismic and geologic hazards as a result of development and land use activities contemplated by the 2040 General Plan.
  - **Section 3.6 - Hazards and Hazardous Materials:** Addresses potential impacts on hazards and hazardous materials as a result of development and land use activities contemplated by the 2040 General Plan.
  - **Section 3.7 - Hydrology and Water Quality:** Addresses potential impacts on water quality, drainage, flooding, and other water resource issues as a result of development and land use activities contemplated by the 2040 General Plan.

- **Section 3.8 - Land Use:** Addresses the potential land use impacts associated with division of an established community and consistency with existing land use plans and regulations as a result of development and land use activities contemplated by the 2040 General Plan.
- **Section 3.9 - Noise:** Addresses potential noise impacts on ambient noise levels as a result of development and land use activities contemplated by the 2040 General Plan.
- **Section 3.10 – Public Services, Recreation, and Utilities:** Addresses potential impacts on fire protection, police protection, schools, parks, recreational facilities, water supply, wastewater, solid waste, storm drainage, and energy providers as a result of development and land use activities contemplated by the 2040 General Plan.
- **Section 3.11 - Transportation:** Addresses the impacts on transportation, including intersection operations, emergency access, roadway safety, public transit, bicycles, and pedestrians as a result of development and land use activities contemplated by the 2040 General Plan.

- **Section 4: Cumulative Effects.** This section discusses the cumulative impacts associated with development and land use activities contemplated by the 2040 General Plan in conjunction with past, present, and future projects.
- **Section 5: Alternatives to the Proposed Project.** This section compares the impacts of the proposed project with three project alternatives: the No Project/1989 General Plan Alternative, the Increased Population Alternative, and the Mobility Improvement Alternative. An environmentally superior alternative is identified. In addition, alternatives initially considered but rejected from further consideration are discussed.
- **Section 6: Other CEQA Considerations.** This section provides a summary of significant environmental impacts, including unavoidable and growth-inducing impacts. In addition, the proposed project's energy demand is discussed.
- **Section 7: Effects Found Not To Be Significant.** This section contains analysis of the topical sections not addressed in Section 3.
- **Section 8: Organizations and Persons Consulted/List of Preparers.** This section contains a full list of persons and organizations that were consulted during the preparation of this Draft EIR, as well as the authors who assisted in the preparation of the Draft EIR, by name and affiliation.
- **Section 9: References.** This section contains a full list of references that were used in the preparation of this Draft EIR.
- **Appendices:** This section includes all notices and other procedural documents pertinent to the Draft EIR, as well as all technical material prepared to support the analysis.

## 1.4 - Documents Incorporated by Reference

As permitted by CEQA Guidelines Section 15150, this Draft EIR has referenced several technical studies, analyses, and previously certified environmental documentation. Information from the documents, which have been incorporated by reference, has been briefly summarized in the appropriate section(s). The relationship between the incorporated part of the referenced document

and the Draft EIR has also been described. The documents and other sources that have been used in the preparation of this Draft EIR include but are not limited to:

- City of Mill Valley 1989 General Plan
- City of Mill Valley 1989 General Plan Environmental Impact Report

These documents are specifically identified in Section 9, References, of this Draft EIR. In accordance with CEQA Guidelines Section 15150(b), the 1989 General Plan, the 1989 General Plan EIR, and the referenced documents and other sources used in the preparation of the Draft EIR are available for review at Mill Valley City Hall at the address shown in Section 1.6 below.

## 1.5 - Documents Prepared for the Project

The following technical studies and analyses were prepared for the proposed project:

- Noise Analysis, prepared by Illingworth & Rodkin. This analysis is wholly contained in the 2040 General Plan.
- Traffic Analysis, prepared by Parisi Associates. This analysis is wholly contained in the 2040 General Plan.

## 1.6 - Review of the Draft EIR

Upon completion of the Draft EIR, the City of Mill Valley filed a Notice of Completion (NOC) with the State Office of Planning and Research to begin the public review period (Public Resources Code, Section 21161). Concurrent with the NOC, this Draft EIR was distributed to responsible and trustee agencies, other affected agencies, surrounding cities, and interested parties, as well as all parties requesting a copy of the Draft EIR in accordance with Public Resources Code 21092(b)(3). During the public review period, the Draft EIR, including the technical appendices, is available for review at Mill Valley City Hall and the Mill Valley Public Library. The address for each location is provided below:

Mill Valley City Hall
26 Corte Madera Avenue
Mill Valley, CA 94941
Hours:
Monday – Friday: 8 a.m. to 12 p.m.
1 p.m. to 5 p.m.

(Note that City Hall is closed alternate Fridays. Please visit the Calendar page of the City's website to determine the Fridays on which it is open).

Mill Valley Public Library
375 Throckmorton Avenue
Mill Valley, CA 94941
Hours:
Monday – Thursday: 10 a.m. to 9 p.m.
Friday: 12 p.m. to 6 p.m.
Saturday: 10 a.m. to 5 p.m.
Sunday: 1 p.m. to 5 p.m.

The Draft EIR is also posted electronically on the City of Mill Valley's website: www.cityofmillvalley.org /generalplan.

Agencies, organizations, and interested parties have the opportunity to comment on the Draft EIR during the 45-day public review period. Written comments on this Draft EIR should be addressed to:

Mr. Mike Moore, Director of Planning & Building
City of Mill Valley
26 Corte Madera Avenue
Mill Valley, CA 94941
Phone: (415) 388-4033
Fax: (415) 381-1736
Email: mmoore@cityofmillvalley.org

Submittal of electronic comments in Microsoft Word or Adobe PDF format is encouraged. Upon completion of the public review period, written responses to all significant environmental issues raised will be prepared and made available for review by the commenting agencies at least 10 days prior to the public hearing before the Mill Valley Planning Commission and Mill Valley City Council on the 2040 General Plan, at which the certification of the Final EIR will be considered. Comments received and the responses to comments will be included as part of the record for consideration by decision makers for the 2040 General Plan.

# SECTION 2: PROJECT DESCRIPTION

This Environmental Impact Report (EIR) analyzes the potential environmental effects of the Mill Valley 2040 General Plan in Mill Valley, California.

## 2.1 - Project Location and Setting

### 2.1.1 - Location

The General Plan area consists of the City of Mill Valley, Marin County, California (Exhibit 2-1). The City of Mill Valley is generally bounded by Mount Tamalpais State Park (west); Corte Madera and Kentfield (north); US 101 and Strawberry (east); and the unincorporated communities of Homestead, Tam Valley, and Almonte (south) (Exhibit 2-2) The project site is located on the San Rafael, California, United States Geological Survey 7.5-minute topographic quadrangle map, Township 1 North, Range 7 West, Sections 28 through 33 (Latitude 37°54’22” North; Longitude 122°32’39” West).

### 2.1.2 - Existing Conditions

The City of Mill Valley is located in southern Marin County. Mill Valley is 4.8 square miles in area and ringed by hillsides on its west, north, and south sides, with a valley floor that slopes towards Richardson Bay in the central and eastern portions of the City. The 2010 United States Census estimated Mill Valley’s population to be 13,903. Table 2-1 summarizes the relevant characteristics of Mill Valley.

**Table 2-1: City of Mill Valley Characteristics (2013)**

| Population | Dwelling Units | Owner Occupied Units | Primary Jobs |
|---|---|---|---|
| 13,903 | 6,534 | 65% | 4,360 |
| Source: City of Mill Valley, 2013. | | | |

Development and land use activities in Mill Valley are primarily residential, with commercial uses located in Downtown, Lower Miller Avenue, E. Blithedale/Alto Center, and Redwood Highway Frontage Road. Exhibit 2-3 depicts the existing land use within Mill Valley.

#### 1989 General Plan

The City of Mill Valley prepared its first General Plan in 1975 and later updated it in 1989. The 1989 General Plan was prepared in conjunction with the County of Marin, and its Planning Area included the unincorporated communities of Homestead, Tam Valley, and Almonte. The 1989 General Plan is the currently adopted, citywide planning document for Mill Valley. (Note that the City’s Housing Element was last updated in 2003).

### 2.1.3 - Surrounding Land Uses

#### West

Mount Tamalpais and its associated canyons and ridgelines are located west of the Planning Area. Much of this land is within the boundaries of Mount Tamalpais State Park.

#### North

Foothills and ridgelines associated with the Coast Range are located north of the Planning Area. Further north is the Town of Corte Madera.

#### East

Richardson Bay and its associated tidal flats are located east of the Planning Area.

#### South

Foothills and ridgelines associated with the Coast Range are located south of the Planning Area. Further south are the unincorporated communities of Homestead, Tam Valley, and Almonte.

## 2.2 - Project Characteristics

### 2.2.1 - Proposed 2040 General Plan

#### Overview

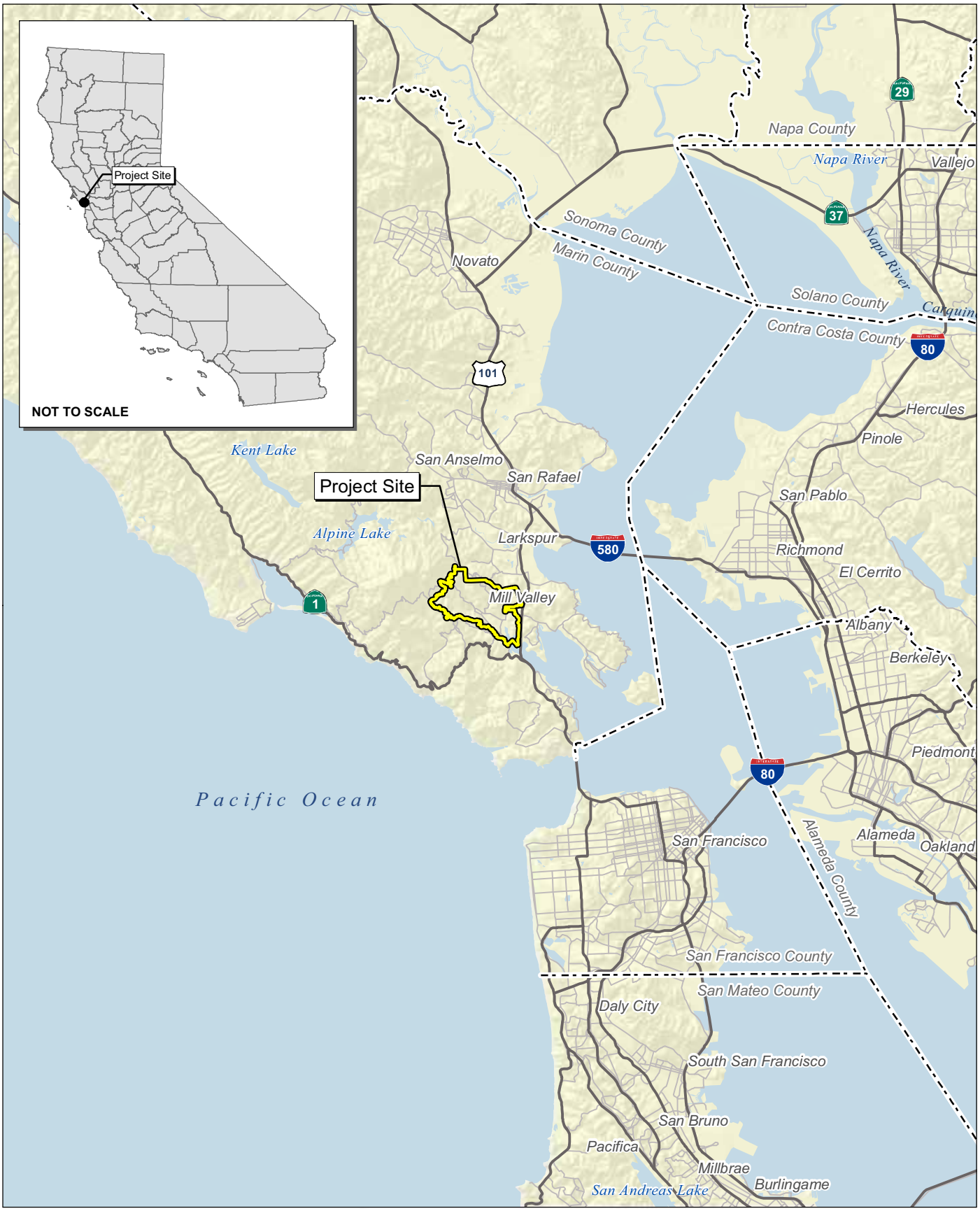
The City of Mill Valley is undertaking an update of its General Plan. The planning horizon for the updated General Plan is 2040 (hence the "2040 General Plan" title). A key difference between the 1989 and 2040 plans is that the latter document will have a smaller planning area that consists of the existing Mill Valley city limits and the portions of the Sphere of Influence that overlap with unincorporated areas served by the Sewerage Agencies of Southern Marin wastewater treatment plant.

#### Elements

The 2040 General Plan contains the following elements:

- Land Use
- Mobility
- Community Vitality
- Natural Environment
- Climate Action
- Hazards and Public Safety
- Noise
- General Plan Administration
- Housing (Under Separate Cover)

Each element begins with a purpose statement and a summary of existing conditions, followed by goals and policies programs for action. Several elements contain a "Trends to Watch" section that outlines relevant data points and forces at work that pertain to Mill Valley. The contents of each element are summarized as follows.




Source: Census 2000 Data, The CaSIL, MBA GIS 2013.

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5 2.5 0 5 Miles

# Exhibit 2-1
# Regional Location Map

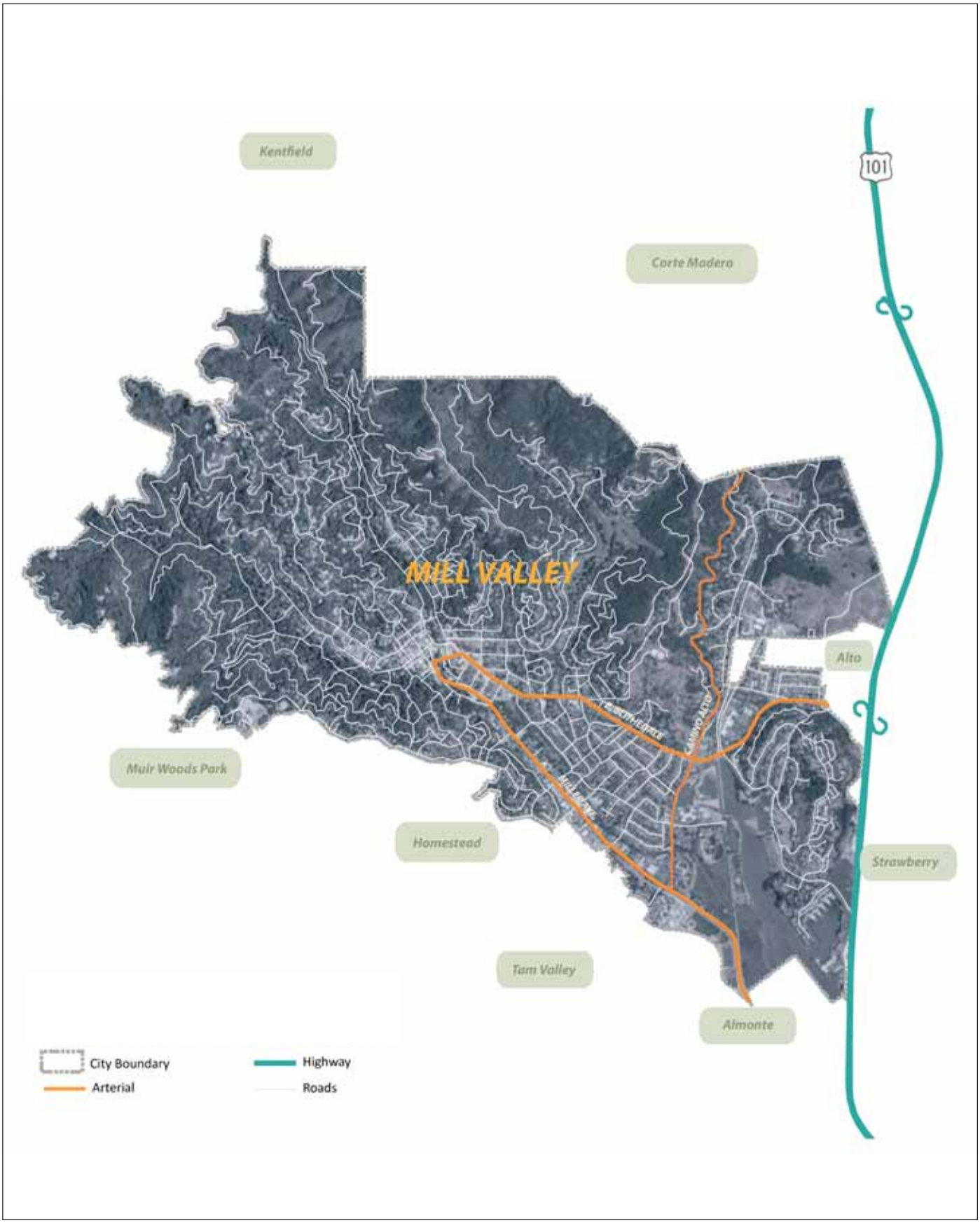


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Exhibit 2-2
Planning Area

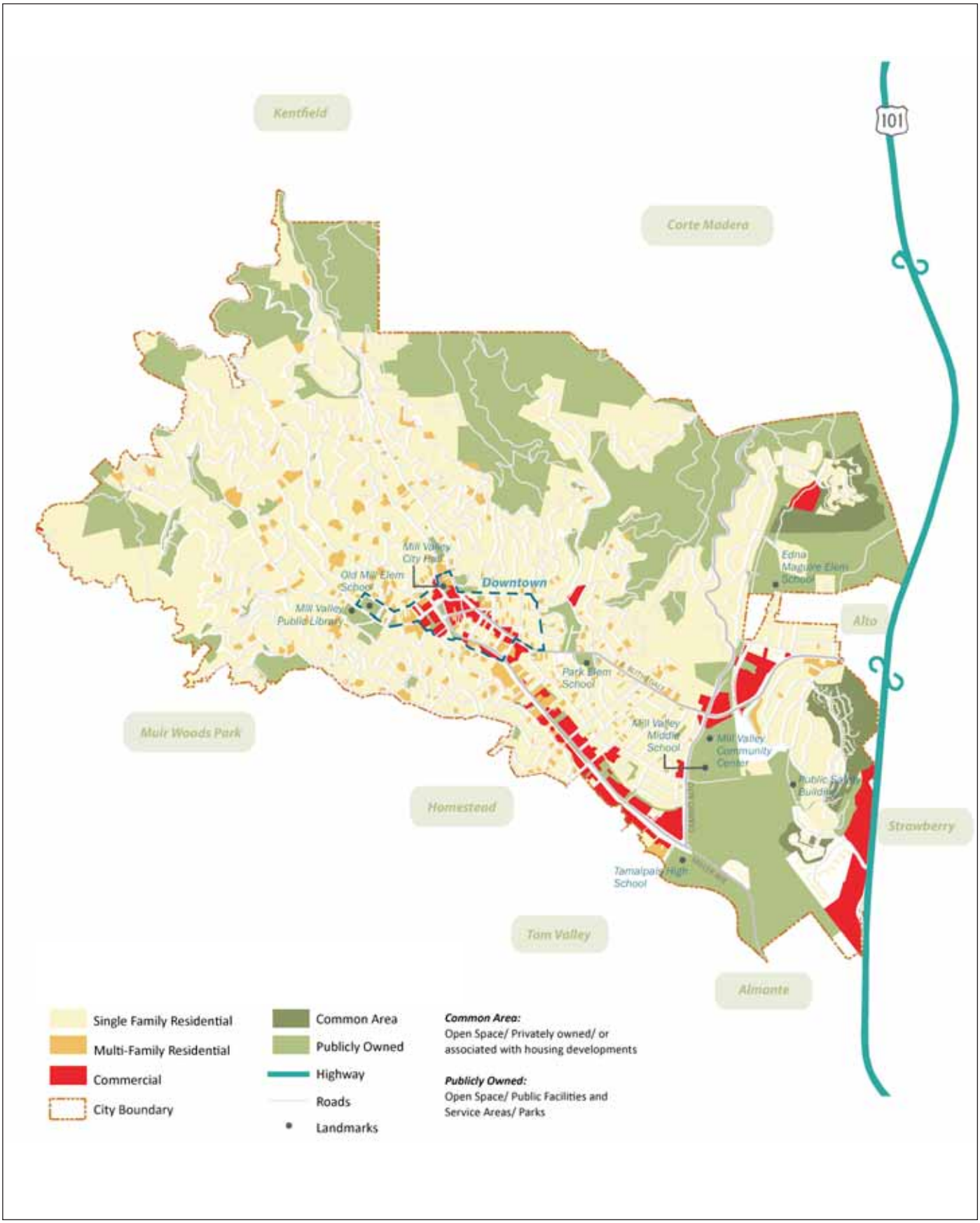


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Exhibit 2-3
Existing Land Use

### *Land Use Element*

Land Use is one of seven General Plan elements mandated by the California Government Code. Although the State General Plan Guidelines indicate that no one element is to be considered more important or more influential than another, the Land Use element is often considered one of the most significant elements of the General Plan because of the importance local communities put on land use decisions and the patterns of growth and development. As such, state law and the General Plan Guidelines suggest that the Land Use Element address a wide variety of topics, including housing, business, industry, open space, recreational facilities, educational facilities, public facilities, areas subject to flooding, water supply, and scenic resources.

The Land Use Element contains the General Plan Land Use Map (General Plan Figure 2.4), which provides an illustration of the contemplated end uses for each individual property within the city limits (e.g., residential, commercial, open space). Note that General Plan policies, zoning regulations, design guidelines, and other standards apply to and influence the final size, scope, and appearance of a development project on a given property. Exhibit 2-4 depicts the Mill Valley 2040 General Plan Land Use Map. The 2040 General Plan acknowledges that Mill Valley is essentially built out and thus maintains the land use designations and allowable densities set forth within the 1989 General Plan.

### *Mobility Element*

The California Government Code mandates that all General Plans include a "Circulation" element that considers major thoroughfares, transit, transportation routes (trucks, bicycles, and pedestrians), parking, and a balanced multi-modal transportation network. The Mill Valley 2040 General Plan uses the term "Mobility" (defined as "the ability to move about") in place of "Circulation" in recognition that it is more reflective of the objective of the element.

The Mobility Element describes Mill Valley's existing roadway, pedestrian and bicycle, and transit and parking conditions; provides forecasts of future multi-modal transportation circulation needs; and considers the variety of travel purposes in Mill Valley, including home to work trips and non-work travel for purposes such as shopping, education, and recreation.

A key change contained in the Mobility Element of the 2040 General Plan includes amending the minimum Level of Service (LOS) values to accept LOS E-plus conditions at E. Blithedale Avenue/Camino Alto, and LOS D at all other signalized intersections. This change reflects the desire to avoid widening intersections in a manner that may adversely affect other modes of transportation (e.g., bicycles, pedestrians, or transit), or negatively affect the City's character. Use of LOS E-plus, which would be unique to Mill Valley, would enable average motorist delays of between 55 and 65 seconds, but not delays between 65 and 80 seconds (LOS E is defined as average delays between 55 and 80 seconds). These conditions would be deemed acceptable during the morning, after-school, and evening one-hour peak traffic periods on weekdays, as well as during peak periods on weekends.

### *Community Vitality*

The Community Vitality Element is intended to further Mill Valley's culture, economic well-being and relationship with its natural setting. This element, which is an elective element, is intended to promote the fiscal health of Mill Valley while also encouraging physical health and cultural vibrancy.

Subjects addressed in the Community Vitality Element include parks, recreational facilities, community facilities, and arts and culture.

### *Natural Environment*

The California Government Code mandates that all General Plans include a "Conservation and Open Space" element that considers conservation of water resources, soils, forests, wildlife, and open space. The Mill Valley 2040 General Plan uses the term "Natural Environment" for this required element. Subjects addressed in the Natural Environment Element include watersheds (including creeks and waterways), tidal and marsh areas, vegetation, soils, sensitive plant and wildlife species, and open space.

### *Climate Action Element*

The City of Mill Valley intends to use the 2040 General Plan as its Climate Action Plan. Various 2040 General Plan policies and programs that promote greenhouse gas emissions reductions are flagged to denote their significance in terms of assisting the City in meeting its greenhouse gas emissions targets. The City of Mill Valley's has two adopted greenhouse gas reduction targets: (1) reduce community emissions by 15 percent relative to 2005 levels by 2020; and (2) reduce government operations emissions by 20 percent relative to 2005 levels by 2020. In addition to the greenhouse gas reduction measures, the 2040 General Plan also identifies climate change adaptation strategies to address potential effects such as sea level rise.

### *Hazards and Public Safety*

The California Government Code mandates that all General Plans include a "Safety" element that considers risks associated with seismic events, landslides, subsidence and liquefaction, flooding, and wildland fires. The Mill Valley 2040 General Plan uses the term "Hazards and Public Safety" for this required element. Subjects addressed in the Hazards and Public Safety Element include earthquakes, ground shaking, liquefaction, landslides, tsunamis, flooding, wildland fires, public health, police services, and emergency evacuation.

### *Noise*

The California Government Code mandates that all General Plans include a "Noise" element that identifies and appraises noise problems in a community. The Noise Element is required to recognize the guidelines established by the Office of Noise Control in the State Department of Health Services and analyze and quantify, to the extent practicable, current and projected noise levels for highways/freeways, arterials and major local streets, railroads, aviation facilities, industrial land uses, and other stationary noise sources.

The 2040 General Plan Noise Element includes a noise survey that was completed in January 2013 that provides existing (baseline) noise levels from all relevant significant noise sources within Mill Valley. These measurements were used as the basis for developing noise contour maps showing noise levels in relation to their source. Additionally, noise contours for Year 2035 were developed showing future noise exposure levels in Mill Valley. The 2040 General Plan sets for goals, policies, and programs to promote land use compatibility in a manner than minimizes adverse noise exposure.

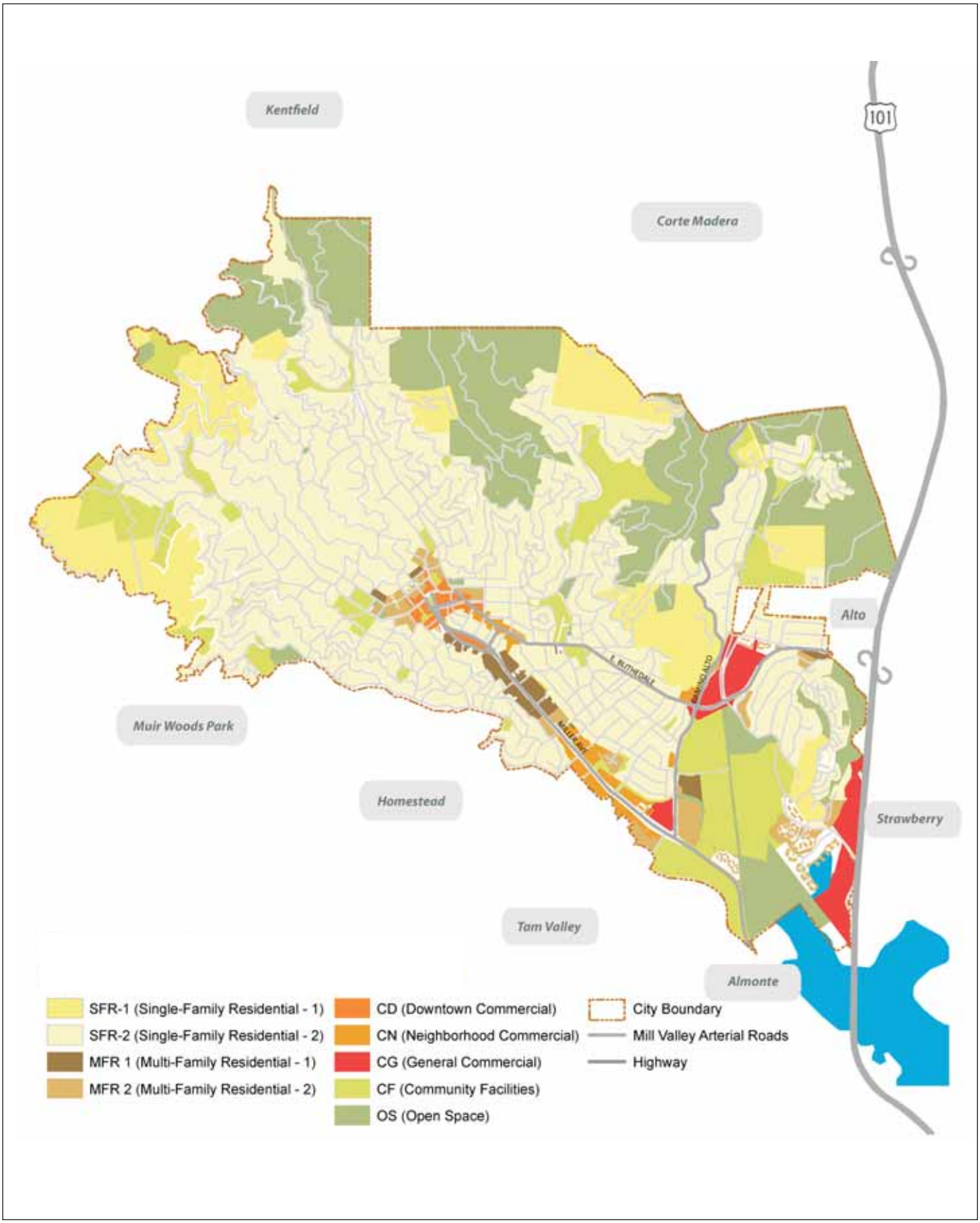



Exhibit 2-4
Mill Valley 2040 General Plan
Land Use Designations

### *General Plan Administration*

The General Plan Administration Element outlines the processes by which the General Plan will be reviewed on an annual basis to ensure that it is responsive to changes that have occurred over time. The element outlines the schedule for a 5-year review and update of the General Plan and the process for reviewing a proposed General Plan Amendment.

### *2009–2014 Housing (Under Separate Cover)*

The California Government Code mandates that all General Plans include a "Housing" element that establishes housing objectives, policies, and programs in response to community housing conditions and needs. State law mandates that jurisdictions update their Housing Elements on a regular basis. Mill Valley last updated its Housing Element in 2003. The proposed 2009–2014 Housing Element outlines the following strategies for achieving compliance with state law:

- Facilitating mixed-use and multi-family infill in commercial districts through elimination of Conditional Use Permit requirements, establishment of well-defined multi-family development standards and guidelines, and creation of modified parking standards;
- Establishment of an Affordable Housing Overlay for the Redwoods Retirement Community with height and parking incentives to facilitate their planned development of 49 independent living units for lower income seniors;
- Strengthening the City's inclusionary housing program and evaluating the establishment of a housing impact fee, similar to Marin County; and
- Review and refinement of the second unit ordinance as informed by a survey of current second unit occupants, and initiation of another amnesty program.

Based on the aforementioned strategies, Table 2-2 identifies the City of Mill Valley's quantified objectives for the 2009–2014 Housing Element planning period.

**Table 2-2: Housing Element Objectives**

| Income Level | New Construction Objectives | Rehabilitation Objectives | Conservation Objectives |
|---|---|---|---|
| Extremely Low (0 to 30 percent of Annual Median Income) | 37 | 2 | 177 |
| Very Low (31 to 50 percent of Annual Median Income) | 37 | 3 | |
| Low (51 to 80 percent of Annual Median Income) | 54 | — | 127 |
| Moderate (81 to 120 percent of Annual Median Income) | 68 | — | 4 |

**Table 2-2: (cont.): Housing Element Objectives**

| Income Level | New Construction Objectives | Rehabilitation Objectives | Conservation Objectives |
|---|---|---|---|
| Above Moderate (More than 120 percent of Annual Median Income) | 96 | — | — |
| **Total** | **292** | **5** | **308** |

Notes:
Rehabilitation objectives are based on a goal to assist five households through Marin Housing's Rehabilitation Loan Program.
Conservation objectives reflect preservation of 308 existing rent-restricted units in publicly assisted projects owned by non-profits or Marin Housing Authority, and affordable rental units provided through the City's inclusionary housing program.
Source: City of Mill Valley, 2013.

Between January 1, 2007 and December 1, 2012, Mill Valley issued 140 building permits for new dwelling units.

In accordance with state law, the Housing Element evaluated potential sites to accommodate new dwelling units. The analysis found that residential-zoned sites could support 146 new dwelling units. Additionally, with the elimination of the Conditional Use Permit requirement for dwelling units on commercial-zoned sites, an estimated 239 dwelling units could be supported within these areas.

## 2.3 - Project Objectives

The objectives of the proposed 2040 General Plan are to:

1. Provide a user-friendly General Plan that guides policy making and actions that are consistent with identified community values and Mill Valley's small-town character.
2. Provide a comprehensive update of the City of Mill Valley in accordance with state law.
3. Revise and update the General Plan map, policies, and text to reflect changes that have occurred since the plan was last comprehensively updated.
4. Maintain the existing land use pattern of Mill Valley in a manner that respects the existing mostly built-out character of the community, but also allowing development where appropriate.
5. Recognize lower Level of Service values at select locations in order to avoid requiring improvements that may adversely affect other modes of transportation or negatively affect the City's small-town character.
6. Use the General Plan as a vehicle to implement a Climate Action Plan that will guide the City of Mill Valley in meeting its greenhouse gas reduction targets.
7. Achieve a certified Housing Element that meets state and regional housing requirements without diminishing local control or Mill Valley's small-town character.

## 2.4 - Intended Uses of This Draft EIR

This Draft EIR is being prepared by the City of Mill Valley to assess the potential environmental impacts that may arise in connection with actions related to implementation of the proposed project. Pursuant to CEQA Guidelines Section 15367, the City of Mill Valley is the lead agency for the proposed project and has discretionary authority over the proposed project and project approvals.

### 2.4.1 - Discretionary and Ministerial Actions

Discretionary approvals and permits are required by the City of Mill Valley for implementation of the proposed project. The project application would require the following discretionary approvals and actions, including:

- EIR Certification – City Council
- General Plan Adoption and 2009–2014 Housing Element Adoption – City Council

Furthermore, the 2040 General Plan EIR is intended to provide coverage for the following activities that would occur concurrent with or after adoption:

- Municipal Code revisions, particularly revisions to the Zoning Ordinance
- Housing Element update (2014–2022)

### 2.4.2 - Responsible and Trustee Agencies

A number of other agencies in addition to the City of Mill Valley will serve as Responsible and Trustee Agencies, pursuant to CEQA Guidelines Section 15381 and Section 15386, respectively. This Draft EIR will provide environmental information to these agencies and other public agencies, which may be required to grant approvals or coordinate with other agencies, as part of 2040 General Plan implementation. These agencies may include but are not limited to the following.

- Marin Local Agency Formation Commission
- Sewerage Agencies of Southern Marin

# SECTION 3: ENVIRONMENTAL IMPACT ANALYSIS

## Organization of Issue Areas

This Draft Environmental Impact Report (Draft EIR) provides analysis of impacts for those environmental topics where it was determined in the Notice of Preparation, or through subsequent analysis that the proposed project would result in "potentially significant impacts." Sections 3.1 through 3.11 discuss the environmental impacts that may result with approval and implementation of the proposed project.

## Issues Addressed in this EIR

The following environmental issues are addressed in Section 3:

- Aesthetics, Light, and Glare
- Air Quality/Greenhouse Gas Emissions
- Biological Resources
- Cultural Resources
- Geology, Soils, and Seismicity
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use
- Noise
- Public Services, Recreation, and Utilities
- Transportation

Each environmental issue area in Sections 3.1 through 3.11 contains a description of:

1. The environmental setting as it relates to the specific issue
2. The regulatory framework governing that issue
3. The methodology used in identifying the issues
4. The significance criteria
5. An evaluation of the project-specific impacts and identification of mitigation measures
6. A determination of the level of significance after mitigation measures are implemented

## Level of Significance

Determining the severity of project impacts is fundamental to achieving the objectives of CEQA. CEQA Guidelines Section 15091 requires that decision makers mitigate, as completely as is feasible, the significant impacts identified in the Final EIR. If the EIR identifies any significant unmitigated impacts, CEQA Guidelines Section 15093 requires decision makers in approving a project to adopt a statement of overriding considerations that explains why the benefits of the project outweigh the adverse environmental consequences identified in the EIR.

The level of significance for each impact examined in this Draft EIR was determined by considering the predicted magnitude of the impact against the applicable threshold. Thresholds were developed using criteria from the CEQA Guidelines and checklist; state, federal, and local regulatory schemes; local/regional plans and ordinances; accepted practice; consultation with recognized experts; and other professional opinions.

## Impact Analysis and Mitigation Measure Format

The format adopted in this EIR to present the evaluation of impacts is described and illustrated below.

**Summary Heading of Impact**

| | |
|---|---|
| **Impact AES-1:** | **An impact summary heading appears immediately preceding the impact description (Summary Heading of Impact in this example). The impact abbreviation identifies the section of the report (AES for Aesthetics, Light, and Glare in this example) and the sequential order of the impact (1 in this example) within that section. To the right of the impact number is the impact statement, which identifies the potential impact.** |

### *Impact Analysis*

A narrative analysis follows the impact statement.

### *Significance Before Mitigation*

This section identifies the level of significance of the impact before any mitigation is proposed.

### *Mitigation Measures*

In some cases, following the impact discussion, reference is made to state and federal regulations and agency policies that would fully or partially mitigate the impact. In addition, policies and programs from applicable local land use plans that partially or fully mitigate the impact may be cited.

Project-specific mitigation measures, beyond those contained in other documents, are set off with a summary heading and described using the format presented below:

**MM AES-1a** Project-specific mitigation is identified that would reduce the impact to the lowest degree feasible. The mitigation number links the particular mitigation to the impact with which it is associated (**AES-1** in this example); the letter identifies the sequential order of that mitigation for that impact (**a** in this example).

### *Significance After Mitigation*

This section identifies the resulting level of significance of the impact following mitigation.

Abbreviations used in the mitigation measure numbering are:

| Code | Environmental Issue |
|---|---|
| AES | Aesthetics, Light, and Glare |
| AIR | Air Quality/Greenhouse Gas Emissions |
| BIO | Biological Resources |
| CUL | Cultural Resources |
| GEO | Geology, Soils, and Seismicity |
| HAZ | Hazards and Hazardous Materials |
| HYD | Hydrology and Water Quality |
| LU | Land Use |
| NOI | Noise |
| PSU | Public Services, Recreation and Utilities |
| TRANS | Transportation |

# 3.1 - Aesthetics, Light, and Glare

## 3.1.1 - Introduction

This section describes the existing aesthetics, light, and glare setting and potential effects from the City of Mill Valley 2040 General Plan implementation on the Planning Area and surroundings.

## 3.1.2 - Environmental Setting

### Aesthetic Character

#### *Regional Setting*

Mill Valley is located in Marin County, which is part of the larger nine-county San Francisco Bay Area region. Marin County has a total population of approximately 254,000 persons as estimated by the California Department of Finance. The California Department of Conservation Farmland Mapping and Monitoring Program indicates that urban land uses within Marin County occupy 42,341 acres or 11 percent of the 378,662 total acres within the County. The balance of the area is committed to agricultural, grazing land, or open space use.

Topographically, Marin County is characterized by coastal and inland valleys and foothills ranging from 1,000 to 3,000 feet in elevation. Mt. Tamalpais, protected as a State Park, is the most prominent topographical feature in Marin County, reaching 2,574 feet above mean sea level. A significant amount of undeveloped land (including ridgelines) within Marin County is in public ownership, of which the National Park Service, State of California, and Marin County Water District are three of the largest landowners.

#### *Local Setting*

Mill Valley is 4.8 square miles with a population of approximately 13,900 residents. Mill Valley is bounded by the hillsides and steep ridges of the coastal mountains and the water of Richardson Bay, which form natural edges to urban growth. Many of the ridgelines that create the dominant visual backdrop for the community are preserved as open space. Similarly, much of the bayfront lands have been preserved as park and open space. Creeks, marshes, redwood groves, heavily forested and grass-covered hillsides, and chaparral are commonplace. Single-family residential neighborhoods are located in the valleys and on the hillsides, with commercial and more intensive residential uses clustered on the flat low lands. Overall, the compact urban footprint and natural setting that forms the edges of the community serve to create a small-town character. Exhibit 3.1-1 depicts the protected lands and topography within Mill Valley.

### Light and Glare

The Mill Valley City limits contain numerous sources of light and glare. Examples of light and glare include streetlights, freestanding lights, building-mounted lights, illuminated signage, reflective building materials, and vehicular headlights. The undeveloped portions of the Planning Area contain few, if any sources of light and glare.

## 3.1.3 - Regulatory Framework

### Local

#### *City of Mill Valley*

*2040 General Plan*

The proposed 2040 General Plan sets forth the following goals and policies that are relevant to aesthetics, light, and glare:

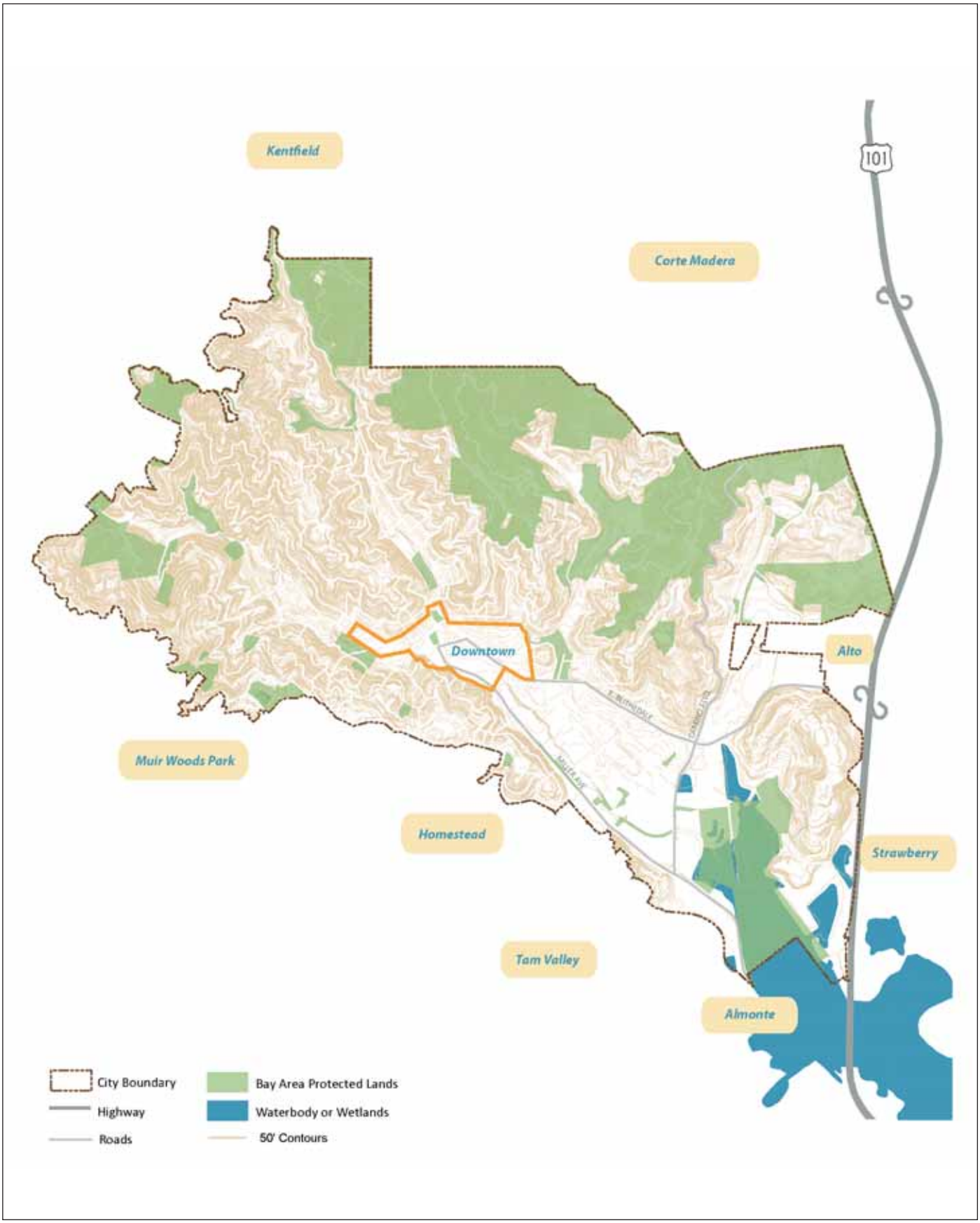
- **Goal LU.1 Community Character:** Protect and enhance the natural beauty and small town character of Mill Valley.
- **Policy LU-1 Residential Development:** Residential development shall be compatible with, integrated into, and subordinate to its natural setting.
- **Policy LU-2 Commercial Development:** Provide commercial services in a convenient, safe and attractive environment that complements the residential character of Mill Valley, supports local business development and growth, and strengthens the sense of community.
- **Goal LU.2 Downtown:** Maintain Downtown Mill Valley as one of the social, commercial, intellectual, cultural, and entertainment centers of the community.
- **Policy LU-3 Community Gathering Space:** Sustain a diverse array of functions – shopping, dining, services, community events, entertainment, and recreation – that will continue to attract locals and visitors to the downtown area.
- **Policy LU-4 Good Neighbor Policy:** Establish clear and consistent "good neighbor" practices (e.g. noise, litter, waste disposal, customer conduct, etc.) for all businesses operating adjacent to established residential uses and make sure that property owners, businesses owners, and residents acknowledge those practices and the operational commitment they represent.
- **Goal LU.3 Commercial Areas:** Enhance the city's principal commercial areas (Downtown, Miller Avenue, Highway 101, East Blithedale/Alto Center).
- **Policy LU-5 Coordinated Strategy:** Work with commercial property owners and the Chamber of Commerce to create and implement a commercial development strategy for the city's principal commercial areas that makes the most of their distinctive locations, amenities, and uses and results in a complete and complementary range of goods and services in the community.

*Zoning Ordinance*

The Zoning Ordinance, Title 20 of the Mill Valley Municipal Code, establishes development standards for each zoning district. Development standards include lot size standards, height limits, setbacks, building coverage standards, parking requirements, and landscaping requirements. New development applications within each zoning district~~s~~ are assessed against the applicable development standards.

*Residential Design Guidelines*

The City of Mill Valley has adopted Residential Design Guidelines that facilitate appropriate and environmentally sensitive residential development. Although the Design Guidelines are not legally binding, applicants proposing new residential development or remodels are encouraged to review them in order to better communicate concerns; set expectations; and meet goals within organized, clear, and balanced parameters.




FirstCarbon® SOLUTIONS

Exhibit 3.1-1
Protected Lands & Topography

## 3.1.4 - Methodology

FirstCarbon Solutions evaluated potential impacts on aesthetics, light, and glare through review of the existing 1989 General Plan and proposed 2040 General Plan, aerial photographs, and land use data provided by the California Department of Conservation Farmland Mapping and Monitoring Program.

## 3.1.5 - Thresholds of Significance

According to Appendix G, Environmental Checklist of the CEQA Guidelines, aesthetics impacts resulting from the implementation of the proposed project would be considered significant if the project would:

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

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic building within a state scenic highway? (Refer to Section 7, Effects Found Not To Be Significant.)

c) Substantially degrade the existing visual character or quality of the site and its surroundings?

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

## 3.1.6 - Project Impacts and Mitigation Measures

### Scenic Vistas

| | |
|---|---|
| **Impact AES-1:** | **Implementation of the Mill Valley 2040 General Plan would not have substantial adverse impacts on scenic vistas.** |

***Impact Analysis***

Exhibit 3.1-1 depicts the protected lands and topography within Mill Valley. As illustrated in the exhibit, most of the resources consist of hillsides to the west and north of the city, along with the shoreline along Richardson Bay.

The 2040 General Plan maintains existing land use patterns and designations within the existing City limits. No changes in planned land use would occur within any of the areas designated as resources on Exhibit 3.1-1.

Furthermore, the 2040 General Plan sets forth Goal LU-1 and Policy LU-1 that establish objectives associated with protection of natural beauty and resources and compatibility between residential development and its natural surroundings.

Therefore, based on existing regulatory requirement and the policies contained within the proposed 2040 General Plan and the preservation of existing land use patterns, there is certainty that future

development and land use activities that occur within Mill Valley would not have significant adverse effects on a scenic vista. Impacts would be less than significant.

### *Level of Significance Before Mitigation*
Less than significant impact.

### *Mitigation Measures*
No mitigation is necessary.

### *Level of Significance After Mitigation*
Less than significant impact.

## Visual Character

| | |
|---|---|
| **Impact AES-2:** | **Implementation of the Mill Valley 2040 General Plan would not degrade the visual character of the Planning Area or its surroundings.** |

### *Impact Analysis*
Urban development is generally concentrated within the valley floor and lower slopes of the hillsides, with the upper slopes and bay lands permanently protected as open space. As illustrated in Exhibit 3.1-1, most of the protected resources within the Planning Area consist of hillsides to the west and north of the city, along with the shoreline along Richardson Bay.

The 2040 General Plan maintains existing land use patterns and designations within the existing City limits. No changes in planned land use would occur within any of the areas designated as resources on Exhibit 3.1-1.

Furthermore, the 2040 General Plan establishes several goals and policies that pertain to the protection of visual resources. Goals LU-1 through LU-3 and Policies LU-1 through LU-5 establish objectives associated with protection of natural beauty and resources, compatibility between residential development and its natural surroundings, promoting a visually appealing and vibrant downtown area, and enhancing the visual quality of commercial development.

Therefore, based on existing regulatory requirement and the policies contained within the proposed 2040 General Plan and the preservation of existing land use patterns, there is certainty that future development and land use activities that occur within Mill Valley would not have significant adverse effects on visual character. Impacts would be less than significant.

### *Level of Significance Before Mitigation*
Less than significant impact.

### *Mitigation Measures*
No mitigation is necessary.

### *Level of Significance After Mitigation*
Less than significant impact.

## Light and Glare

**Impact AES-3: Implementation of the Mill Valley 2040 General Plan would not create new sources of light and glare that may adversely affect views.**

### *Impact Analysis*

The Mill Valley city limits contain numerous sources of light and glare. Examples of light and glare include streetlights, freestanding lights, building-mounted lights, illuminated signage, reflective building materials, and vehicular headlights. The undeveloped portions of the Planning Area contain few, if any sources of light and glare.

The 2040 General Plan maintains existing land use patterns and designations within the existing City limits. No changes in planned land use would occur within any of the areas designated as resources on Exhibit 3.1-1. As such, no new substantial sources of light and glare would be introduced into protected areas.

Furthermore, the 2040 General Plan establishes several goals and policies that pertain to the protection of visual resources. Policies LU-1 and Policy LU-4 establish objectives associated with compatibility between residential development and its natural surroundings and promoting land use compatibility between commercial and residential land uses within the downtown area. Land use compatibility includes appropriate levels of lighting; thus, these policies would serve to minimize adverse impacts associated with the introduction of new sources of light and glare.

Therefore, based on existing regulatory requirement and the policies contained within the proposed 2040 General Plan and the preservation of existing land use patterns, there is certainty that future development and land use activities that occur within Mill Valley would not have significant adverse impacts associated with light and glare. Impacts would be less than significant.

### *Level of Significance Before Mitigation*

Less than significant impact.

### *Mitigation Measures*

No mitigation is necessary.

### *Level of Significance After Mitigation*

Less than significant impact.

# 3.2 - Air Quality/Greenhouse Gas Emissions

This section describes the existing transportation setting and potential effects from the 2040 General Plan implementation on the Planning Area and surroundings.

## 3.2.1 - Environmental Setting

### Air Basin

Mill Valley is located in the San Francisco Bay Area Air Basin (Air Basin). The Air Basin consists of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, and Santa Clara Counties; the western portion of Solano County; and the southern portion of Sonoma County. The local agency with jurisdiction over air quality in the Basin is the Bay Area Air Quality Management District (BAAQMD).

### Air Pollutants

For reasons described below in the Regulatory Framework section, the criteria pollutants of greatest concern for the project area are ozone, $PM_{10}$, and $PM_{2.5}$. Carbon monoxide is of less concern in the Basin because it is classified as an attainment area. Table 3.2-1 summarizes the most relevant effects from exposure, the properties, and the sources of the pollutants. Also shown are national and California ambient air quality standards.

### Local Air Quality

Meteorology acts on the emissions released into the atmosphere to produce pollutant concentrations. These airborne pollutant concentrations are measured throughout California at air quality monitoring sites. The California Air Resources Board (ARB) operates a statewide network of monitors. Data from this network are supplemented with data collected by local air districts, other public agencies, and private contractors. There are more than 250 criteria pollutant monitoring sites in California. Each year, more than 10 million air quality measurements from all of these sites are collected and stored in a comprehensive air quality database maintained by ARB.

The air quality monitoring station closest to Mill Valley is located in San Rafael. This station monitors ozone and particulate matter. Table 3.2-2 summarizes 2010 to 2012 published monitoring data. The data shows that only the federal standard $PM_{2.5}$ was exceeded on 1 day and the state standards for $PM_{2.5}$ and $PM_{10}$ were exceeded on 1 day and 12 days, respectively, during the 3-year period.

## Table 3.2-1: Air Pollutants

| Air Pollutant | Averaging Time | California Standard | National Standard[a] | Most Relevant Effects from Pollutant Exposure | Properties | Sources |
|---|---|---|---|---|---|---|
| Ozone | 1 Hour | 0.09 ppm | — | (a) Decrease of pulmonary function and localized lung edema in humans and animals, (b) risk to public health implied by alterations in pulmonary morphology and host defense in animals, (c) increased mortality risk, (d) risk to public health implied by altered connective tissue metabolism and altered pulmonary morphology in animals after long-term exposures and pulmonary function decrements in chronically exposed humans, (e) vegetation damage, (f) property damage. | Ozone is a photochemical pollutant as it is not emitted directly into the atmosphere, but is formed by a complex series of chemical reactions between reactive organic gases, $NO_x$, and sunlight. Ozone is a regional pollutant that is generated over a large area and is transported and spread by the wind. | Ozone is a secondary pollutant; thus, it is not emitted directly into the lower level of the atmosphere. The primary sources of ozone precursors (ROG and $NO_x$) are mobile sources (on-road and off-road vehicle exhaust). |
| | 8 Hour | 0.070 ppm | 0.075 ppm | | | |
| Carbon monoxide (CO) | 1 Hour | 20 ppm | 35 ppm | (a) Aggravation of angina pectoris (chest pain) and other aspects of coronary heart disease, (b) decreased exercise tolerance in persons with peripheral vascular disease and lung disease, (c) impairment of central nervous system functions, (d) possible increased risk to fetuses. | CO is a colorless, odorless, toxic gas. CO is somewhat soluble in water; therefore, rainfall and fog can suppress CO conditions. CO enters the body through the lungs, dissolves in the blood, replaces oxygen as an attachment to hemoglobin, and reduces available oxygen in the blood. | CO is produced by incomplete combustion of carbon-containing fuels (e.g., gasoline, diesel fuel, and biomass). Sources include motor vehicle exhaust, industrial processes (metals processing and chemical manufacturing), residential wood burning, and natural sources. |
| | 8 Hour | 9.0 ppm | 9 ppm | | | |

## Table 3.2-1 (cont.): Air Pollutants

| Air Pollutant | Averaging Time | California Standard | National Standard[a] | Most Relevant Effects from Pollutant Exposure | Properties | Sources |
|---|---|---|---|---|---|---|
| Nitrogen dioxide[c] ($NO_2$) | 1 Hour | 0.18 ppm | 0.100 ppm | (a) Potential to aggravate chronic respiratory disease and respiratory symptoms in sensitive groups, (b) risk to public health implied by pulmonary and extra-pulmonary biochemical and cellular changes and pulmonary structural changes, (c) contribution to atmospheric discoloration. | During combustion of fossil fuels, oxygen reacts with nitrogen to produce nitrogen oxides - $NO_x$ (NO, $NO_2$, $NO_3$, $N_2O$, $N_2O_3$, $N_2O_4$, and $N_2O_5$). $NO_x$ is a precursor to ozone, $PM_{10}$, and PM2.5 formation. $NO_x$ can react with compounds to form nitric acid and related particles. | $NO_x$ is produced in motor vehicle internal combustion engines and fossil fuel-fired electric utility and industrial boilers. $NO_2$ concentrations near major roads can be 30 to 100 percent higher than those at monitoring stations. |
| | Annual | 0.030 ppm | 0.053 ppm | | | |
| Sulfur dioxide ($SO_2$) | 1 Hour | 0.25 ppm | 0.075 ppm[d] | Bronchoconstriction accompanied by symptoms which may include wheezing, shortness of breath and chest tightness, during exercise or physical activity in persons with asthma. Some population-based studies indicate that the mortality and morbidity effects associated with fine particles show a similar association with ambient sulfur dioxide levels. It is not clear whether the two pollutants act synergistically or one pollutant alone is the predominant factor. | Sulfur dioxide is a colorless, pungent gas. At levels greater than 0.5 ppm, the gas has a strong odor, similar to rotten eggs. Sulfur oxides ($SO_x$) include sulfur dioxide and sulfur trioxide. Sulfuric acid is formed from sulfur dioxide, which can lead to acid deposition and can harm natural resources and materials. Although sulfur dioxide concentrations have been reduced to levels well below state and national standards, further reductions are desirable because sulfur dioxide is a precursor to sulfate and $PM_{10}$. | Human caused sources include fossil-fuel combustion, mineral ore processing, and chemical manufacturing. Volcanic emissions are a natural source of sulfur dioxide. The gas can also be produced in the air by dimethylsulfide and hydrogen sulfide. Sulfur dioxide is removed from the air by dissolution in water, chemical reactions, and transfer to soils and ice caps. The sulfur dioxide levels in the State are well below the maximum standards. |
| | 3 Hour1 | — | 0.5 ppm | | | |
| | 24 Hour | 0.04 ppm | 0.14 ppm | | | |
| | Annual | — | 0.030 ppm | | | |
| Particulate matter ($PM_{10}$) | 24 hour | 50 µg/m$^3$ | 150 µg/m$^3$ | (a) Exacerbation of symptoms in sensitive patients with respiratory or cardiovascular | Suspended particulate matter is a mixture of small particles that consist of dry solid fragments, | Stationary sources include fuel combustion for electrical utilities, residential space heating, and |
| | Mean | 20 µg/m$^3$ | — | | | |

## Table 3.2-1 (cont.): Air Pollutants

| Air Pollutant | Averaging Time | California Standard | National Standard[a] | Most Relevant Effects from Pollutant Exposure | Properties | Sources |
|---|---|---|---|---|---|---|
| Particulate matter ($PM_{2.5}$) | 24 Hour | — | 35 µg/m$^3$ | | | |
| | Annual | 12 µg/m$^3$ | 15.0 µg/m$^3$ | | | |
| Sulfates | 24 Hour | 25 µg/m$^3$ | — | (a) Decrease in ventilatory function, (b) aggravation of asthmatic symptoms, (c) aggravation of cardio-pulmonary disease, (d) vegetation damage, (e) degradation of visibility, (f) property damage. | The sulfate ion is a polyatomic anion with the empirical formula $SO_4^{2-}$. Sulfates occur in combination with metal and/or hydrogen ions. Many sulfates are soluble in water. | Sulfates are particulates formed through the photochemical oxidation of sulfur dioxide. In California, the main source of sulfur compounds is combustion of gasoline and diesel fuel. |
| Lead[b] | 30-day | 1.5 µg/m$^3$ | — | Lead accumulates in bones, soft tissue, and blood and can affect the kidneys, liver, and nervous system. It can cause impairment of blood formation and nerve conduction. The more serious effects of lead poisoning include behavior disorders, mental retardation, neurological impairment, learning deficiencies, and low IQs. Lead may also contribute to high blood pressure and heart disease. | Lead is a solid heavy metal that can exist in air pollution as an aerosol particle component. An aerosol is a collection of solid, liquid, or mixed-phase particles suspended in the air. Lead was first regulated as an air pollutant in 1976. Leaded gasoline was first marketed in 1923 and was used in motor vehicles until around 1970. Lead concentrations have not exceeded state or national air quality standards at any monitoring station since 1982. | Lead ore crushing, lead-ore smelting, and battery manufacturing are currently the largest sources of lead in the atmosphere in the United States. Other sources include dust from soils contaminated with lead-based paint, solid waste disposal, and crustal physical weathering. Lead can be removed from the atmosphere through deposition to soils, ice caps, oceans, and inhalation. |
| | Quarter | — | 1.5 µg/m$^3$ | | | |
| | Rolling 3-month average | — | 0.15 µg/m$^3$ | | | |
| Vinyl chloride[b] | 24 Hour | 0.01 ppm | — | Short-term exposure to high levels of vinyl chloride in the air causes central nervous system effects, such as dizziness, drowsiness, and headaches. Epidemiological studies of | Vinyl chloride, or chloroethene, is a chlorinated hydrocarbon and a colorless gas with a mild, sweet odor. In 1990, ARB identified vinyl chloride as a toxic air contaminant and estimated a cancer unit risk | Most vinyl chloride is used to make polyvinyl chloride plastic and vinyl products, including pipes, wire and cable coatings, and packaging materials. It can be formed when plastics containing these substances |

## Table 3.2-1 (cont.): Air Pollutants

| Air Pollutant | Averaging Time | California Standard | National Standard[a] | Most Relevant Effects from Pollutant Exposure | Properties | Sources |
|---|---|---|---|---|---|---|
| | | | | occupationally exposed workers have linked vinyl chloride exposure to development of a rare cancer, liver angiosarcoma, and have suggested a relationship between exposure and lung and brain cancers. | factor. | are left to decompose in solid waste landfills. Vinyl chloride has been detected near landfills, sewage plants, and hazardous waste sites. |
| Hydrogen sulfide | 1 Hour | 0.03 ppm | — | High levels of hydrogen sulfide can cause immediate respiratory arrest. It can irritate the eyes and respiratory tract and cause headache, nausea, vomiting, and cough. Long exposure can cause pulmonary edema. | Hydrogen sulfide ($H_2S$) is a flammable, colorless, poisonous gas that smells like rotten eggs. | Manure, storage tanks, ponds, anaerobic lagoons, and land application sites are the primary sources of hydrogen sulfide. Anthropogenic sources include the combustion of sulfur containing fuels (oil and coal). |
| Reactive organic gases (ROGs) | | There are no state or national ambient air quality standards for ROGs because they are not classified as criteria pollutants. | | Health effects can occur from exposures to high concentrations because of interference with oxygen uptake. In general, concentrations of ROGs are suspected to cause eye, nose, and throat irritation; headaches; loss of coordination; nausea; and damage to the liver, the kidneys, and the central nervous system. Many ROGs have been classified as toxic air contaminants. | ROGs, or volatile organic compounds (VOCs), are defined as any compound of carbon—excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate—that participates in atmospheric photochemical reactions. Although there are slight differences in the definition of ROGs and VOCs, the two terms are often used interchangeably. | Indoor sources of ROGs include paints, solvents, aerosol sprays, cleansers, tobacco smoke, etc. Outdoor sources of ROGs are from combustion and fuel evaporation. A reduction in ROG emissions reduces certain chemical reactions that contribute to the formulation of ozone. ROGs are transformed into organic aerosols in the atmosphere, which contribute to higher $PM_{10}$ and lower visibility. |
| Benzene | | There are no ambient air quality standards for benzene. | | Short-term (acute) exposure of high doses from inhalation of benzene may cause dizziness, | Benzene is a ROG. It is a clear or colorless light-yellow, volatile, highly flammable liquid with a | Benzene is emitted into the air from fuel evaporation, motor vehicle exhaust, tobacco smoke, and from |

## Table 3.2-1 (cont.): Air Pollutants

| Air Pollutant | Averaging Time | California Standard | National Standard[a] | Most Relevant Effects from Pollutant Exposure | Properties | Sources |
|---|---|---|---|---|---|---|
| | | | | drowsiness, headaches, eye irritation, skin irritation, and respiratory tract irritation, and at higher levels, loss of consciousness can occur. Long-term (chronic) occupational exposure of high doses has caused blood disorders, leukemia, and lymphatic cancer. | gasoline-like odor. The EPA has classified benzene as a "Group A" carcinogen. | burning oil and coal. Benzene is used as a solvent for paints, inks, oils, waxes, plastic, and rubber. It is used in the extraction of oils from seeds and nuts and in the manufacture of detergents, explosives, and pharmaceuticals. |
| Diesel particulate matter (DPM) | | There are no ambient air quality standards for DPM. | | Some short-term (acute) effects of diesel exhaust exposure include eye, nose, throat, and lung irritation, and can cause coughs, headaches, light-headedness, and nausea. Studies have linked elevated particle levels in the air to increased hospital admissions, emergency room visits, asthma attacks, and premature deaths among those suffering from respiratory problems. Human studies on the carcinogenicity of DPM demonstrate an increased risk of lung cancer, although the increased risk cannot be clearly attributed to diesel exhaust exposure. | DPM is a source of $PM_{2.5}$—diesel particles are typically 2.5 microns and smaller. Diesel exhaust is a complex mixture of thousands of particles and gases that is produced when an engine burns diesel fuel. Organic compounds account for 80 percent of the total particulate matter mass, which consists of compounds such as hydrocarbons and their derivatives, and polycyclic aromatic hydrocarbons and their derivatives. Fifteen polycyclic aromatic hydrocarbons are confirmed carcinogens, a number of which are found in diesel exhaust. | Diesel exhaust is a major source of ambient particulate matter pollution in urban environments. In 2002 in the South Coast Air Basin, the main sources of diesel particulate matter were due to the combustion of diesel fuel in diesel-powered engines. Such engines can include on-road vehicles such as diesel trucks, off-road construction vehicles, diesel electrical generators, and various pieces of stationary construction equipment. |

## Table 3.2-1 (cont.): Air Pollutants

| Air Pollutant | Averaging Time | California Standard | National Standard[a] | Most Relevant Effects from Pollutant Exposure | Properties | Sources |
|---|---|---|---|---|---|---|

Abbreviations:
ppm = parts per million (concentration) µg/m$^3$ = micrograms per cubic meter Annual = Annual Arithmetic Mean 30-day = 30-day average Quarter = Calendar quarter

a National standard refers to the primary national ambient air quality standard, or the levels of air quality necessary, with an adequate margin of safety to protect the public health. All standards listed are primary standards except for 3 Hour $SO_2$, which is a secondary standard. A secondary standard is the level of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

b The ARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

c Effective April 12, 2010, to attain this standard, the 3-year average of the 98th percentile of the daily maximum 1-hour average at each monitor within an area must not exceed 100 ppb, or 188 µg/m$^3$

d To attain this standard, the 3-year average of the 99th percentile of the daily maximum 1-hour average at each monitor within an area must not exceed 75 ppb.

Source of effects: South Coast Air Quality Management District, 2007; California Environmental Protection Agency, 2002; California Air Resources Board, 2009; United States Environmental Protection Agency, 2007; United States Environmental Protection Agency, 2000; National Toxicology Program, 2005.
Source of standards: California Air Resources Board, 2010.
Source of properties and sources: United States Environmental Protection Agency, 1999; United States Environmental Protection Agency, 2003; Environmental Protection Agency, 2009; National Toxicology Program, 2005.

**Table 3.2-2: Ambient Air Monitoring Data**

| Air Pollutant | Averaging Time (Units) | 2010 | 2011 | 2012 |
|---|---|---|---|---|
| Ozone | Maximum 1 Hour (ppm)<br>Days > State Standard (0.09 ppm) | 0.083<br>0 | 0.092<br>0 | 0.076<br>0 |
| | Maximum 8 Hour (ppm)<br>Days Above State Standard (0.07 ppm)<br>Days Above 2008 National Standard (0.08) | 0.070<br>0<br>0 | 0.070<br>0<br>0 | 0.058<br>0<br>0 |
| Particulate matter ($PM_{10}$) | Mean ($\mu g/m^3$) | 16.7 | 16.5 | 13.3 |
| | 24 Hour ($\mu g/m^3$)<br>Days > State Standard (50 $\mu g/m^3$)<br>Days > National Standard (150 $\mu g/m^3$) | 51.3<br>6<br>0 | 54.1<br>6<br>0 | 37.1<br>0<br>0 |
| Particulate matter ($PM_{2.5}$) | Mean ($\mu g/m^3$) | — | 9.8 | 8.0 |
| | 24 Hour ($\mu g/m^3$)<br>Days > National Standard (35 $\mu g/m^3$) | 46.5<br>0 | 42.2<br>1 | 26.5<br>0 |

Note:
All measurements taken at the San Rafael Air Monitoring Station.
Source: California Air Resources Board, 2013.

## Sensitive Receptors

Certain populations, such as children, the elderly, and persons with preexisting respiratory or cardiovascular illness, are particularly sensitive to the health impacts of air pollution. For purposes of the California Environmental Quality Act (CEQA), the BAAQMD identifies sensitive receptors as facilities or land uses that include members of the population that are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Examples include schools, hospitals, and residential areas. The potential for adverse air quality impacts increases as the distance between the source of emissions and members of the public decreases.

## Attainment Status

Air basins where ambient air quality standards are exceeded are referred to as “nonattainment” areas. If standards are met, the area is designated as an “attainment” area. If there is inadequate or inconclusive data to make a definitive attainment designation, they are considered “unclassified.” National nonattainment areas are considered severe, serious, or moderate as a function of deviation from standards.

As shown in Table 3.2-3, the Air Basin is in nonattainment for the national and state 1-hour ozone standard and the state $PM_{10}$ standard. As shown in the table, the Bay Area is in nonattainment for state 1-hour ozone standard, national 8-hour ozone standard, state 24-hour and annual $PM_{10}$ standards, and state annual $PM_{2.5}$ standard. This means that the area experiences poor air quality at times.

**Table 3.2-3: Air Basin Attainment Status**

| Pollutant | Averaging Time | State Status | National Status |
|---|---|---|---|
| Ozone | 1-hour | Nonattainment | Not Applicable[1] |
| | 8-hour | Nonattainment | Nonattainment[2] |
| Carbon monoxide | 1-hour and 8-hour | Attainment | Attainment[3] |
| Nitrogen dioxide | 1-hour | Attainment | Unclassified[4] |
| | Annual | No state classification | Attainment |
| Sulfur dioxide[5] | 24-hour | Attainment | Attainment |
| | 1-hour | Attainment | Attainment |
| | Annual | No state standard | Attainment |
| $PM_{10}$ | 24-hour | Nonattainment | Unclassified |
| | Annual | Nonattainment | No federal standard[6] |
| $PM_{2.5}$ | 24-hour | No state standard | Nonattainment[7] |
| | Annual | Nonattainment | Attainment |

Notes:
1 The national 1-hour ozone standard was revoked by EPA on June 15, 2005.
2 Final designations effective July 20, 2012.
3 In April 1998, the Bay Area was redesignated to attainment for the national 8-hour carbon monoxide standard.
4 To attain this standard, the 3-year average of the 98th percentile of the daily maximum 1-hour average at each monitor within an area must not exceed 0.100ppm (effective January 22, 2010).
5 On June 2, 2010, the U.S. EPA established a new 1-hour SO2 standard, effective August 23, 2010, which is based on the 3-year average of the annual 99th percentile of 1-hour daily maximum concentrations. The existing 0.030-ppm annual and 0.14-ppm 24-hour SO2 National Ambient Air Quality Standards however must continue to be used until one year following U.S. EPA initial designations of the new 1-hour SO2 National Ambient Air Quality Standards. EPA was expected to designate areas by June 2012, however in a February 2013 letter to the ARB, the EPA indicated that it had extended the deadline to June 2013.
6 EPA revoked the annual $PM_{10}$ standard on September 21, 2006.
7 EPA lowered the 24-hour $PM_{2.5}$ standard from 65 $\mu g/m^3$ to 35 $\mu g/m^3$ in 2006. Bay Area levels were just over the national 24-hour $PM_{2.5}$ standard of 35 $\mu g/m^3$ based on data for the three-year cycle 2006-2008. This triggered the requirement for the Bay Area to prepare a SIP submittal to demonstrate how the region would attain the standard. However, data for both the 2008-2010 and the 2009-2011 cycles showed that Bay Area PM levels currently meet the standard. On October 29, 2012, EPA issued a proposed rule-making to determine that the Bay Area now attains the 24-hour $PM_{2.5}$ national standard. Written comments on the proposed rule-making are due to EPA by November 28, 2012. When the proposed rule-making is finalized, key SIP requirements to demonstrate how a region will achieve the standard will be suspended as long as monitoring data continues to show that the Bay Area attains the standard. The Bay Area will continue to be designated as "nonattainment" for the national 24-hour $PM_{2.5}$ standard until the Air District elects to submit a "redesignation request" and a "maintenance plan" to EPA, and EPA approves the proposed redesignation.
Source: California Air Resources Board, 2013.

## Greenhouse Gases

Gases that trap heat in the atmosphere are referred to as greenhouse gases. The effect is analogous to the way a greenhouse retains heat. Common greenhouse gases include water vapor, carbon dioxide, methane, nitrous oxides, chlorofluorocarbons, hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, ozone, and aerosols. Natural processes and human activities emit greenhouse gases.

The presence of greenhouse gases in the atmosphere affects the earth's temperature. Without the natural heat trapping effect of greenhouse gas, the earth's surface would be about 34 degrees Celsius (°C) cooler. However, it is believed that emissions from human activities have elevated the concentration of these gases in the atmosphere beyond the level of naturally occurring concentrations.

Increased greenhouse gases results in an increased greenhouse effect and could result in changes to the climate. The United Nations Intergovernmental Panel on Climate Change constructed several emission trajectories of greenhouse gases needed to stabilize global temperatures and climate change impacts. The Intergovernmental Panel on Climate Change predicted that global mean temperature change from 1990 to 2100, given six scenarios, could range from 1.1°C to 6.4°C. Regardless of analytical methodology, global average temperatures and sea levels are expected to rise under all scenarios.

Climate change is driven by forcings and feedbacks. Radiative forcing is the difference between the incoming energy and outgoing energy in the climate system. Positive forcing tends to warm the surface while negative forcing tends to cool it. Radiative forcing values are typically expressed in watts per square meter. A feedback is a climate process that can strengthen or weaken a forcing. For example, when ice or snow melts, it reveals darker land underneath which absorbs more radiation and causes more warming. The global warming potential is the potential of a gas or aerosol to trap heat in the atmosphere. The global warming potential of a gas is essentially a measurement of the radiative forcing of a greenhouse gas compared with the reference gas, carbon dioxide.

Individual greenhouse gas compounds have varying global warming potential and atmospheric lifetimes. Carbon dioxide, the reference gas for global warming potential, has a global warming potential of one. The calculation of the carbon dioxide equivalent is a consistent methodology for comparing greenhouse gas emissions since it normalizes various greenhouse gas emissions to a consistent metric. Methane's warming potential of 21 indicates that methane has a 21 times greater warming affect than carbon dioxide on a molecule per molecule basis. A carbon dioxide equivalent is the mass emissions of an individual greenhouse gas multiplied by its global warming potential.

Greenhouse gases as defined by Assembly Bill (AB) 32 include the gases shown in Table 3.2-4.

**Table 3.2-4: Greenhouse Gases**

| Greenhouse Gas | Description and Physical Properties | Sources |
|---|---|---|
| Nitrous oxide | Nitrous oxide is also known as laughing gas and is a colorless greenhouse gas. It has a lifetime of 114 years. Its global warming potential is 310. | Microbial processes in soil and water, fuel combustion, and industrial processes. |
| Methane | Methane is a flammable gas and is the main component of natural gas. It has a lifetime of 12 years. Its global warming potential is 21. | Methane is extracted from geological deposits (natural gas fields). Other sources are landfills, fermentation of manure, decay of organic matter, and cattle. |

**Table 3.2-4 (cont.): Greenhouse Gases**

| Greenhouse Gas | Description and Physical Properties | Sources |
|---|---|---|
| Carbon dioxide | Carbon dioxide ($CO_2$) is an odorless, colorless, natural greenhouse gas. Carbon dioxide's global warming potential is 1. The concentration in 2005 was 379 parts per million (ppm), which is an increase of about 1.4 ppm per year since 1960. Carbon dioxide from fossil fuels contributed 81% of greenhouse gas emissions in 2004 in California. | Natural sources include decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungus; evaporation from oceans; and volcanic outgassing. Anthropogenic sources are from burning coal, oil, natural gas, and wood. |
| Chlorofluorocarbons | These are gases formed synthetically by replacing all hydrogen atoms in methane or ethane with chlorine and/or fluorine atoms. They are nontoxic, nonflammable, insoluble, and chemically unreactive in the troposphere (the level of air at the earth's surface). Global warming potentials range from 3,800 to 8,100. | Chlorofluorocarbons were synthesized in 1928 for use as refrigerants, aerosol propellants, and cleaning solvents. They destroy stratospheric ozone. The Montreal Protocol on Substances that Deplete the Ozone Layer prohibited their production in 1987. |
| Hydrofluorocarbons | Hydrofluorocarbons are a group of greenhouse gases containing carbon, chlorine, and at least one hydrogen atom. Global warming potentials range from 140 to 11,700. | Hydrofluorocarbons are synthetic manmade chemicals used as a substitute for chlorofluorocarbons in applications such as automobile air conditioners and refrigerants. |
| Perfluorocarbons | Perfluorocarbons have stable molecular structures and only break down by ultraviolet rays about 60 kilometers above Earth's surface. Because of this, they have long lifetimes, between 10,000 and 50,000 years. Global warming potentials range from 6,500 to 9,200. | Two main sources of perfluorocarbons are primary aluminum production and semiconductor manufacturing. |
| Sulfur hexafluoride | Sulfur hexafluoride is an inorganic, odorless, colorless, and nontoxic, nonflammable gas. It has a lifetime of 3,200 years. It has a high global warming potential, 23,900. | This gas is manmade and used for insulation in electric power transmission equipment, in the magnesium industry, in semiconductor manufacturing, and as a tracer gas. |
| Source: FirstCarbon Solutions, 2013. | | |

## 3.2.2 - Regulatory Framework

Air pollutants are regulated at the national, state, and air basin level; each agency has a different level of regulatory responsibility. The United States Environmental Protection Agency (EPA) regulates at the national level. The California Air Resources Board (ARB) regulates at the state level and BAAQMD ~~SJVAPCD~~ regulates at the air basin level.

## Federal and State

The EPA handles global, international, national, and interstate air pollution issues and policies. The EPA sets national vehicle and stationary source emission standards, oversees approval of all State Implementation Plans, provides research and guidance for air pollution programs, and sets National Ambient Air Quality Standards, also known as federal standards or national standards. There are national standards for six common air pollutants, called criteria air pollutants, which were identified from provisions of the Clean Air Act of 1970. The criteria pollutants are:

- Ozone
- Particulate matter ($PM_{10}$ and $PM_{2.5}$)
- Nitrogen dioxide
- Carbon monoxide (CO)
- Lead
- Sulfur dioxide

The national standards were set to protect public health, including that of sensitive individuals; thus, the standards continue to change as more medical research is available regarding the health effects of the criteria pollutants. Primary national standards are the levels of air quality necessary, with an adequate margin of safety, to protect public health, as discussed in Ambient Air Quality Standards summary prepared by the ARB.

A State Implementation Plan is a document prepared by each state describing existing air quality conditions and measures that will be followed to attain and maintain national standards. The State Implementation Plan for the State of California is administered by the ARB, which has overall responsibility for statewide air quality maintenance and air pollution prevention. The ARB also administers California Ambient Air Quality Standards for the 10 air pollutants designated in the California Clean Air Act. The 10 state air pollutants are the six national standards listed above as well as the following: visibility-reducing particulates, hydrogen sulfide, sulfates, and vinyl chloride.

The national and state ambient air quality standards, the most relevant effects, the properties, and sources of the pollutants were previously summarized in Table 3.2-1.

### *California Greenhouse Gas Regulation*

The State has enacted several key pieces of regulation, some of which are discussed as follows.

*AB 32.* In 2006, the California State Legislature enacted AB 32, the California Global Warming Solutions Act of 2006. AB 32 focuses on reducing greenhouse gas emissions in California. Greenhouse gases as defined under AB 32 include carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. AB 32 requires that greenhouse gases emitted in California be reduced to 1990 levels by the year 2020. ARB is the state agency charged with monitoring and regulating sources of emissions of greenhouse gases that cause global warming in order to reduce emissions of greenhouse gases. AB 32 states the following:

> Global warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California. The potential adverse impacts of global warming include the exacerbation of air quality problems, a reduction in the quality and supply of water to the state from the Sierra snowpack, a rise in sea levels resulting in the displacement of thousands of coastal businesses and residences, damage to marine ecosystems and the natural environment, and an increase in the incidences of infectious diseases, asthma, and other human health-related problems.

The ARB approved the 1990 greenhouse gas emissions level of 427 million metric tons of carbon dioxide equivalent ($MMTCO_2e$) on December 6, 2007. Therefore, emissions generated in California in 2020 are required to be equal to or less than 427 $MMTCO_2e$. Emissions in 2020 in a "business as usual" scenario are estimated to be 596 $MMTCO_2e$.

The ARB approved the Climate Change Scoping Plan in December 2008. The Scoping Plan contains a set of measures designed to reduce the State's emissions to 1990 levels by the year 2020. The measures in the Scoping Plan will be in place by 2012. The Scoping Plan identifies recommended measures for multiple greenhouse gas emission sectors and the associated emission reductions needed to achieve the year 2020 emissions target—each sector has a different emission reduction target. Most of the measures target the transportation and electricity sectors.

## Bay Area Air Quality Management District

The BAAQMD regulates air quality in the Air Basin, which consists of the entirety of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, and Santa Clara counties; the western portion of Solano County; and the southern portion of Sonoma County. The BAAQMD is responsible for controlling and permitting industrial pollution sources (such as power plants, refineries, and manufacturing operations) and widespread, areawide sources (such as bakeries, dry cleaners, service stations, and commercial paint applicators), and for adopting local air quality plans and rules.

### *Air Quality Plans*

The latest air quality plan in the Basin is the 2010 Clean Air Plan, an update to the Bay Area 2005 Ozone Strategy. The 2010 Clean Air Plan provides the following:

- Review progress in improving Bay Area air quality to date.
- Establish a control strategy including "all feasible measures" to achieve state ozone standards by the earliest practicable date and reduce transport of ozone precursors to neighboring air basins.
- Address ozone, particulate matter, air toxics, and greenhouse gas emissions in a single integrated plan.

Air quality plans are required to address transportation control measures requirements of the federal Clean Air Act and California Clean Air Act. Transportation control measures are defined as "any strategy to reduce vehicle trips, vehicle use, vehicle miles traveled, vehicle idling, or traffic

congestion for the purpose of reducing motor vehicle emissions." The Bay Area has extensive experience with developing and implementing transportation control measures. The first regional plan prepared pursuant to the California Clean Air Act, the 1991 Clean Air Plan, included 23 transportation control measures to meet state planning requirements (state transportation control measures). Plan updates in 1994 and 1997 included revisions to the transportation control measures.

## Local

### *City of Mill Valley*

*2040 General Plan*

The proposed 2040 General Plan establishes the following goals and policies that are relevant to air quality and greenhouse gas emissions:

- **Goal LAN-1 Community Character:** Protect and enhance the natural beauty and small town character of Mill Valley.
- **Policy LU-2 Commercial Development:** Provide commercial services in a convenient, safe and attractive environment that complements the residential character of Mill Valley, supports local business development and growth, and strengthens the sense of community.
- **Goal MOB.2 Sustainable Transportation:** Reduce transportation-related emissions by reducing traffic congestion and vehicle miles traveled while promoting the use of lower emission vehicles and non-automotive modes of travel.
- **Policy M.3 Leadership and Coordination:** Coordinate with cities and regional transportation leaders to identify, develop, and fund alternative fuels and forms of transportation.
- **Policy M.4 Interconnected Transportation Network:** Foster an interconnected transportation system that allows for the safe and efficient transport of goods and people, as well as easy and effective transitions between modes of travel.
- **Policy M.5 Education and Technology:** Encourage sustainable transportation and educate the community on ways to reduce vehicle miles traveled.
- **Policy M.6 City Operations:** Reduce emissions of City vehicles.
- **Policy M.7 Low and Zero Emission Vehicles:** Encourage ownership of low and zero emission vehicles.
- **Policy M.8 Compact Development:** Support new development and redevelopment of existing buildings through regulations and design guidelines that encourage alternative modes of transportation and/or discourage reliance on single-occupancy vehicle use.
- **Goal MOB.3 Sustainable Transportation:** Create a safe and sustainable transportation network that balances the needs of pedestrians, bicyclists, motorists, and transit users.
- **Policy M.9 Traffic Management:** Maintain a well-functioning roadway network that provides for the safe and efficient flow of vehicular traffic.
- **Policy M.10 Bicycle and Pedestrian Access:** Provide a consistent standard of pedestrian and bicycle access within the roadway network.
- **Policy M.11 Improved Pedestrian and Bicycle Network:** Establish and maintain a well connected pedestrian and bicycle system that is accessible, easy to navigate, and comfortable for all types of users.

- **Policy M.12 Steps, Lanes & Paths Network.** Maintain, preserve and restore Mill Valley's network of steps, lanes and paths.
- **Policy M.13 Pedestrian and Bicycle Safety, Education and Outreach:** Foster a common understanding among cyclists, pedestrians, and the police about the California Motor Vehicle Code and the rights and duties of all road users.
- **Policy M.14 Improved Transit Network:** Work with Marin Transit to support the continued development of and improvements to safe, efficient, and reliable transit service.
- **Policy M.15 Local Shuttle Service:** Plan and implement a shuttle system that connects local neighborhoods, facilities, services, and adjacent communities.
- **Goal CL.1 Climate Change:** Reduce the Community's Carbon Footprint
- **Policy CL.1 Clean Energy & Energy Efficiency:** Support and provide incentives for utilizing and investing in clean energy end energy efficiency solutions.
- **Policy CL.2 Carbon Offsets:** Offset carbon emissions through carbon credits or allowances.
- **Policy CL.3 Monitoring:** Establish a baseline and monitor the City and community contribution to greenhouse gas emissions.
- **Goal CL.2 Climate Change:** Develop Adaptation Strategies.
- **Policy CL.4 Adapting to Climate Change:** Ground climate change adaptation strategies in the best-available scientific understanding of hazards, risks, impacts, and vulnerabilities, and make adaptation planning and implementation a City budget and operational priority.
- **Goal CL.3 Zero Waste:** Implement Zero Waste Strategies for Solid Waste Management.
- **Policy CL.5 Recycling and Waste Management:** Reduce the volume of the waste stream by encouraging recycling and composting and moving toward Zero Waste objectives that minimize or eliminate waste sent to landfills.

## 3.2.3 - Methodology

The BAAQMD has developed California Environmental Quality Act Air Quality Guidelines (Guidelines). The most current draft of the Guidelines was issued in 2010. The purpose of the Guidelines is to assist lead agencies in evaluating air quality impacts of projects and plans proposed in the Basin. The Guidelines contain guidance on how to determine the significance of a project's emissions of greenhouse gases. This analysis follows the guidance in the Guidelines where appropriate.

## 3.2.4 - Thresholds of Significance

According to the CEQA Guidelines' Appendix G Environmental Checklist, to determine whether impacts to air quality and greenhouse gas emissions impacts are significant environmental effects, the following questions are analyzed and evaluated.

Where available, the significance criteria established by the applicable air quality management 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?

b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?

c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors)?

d) Expose sensitive receptors to substantial pollutant concentrations?

e) Create objectionable odors affecting a substantial number of people?

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

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

## 3.2.5 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the development of the proposed project and provides mitigation measures where appropriate.

### Air Quality Plan

| | |
|---|---|
| **Impact AIR-1:** | **Implementation of the 2040 General Plan would not conflict with or obstruct implementation of the applicable air quality plan.** |

***Impact Analysis***

The BAAQMD Air Quality Guidelines indicates that the threshold of significance for operational-related criteria air pollutant and precursor impacts for long range plans (general plan, redevelopment plans, specific plans, area plans, community plans, transportation plans, congestion management plans, etc.) is consistency with the most recently adopted air quality plan (AQP). All of the following criteria must be satisfied for a proposed plan to be consistent with the AQP, and to result in a less than significant impact.

Proposed plans must show over the planning period of the plan that:

- The plan incorporates current AQP control measures as appropriate to the plan area;
- The projected vehicle miles traveled or vehicle trips increase is less than or equal to projected population increase.

*AQP Primary Goals*
As discussed in this Draft EIR, the 2040 General Plan has a less than significant impact on all air quality and greenhouse gas emissions impacts. As such, it would not hinder regional efforts to attain air quality standards.

Additionally, the 2040 General Plan does not have any characteristics that would increase population exposure to public health risks. Moreover, because the 2040 General Plan maintains existing land use patterns and densities within Mill Valley, there would not be any change in risk exposure levels.

Finally, as discussed in Impact AIR-6, the 2040 General Plan contains a Climate Change Element, which would serve as City of Mill Valley's Climate Action Plan. The Climate Change Element has an adopted greenhouse gas emissions reduction target of 20 percent below 2005 levels by 2020 for internal government operations and 15 percent below 2005 levels communitywide by 2020.

In summary, the 2040 General Plan furthers the primary goals of the AQP.

*Control Measures*
The first step to ensure that the project would not conflict with or obstruct the AQP requires that the General Plan incorporate appropriate AQP control measures. The BAAQMD Guidelines state that the most recently adopted AQP will provide the methodology for determining the appropriate control measures that should be included in specific types of long-range plans.

The 2040 General Plan establishes a number of goals and policies that are consistent with the strategies and control measures identified in the 2010 Clean Air Plan (AQP). These include Goal CL.1, and Policies CL.1 through CL.3, which call for reducing the community's carbon footprint, using clean energy, monitoring greenhouse gas emissions. Although these goals and policies ostensibly pertain to greenhouse gas emissions, they do promote reduction in criteria pollutants, as many of the strategies yield reductions in both types of pollutants. Additionally, Goals MOB.2, MOB.3, and Policies M.3 through 14 encourage sustainable transportation through provision of pedestrian and bicycle infrastructure and transit availability and compact development which results in reductions in vehicle miles traveled. As such, the 2040 General Plan's goals and policies would not conflict with the applicable provisions of the 2010 Clean Air Plan.

*Vehicle Miles Traveled and Population Increase*
The second step to ensure that the project would not conflict with or obstruct the AQP is to show that the projected vehicle miles traveled or vehicle trips increase for the General Plan is less than or equal to the projected population increase. The BAAQMD Guidelines state that population estimates should be derived from the most recent issue of the Association of Bay Area Governments Projections publication.

ABAG projects that Mill Valley's population will increase from 14,000 to 14,300 between 2005 and 2020. For comparison purposes, the 2010 United States Census indicated that the population of Mill Valley was 13,903 and the California Department of Finance indicated that the population of Mill Valley was 14,147 as of January 1, 2013. Thus, recent population growth has been within ABAG projections.

The Metropolitan Transportation Commission (MTC) projects that countywide vehicle miles traveled in Marin County will increase at a rate of 0.78 percent a year or approximately 12.4 percent between 2005 and 2020. As shown in Table 3.2-5, based on the projected increase in population and the vehicle miles traveled per capita for the Bay Area, the annual growth rate is estimated to be 0.46 percent or approximately 7.1 percent between 2005 and 2020; thus, the VMT increase is within the MTC projections.

**Table 3.2-5: Vehicle Miles Traveled Comparison**

| Year | Population[1] | Daily Vehicle Miles of Travel (VMT)Per Capita[2] | Total Annual VMT |
|---|---|---|---|
| 2005 | 14,000 | 20.3 | 103.7 million miles |
| 2020 | 14,300 | 21.3 | 111.1 million miles |
| Difference | 300 | 1.3 | 7.4 million miles |
| Annual Growth Rate | — | — | 0.46% |

Sources:
[1] Association of Bay Area Governments Projections 2009
[2] Per capita VMT values derived from the Environmental Impact Report (EIR) for the Transportation 2035 Plan for the San Francisco Bay Area, 2008.
Source: Metropolitan Transportation Commission, 2008.

*Conclusion*
The 2040 General Plan is consistent with both criteria set forth by the BAAQMD for determining consistent with the AQP. As such, adoption of the 2040 General Plan would not conflict with implementation of the AQP. Impacts would be less than significant.

### *Level of Significance Before Mitigation*
Less than significant impact.

### *Mitigation Measures*
No mitigation is necessary.

### *Level of Significance After Mitigation*
Less than significant impact.

## Air Quality Violations

**Impact AIR-2:** **Implementation of the 2040 General Plan would not violate any air quality standard or contribute substantially to an existing or projected air quality violation.**

### *Impact Analysis*
Development and land use activities contemplated by the 2040 General Plan would include construction and operational air emissions of criteria pollutants. This impact will assess short-term construction air emissions and long-term operational missions.

*Construction Emissions*
Construction activities associated with development activities contemplated by the General Plan would include grading, demolition, building construction, and paving. Generally, the most substantial air pollutant emissions would be dust generated from site grading. If uncontrolled, these emissions could lead to both health and nuisance impacts. Construction activities would also temporarily create emissions of equipment exhaust and other air contaminants.

The BAAQMD does not recommend a numerical threshold for fugitive, dust-related particulate matter emissions. Instead, the BAAQMD bases the determination of significance for fugitive dust on a consideration of the control measures to be implemented. If all appropriate emissions control measures recommended by the BAAQMD are implemented for a project, then fugitive dust emissions during construction are not considered significant.

Off-road construction equipment is a large source of $NO_x$ and diesel particulate matter in the Bay Area. $NO_x$ is an ozone precursor pollutant that contributes to regional ozone formation. Diesel particulate matter contributes to elevated $PM_{10}$ and $PM_{2.5}$ concentrations and is a toxic air contaminant. The BAAQMD has numerical thresholds for ROG, $NO_x$, $PM_{10}$ exhaust, and $PM_{2.5}$ exhaust, and new development projects would use the BAAQMD's CEQA Guidelines as the basis for assessing impacts. This document sets for guidance for evaluating and mitigating construction-related ROG, $NO_x$, $PM_{10}$ exhaust, and $PM_{2.5}$ emissions; therefore, this would ensure that construction emissions are evaluated and mitigated. In addition, as a standard condition of approval for new residential projects, the City of Mill Valley prohibits extended idling of construction vehicles and requires construction workers to carpool to hillside lots. These standard conditions of approvals would also contribute to a reduction in construction emissions. As such, impacts would be less than significant.

*Operational Emissions*
The BAAQMD CEQA Guidelines indicate that the threshold for operational-related criteria air pollutant and precursor impacts for plans is consistency with the most recently adopted Air Quality Plan. This is demonstrated by showing that the plan incorporates current Air Quality Plan control measures, and the rate of increase in vehicle miles traveled within the plan area is equal to or lower than the rate of increase in population projected for the proposed plan.

The analysis of Air Quality Plan consistency provided in Impact AIR-1 demonstrates compliance with the first criteria. The 2040 General Plan includes numerous goals and policies promoting alternates modes of transportation (transit, bicycles, pedestrians), transit-oriented development, pedestrian-oriented development, and transportation demand management that result in lower vehicle miles traveled.

The 2040 General Plan Climate Action Element cross-references the various goals and policies contained throughout the document that support reductions in vehicle miles traveled to achieve the City's greenhouse gas reduction target. These goals and policies would also serve to reduce operational criteria pollutant emissions. Therefore, the population increase accommodated by the 2040 General Plan will occur in development that produces lower vehicle miles traveled per capita than development allowed under the 1989 General Plan. The 2040 General Plan meets the

BAAQMD significance criteria and would not substantially contribute to an existing violation of the ozone and particulate standards. Impacts would be less than significant.

### *Level of Significance Before Mitigation*
Less than significant impact.

### *Mitigation Measures*
No mitigation is necessary.

### *Level of Significance After Mitigation*
Less than significant impact.

## Cumulative Criteria Pollutants

| | |
|---|---|
| **Impact AIR-3:** | **Implementation of the 2040 General Plan would not ~~may~~ result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors).** |

### *Impact Analysis*
According to the checklist in the CEQA Guidelines, a project would create a significant impact if it would "result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable national or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)."

Section 15130(b) of the CEQA Guidelines states the following:

> The following elements are necessary to an adequate discussion of significant cumulative impacts: 1) Either: (A) A list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency, or (B) A summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or area wide conditions contributing to the cumulative impact.

In accordance with CEQA Guidelines 15130(b), this analysis of cumulative impacts incorporates a summary of projections.

The geographic scope for cumulative criteria pollution from air quality impacts is the San Francisco Bay Area Air Basin, because that is the area in which the air pollutants generated by the sources within the basin circulate and are often trapped. The BAAQMD is required to prepare and maintain a Clean Air Plan and a State Implementation Plan to document the strategies and measures to be undertaken to reach attainment of ambient air quality standards. While the BAAQMD does not have direct authority over land use decisions, it recognized that changes in land use and circulation planning are necessary to maintain clean air. The BAAQMD evaluated the entire Basin when it developed the Clean Air Plan.

According to the analysis contained in Impact AIR-1, the project is consistent with the Clean Air Plan.

The Basin is in nonattainment for ozone, $PM_{10}$, and $PM_{2.5}$, which means that the background levels of those pollutants are at times higher than the ambient air quality standards. The air quality standards were set to protect public health, including the health of sensitive individuals (such as the elderly, children, and the sick). Therefore, when the concentration of those pollutants exceeds the standard, it is likely that some sensitive individuals in the population would experience health effects that were described in Table 3.2-1. However, the health effects are a factor of the dose-response curve. Concentration of the pollutant in the air (dose), the length of time exposed, and the response of the individual are factors involved in the severity and nature of health impacts. If a significant health impact results from project emissions, it does not mean that 100 percent of the population would experience health effects.

The 2040 General Plan is consistent with the 2010 Clean Air Plan, as its vehicle miles traveled and population growth assumptions are in line with ABAG projections. Furthermore, the goals and policies of the 2040 General Plan are consistent with the air pollution reduction and control strategies outlined in the 2010 Clean Air Plan. Impacts would be less than significant.

### *Level of Significance Before Mitigation*
Less than significant impact.

### *Mitigation Measures*
No mitigation is necessary.

### *Level of Significance After Mitigation*
Less than significant impact.

## Sensitive Receptors

| | |
|---|---|
| **Impact AIR-4:** | **Implementation of the 2040 General Plan would not expose sensitive receptors to substantial pollutant concentrations.** |

### *Impact Analysis*
Sensitive receptors are land uses that house sensitive populations (children, the elderly, and the infirmed) for sustain periods. Examples of land uses include residential areas, schools, hospitals, convalescent facilities, and day care centers. Toxic air contaminants are the air pollutants of most concern as it relates to sensitive receptors, as they have the greatest potential to pose a carcinogenic and non-carcinogenic (e.g., asthma, bronchitis, etc.) hazard to human health. Based on the types of land use activities present in Mill Valley, diesel particulate matter (DPM) and perchloroethylene (PCE) are the two toxic air contaminants most likely to occur locally. DPM is emitted by vehicles with diesel engines (e.g., trucks, heavy equipment, etc.), while PCE is a byproduct of dry cleaning operations. BAAQMD's guidance indicates that lead agencies should consider the extent to which a new toxic air contaminant source would increase risk levels, hazard index, or $PM_{2.5}$ concentrations at nearby receptors.

The 2040 General Plan acknowledges that Mill Valley is essentially built out and maintains the existing established land use patterns and densities that currently exist within the city limits. As such, the potential for 2040 General Plan to facilitate the development of new sensitive land uses within proximity of existing toxic air contaminant sources (gas stations, dry cleaners, US 101, etc.) is very limited. Regardless, should such development proposals be advanced, the BAAQMD has established procedures for evaluating the health risks and, if necessary, implementing mitigation.

Therefore, based on the existing regulatory requirements, there is certainty that future development and land use activities contemplated by the 2040 General Plan would not expose sensitive receptors to substantial pollutant concentrations. Impacts would be less than significant.

### *Level of Significance Before Mitigation*
Less than significant impact.

### *Mitigation Measures*
No mitigation is necessary.

### *Level of Significance After Mitigation*
Less than significant impact.

## Odors

| | |
|---|---|
| **Impact AIR-5:** | **Implementation of the 2040 General Plan would not create objectionable odors affecting a substantial number of people.** |

### *Impact Analysis*
The lone substantial odor source in Mill Valley is the Sewerage Agency of Southern Marin (SASM) wastewater treatment plant located near Bayfront Park. The facility has a dry-weather capacity of 3.6 million gallons per day and has an average daily dry-weather flow of 2.0 million gallons per day. The treatment plant is surrounded by a church (west), a school and park (north), a park and Richardson Bay (east), and open space and The Redwoods Retirement Community (south). The 2040 General Plan does not propose any changes to land use designations within this area; therefore, the existing land use patterns (and any existing exposure to odors) would be expected to remain unchanged for the foreseeable future.

The 2040 General Plan acknowledges that Mill Valley is essentially built out and maintains the existing established land use patterns and densities that currently exist within the city limits. As such, the potential for 2040 General Plan to facilitate the development of land uses within proximity of the wastewater treatment plant is very limited. Regardless, should such development proposals be advanced, BAAQMD has established screening levels for project-level evaluation for sensitive receptors proposed to be located near several types of utilities and industrial facilities. New development activities that occur within 2 miles of a wastewater treatment plant are advised to consider odor impacts from such a facility as part of the development review process.

Therefore, based on the existing regulatory requirement and the policies contained within the proposed 2040 General Plan, there is certainty that future development and land use activities

contemplated by the 2040 General Plan would not create objectionable odors affecting a substantial number of people or result in significant impacts. Impacts would be less than significant.

### *Level of Significance Before Mitigation*
Less than significant impact.

### *Mitigation Measures*
No mitigation is necessary.

### *Level of Significance After Mitigation*
Less than significant impact.

## Greenhouse Gas Emissions

| | |
|---|---|
| **Impact AIR-6:** | **Implementation of the 2040 General Plan would not generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment, or conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.** |

### *Impact Analysis*
California's legislative mandate (AB 32) is to reduce total projected 2020 greenhouse gas emissions to 1990 levels, a reduction of approximately 30 percent. To achieve this target, future development must be planned and implemented in the most efficient manner possible. Greenhouse gas-efficient development reduces vehicle miles traveled by supporting mixed-use, pedestrian- and bicycle-friendly, development. The BAAQMD strongly encourages state, regional, and local agencies to address greenhouse gas emissions when updating and/or adopting long-range plans. For local jurisdictions, the general plan is perhaps the best venue for addressing greenhouse gas emissions in making meaningful progress toward attaining AB 32 goals while addressing CEQA requirements.

If a long-range plan includes goals, policies, performance standards, and implementation measures achieving greenhouse gas emission reductions that can be shown to meet and/or exceed AB 32 mandates, as outlined in BAAQMD-recommended Thresholds of Significance, subsequent projects consistent with the plan could be relieved of performing greenhouse gas analysis as part of their CEQA compliance.

The BAAQMD Guidelines threshold of significance for operational-related greenhouse gas impacts of plans employs either a greenhouse gas efficiency-based metric of 6.6 metric tons per service population per year of carbon dioxide equivalent ($CO_2e$) or a Climate Action Plan (CAP) option. The greenhouse gas efficiency threshold may only be applied to general plans and regional transportation plans. This analysis is going to use the CAP approach.

<u>Due to recent litigation, the quantitative thresholds of significance for greenhouse gases contained in the BAAQMD's 2010 CEQA Guidelines are not currently in effect. However, this does not affect the analysis contained in the Mill Valley 2040 General Plan, which relied on the Climate Action Plan approach.</u>

*Climate Action Plan Approach*

The BAAQMD Guidelines indicate that a long-range plan would have a less than significant impact related to greenhouse gas emissions if the Lead Agency has an adopted qualified CAP that is referenced and or integrated within the long-range plan. The 2040 General Plan includes a Climate Action Element, which would serve as Mill Valley's Climate Action Plan. The Climate Action Element meets the following definitions of a "qualified" CAP in the BAAQMD Guidelines.

- A greenhouse gas inventory for current year and forecast for 2020 (and for 1990 if the reduction goal is based on 1990 emission levels).
- An adopted Greenhouse Gas Reduction Goal for 2020 for the jurisdiction from all sources (existing and future) which is at least one of the following: 1990 emission levels, 15 percent below 2008 emission levels, or 28 percent below business as usual forecasts for 2020 (if including non-land use sector emissions in the local inventory; otherwise can use 26.2 percent if only including land use sector emissions).
- Identification of feasible reduction measures to reduce emissions for 2020 to the identified target.
- Application of relevant reduction measures included in the AB 32 Scoping Plan that are within the jurisdiction of the local land use authority (such as building energy efficiency, etc.).
- Quantification of the reduction effectiveness of each of the feasible measures identified including disclosure of calculation method and assumptions.
- Identification of implementation steps and financing mechanisms to achieve the identified goal by 2020.
- Procedures for monitoring and updating the greenhouse gas inventory and reduction measures at least twice before 2020 or at least every five years.
- Identification of responsible parties for implementation.
- Schedule of implementation.
- Certified California Environmental Quality Act (CEQA) document, or equivalent process.

Mill Valley's updated greenhouse gas emissions inventory sets a baseline emissions level for the year 2005 and projects future emissions levels for the year 2020. The baseline and projection are used to determine the amount of emissions reduction necessary to achieve the City's adopted reduction targets for both the community and internal government operations.

Mill Valley as a community emitted approximately 95,000 metric tons equivalent carbon dioxide ($MTCO_2e$) of greenhouse gases in 2005. The majority of these emissions resulted from transportation. Residential energy use was the second largest source of emissions followed by commercial/industrial energy use and waste.

In 2005, internal government operations were estimated to have contributed 3,000 MTCO2e of greenhouse gas emissions – just over 3 percent of total citywide emissions. The largest emission sources were wastewater treatment and water management, building and facility energy use, vehicle fleet, and employee commute. Waste and streetlight energy use contributed the remainder.

If emissions continue to increase at the same rate of increase as population, jobs, and traffic volumes, Mill Valley is expected to emit 8 percent more greenhouse gases in 2020 than in 2005.

Without specific new greenhouse gas reduction measures, emissions from government operations are expected to remain relatively constant.

The 2040 General Plan Climate Action Element meets the criteria for a qualified CAP. The Climate Action Element addresses both city emissions (e.g., emissions from city vehicles) as well as community emissions (e.g., emissions from the electricity generated to power residences within the City). The Climate Action Element cross-references goals and policies within the document that further the objective of reducing greenhouse gas emissions. The City of Mill Valley has adopted a greenhouse gas emissions reduction target of 20 percent below 2005 levels by 2020 for internal government operations, and 15 percent below 2005 levels communitywide by 2020. The emission reduction targets are shown in Table 3.2-6 and are based on the Mill Valley 2040 goals, policies, and programs. As shown in the table, the Mill Valley 2040 goals, policies, and programs result in a 21.7-percent and 24.6-percent reduction in 2005 Baseline emissions for 2020 and 2040. Thus, the emission reductions meet the required reduction of 20 percent.

**Table 3.2-6: Greenhouse Gas Emissions Reduction Summary Total**

| No. | Emissions Reduction Measure | Greenhouse Gas Emissions Reductions ($MTCO_2e/yr$) | |
|---|---|---|---|
| | | 2020 | 2040 |
| **LOCAL ACTIONS** | | | |
| 1 | Recycled Water | -0.3 | -8.3 |
| 2 | Reduce Infiltration & Inflow to Wastewater Treatment Plant | -3.1 | -9.3 |
| 3 | Municipal Indoor Water Conservation | -1.0 | -1.5 |
| 4 | Municipal Outdoor Water Conservation | -1.6 | -2.4 |
| 5 | Wastewater Treatment Plant Energy Efficiency Projects | -21.3 | -21.3 |
| 6 | Cogeneration at Wastewater Treatment Plant | 0.0 | -110.0 |
| 7 | Indoor Water Efficiency and Conservation | -1,234.6 | -1,938.1 |
| 8 | Outdoor Water Efficiency and Conservation | -16.8 | -26.3 |
| 9 | Greywater | -0.3 | -6.7 |
| 10 | Rainwater Catchment | 0.0 | -0.2 |
| 11 | Food and Greenwaste | -689.2 | -801.5 |

## Table 3.2-6 (cont.): Greenhouse Gas Emissions Reduction Summary Total

| No. | Emissions Reduction Measure | Greenhouse Gas Emissions Reductions ($MTCO_2e/yr$) | |
|---|---|---|---|
| | | 2020 | 2040 |
| 12 | Construction &Demolition Waste | -117.7 | -136.9 |
| 13 | Paper Waste | -1,013.4 | -1,177.9 |
| 14 | Food Waste to Energy | 0.0 | -134.2 |
| 15 | Resilient Neighborhoods & Businesses | -330.0 | -1,650.0 |
| 16 | Green Purchasing | -8.6 | -9.6 |
| 17 | Energy Efficiency Beyond Title 24 | -8.8 | -12.6 |
| 18 | Energy Audits | -37.6 | -249.7 |
| 19 | Marin Clean Energy | -4,582.0 | -3,849.0 |
| 20 | Municipal Streetlights | -38.7 | -51.5 |
| 21 | Municipal Energy Efficiency and Renewable Energy Projects | -46.6 | -127.5 |
| 22 | Energy Efficiency | -402.1 | -2,085.7 |
| 23 | Renewable Energy | -117.3 | -1,308.5 |
| 24 | Tree Planting | -8.5 | -28.3 |
| 25 | Electric Vehicle Parking | -31.0 | -155.1 |
| 26 | Carpool Parking | -16.9 | -84.7 |
| 27 | School Transportation | -50.1 | -100.2 |
| 28 | Bicycle and Pedestrian Transportation | -285.0 | -955.4 |
| 29 | Public Transportation | -101.2 | -402.8 |
| 30 | Carpooling | -200.0 | -320.6 |
| 31 | Bike Sharing | -13.8 | -55.3 |
| 32 | High-Efficiency City Vehicles | 18.3 | -36.6 |
| 33 | City Employee Commute Incentives | -3.9 | -11.2 |
| **Total – Local Actions** | | **-9,363** | **-15,869** |
| **STATE ACTIONS** | | | |
| Renewable Portfolio Standards | | -834 | -700 |
| Title 24 | | -116 | -1,893 |
| Pavley 1 and Low Carbon Fuel Standard (Vehicle Emissions) | | -10,991 | -17,919 |
| California Solar Initiative | | -277 | -277 |
| **Total – State Actions** | | **-12,217** | **-20,788** |

**Table 3.2-6 (cont.): Greenhouse Gas Emissions Reduction Summary Total**

| No. | Emissions Reduction Measure | Greenhouse Gas Emissions Reductions ($MTCO_2e/yr$) | |
|---|---|---|---|
| | | 2020 | 2040 |
| **PROJECTED EMISSIONS** | | | |
| Projected Business As Usual Community-Wide Greenhouse Gas Emissions | | 92,663 | 105,168 |
| Emission Reductions from Local and State Actions | | -21,580 | -36,657 |
| Community-Wide Emissions with Local and State Actions Implemented | | 71,083 | 68,510 |
| **REDUCTION FROM 2010 EMISSIONS** | | | |
| 2010 Community-Wide Greenhouse Gas Emissions | | 87,258 | 87,258 |
| Community-Wide Emissions with Local and State Actions Implemented | | 71,083 | 68,510 |
| Percent Reduction from 2010 Emissions | | 18.5% | 21.5% |
| Reduction from 2005 Baseline Emissions | | | |
| 2005 Community-Wide Greenhouse Gas Emissions | | 90,806 | 90,806 |
| Community-Wide Emissions with Local and State Actions Implemented | | 71,083 | 68,510 |
| Percent Reduction from 2005 Baseline | | 21.7% | 24.6% |
| Source: City of Mill Valley, 2013. | | | |

Based on the existing regulatory requirement and the goals and policies contained within the proposed 2040 General Plan, there is certainty that future activities contemplated by the 2040 General Plan would not generate greenhouse gas emissions, either directly or indirectly, and therefore will not have a significant impact on the environment or conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases. This impact is less than significant.

### *Level of Significance Before Mitigation*
Less than significant impact.

### *Mitigation Measures*
No mitigation is necessary.

### *Level of Significance After Mitigation*
Less than significant impact.

# 3.3 - Biological Resources

## 3.3.1 - Introduction

This section describes the existing biological setting and potential effects from the 2040 General Plan implementation on the Planning Area and surroundings.

## 3.3.2 - Environmental Setting

### Vegetative Communities

The majority of the Planning Area contains urban development, rural residential development, undeveloped areas, and open space areas. Vegetative communities consist of California Bay Forest, Coast Live Oak Forest/Woodland, Coastal Salt Marsh/Coastal Brackish Marsh, Coastal Scrub, Cool Grasslands, Douglas Fir Forest, Eucalyptus, Mixed Montane Chaparral, Moderate Grasslands, Montane Hardwoods, Non-Native Ornamental Conifer-Hardwood Mixture, Non-Native/Ornamental Grass, and Redwood Forest. Exhibit 3.3-1 depicts the vegetative communities within Mill Valley.

#### *Sensitive Natural Communities*

Of the various vegetative communities shown in Exhibit 3.3-1, the following are classified as "sensitive natural communities" under CEQA: California Bay Forest, Coast Live Oak Forest/Woodland, Coastal Salt Marsh/Coastal Brackish Marsh, Coastal Scrub, Cool Grasslands, Douglas Fir Forest, Mixed Montane Chaparral, Moderate Grasslands, Montane Hardwoods, and Redwood Forest.

### Special-Status Species

Special-status species are those animal and plant species that, in the judgment of the resource agencies, trustee agencies, and certain non-governmental organizations, warrant special consideration in the California Environmental Quality Act (CEQA) process. This includes the following:

- Officially designated "threatened," "endangered," or "candidate" species federally listed by the United States Fish and Wildlife Service (USFWS) and protected under the Federal Endangered Species Act.
- Officially designated "rare," "threatened," "endangered," or "candidate" species state listed by the California Department of Fish and Wildlife (CDFW) and protected under the California Endangered Species Act. CDFW also maintains a list of "Fully Protected" species as well as "California Species of Special Concern" that are also generally included as special-status species under CEQA.
- Species considered rare, threatened, or endangered under the conditions of Section 15380 of the CEQA Guidelines, such as plant species identified on lists 1A, 1B, and 2 in the California Native Plant Society (CNPS) Inventory of Rare and Endangered Vascular Plants of California.
- Other species considered sensitive, such as birds protected under the Migratory Bird Treaty Act, which includes most native birds. A species may also be designated as special concern at the local level.

### *Special-Status Species within the Planning Area*

The following special-status species have been recorded within the Planning Area: steelhead salmon, marbled murrelet, and the northern spotted owl. Exhibit 3.3-2 provides the areas that provide suitable habitat for these species within the Planning Area.

### Jurisdictional Features

Jurisdictional features consist of waterways and other water features (e.g., wetlands) that are protected under the Federal Clean Water Act. Within Mill Valley, significant jurisdictional features include Coyote Creek, Old Mill Creek, Cascade Creek, Galena Creek, Arroyo Corte Madera Del Presidio, and Richardson Bay. Exhibit 3.7-1 in Section 3.7, Hydrology and Water Quality depicts the watersheds within Mill Valley.

### Wildlife Movement Corridors

Wildlife movement corridors link together areas of suitable habitat that are otherwise separated by rugged terrain, changes in vegetation, or human disturbance. The fragmentation of open space areas by urbanization creates isolated "islands" of wildlife habitat. In short, a wildlife movement corridor is a "choke point" that serves to link larger areas of biological activity. Generally, these corridors are linear features such as waterways, canyons, and passes.

Within Mill Valley, wildlife movement corridors are limited to the waterways that link the hillsides with Richardson Bay. Because of the characteristics of these features, they are generally suitable for fish and small mammals adapted to urban environments (raccoons, possums, etc.).

## 3.3.3 - Regulatory Framework

### Federal

#### *Endangered Species Act*

The Endangered Species Act of 1973 establishes a framework for protecting and facilitating the recovery of threatened and endangered populations of animal and plant species. Under the act, the Secretary of the Interior is required to list species of animals and plants that are both threatened and endangered, a task that is delegated to the USFWS and the National Marine Fisheries Service (NMFS). A species can become threatened or endangered as a result of the following factors:

- Present or threatened destruction
- Modification or curtailment of its habitat range
- Over-utilization for commercial recreation, scientific, or educational purposes
- Disease or predation
- Inadequacy of existing statutory mechanisms
- Other natural or man-made factors affecting its continued existence

Section 3 of the Endangered Species Act defines an endangered species as any species or subspecies of fish, wildlife, or plants "in danger of extinction throughout all or a significant portion of its range." A threatened species is defined as any species or subspecies "likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range."

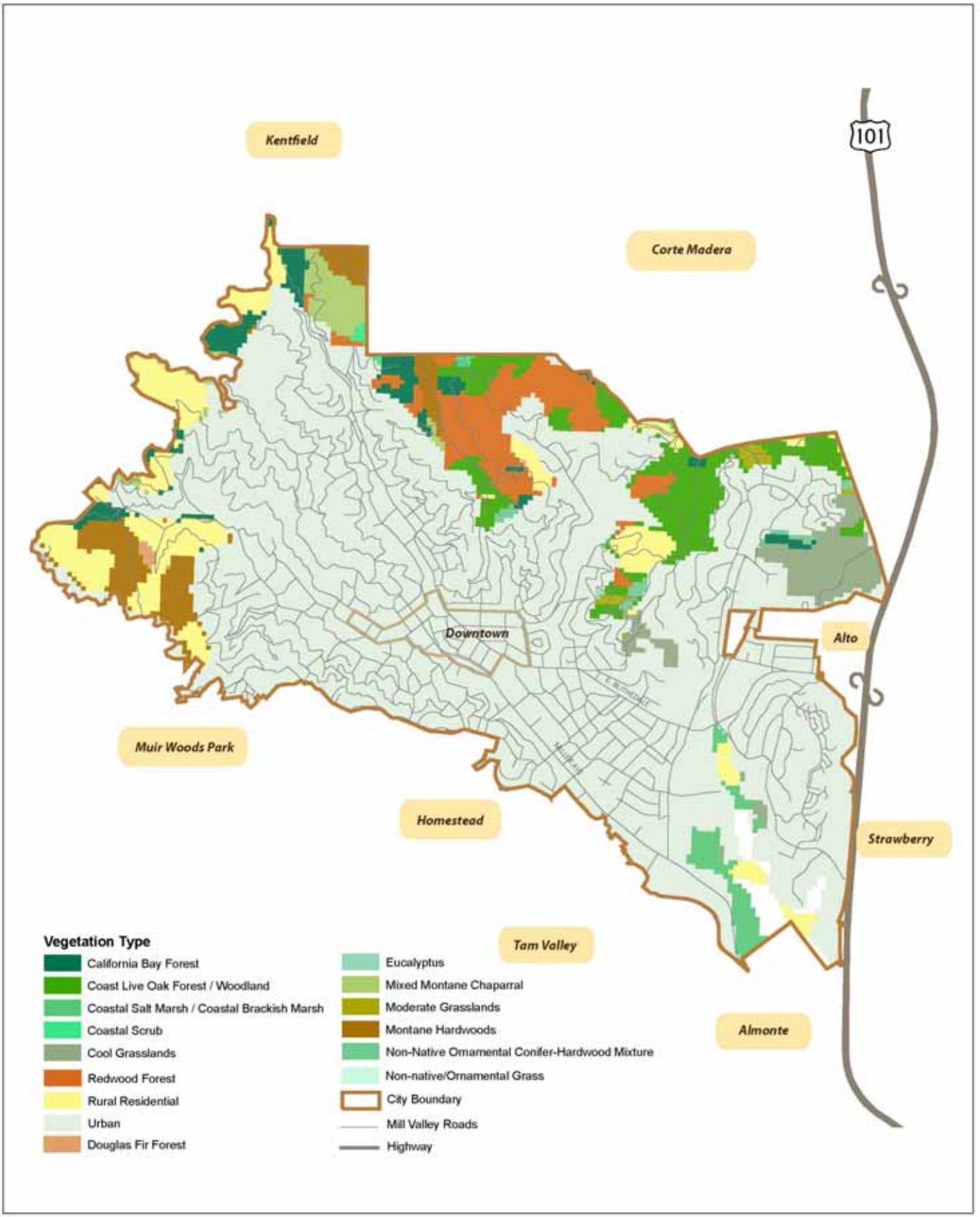



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Exhibit 3.3-1
Vegetative Communities

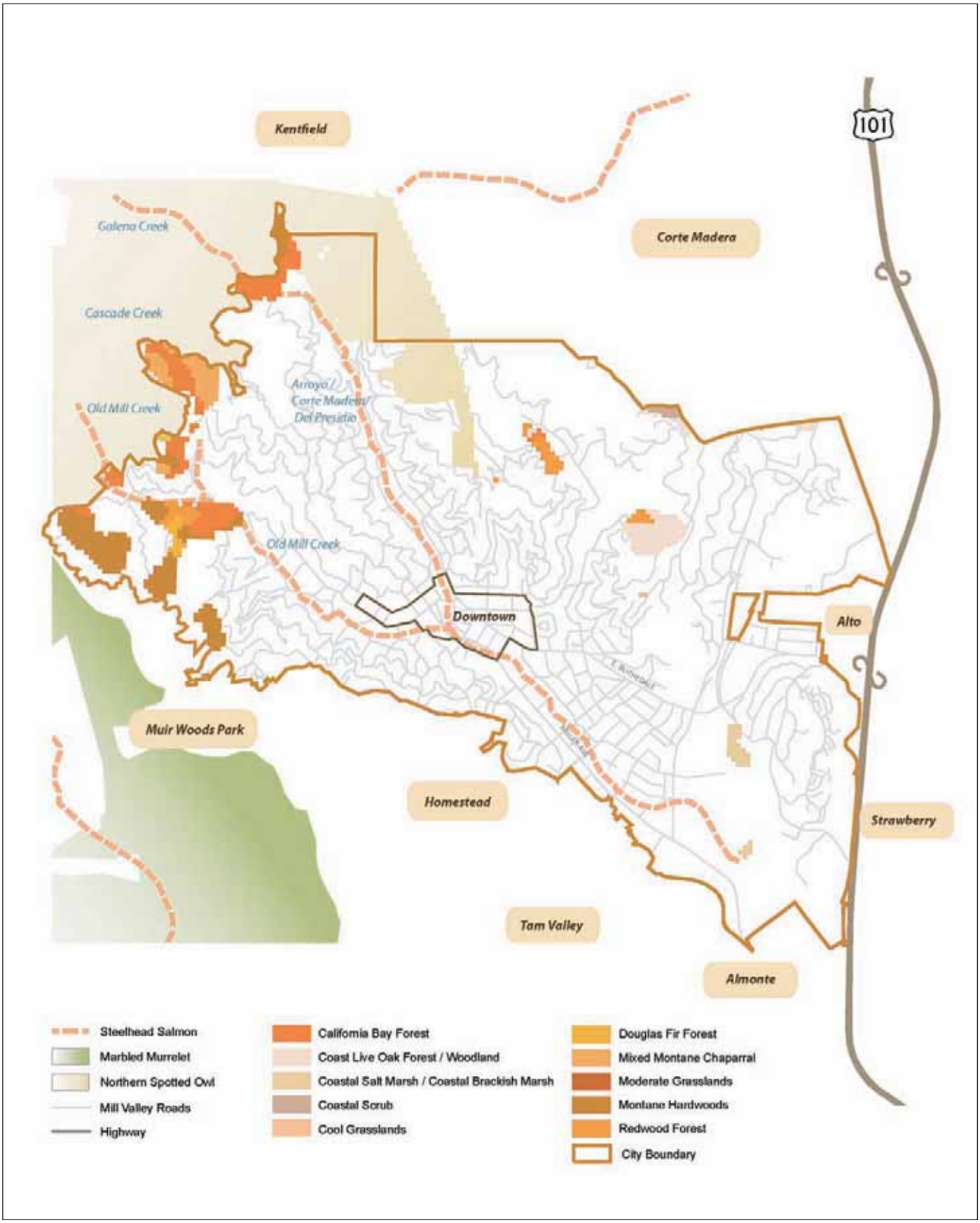


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Exhibit 3.3-2
Sensitive Species

Designated endangered and threatened species, as listed through publication of a final rule in the Federal Register, are fully protected from a "take" without an incidental take permit administered by the USFWS under Section 10 of the ESA. "Take" is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap capture, or collect, or to attempt to engage in any such conduct (50 Code of Federal Regulations [CFR] 17.3). The term "harm" in the definition of take means an action that actually kills or injures wildlife. Such action may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering (50 CFR 17.3). The term "harass" in the definition of take means an intentional or negligent act or omission that creates the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns, which include but are not limited to breeding, feeding, or sheltering (50 CFR 17.3). Proposed endangered or threatened species are those for which a proposed regulation, but not a final rule, has been published in the Federal Register.

Section 7 of the act requires that federal agencies ensure that their actions are not likely to jeopardize the continued existence of a listed species, or destroy or adversely modify its critical habitat. This obligation requires federal agencies to consult with the USFWS or the NMFS on any actions (issuing permits including Section 404 permits, issuing licenses, providing federal funding) that may affect listed species to ensure that reasonable and prudent measures will be undertaken to mitigate impacts on listed species. Consultation with USFWS or NMFS can be either formal or informal, depending on the likelihood of the action to adversely affect listed species or critical habitat. Once a formal consultation is initiated, USFWS or NMFS will issue a Biological Opinion (either a "jeopardy" or a "no jeopardy" opinion) indicating whether the proposed agency action will or will not jeopardize the continued existence of a listed species or result in the destruction or modification of its critical habitat. A permit cannot be issued for a project with a jeopardy opinion unless the project is redesigned to lessen impacts.

In the absence of any federal involvement, as in a privately funded project on private land with no federal permit, only Section 10(a) of the act can empower the USFWS or NMFS to authorize incidental take of a listed species, provided a habitat conservation plan is developed. To qualify for a formal Section 10(a) permit, strict conditions must be met, including a lengthy procedure involving discussions with USFWS, NMFS, and local agencies; preparation of an habitat conservation plan; and a detailed Section 10(a) permit application.

### *Clean Water Act*

Section 404 of the Federal Clean Water Act (CWA), which is administered by the United States Army Corps of Engineers (USACE), regulates the discharge of dredge and fill material into "waters of the United States." Once Section 404 jurisdiction is established, several different types of permitting procedures cover the discharge of dredge and fill material. The first category of permits is the General Permit (falling into two sub-categories: nationwide and regional permits), which provide standing authority for certain specified activities, and set forth various compliance requirements necessary to obtain coverage without further USACE involvement. The second category of permits is the Individual Permit. Unlike the General Permit process, individual permit applications are subject to public notice and a public interest review, which involve a comprehensive analysis of a number of identified factors to evaluate the probable impacts on the public interest of the proposed activity.

These permit applications also require preparation of an alternatives analysis that evaluates whether there is a "practicable alternative" to the proposed discharge. The USACE has established a series of nationwide permits that authorize certain activities in waters of the United States, if a proposed activity can demonstrate compliance with standard conditions. Normally, the USACE requires an individual permit for an activity that would affect an area equal to or in excess of 0.5 acre of waters of the United States. Projects that result in impacts to less than 0.5 acre can normally be conducted pursuant to one of the nationwide permits, if consistent with the standard permit conditions. The USACE also has discretionary authority to require an Environmental Impact Statement for projects that result in impacts to an area between 0.1 and 0.5 acre. Use of any nationwide permit is contingent on the activities having no impacts to endangered species.

Section 401 of the CWA requires that "any applicant for a federal permit for activities that involve a discharge to waters of the State shall provide the federal permitting agency with a certification from the State, in which the discharge is proposed, that states the discharge will comply with the applicable provisions under the federal Clean Water Act." Therefore, before the USACE will issue a Section 404 permit, applicants must apply for and receive a Section 401 water quality certification from the Regional Water Quality Control Board (RWQCB). This certification requirement applies to both General and Individual Permits.

### *Migratory Bird Treaty Act*

The Migratory Bird Treaty Act of 1918 makes it unlawful to take (kill, harm, harass, etc.) any migratory bird listed in 50 CFR 10, including their nests, eggs, or products. The Migratory Bird Treaty Act protects more than 800 species, including geese, ducks, shorebirds, raptors, songbirds, and many relatively common species, and it was originally drafted to put an end to the commercial trade in birds and their feathers that, by the early years of the 20$^{th}$ century, had wreaked havoc on the populations of many native bird species. The Migratory Bird Treaty Act implements the United States' commitment to four international conventions (with Canada, Japan, Mexico, and Russia) for the protection of a shared migratory bird resource. Each of the conventions protects selected species of birds that are common to both countries (i.e., they occur in both countries at some point during their annual life cycle). The act requires that the removal of any trees, shrubs, or any other potential nesting habitat be conducted outside the avian nesting season, which is generally between early February and late August.

## State

### *California Endangered Species Act*

Signed into law in 1984, the California Endangered Species Act declares that deserving plant or animal species will be given protection by the State because they are of ecological, educational, historical, recreational, aesthetic, economic, and scientific value to the people of the State. The act established that it is State policy to conserve, protect, restore, and enhance endangered species and their habitats. Under State law, the California Fish and Game Commission may formally designate plant and animal species rare, threatened, or endangered by official listing. Listed species are generally given greater attention during the land use planning process by local governments, public agencies, and landowners than are species that have not been listed.

The California Endangered Species Act prohibits the take of any species that the California Fish and Game Commission determines to be an endangered species or a threatened species. The act defines a take as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." The CDFG enforces the act, which authorizes that take of a plant or wildlife species listed as endangered or threatened under the federal and state acts may occur pursuant to a federal incidental take permit issued in accordance with Section 10 of the federal Endangered Species Act, provided CDFG is notified and certifies that the incidental take statement or incidental take permit is consistent with California Endangered Species Act (Fish and Game Code Section 2080.1(a)).

The California Endangered Species Act emphasizes early consultation to avoid potential impacts to rare, endangered, and threatened species and to develop appropriate mitigation planning to offset project-caused losses of listed species populations and their essential habitats.

### *California Environmental Quality Act - Treatment of Listed Plant and Animal Species*

Both the federal and state Endangered Species Acts protect only those species formally listed as threatened or endangered (or rare, in the case of the State list). CEQA Guidelines Section 15380, however, independently defines "endangered" species of plants, fish or wildlife as those whose survival and reproduction in the wild are in immediate jeopardy, and "rare" species as those which are in such low numbers that they could become endangered if their environment worsens. Therefore, a project will normally have a significant effect on the environment if it will substantially affect a rare or endangered species or the habitat of the species. The significance of impacts to a species under CEQA must be based on analyzing actual rarity and threat of extinction despite legal status or lack thereof.

### *California Fish and Game Code*

Sections 3503, 3503.5, and 3800 of the California Fish and Game Code prohibit the "take, possession, or destruction of birds, their nests or eggs." Disturbance that causes nest abandonment and/or loss of reproductive effort (killing or abandonment of eggs or young) is considered a take.

### *State Water Resources Control Board/California Regional Water Quality Control Board*

The State Water Resources Control Board (SWRCB) and the RWQCB regulate activities in waters of the State (which include wetlands) through Section 401 of the CWA. If an applicant proposes to discharge dredged or fill material into any waters of any state, Section 401 of the CWA requires that, in addition to an application for a permit, the applicant must provide proof of state or intrastate water pollution control agency certification of compliance with its water quality criteria (as described more fully above).

### *Porter-Cologne Water Quality Act*

The RWQCB regulates actions that would involve "discharging waste, or proposing to discharge waste, within any region that could affect the water of the state" (California Water Code Section 13260(a)), pursuant to provisions of the Porter-Cologne Water Quality Act. Waters of the State are defined as "any surface water or groundwater, including saline waters, within the boundaries of the state" (California Water Code 13050(e)).

### *National Pollutant Discharge Elimination System (NPDES)*

The CWA requires local jurisdictions to address the problem of pollutants in stormwater runoff from development. The CWA provides for the control of the discharge of any pollutant into navigable waters from any point sources. To regulate point source pollution, the CWA provides that the EPA may issue national pollution discharge elimination system (NPDES) permits. NPDES permits are issued by the EPA or by the states under EPA-approved permit programs that incorporate CWA's technological standards. California's permit program is implemented through SWRCB and the regional water quality control boards. Section 402(p) of the CWA establishes a framework for regulating municipal and industrial stormwater discharges under the NPDES program, and requires controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and systems, and design and engineering methods. The regional boards implement the CWA's municipal stormwater requirements through the State's Municipal Storm Water Permitting Program. While federal regulations allow the permitting options for stormwater discharge (Individual and General Permits), the SWRCB has elected to adopt only one statewide General Permit.

### *California Native Plant Protection Act*

The California Native Plant Protection Act is intended to preserve, protect, and enhance endangered or rare native plants in California. This act directs CDFG to establish criteria for determining what native plants are rare or endangered. Under this act, a species is endangered when its prospects for survival and reproduction are in immediate jeopardy from one or more causes. A species is rare, although not threatened with immediate extinction, if it is in such small numbers throughout its range that it may become endangered if its present environment worsens. This act prohibits any person from importing into or taking, possessing or selling within California, except as incident to the possession or sale of the real property on which the plant is growing, any endangered or rare native plant or as otherwise excepted under the act.

The CNPS maintains a list of plant species native to California that have low numbers, limited distribution, or otherwise are threatened with extinction. This information is published in the Inventory of Rare and Endangered Vascular Plants of California. Potential impacts to population of rare plants receive consideration under CEQA review. The CNPS ranking system applicable to the project are defined below:

- List 1A: Plants presumed extinct
- List 1B: Plants rare, threatened or endangered in California and elsewhere
- List 2: Plants rare, threatened or endangered in California, but more numerous elsewhere

### *Bay Conservation and Development Commission*

The Bay Conservation and Development Commission (BCDC) has jurisdiction over all areas of San Francisco Bay that are subject to tidal action. (Tidal action is defined by the shoreline that extends up to mean high water, except in marsh areas, where BCDC's jurisdiction extends to 5 feet above mean sea level.) BCDC also has "shoreline band" jurisdiction over an area 100 feet wide inland and parallel to the shoreline. For projects within BCDC jurisdiction, permits may be required, depending on the nature of the activity. Those projects requiring a permit must comply with the requirements of the McAteer-Petris Act and the Bay Plan.

### Local

#### *City of Mill Valley*

*2040 General Plan*

The proposed 2040 General Plan establishes the following goals and policies associated with biological resources:

- **Goal NE.1 Understanding & Sustaining the Ecosystem:** Identify, map and inventory natural resources and potential natural hazards, with regular updates.
- **Policy NE.1 Data and Mapping:** Collaborate with regional, state, and federal agencies to continually update and assess information on ecologically sensitive and significant natural communities.
- **Goal NE.2 Understanding & Sustaining the Ecosystem:** Preserve, restore or rehabilitate the integrity, function, productivity and long-term viability and resiliency of the ecosystem and its ecologically sensitive and significant natural communities and wildlife habitats.
- **Policy NE.2 Resource Preservation and Restoration:** Utilize a watershed approach (as compared to a parcel-by-parcel approach) to identifying, preserving or rehabilitating natural resources in a consistent manner that support applicable flood control, storm drainage, water quality and public access values, and as a basis for identifying and applying best practices for the continued contribution of the community's native plant and wildlife species value and aesthetic character to Mill Valley.
- **Goal NE.5 Leadership & Education:** Increase the community's knowledge and understanding of ecologically significant and sensitive natural communities, natural processes, and any corresponding hazards in areas where the natural environment and human settlement meet.
- **Policy NE.5 Community Outreach and Education:** Support educational programs for residents and visitors about the uniqueness and value of Mill Valley's natural resources and ways to appreciate, enjoy, and protect those resources.
- **Goal NE.6 Considering the Ecosystem in City Decision-Making:** Ensure that all planning and decision-making processes integrate sustainability and resource conservation.
- **Policy NE.7 Leadership and Coordination:** Collaborate with local, state and federal agencies and private organizations to initiate and implement sustainable policies and programs. Develop and promote sustainable practices and using an ecosystem and watershed approach to solving resource related issues that goes beyond political boundaries.

## 3.3.4 - Methodology

FirstCarbon Solutions evaluated potential impacts on biological resources through review of the existing 1989 General Plan and proposed 2040 General Plan, federal and state lists of special-status species, aerial photographs, and visual reconnaissance.

## 3.3.5 - Thresholds of Significance

According to Appendix G, Environmental Checklist, of the CEQA Guidelines, biological resources impacts resulting from the implementation of the proposed project would be considered significant if the project would:

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?

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

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 wildlife nursery sites?

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

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? (Refer to Section 7, Effects Found Not To Be Significant.)

## 3.3.6 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the development of the project and provides mitigation measures where appropriate.

### Special-Status Species

| | |
|---|---|
| **Impact BIO-1:** | **Implementation of the 2040 General Plan would not have a substantial adverse effect on special-status plant or wildlife species.** |

***Impact Analysis***

Special-status plant and wildlife species typically occur in undeveloped areas, although it is possible for them to occur within developed areas as well. As shown Exhibit 3.3-2, special-status species have been recorded within the Planning Area include steelhead salmon, marbled murrelet, and the northern spotted owl. Old Mill Creek, Cascade Creek, Galena Creek, and Arroyo Corte Madera Del Presidio provide suitable habitat for steelhead salmon, while the western and northern hillsides of the Planning Area contain suitable habitat for the marbled murrelet, and the northern spotted owl.

The 2040 General Plan sets forth several goals and policies that address potential impacts on special-status species. Goals NE.1, NE.2, and NE.6 and Policies NE.1, NE.2, and NE.7 call for regularly updating inventories of biological resources, collaborating with resource agencies, preserving ecological sensitive natural communities and habitats, utilizing a watershed approach for assessing impacts on species, and considering biological resource impacts as part of the planning and decision-making processes.

Finally, development and land use activities that involve potentially impacts to federally and state protected species would be subject to applicable statutes and regulatory policies, including but not limited to the Federal Endangered Species Act, the Migratory Bird Treaty Act, the California Endangered Species Act, and the Fish and Game Code.

Therefore, based on the existing regulatory requirements and the policies contained within the proposed 2040 General Plan, there is certainty that future development and land use activities contemplated by the 2040 General Plan would not have significant impacts on special-status species. Impacts would be less than significant.

### *Level of Significance Before Mitigation*
Less than significant impact.

### *Mitigation Measures*
No mitigation is necessary.

### *Level of Significance After Mitigation*
Less than significant impact.

## Riparian Habitat and Sensitive Natural Communities

| | |
|---|---|
| **Impact BIO-2:** | **Implementation of the 2040 General Plan would not have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.** |

### *Impact Analysis*
As shown in Exhibit 3.3-2, sensitive natural communities within Mill Valley consist of California Bay Forest, Coast Live Oak Forest/Woodland, Coastal Salt Marsh/Coastal Brackish Marsh, Coastal Scrub, Cool Grasslands, Douglas Fir Forest, Mixed Montane Chaparral, Moderate Grasslands, Montane Hardwoods, and Redwood Forest. Most of the natural communities occur within publicly owned open space areas along the western and northern hillsides of Mill Valley. Additionally, riparian habitat is present within the various creek corridors in the Planning Area.

The 2040 General Plan sets forth several goals and policies that address potential impacts on riparian habitat and sensitive natural communities. Goals NE.1, NE.2, and NE.6 and Policies NE.1, NE.2, and NE.7 call for regularly updating inventories of biological resources, collaborating with resource agencies, preserving ecological sensitive natural communities and habitats, utilizing a watershed approach for assessing impacts on species, and considering biological resource impacts as part of the planning and decision-making processes.

Finally, development and land use activities that involve potential impacts to riparian habitat and sensitive natural communities would be subject to applicable statutes and regulatory policies, including but not limited to the Federal Clean Water Act, the Porter-Cologne Water Quality Act, and the Fish and Game Code.

Therefore, based on the existing regulatory requirements and the policies contained within the proposed 2040 General Plan, there is certainty that future development and land use activities contemplated by the 2040 General Plan would not have significant impacts on riparian habitat and sensitive natural communities. Impacts would be less than significant.

### *Level of Significance Before Mitigation*
Less than significant impact.

### *Mitigation Measures*
No mitigation is necessary.

### *Level of Significance After Mitigation*
Less than significant impact.

## Federally Protected Wetlands

| | |
|---|---|
| **Impact BIO-3:** | **Implementation of the 2040 General Plan would not have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.** |

### *Impact Analysis*
Within Mill Valley, wetlands eligible for protection under the Federal Clean Water Act are present with creek corridors and along Richardson Bay. Additionally, vernal pools may also be classified as wetlands if they meet specific criteria.

The 2040 General Plan sets forth several goals and policies that address potential impacts on wetlands. Goals NE.1, NE.2, and NE.6 and Policies NE.1, NE.2, and NE.7 call for regularly updating inventories of biological resources, collaborating with resource agencies, preserving ecological sensitive natural communities and habitats, utilizing a watershed approach for assessing impacts on species, and considering biological resource impacts as part of the planning and decision-making processes.

Finally, development and land use activities that involve potentially impacts to riparian habitat and sensitive natural communities would be subject to applicable statutes and regulatory policies, including but not limited to the Federal Clean Water Act, the Porter-Cologne Water Quality Act, and the Fish and Game Code.

Therefore, based on the existing regulatory requirements and the policies contained within the proposed 2040 General Plan, there is certainty that future development and land use activities contemplated by the 2040 General Plan would not have significant impacts on federally protected wetlands. Impacts would be less than significant.

### *Level of Significance Before Mitigation*
Less than significant impact.

### *Mitigation Measures*
No mitigation is necessary.

### *Level of Significance After Mitigation*
Less than significant impact.

## Wildlife Movement and Nurseries

| | |
|---|---|
| **Impact BIO-4:** | **Implementation of the 2040 General Plan would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of wildlife nursery sites.** |

### *Impact Analysis*
Examples of wildlife movement corridors include waterways, arroyos, and ridgelines. Within Mill Valley, creek corridors are the most common wildlife movement corridor. Additionally, Old Mill Creek, Cascade Creek, Galena Creek, and Arroyo Corte Madera Del Presidio provide suitable habitat for fish species.

The 2040 General Plan sets forth several goals and policies that address potential impacts on fish and wildlife movement. Goals NE.1, NE.2, and NE.6 and Policies NE.1, NE.2, and NE.7 call for regularly updating inventories of biological resources, collaborating with resource agencies, preserving ecological sensitive natural communities and habitats, utilizing a watershed approach for assessing impacts on species, and considering biological resource impacts as part of the planning and decision-making processes.

Finally, development and land use activities that involve potentially impacts to federally and state protected species would be subject to applicable statutes and regulatory policies, including but not limited to the Federal Endangered Species Act, the Migratory Bird Treaty Act, the California Endangered Species Act, and the Fish and Game Code.

Therefore, based on the existing regulatory requirements and the policies contained within the proposed 2040 General Plan, there is certainty that future development and land use activities contemplated by the 2040 General Plan would not have significant impacts on fish and wildlife movement. Impacts would be less than significant.

### *Level of Significance Before Mitigation*
Less than significant impact.

### *Mitigation Measures*
No mitigation is necessary.

### *Level of Significance After Mitigation*
Less than significant impact.

## Local Biological Ordinances and Policies

**Impact BIO-5: Implementation of the 2040 General Plan would not conflict with any local policies or ordinances.**

### *Impact Analysis*

As listed above in the Regulatory Framework section, the proposed 2040 General Plan establishes a number of goals and policies that concern protection of biological resources. The General Plan sits atop the hierarchy of planning documents used by the City; therefore, Municipal Code updates and other City programs must be consistent with the policies established in the General Plan. As such, the proposed 2040 General Plan would be internally consistent with the City's existing and proposed local policies protecting biological resources. Impacts would be less than significant.

### *Level of Significance Before Mitigation*

Less than significant impact.

### *Mitigation Measures*

No mitigation is necessary.

### *Level of Significance After Mitigation*

Less than significant impact.

# 3.4 - Cultural Resources

## 3.4.1 - Introduction

This section describes the existing cultural setting and potential effects from the 2040 General Plan implementation on the Planning Area and surroundings.

## 3.4.2 - Environmental Setting

### Overview

The term "cultural resources" encompasses historic, archaeological, and paleontological resources, and burial sites. Below is a brief summary of each component:

- **Historic Resources:** Historic resources are associated with the recent past. In California, historic resources are typically associated with the Spanish, Mexican, and American periods in the State's history and are generally less than 200 years old.
- **Archaeological Resources:** Archaeology is the study of prehistoric human activities and cultures. Archaeological resources are generally associated with indigenous cultures.
- **Paleontological Resources:** Paleontology is the study of plant and animal fossils.
- **Burial Sites:** Burial sites are formal or informal locations where human remains, usually associated with indigenous cultures, are interred.

### Cultural Setting

#### *Native American Background*

The Coast Miwok were the first inhabitants of modern-day Marin County and Mill Valley. The Coast Miwok arrived approximately 6,000 years ago and occupied the area consisting of Marin County and southern Sonoma County. More that 600 Coast Miwok village sites have been identified, including 14 sites in and around Mill Valley. Researchers estimated the Coast Miwok population to be 1,500 to 2,000 in 1770 (prior to the establishment of the Mission system). Ultimately, this population declined to an estimated 300 in 1848 and then 60 in 1880.

The earliest recorded contact the Coast Miwok had with Europeans was in 1579 when Sir Frances Drake landed in Marin County. Over the next several centuries, the Coast Miwok encountered Spanish and Russian voyagers.

The foundation of Mission San Francisco de Asís (commonly known as Mission Dolores) in 1776 in modern-day San Francisco marked a turning point for the Coast Miwok. Tribal members gradually entered the mission and were taught the Catholic religion. Approximately three-quarters of the population died as a result of exposure to European diseases. The high death rate at Mission Dolores prompted the missionaries to build Mission San Rafael Archangel in modern-day San Rafael in 1817. More than 200 surviving Coast Miwok were transferred to Mission San Rafael.

Artifacts from the Coast Miwok have been found over time in Mill Valley. Evidence of a village site (tools, burials, and food debris) was found in 1907 at what is modern-day Locust Avenue. A metal plaque identifies this site, which is also believed to be the birthplace of Chief Marin in 1871. Shell mounds have also been found along Richardson Bay.

### *Historic Background*

Mill Valley overlaps with two historic ranchos—Rancho Corte Madera del Presidio and Rancho Saucelito—with modern-day Miller Avenue the demarcation line. Rancho Corte Madera del Presidio is east of Miller Avenue, while Rancho Saucelito is west of the roadway.

In 1834, Alta California Governor José Figueroa awarded John T. Reed the first land grant in Marin, known as Rancho Corte Madera del Presidio. Reed was originally from Dublin, Ireland and arrived at the San Francisco Presidio in 1826, where he befriended Commandant José Antonio Sanchez and later married his daughter.

In 1838, Figueroa awarded William A. Richardson[1] the Rancho Saucelito. Rancho Corte Madera del Presidio encompassed modern-day southern Corte Madera, the Tiburon Peninsula, and Strawberry Point, while Rancho Saucelito encompassed most of the balance of modern-day Mill Valley, as well as the rest of the southern Marin Peninsula. Reed and Richardson were friends and did not delineate a boundary between their neighboring ranchos, and later, their heirs had to resolve the boundaries of their properties in court.

Reed built a sawmill in the mid-1830s on Cascade Creek in what is now modern-day Old Mill Park on Richardson's rancho. The mill provided wood products for the San Francisco Presidio. Reed built an adobe at what is now modern-day La Goma Avenue and raised four children with his spouse, the daughter of Commandant Sanchez. He also raised livestock and operated a brickyard and stone quarry. Reed died in 1843 and the rancho was bequeathed to his four children.

Richardson sold dairy and meat products to San Francisco during the Gold Rush. In the 1850s, he made several poor investments and incurred massive debt to many creditors. Richardson was forced to deed 640 acres of Rancho Saucelito to his wife, who was the daughter of the commandant of the Presidio, in order to protect her interests. The rest of the rancho, including the part of what is now Mill Valley that did not already belong to Reed's heirs, was given to his administrator, Samuel Reading Throckmorton. Richardson died in 1856, and Throckmorton continued Richardson's dairy and ranch operations for another 30 years before passing away in 1887. Ultimately, San Francisco Savings & Union Bank gained control of Throckmorton's land.

The San Francisco Savings & Union Bank organized the Tamalpais Land & Water Company in 1889 as an agency for disposing of Throckmorton's land. The Tamalpais Land & Water Co. hired Michael O'Shaughnessy, a noted engineer (who would later become chief engineer for the Hetch Hetchy Reservoir and O'Shaughnessy Dam), to lay out roads, pedestrian paths, and step-systems for what was envisioned to become a new city. O'Shaughnessy also built the Cascade Dam & Reservoir for

[1] William Richardson is the namesake of Richardson Bay.

water supply, and set aside land plots for churches, schools, and parks. During this period, the North Pacific Coast Railroad extended a rail line to Mill Valley in 1889.

In May 1890, nearly 3,000 people attended a land auction near the old sawmill. More than 200 acres were sold in the areas of present-day Throckmorton, Cascade, Lovell, Summit, and Miller Avenues and extending to the west side of Corte Madera Avenue. By 1892, there were two schools in the area and a few churches.

The Mt. Tamalpais Scenic Railway opened in 1896 and ran from the town center (modern-day Lytton Square) all the way to the summit. In 1907, the railroad added a branch line into "Redwood Canyon," which became Muir Woods National Monument in 1908. The railroad built the Muir Inn and overnight cabins for visitors. The railroad was destroyed by fire and rebuilt in 1923 and again destroyed by fire in 1929. After the second fire, the tracks were removed in the early 1930s.

By 1900, the population of Mill Valley approached 900 and local residents pushed out the Tamalpais Land & Water Co. in favor of incorporation. The 1906 earthquake was a catalyst for growth in Mill Valley, as many San Francisco residents moved to Marin County. Tamalpais High School opened, and the first city hall was erected, in 1908. During this period, many cultural and social organizations were founded, including the Outdoor Art Club in 1902. Mill Valley grew over the next two decades, reaching more than 2,500 residents by the mid-1920s.

In 1929, the Great Fire destroyed 117 homes and most of Mt. Tamalpais. The following year, the Panoramic Highway running between Mill Valley and Stinson Beach opened, which—combined with the 1929 fire and the onset of the Great Depression—was instrumental in the demise of the Mt. Tamalpais Scenic Railway. The opening of the Golden Gate Bridge in 1937 was a catalyst for more growth and effectively ended passenger railroad service to Mill Valley.

By 1950, Mill Valley's population reached 7,000. The United States Department of Defense built Mill Valley Air Force Station, a radar installation on Mt. Tamalpais, during the Korean War. A group of Beat poets and writers, including Jack Kerouac, briefly lived in Mill Valley in the late 1950s.

The 1960s through the 2000s saw considerable growth and modernization of the City. Older businesses that dated to the first half of the 1900s closed and were replaced with boutiques, upscale clothing stores, coffee shops, art galleries, and gourmet grocery stores. Likewise, many older, smaller homes have been replaced with larger, modern structures. Today, Mill Valley's population stands at 13,903.

## Listed Resources

Table 3.4-1 summarizes listed federal and state historic resources within and near Mill Valley.

**Table 3.4-1: Federal and State Listed Historic Resources**

| Resource | Description | Location | Register(s) |
|---|---|---|---|
| Outdoor Art Club | Designed in 1904 by Bernard Maybeck; notable for its unusual roof truss system | 1 W. Blithedale Avenue | National Register, California State Historic Landmark |
| First Sawmill in Marin County | Sawmill built by John Reed in the 1830s; rebuilt to original specifications in 1991 | Old Mill Park | California State Historic Landmark |
| Source: California Office of Historic Preservation, 2013. | | | |

## 3.4.3 - Regulatory Framework

### Federal

#### *National Historic Preservation Act*

The National Historic Preservation Act of 1966 (NHPA), as amended, established the National Register of Historic Places (NRHP), which contains an inventory of the nation's significant prehistoric and historic properties. Under 36 CFR 60, a property is recommended for possible inclusion on the NRHP if it is at least 50 years old, has integrity, and meets one of the following criteria:

- It is associated with significant events in history, or broad patterns of events.
- It is associated with significant people in the past.
- It embodies the distinctive characteristics of an architectural type, period, or method of construction; or it is the work of a master or possesses high artistic value; or it represents a significant and distinguishable entity whose components may lack individual distinction.
- It has yielded, or may yield, information important in history or prehistory.

Certain types of properties are usually excluded from consideration for listing in the NRHP, but they can be considered if they meet special requirements in addition to meeting the criteria listed above. Such properties include religious sites, relocated properties, graves and cemeteries, reconstructed properties, commemorative properties, and properties that have achieved significance within the past 50 years.

### State

#### *California Register of Historical Resources*

As defined by Section 15064.5(a)(3)(A-D) of the CEQA Guidelines, a resource shall be considered historically significant if the resource meets the criteria for listing on the California Register of Historical Resources (CR). The California Register of Historical Resources and many local preservation ordinances have employed the criteria for eligibility to the NRHP as a model, since the NHPA provides the highest standard for evaluating the significance of historic resources. A resource that meets the NRHP criteria is clearly significant. In addition, a resource that does not meet the NRHP standards may still be considered historically significant at a local or state level.

### *California Environmental Quality Act*

The CEQA Guidelines state that a resource need not be listed on any register to be found historically significant. The CEQA guidelines direct lead agencies to evaluate archaeological sites to determine if they meet the criteria for listing in the California Register. If an archaeological site is a historical resource, in that it is listed or eligible for listing in the California Register, potential adverse impacts to it must be considered. If an archaeological site is considered not to be an historical resource but meets the definition of a "unique archeological resource" as defined in Public Resources Code Section 21083.2, then it would be treated in accordance with the provisions of that section.

## Local

### *City of Mill Valley*

*2040 General Plan*

The proposed 2040 General Plan establishes the following goals and policies that are relevant to cultural resources:

- **Goal LU.4: Historic and Archeological Resources:** Identify, preserve and protect potential and listed historic and archeological resources citywide.
- **Policy LU-6: Resources Inventory:** Work with the Mill Valley Historical Society to develop and implement a comprehensive inventory of potential historic and archeological resources.
- **Policy LU-7: Protect Historic and Cultural Resources:** Protect the historical and cultural value, architectural appearance, aesthetics and unique character of historic and cultural resources.
- **Policy LU-8: Education and Appreciation:** Promote education about and greater appreciation of historic preservation and efforts to protect historic and cultural resources.

## 3.4.4 - Methodology

FirstCarbon Solutions evaluated potential impacts on cultural resources through review of the existing 1989 General Plan and proposed 2040 General Plan, federal and state historic registers, aerial photographs, and local historical documents.

## 3.4.5 - Thresholds of Significance

According to Appendix G, Environmental Checklist, of the CEQA Guidelines, cultural resources impacts resulting from the implementation of the proposed project would be considered significant if the project would:

a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?

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

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

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

## 3.4.6 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the development of the project and provides mitigation measures where appropriate.

### Historic Resources

**Impact CUL-1: Implementation of the City of Mill Valley 2040 General Plan would not damage or destroy previously undiscovered historic resources.**

#### *Impact Analysis*

The Planning Area contains two federal or state listed historic resources: the Outdoor Art Club (National Register and California State Historic Landmark) and the First Sawmill in Marin County (California State Historic Landmark). The former resource is under private ownership, while the latter resource is owned by the City of Mill Valley and is part of Old Mill Park.

The 2040 General Plan sets forth a goal and three policies that concern protection of historic resources. Goal LU.4 and Policies LU-6, LU-7, and LU-8 call for preserving and protecting potential and listed historic and archaeological resources, working with the Mill Valley Historical Society to develop a comprehensive inventory of potential historic and archaeological resources, protecting the values of historic and cultural resources, and promoting education about historic preservation.

Finally, development and land use activities that involve potentially impacts to historic resources would be subject to applicable statutes and regulatory policies, including but not limited to the National Historic Preservation Act and California Register of Historical Resources.

Therefore, based on the existing regulatory requirement and the policies contained within the proposed 2040 General Plan, there is certainty that future development and land use activities contemplated by the 2040 General Plan would not have significant impacts on historic resources. Impacts would be less than significant.

#### *Level of Significance Before Mitigation*

Less than significant impact.

#### *Mitigation Measures*

No mitigation is necessary.

#### *Level of Significance After Mitigation*

Less than significant impact.

### Archaeological Resources

**Impact CUL-2: Implementation of the City of Mill Valley 2040 General Plan would not damage or destroy previously undiscovered archaeological resources.**

#### *Impact Analysis*

Archaeological resources (i.e., artifacts) are most commonly found in areas that have not been previous disturbed such as undeveloped areas. The Mill Valley city limits are mostly developed and

have been previously disturbed by earthwork activities. Thus, it is doubtful that undiscovered archaeological resources would be encountered as part of development and land use activities that occur within the city limits.

The 2040 General Plan sets forth a goal and three policies that concern protection of archaeological resources. Goal LU.4 and Policies LU-6, LU-7, and LU-8 call for preserving and protecting potential and listed historic and archaeological resources, working with the Mill Valley Historical Society to develop a comprehensive inventory of potential historic and archaeological resources, protecting the values of historic and cultural resources, and promoting education about historic preservation.

Therefore, based on the existing regulatory requirement and the policies contained within the proposed 2040 General Plan, there is certainty that future development and land use activities contemplated by the 2040 General Plan would not have significant impacts on undiscovered archaeological resources. Impacts would be less than significant.

### *Level of Significance Before Mitigation*
Less than significant impact.

### *Mitigation Measures*
No mitigation is necessary.

### *Level of Significance After Mitigation*
Less than significant impact.

## Paleontological Resources

| | |
|---|---|
| **Impact CUL-3:** | **Implementation of the City of Mill Valley 2040 General Plan would not damage or destroy previously undiscovered paleontological resources.** |

### *Impact Analysis*
Paleontological resources (i.e., fossils) are most commonly found in areas that have not been previous disturbed such as undeveloped areas. The Mill Valley city limits are mostly developed and have been previously disturbed by earthwork activities. Thus, it is doubtful that undiscovered paleontological resources would be encountered as part of development and land use activities that occur within the city limits.

The 2040 General Plan sets forth a goal and three policies that concern protection of paleontological resources. Goal LU.4 and Policies LU-6, LU-7, and LU-8 call for preserving and protecting potential and listed historic and archaeological resources, working with the Mill Valley Historical Society to develop a comprehensive inventory of potential historic and archaeological resources, protecting the values of historic and cultural resources, and promoting education about historic preservation. In addition, as a standard condition of approval for development projects that occur in known paleontological areas, the City requires applicants to implement inadvertent discovery mitigation procedures in the event fossils are encountered.

Therefore, based on the existing regulatory requirement and the policies contained within the proposed 2040 General Plan, there is certainty that future development and land use activities

contemplated by the 2040 General Plan would not have significant impacts on undiscovered paleontological resources. Impacts would be less than significant.

### *Level of Significance Before Mitigation*
Less than significant impact.

### *Mitigation Measures*
No mitigation is necessary.

### *Level of Significance After Mitigation*
Less than significant impact.

## Burial Sites

| | |
|---|---|
| **Impact CUL-4:** | **Implementation of the City of Mill Valley 2040 General Plan would not damage or destroy previously undiscovered human burial sites.** |

### *Impact Analysis*
Burial sites are most commonly found in areas that have not been previous disturbed such as undeveloped areas. The Mill Valley city limits are mostly developed and have been previously disturbed by earthwork activities. Thus, it is doubtful that undiscovered burial sites would be encountered as part of development and land use activities that occur within the city limits.

The 2040 General Plan sets forth a goal and three policies that concern protection of burial sites. Goal LU.4 and Policies LU-6, LU-7, and LU-8 call for preserving and protecting potential and listed historic and archaeological resources, working with the Mill Valley Historical Society to develop a comprehensive inventory of potential historic and archaeological resources, protecting the values of historic and cultural resources, and promoting education about historic preservation.

Therefore, based on the existing regulatory requirement and the policies contained within the proposed 2040 General Plan, there is certainty that future development and land use activities contemplated by the 2040 General Plan would not have significant impacts on undiscovered burial sites. Impacts would be less than significant.

### *Level of Significance Before Mitigation*
Less than significant impact.

### *Mitigation Measures*
No mitigation is necessary.

### *Level of Significance After Mitigation*
Less than significant impact.

# 3.5 - Geology, Soils, and Seismicity

## 3.5.1 - Introduction

This section describes the existing geology, soils, and seismicity setting and potential effects from City of Mill Valley 2040 General Plan implementation on the Planning Area and surroundings.

## 3.5.2 - Environmental Setting

### Regional Setting

Mill Valley is located within the Coast Ranges Geomorphic Province of Northern California, a region characterized by frequent seismic activity along the North American and Pacific Plate margin. Tectonic stress in the region is periodically released when there is slip along one of the area faults, causing an earthquake. Active faulting and crustal deformation affects the topographic geometry of the region; ridges and valleys generally trend northwest to southeast, parallel to the strike of the faults.

Mill Valley is located at the edge of the eastern flank of Mount Tamalpais, an area underlain by rocks of the Franciscan Complex. This Mesozoic rock group is composed of weakly to strongly metamorphosed greywacke (sandstone), siltstone, shale, limestone, basalt, serpentinite, chert, and other rocks formed from Jurassic oceanic crust and pelagic (deep-sea) deposits. Also included in the formation are overlying Late Jurassic to Late Cretaceous sedimentary deposits. High-pressure and low-temperature metamorphic mineral assemblages are common in the Franciscan complex, but there are also high-grade metamorphic blocks surrounded by sheared lightly metamorphosed shale

### Seismicity

The term seismicity refers to the location, frequency, magnitude, and other characteristics of earthquakes. To understand the implications of seismic events, a discussion of faulting and seismic hazards is provided below.

#### *Faulting*

Faults form in rocks when stresses overcome the internal strength of the rock, resulting in a fracture. Large faults develop in response to large regional stresses operating over a long time, such as those stresses caused by the relative displacement between tectonic plates. According to the elastic rebound theory, these stresses build up in the earth's crust until enough stress has built up to exceed the strength along a fault and cause a brittle failure. The rapid slip between the two stuck plates or coherent blocks generates an earthquake. Following an earthquake, stress will build once again until the occurrence of another earthquake. The magnitude of slip is related to the maximum allowable stress that can be built up along a particular fault segment. The greatest buildup in stress due to the largest relative motion between tectonic plates or fault blocks over the longest period will generally produce the largest earthquakes. The distribution of these earthquakes is a study of much interest for both hazard prediction and the study of active deformation of the earth's crust. Deformation is a complex process and strain caused by tectonic forces is not only accommodated through faulting, but also by folding, uplift, and subsidence, which can be gradual or in direct response to earthquakes.

*Local Faulting*
In the San Francisco Bay region, fault displacement is primarily right lateral strike-slip (horizontal) with lesser dip-slip (vertical) components. Active earthquake faults may include several fault strands in a broad zone, or a single actively creeping identifiable fault. Most slip is accommodated along fault planes that cause surface rupture along fault traces, but slip may also occur in the subsurface and not cause surface rupture, instead occurring along "blind" thrust faults.

There are five major active faults within 25 miles of Mill Valley: the San Andreas, Hayward, Rodgers Creek, Napa, and Concord/Green Valley faults. The nearest fault is the San Andreas, passing approximately 7 miles southwest. Other nearby active faults include the Hayward (11 miles east), Rodgers Creek (18 miles north), West Napa (22 miles northeast), and the Concord-Green Valley fault (25 miles northeast).

### *Seismic Hazards*
Seismic hazards pose a substantial danger to property and human safety and are present because of the risk of naturally occurring geologic events and processes affecting human development. Therefore, the hazard risk is equally influenced by the condition and location of human development as by the frequency and distribution of major geologic events. Seismic hazards present in California include ground rupture along faults, strong seismic shaking, liquefaction, ground failure, and slope failure. Exhibit 3.5-1 shows local geotechnical hazards within the Planning Area.

*Fault Rupture*
Fault rupture is a seismic hazard that affects structures sited above an active fault. The hazard from fault rupture is the movement of the ground surface along a fault during an earthquake. Typically, this movement takes place during the short time of an earthquake but can also occur slowly over many years in a process known as creep. Most structures and underground utilities cannot accommodate the surface displacements of several inches to several feet commonly associated with fault rupture or creep. As previously noted, there are no known faults within Mill Valley.

*Ground Shaking*
The severity of ground shaking depends on several variables such as earthquake magnitude, epicenter distance, local geology, thickness, and seismic wave-propagation properties of unconsolidated materials, groundwater conditions, and topographic setting. Ground shaking hazards are most pronounced in areas near faults or with unconsolidated alluvium.

The most common type of damage from ground shaking is structural damage to buildings, which can range from cosmetic cracks to total collapse. The overall level of structural damage from a nearby large earthquake would likely be moderate to heavy, depending on the characteristics of the earthquake, the type of ground, and the condition of the building. Besides damage to buildings, strong ground shaking can cause severe damage from falling objects or broken utility lines. Fire and explosions are also hazards associated with strong ground shaking.

As shown in Exhibit 3.5-1, the portions of Mill Valley closest to Richardson Bay are most susceptible to strong ground shaking.

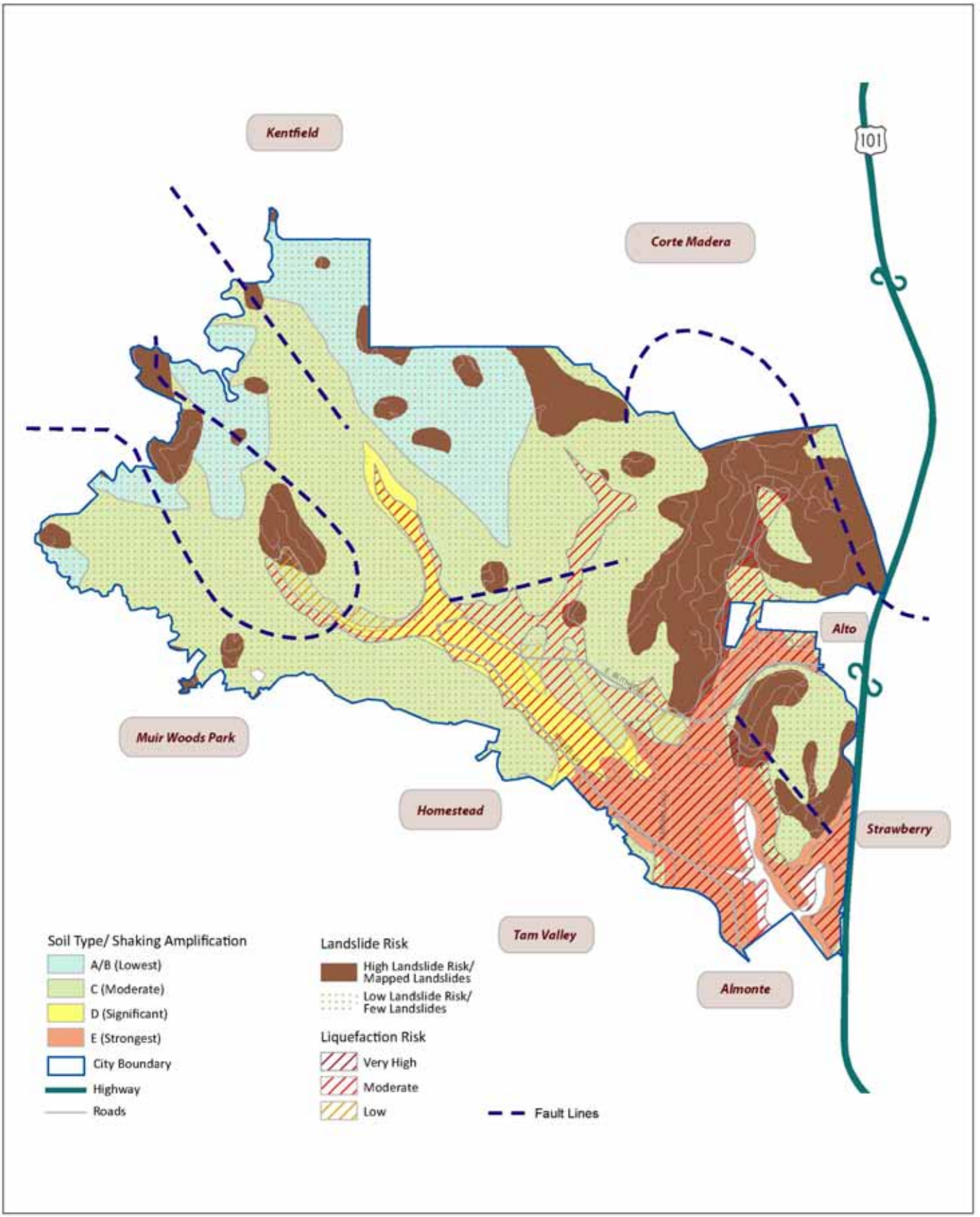


Exhibit 3.5-1
Seismic Ground-Shaking, Landslide and Liquefaction

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*Ground Failure*
Ground failure includes liquefaction and the liquefaction-induced phenomena of lateral spreading, and lurching.

Liquefaction is a process by which sediments below the water table temporarily lose strength during an earthquake and behave as a viscous liquid rather than a solid. Liquefaction is restricted to certain geologic and hydrologic environments, primarily recently deposited sand and silt in areas with high groundwater levels. The process of liquefaction involves seismic waves passing through saturated granular layers, distorting the granular structure, and causing the soil to densify.

Liquefaction can cause the soil beneath a structure to lose strength, which may result in the loss of foundation-bearing capacity and which could cause a structure to settle or tip. Liquefaction can also result in the settlement of large areas because of the densification of the liquefied deposit. Where structures are located within liquefied deposits, the liquefaction can result in the structure to rise as a result of buoyancy.

Lateral spreading is lateral ground movement, with some vertical component, as a result of liquefaction. In effect, the soil rides on top of the liquefied layer. Lateral spreading can occur on relatively flat sites with slopes less than 2 percent, under certain circumstances, and can cause ground cracking and settlement.

Lurching is the movement of the ground surface toward an open face when the soil liquefies. An open face could be a graded slope, stream bank, canal face, gully, or other similar feature.

As shown in Exhibit 3.5-1, the portions of Mill Valley closest to Richardson Bay are most susceptible to liquefaction.

*Landslides and Slope Failure*
Landslides and other forms of slope failure form in response to the long-term geologic cycle of uplift, mass wasting, and disturbance of slopes. Mass wasting refers to a variety of erosional processes from gradual downhill soil creep to mudslides, debris flows, landslides, and rock fall. These processes are commonly triggered by intense precipitation. Seismic activity can also trigger landslides and rockfalls.

Often, various forms of mass wasting are grouped together as landslides, which are generally used to describe the downhill movement of rock and soil. Geologists classify landslides into several different types that reflect differences in the type of material and type of movement. The four most common types of landslides are translational, rotational, earth flow, and rock fall. Debris flows and earth flows are another type of landslide that are characterized by soil and rock particles in suspension with water and which often move with considerable speed. Debris flows often refer to flows that contain coarser soil and rock materials while earth flows frequently refer to slides that are predominantly finer materials. Mudslide is a term that appears in non-technical literature to describe a variety of shallow, rapidly moving earth flows.

As shown in Exhibit 3.5-1, the northern and western slopes of Mill Valley contain mapped landslides or are highly susceptibility to landsliding.

### Soils

Soils within the Planning Area generally consist of Chronkhite-Barnabe, Dipsea-Barnabe, Los Osos-Bonnydoon, Maymen, Saurin-Bonnydoon, Xerorthents, Tocaloma-McMullin and Tocaloma-Saurin; refer to Exhibit 3.5-2.

## 3.5.3 - Regulatory Framework

### State

#### *Alquist-Priolo Earthquake Fault Zoning Act*

In response to the severe fault rupture damage of structures by the 1971 San Fernando earthquake, the State of California enacted the Alquist-Priolo Earthquake Fault Zoning Act in 1972. This act required the State Geologist to delineate Earthquake Fault Zones along known active faults that have a relatively high potential for ground rupture. Faults that are zoned under the Alquist-Priolo Act must meet the strict definition of being "sufficiently active" and "well-defined" for inclusion as an Earthquake Fault Zones. The Earthquake Fault Zones are revised periodically, and they extend 200 to 500 feet on either side of identified fault traces. No structures for human occupancy may be built across an identified active fault trace. An area of 50 feet on either side of an active fault trace is assumed to be underlain by the fault, unless proven otherwise. Proposed construction in an Earthquake Fault Zone is permitted only following the completion of a fault location report prepared by a California Registered Geologist.

#### *California Building Standards Code*

The California Building Standards Code establishes building requirements for construction and renovation. The most recent version of the California Building Standards Code was adopted in 2010 by the California Building Standards Commission and took effect January 1, 2011, and it is based on the International Code Council's Building and Fire Codes. Included in the California Building Standards Code are the Electrical Code, Mechanical Code, Plumbing Code, Energy Code, and Fire Code.

The State of California provides minimum standards for building design through the California Building Standards Code (California Code of Regulations, Title 24). Where no other building codes apply, Chapter 29 regulates excavation, foundations, and retaining walls. Finally, the 2010 California Building Standards Code regulates grading activities, including drainage and erosion control and construction on unstable soils, such as expansive soils and areas subject to liquefaction.

#### *California Seismic Hazards Mapping Act*

The California Seismic Hazards Mapping Act of 1990 (California Public Resources Code Section 1690-2699.6) addresses seismic hazards other than surface rupture, such as liquefaction and induced landslides. The Seismic Hazards Mapping Act specifies that the lead agency for a project may withhold development permits until geologic or soils investigations are conducted for specific sites and mitigation measures are incorporated into plans to reduce hazards associated with seismicity and unstable soils.

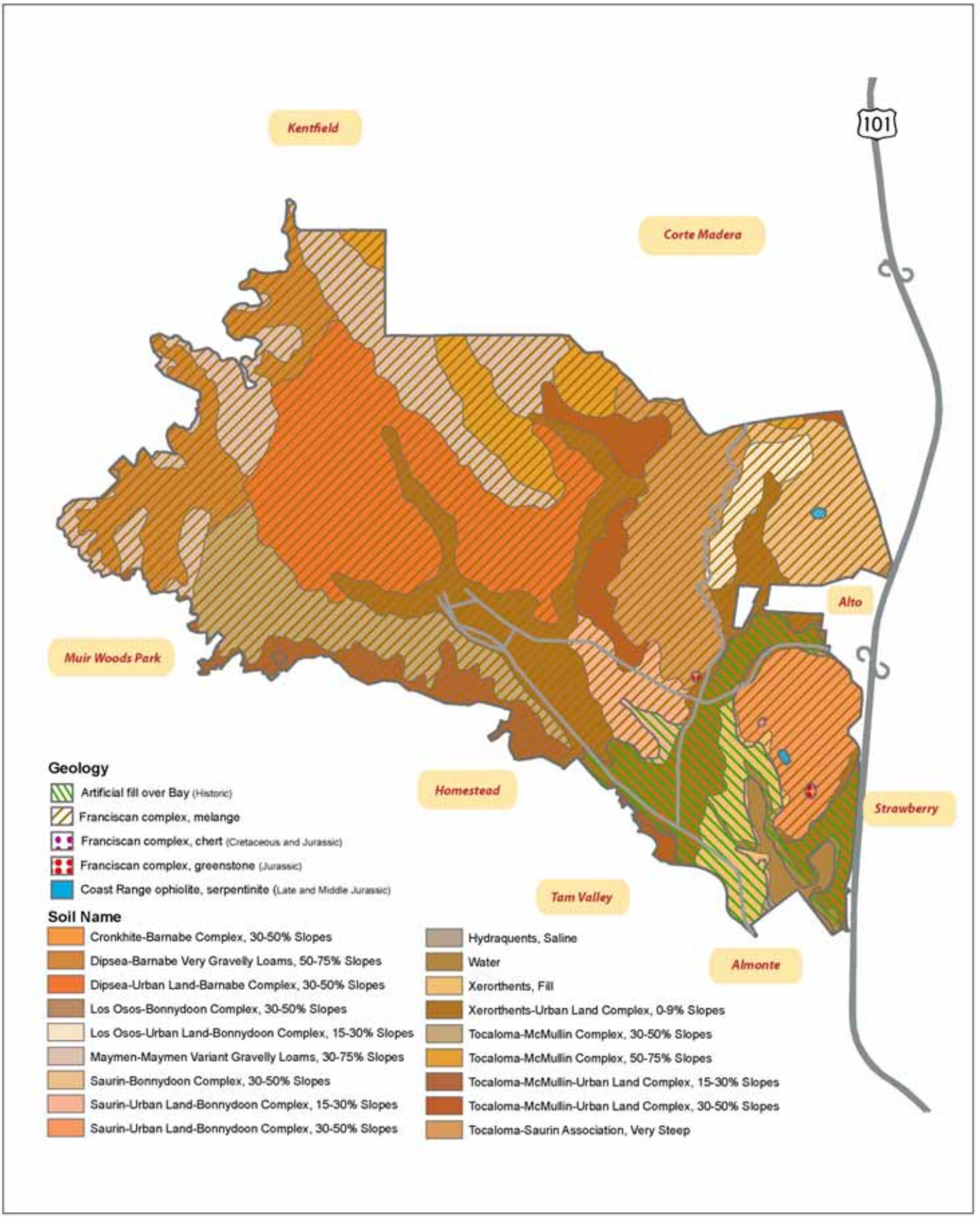


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Exhibit 3.5-2
Soils & Geology

### Local

#### *City of Mill Valley*

*2040 General Plan*

The proposed 2040 General Plan sets forth the following goals and policies that are relevant to geology, soils, and seismicity:

- **Goal HZ-1 Community Hazard Resilience:** Minimize loss of life, property, and important elements of the natural ecosystem and maximize Mill Valley's ability to prepare for, respond to, and recover from disaster.
- **Policy HZ.1 Hazard Identification and Mitigation:** Identify all hazards that threaten the city as either "sudden onset" disasters (e.g., earthquakes, wildfire) or "slow onset" disasters/phenomena (e.g., drought, extreme heat, sea level rise) and strengthen hazard mitigation policies and regulations.
- **Policy HZ.6 Prevention and Protection:** Reduce injury and damage from hazards.

## 3.5.4 - Methodology

FirstCarbon Solutions evaluated potential impacts on geology, soils, and seismicity through review of the existing 1989 General Plan and proposed 2040 General Plan, seismic hazards mapping, and the Natural Resources Conservation Service Web Soil Survey.

## 3.5.5 - Thresholds of Significance

According to Appendix G, Environmental Checklist, of the CEQA Guidelines, geology, soils, and seismicity impacts resulting from the implementation of the proposed project would be considered significant if the project would:

a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death involving:

   i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.

   ii. Strong seismic ground shaking?

   iii. Seismic-related ground failure, including liquefaction?

   iv. Landslides?

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

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?

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

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? (Refer to Section 7, Effects Found Not To Be Significant.)

## 3.5.6 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the development of the project and provides mitigation measures where appropriate.

### Seismic Hazards

| | |
|---|---|
| **Impact GEO-1:** | **Implementation of the City of Mill Valley 2040 General Plan would not expose people or structures to potential substantial adverse effects associated with seismic hazards.** |

***Impact Analysis***

As shown in Exhibit 3.5-1, the Planning Area contains areas susceptible to fault rupture, strong ground shaking, liquefaction, and areas susceptible to landsliding. Generally, existing development within the Planning Area has mitigated the potential for adverse impacts from seismic hazards through fault setbacks, compliance with building code requirements, and avoidance of areas unsuitable for development (e.g., steep slopes).

The 2040 General Plan establishes a goal and two policies that concern mitigation of seismic hazards. Goal HZ-1 and Policies HZ.1 and HZ.6 call for emergency preparedness, identification of seismic hazards, and measures to reduce injury and damage from seismic hazards.

Finally, all new development is subject to the seismic safety requirements set forth in the California Building Standards Code, which are widely regarded as some of the most stringent in the world.

Therefore, based on the existing regulatory requirements and the policies contained within the proposed 2040 General Plan, there is certainty that future development and land use activities contemplated by the 2040 General Plan would not be exposed to substantial adverse effects associated with seismic hazards. Impacts would be less than significant.

***Level of Significance Before Mitigation***

Less than significant impact.

***Mitigation Measures***

No mitigation is necessary.

***Level of Significance After Mitigation***

Less than significant impact.

## Erosion Hazards

**Impact GEO-2: Implementation of the 2040 General Plan would not result in substantial soil erosion or the loss of topsoil.**

### *Impact Analysis*

The potential for erosion is greatest in areas with steep slopes (15 percent or more), such as the hillsides that flank Mill Valley to the west, north, and south. Generally, most of the developed areas within the Planning Area are not susceptible to significant erosion because of gentle slopes and the presence of vegetation. Areas that may be susceptible to significant erosion have mitigated the potential through use of grading, retaining walls, landscaping, or avoidance of areas susceptible to erosion.

The 2040 General Plan establishes a goal and two policies that concern mitigation of geologic hazards. Goal HZ-1 and Policies HZ.1 and HZ.6 call for emergency preparedness, identification of geologic hazards, and measures to reduce injury and damage from geologic hazards.

Therefore, based on the existing regulatory requirements and the policies contained within the proposed 2040 General Plan, there is certainty that future development and land use activities contemplated by the 2040 General Plan would not have significant erosion impacts. Impacts would be less than significant.

### *Level of Significance Before Mitigation*

Less than significant impact.

### *Mitigation Measures*

No mitigation is necessary.

### *Level of Significance After Mitigation*

Less than significant impact.

## Unstable Geologic Units or Soils

**Impact GEO-3: Implementation of the City of Mill Valley 2040 General Plan would not expose persons or property to hazards associated with unstable geologic units or soils.**

### *Impact Analysis*

As shown in Exhibit 3.5-1, the Planning Area contains areas susceptible to liquefaction, liquefaction-related phenomena, and landsliding as a result of underlying geologic conditions. Generally, existing development within the Planning Area has mitigated the potential for adverse impacts from unstable geologic units and soils through compliance with building code requirements, retaining walls, landscaping, and avoidance of areas unsuitable for development.

The 2040 General Plan establishes a goal and two policies that concern mitigation of seismic hazards. Goal HZ-1 and Policies HZ.1 and HZ.6 call for emergency preparedness, identification of geologic and seismic hazards, and measures to reduce injury and damage from geologic and seismic hazards.

Finally, all new development is subject to the seismic safety requirements set forth in the California Building Standards Code, which are widely regarded as some of the most stringent in the world.

Therefore, based on the existing regulatory requirements and the policies contained within the proposed 2040 General Plan, there is certainty that future development and land use activities contemplated by the 2040 General Plan would not have significant impacts associated with unstable geologic units and soils. Impacts would be less than significant.

### *Level of Significance Before Mitigation*
Less than significant impact.

### *Mitigation Measures*
No mitigation is necessary.

### *Level of Significance After Mitigation*
Less than significant impact.

## Expansive Soils

**Impact GEO-4: Implementation of the City of Mill Valley 2040 General Plan would not be exposed to unacceptable risks associated with expansive soils.**

### *Impact Analysis*
As shown in Exhibit 3.5-2, Mill Valley is underlain by Chronkhite-Barnabe, Dipsea-Barnabe, Los Osos-Bonnydoon, Maymen, Saurin-Bonnydoon, Xerorthents, Tocaloma-McMullin and Tocaloma-Saurin soils. The properties of these soils vary, with some having high clay content and, thus, the potential for substantial shrink and swell. However, because Mill Valley is mostly built out, risks associated with expansive soils have been mitigated through soil engineering practices.

The 2040 General Plan establishes a goal and two policies that concern mitigation of seismic hazards. Goal HZ-1 and Policies HZ.1 and HZ.6 call for emergency preparedness, identification of geologic and seismic hazards, and measures to reduce injury and damage from geologic and seismic hazards.

Finally, all new development is subject to the soil engineering and foundation design requirements set forth in the California Building Standards Code, which recommends measures and practices to ensure that new structures are adequately supported and are not susceptible to the adverse effects of expansive soils.

Therefore, there is certainty that future development and land use activities contemplated by the 2040 General Plan would not have significant expansive soil impacts. Impacts would be less than significant.

### *Level of Significance Before Mitigation*
Less than significant impact.

### *Mitigation Measures*

No mitigation is necessary.

### *Level of Significance After Mitigation*

Less than significant impact.

# 3.6 - Hazards and Hazardous Materials

## 3.6.1 - Introduction

This section describes the existing hazards and hazardous materials setting and potential effects from City of Mill Valley 2040 General Plan implementation on the Planning Area and surroundings.

## 3.6.2 - Environmental Setting

### Hazardous Materials

Hazardous materials, as defined by the California Code of Regulations, are substances with certain physical properties that could pose a substantial present or future hazard to human health or the environment when improperly handled, disposed, or otherwise managed. Hazardous materials are grouped into the following four categories, based on their properties:

- Toxic - causes human health effects.
- Ignitable - has the ability to burn.
- Corrosive - causes severe burns or damage to materials.
- Reactive - causes explosions or generates toxic gases.

A hazardous waste is any hazardous material that is discarded, abandoned, or slated to be recycled. The criteria that define a material as hazardous also define a waste as hazardous. If improperly handled, hazardous materials and hazardous waste can result in public health hazards if released into the soil or groundwater or through airborne releases in vapors, fumes, or dust. Soil and groundwater having concentrations of hazardous constituents higher than specific regulatory levels must be handled and disposed of as hazardous waste when excavated or pumped from an aquifer. The California Code of Regulations, Title 22, Sections 66261.20-24 contains technical descriptions of toxic characteristics that could cause soil or groundwater to be classified as hazardous waste.

#### *Hazardous Materials Usage within the Planning Area*

The Planning Area contains a number of hazardous materials users. The State Water Resources Control Board Geotracker Database indicates that there are 32 sites within the Mill Valley Planning Area that are listed on hazardous materials databases. Examples of users include auto repair facilities, corporation yards, gas stations, and schools. Generally, public safety is not at risk when hazardous materials are properly used, stored, transported, and disposed of.

*Clean-Up Sites*

The State Water Resources Control Board Geotracker Database indicates that there are 21 sites within Mill Valley that have had reported releases of hazardous materials. The majority of these sites are associated with leaking underground storage tanks. Seventeen of the 21 cases are listed as "Closed," indicating that they have been remediated to the satisfaction of the San Francisco Bay Regional Water Quality Control Board. Of the remaining four sites, three are listed as "inactive," while the fourth is identified as in the process of remediation.

### Emergency Evacuation

The 2040 Mill Valley General Plan designates almost every arterial and collector roadway as an evacuation route; refer to Exhibit 3.6-1. Because of the geographical and topographical characteristics of the Mill Valley Planning Area, emergency evacuation will generally occur in an easterly direction towards US 101. Should the freeway be inaccessible, evacuation would occur via surface streets to either the north or south.

### Wildland Fire Hazards

Wildland fire hazards exist in varying degrees throughout Mill Valley and probably pose the greatest threat to public safety and property of all other potential hazards. The fire season generally lasts from 5 to 6 months. The wildland fire hazard is caused by a combination of factors, including weather, topography, highly flammable vegetation/fuel loading, and human activity.

Many homes have been built on steep slopes with vegetation nearby. These slopes are often steep, located in rugged terrain, and have very few access routes. The onset of sudden oak death has significantly increased the number of dead or weakened trees, which serves as potential fuel for fires.

In several areas, an "urban interface" fire hazard is created when older neighborhoods directly border parks or open space. These areas often have mature vegetation and large tree canopies that could contribute to fires spreading quickly.

In Mill Valley, significant portions of the community are within designated Wildland-Urban Interface Zones; refer to Exhibit 3.6-2. This includes Warner Canyon, Mill Valley Ridge, Blithedale Canyon, Blithedale Ridge, Cascade Canyon, Fern Canyon, Summit Ridge, Scott Valley, and the southeast face of Mt. Tamalpais. These areas are characterized by steep slopes and are covered by dense stands of vegetation that burn explosively and cause fire to spread rapidly. A major fire has not occurred in these areas since the fire of 1929, and, as a result, the density of dry vegetation has increased.

## 3.6.3 - Regulatory Framework

### Federal

#### *Comprehensive Environmental Response, Compensation, and Liability Act*

Discovery of environmental health damage from disposal sites prompted the U.S. Congress to pass the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or Superfund). The purpose of CERCLA is to identify and clean up chemically contaminated sites that pose a significant environmental health threat. The Hazard Ranking System is used to determine whether a site should be placed on the National Priorities List for cleanup activities.

#### *Superfund Amendments and Reauthorization Act*

The Superfund Amendments and Reauthorization Act pertains primarily to emergency management of accidental releases. It requires formation of state and local emergency planning committees, which are responsible for collecting material handling and transportation data for use as a basis for planning. Chemical inventory data is made available to the community at large under the "right-to-know" provision of the law.

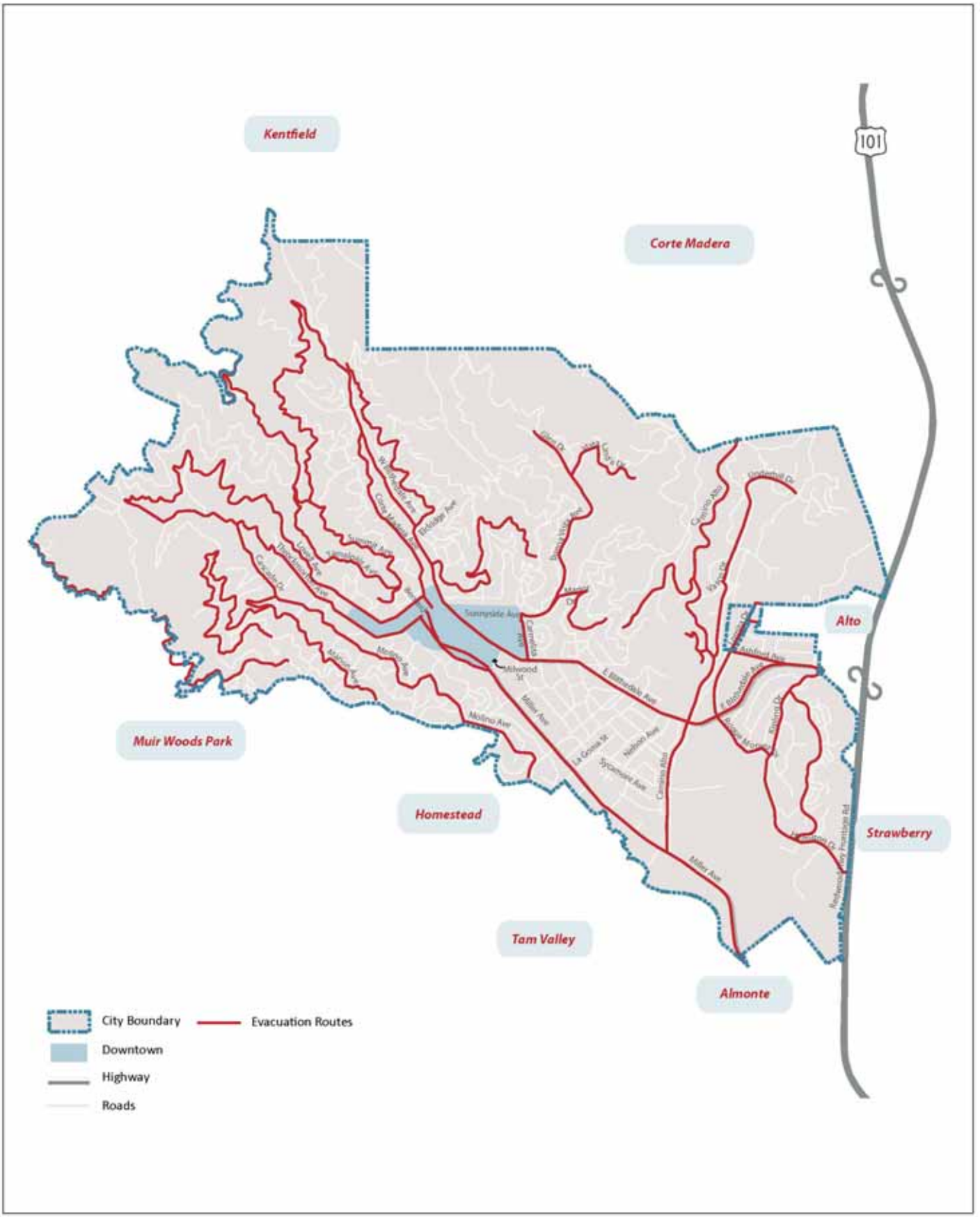


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Exhibit 3.6-1
Evacuation Routes

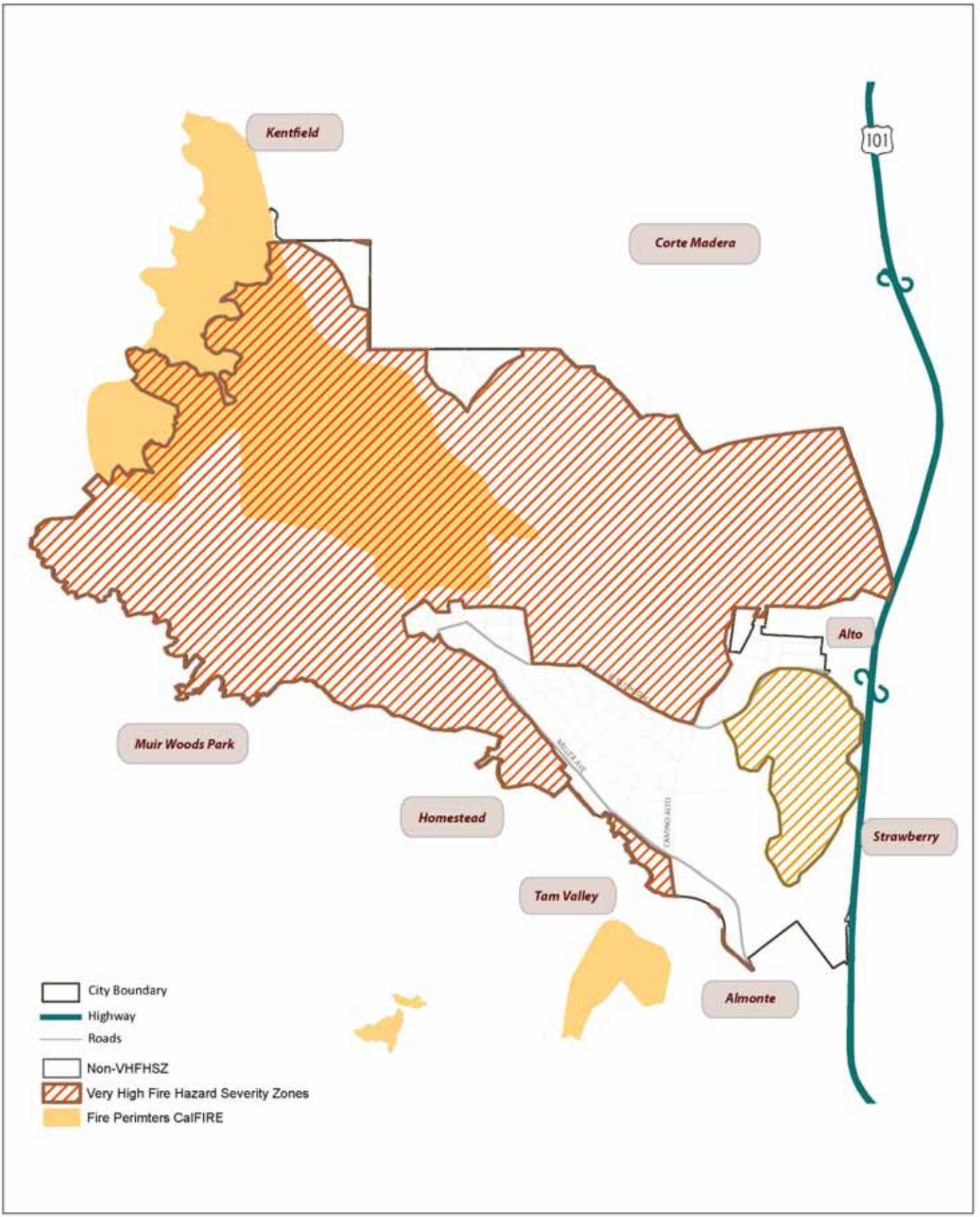


Exhibit 3.6-2
Wildland-Urban Interface (WUI) and Severe Fire Zones

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In addition, the Superfund Amendments and Reauthorization Act also requires annual reporting of continuous emissions and accidental releases of specified compounds. These annual submissions are compiled into a nationwide Toxics Release Inventory.

### *Hazardous Materials Transportation Act*

The Hazardous Materials Transportation Act 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, placecarding, and shipping documentation.

### *Resource Conservation and Recovery Act*

The Resource Conservation and Recovery Act (RCRA) Subtitle C addresses hazardous waste generation, handling, transportation, storage, treatment, and disposal. It includes requirements for a system that uses hazardous waste manifests to track the movement of waste from its site of generation to its ultimate disposition. The 1984 amendments to RCRA created a national priority for waste minimization. Subtitle D establishes national minimum requirements for solid waste disposal sites and practices. It requires states to develop plans for the management of wastes within their jurisdictions. Subtitle I requires monitoring and containment systems for underground storage tanks that hold hazardous materials. Owners of tanks must demonstrate financial assurance for the cleanup of a potential leaking tank.

## State

### *California Hazardous Waste Control Law*

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

### *California Health and Safety Code*

The California Environmental Protection Agency has established rules governing the use of hazardous materials and the management of hazardous wastes. California Health and Safety Code Sections 25531, et seq. incorporate the requirements of Superfund Amendments and Reauthorization Act and the Clean Air Act as they pertain to hazardous materials. Health and Safety Code Section 25534 directs facility owners storing or handling acutely hazardous materials in reportable quantities to develop a Risk Management Plan (RMP). The RMP must be submitted to the appropriate local authorities, the designated local administering agency, and the United States Environmental Protection Agency (EPA) for review and approval.

### *CEQA and the Cortese List*

The Cortese List (Hazardous Waste and Substances Site List) is a planning document used by the state, local agencies, and developers to comply with CEQA requirements to consider Government Code Section 5962.5 in evaluating proposed development projects. Section 65962.5 states that

> The list should contain all hazardous waste facilities subject to corrective action , all hazardous waste property or border zone property designations, all information received on hazardous waste disposals on public land, all hazardous substance release sites listed pursuance to Government Code Section 25356, and all sites that were included in the former Abandonment Site Assessment Program.

### *California Fire Code*

The California Fire Code, Chapter 49 establishes fire safety requirements for new construction in the wildland-urban interface. New construction is required to adhere to guidelines for defensible space, vegetation management in a fire safe manner, financial responsibility for maintenance of landscaping and open parcels (forest), and other measures. In addition, a wildfire behavior model is required to specify building setbacks and fire resistive ratings.

## Local

### *City of Mill Valley*

*2040 General Plan*

The proposed 2040 General Plan sets forth the following goals and policies that are relevant to hazards and hazardous materials:

- **Goal HZ-1 Community Hazard Resilience:** Minimize loss of life, property, and important elements of the natural ecosystem and maximize Mill Valley's ability to prepare for, respond to, and recover from disaster.
- **Policy HZ.1 Hazard Identification and Mitigation:** Identify all hazards that threaten the city as either "sudden onset" disasters (e.g., earthquakes, wildfire) or "slow onset" disasters/phenomena (e.g., drought, extreme heat, sea level rise) and strengthen hazard mitigation policies and regulations.
- **Policy HZ.2 Administrative and Equipment Capacity:** Maintain adequate concentration and distribution of staff, facilities, materials, and equipment to provide a timely disaster response consistent with the needs of a demographically changing community and a challenging natural environment, while recognizing the difficulties of maintaining these systems on a daily basis.
- **Policy HZ.3 Critical Infrastructure:** Develop strategies for critical facilities and services (local and regional) that will minimize problems during post-disaster evacuations, rescues, and major clean-up operations following a major disaster.
- **Policy HZ.4 Civic Duty and Responsibility:** Promote education and events that reinforce the personal responsibility of all residents, business owners, and City staff to plan for, respond to, and recover from disasters.
- **Policy HZ.5 Emergency Response and Evacuation Routes:** Maintain and expand the network of anticipated emergency response routes and regularly exercise evacuation protocols and procedures.
- **Policy HZ.6 Prevention and Protection:** Reduce injury and damage from hazards.

## 3.6.4 - Methodology

FirstCarbon Solutions evaluated potential impacts on hazards and hazardous materials through review of the existing 1989 General Plan and proposed 2040 General Plan, the EPA's RCRAInfo database, the State Water Resources Control Board Geotracker Database, and wildland fire hazard maps.

## 3.6.5 - Thresholds of Significance

According to Appendix G, Environmental Checklist, of the CEQA Guidelines, hazards and hazardous materials impacts resulting from the implementation of the proposed project would be considered significant if the project would:

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment?

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

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?

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working the project area? (Refer to Section 7, Effects Found Not To Be Significant.)

f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area? (Refer to Section 7, Effects Found Not To Be Significant.)

g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

h) Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

## 3.6.6 - Project Impacts and Mitigation Measures

### Routine Use/Risk of Upset

**Impact HAZ-1: Implementation of the City of Mill Valley 2040 General Plan would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.**

***Impact Analysis***

The State Water Resources Control Board Geotracker Database indicates that hazardous materials users within Mill Valley consist of gas stations, auto repair facilities, medical facilities, and public facilities (e.g., corporation yards). These types of hazardous materials users are common throughout Marin County, California, and the United States.

Moreover, the 2040 General Plan maintains existing land use patterns and densities that were previously established by the 1989 General Plan. As such, it would not be expected that there would be substantial changes in the number of hazardous materials within in Mill Valley.

The 2040 General Plan establishes a goal and several policies that concern mitigation of hazards. Goal HZ-1 and Policies HZ.1, HZ.2, HZ.3, HZ.4, HZ.5, and HZ.6 call for emergency preparedness, identification of potential hazards, maintaining adequate emergency response capabilities, ensuring that critical infrastructure is available during response to emergencies, planning for disasters, maintaining emergency response and evacuation routes, and implementing measures to reduce injury and damage from hazards.

Furthermore, hazardous materials users are subject to federal and state statutes and regulations, including the Resource Conservation and Recovery Act, Hazardous Materials Transportation Act, and California Hazardous Waste Control Law.

Therefore, based on the existing regulatory requirements and the goals and policies contained within the proposed 2040 General Plan, there is certainty that future development and land use activities contemplated by the 2040 General Plan would not be exposed to substantial adverse effects associated with the routine transport, use, or disposal of hazardous materials or the risk of upset associated with such usage. Impacts would be less than significant.

***Level of Significance Before Mitigation***

Less than significant impact.

***Mitigation Measures***

No mitigation is necessary.

***Level of Significance After Mitigation***

Less than significant impact.

## Hazardous Materials Sites

**Impact HAZ-2: Implementation of the City of Mill Valley 2040 General Plan would not create significant hazards to the public associated with sites included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5.**

### *Impact Analysis*

The State Water Resources Control Board Geotracker Database indicates that there are 21 sites within Mill Valley have had reported releases of hazardous materials. (These sites are included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5.) The majority of these sites are associated with leaking underground storage tanks. Seventeen of the 21 cases are listed as "Closed," indicating that they have been remediated to the satisfaction of the San Francisco Bay Regional Water Quality Control Board. Of the remaining four sites, three are listed as "inactive," while the fourth is identified as in the process of remediation.

The 2040 General Plan establishes a goal and several policies that concern mitigation of hazards. Goal HZ-1 and Policies HZ.1, HZ.2, HZ.3, HZ.4, HZ.5, and HZ.6 call for emergency preparedness, identification of potential hazards, maintaining adequate emergency response capabilities, ensuring that critical infrastructure is available during response to emergencies, planning for disasters, maintaining emergency response and evacuation routes, and implementing measures to reduce injury and damage from hazards.

Furthermore, hazardous materials users are subject to federal and state statutes and regulations including the Resource Conservation and Recovery Act, Hazardous Materials Transportation Act, California Hazardous Waste Control Law, and the California Health and Safety Code.

Therefore, based on the existing regulatory requirements and the policies contained within the proposed 2040 General Plan, there is certainty that future development and land use activities contemplated by the 2040 General Plan would not be exposed to substantial adverse effects associated with hazardous materials sites. Impacts would be less than significant.

### *Level of Significance Before Mitigation*

Less than significant impact.

### *Mitigation Measures*

No mitigation is necessary.

### *Level of Significance After Mitigation*

Less than significant impact.

## Exposure of Schools

**Impact HAZ-3: Implementation of the City of Mill Valley 2040 General Plan would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.**

### *Impact Analysis*

As previously discussed, the Geotracker Database indicates that hazardous materials users within Mill Valley consist of gas stations, auto repair facilities, medical facilities, and public facilities (e.g., corporation yards). Several of these facilities are located within 0.25 mile of existing schools, including some facilities that are located on school grounds. It should be noted that the mere use of hazardous materials within 0.25 mile of a school does not inherently present a risk to public safety; rather, it is the potential that hazardous materials could be used in a manner that poses a risk to schools.

Moreover, the 2040 General Plan maintains existing land use patterns and densities that were previously established by the 1989 General Plan. As such, it would not be expected that there would be substantial changes in the number of hazardous materials within in Mill Valley, including within 0.25 mile of schools.

The 2040 General Plan establishes a goal and several policies that concern mitigation of hazards. Goal HZ-1 and Policies HZ.1, HZ.2, HZ.3, HZ.4, HZ.5, and HZ.6 call for emergency preparedness, identification of potential hazards, maintaining adequate emergency response capabilities, ensuring that critical infrastructure is available during response to emergencies, planning for disasters, maintaining emergency response and evacuation routes, and implementing measures to reduce injury and damage from hazards.

Furthermore, hazardous materials users are subject to federal and state statutes and regulations including the Resource Conservation and Recovery Act, Hazardous Materials Transportation Act, California Hazardous Waste Control Law, and the California Health and Safety Code.

Therefore, based on the existing regulatory requirements and the policies contained within the proposed 2040 General Plan, there is certainty that future development and land use activities contemplated by the 2040 General Plan would not expose schools to hazardous materials. Impacts would be less than significant.

### *Level of Significance Before Mitigation*

Less than significant impact.

### *Mitigation Measures*

No mitigation is necessary.

### *Level of Significance After Mitigation*

Less than significant impact.

## Emergency Response and Evacuation

**Impact HAZ-4: Implementation of the City of Mill Valley 2040 General Plan would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.**

### *Impact Analysis*

The 2040 Mill Valley General Plan designates almost every arterial and collector roadway as an evacuation route; refer to Exhibit 3.6-1. Because of the geographical and topographical characteristics of the Mill Valley Planning Area, emergency evacuation will generally occur in an easterly direction towards US 101. Should the freeway be inaccessible, evacuation would occur via surface streets to either the north or south.

The 2040 General Plan establishes a goal and several policies that concern mitigation of hazards. Goal HZ-1 and Policies HZ.2, HZ.3, and HZ.5 call for emergency preparedness, maintaining adequate emergency response capabilities, ensuring that critical infrastructure is available during response to emergencies, and maintaining emergency response and evacuation routes.

As such, development and land use activities contemplated by the 2040 General Plan would not impair or interfere with emergency response and evacuation. Impacts would be less than significant.

### *Level of Significance Before Mitigation*

Less than significant impact.

### *Mitigation Measures*

No mitigation is necessary.

### *Level of Significance After Mitigation*

Less than significant impact.

## Wildland Fires

**Impact HAZ-5: Implementation of the City of Mill Valley 2040 General Plan would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires.**

### *Impact Analysis*

In Mill Valley, significant portions of the community are within designated Wildland-Urban Interface Zones; refer to Exhibit 3.6-2. This includes Warner Canyon, Mill Valley Ridge, Blithedale Canyon, Blithedale Ridge, Cascade Canyon, Fern Canyon, Summit Ridge, Scott Valley, and the southeast face of Mt. Tamalpais. These areas are characterized by steep slopes and are covered by dense stands of vegetation that burn explosively and cause fire to spread rapidly. A major fire has not occurred in these areas since the fire of 1929, and, as a result, the density of dry vegetation has increased.

The 2040 General Plan 2030 establishes a goal and policies that pertain to mitigating wildfire hazards. Goal HZ-1 and Policies HZ.1, HZ.2, HZ.3, HZ.4, HZ.5, and HZ.6 call for emergency preparedness, identification of potential hazards, maintaining adequate emergency response

capabilities, ensuring that critical infrastructure is available during response to emergencies, planning for disasters, maintaining emergency response and evacuation routes, and implementing measures to reduce injury and damage from hazards.

Finally, the California Fire Code, Chapter 49 establishes fire safety requirements for new construction in the wildland-urban interface. New construction is required to adhere to guidelines for defensible space, vegetation management in a fire safe manner, financial responsibility for maintenance of landscaping and open parcels (forest), and other measures. In addition, a wildfire behavior model is required to specify building setbacks and fire-resistive ratings.

Therefore, based on the existing regulatory requirements and the policies contained within the proposed 2040 General Plan, there is certainty that future development and land use activities contemplated by the 2040 General Plan would not expose persons or property to unacceptable risks associated with wildland fires. Impacts would be less than significant.

### *Level of Significance Before Mitigation*
Less than significant impact.

### *Mitigation Measures*
No mitigation is necessary.

### *Level of Significance After Mitigation*
Less than significant impact.

# 3.7 - Hydrology and Water Quality

## 3.7.1 - Introduction

This section describes the existing hydrology and water quality setting and potential effects from City of Mill Valley 2040 General Plan implementation on the Planning Area and surroundings.

## 3.7.2 - Environmental Setting

### Climate

Mill Valley is located on the Marin Peninsula and its climate is strongly influenced by proximity to the Pacific Ocean. The average low ranges from 38.6 Fahrenheit (°F) in January to an average high of 83.4 °F in July. Precipitation averages 47.41 inches annually. Table 3.7-1 provides a meteorological summary for Mill Valley.

**Table 3.7-1: Mill Valley Meteorological Summary**

| Month | Temperature (° F) | | Precipitation (Inches) |
|---|---|---|---|
| | Average Low | Average High | |
| January | 38.6 | 55.6 | 10.45 |
| February | 41.0 | 60.5 | 8.36 |
| March | 42.0 | 64.5 | 6.36 |
| April | 43.8 | 69.3 | 2.81 |
| May | 46.5 | 74.1 | 1.31 |
| June | 49.5 | 79.8 | 0.36 |
| July | 50.2 | 83.4 | 0.05 |
| August | 50.1 | 82.7 | 0.08 |
| September | 49.6 | 81.4 | 0.46 |
| October | 47.0 | 74.8 | 2.46 |
| November | 42.8 | 64.2 | 5.82 |
| December | 39.1 | 56.3 | 8.89 |
| **Annual Average** | **45.0** | **70.5** | **47.41** |

Note:
Measurements recorded at the Kentfield Weather Station between January 1, 1902 and March 31, 2013.
Source: Western Regional Climate Center, 2013.

### Watersheds

Mill Valley drains into Richardson Bay mainly by way of the Arroyo Corte Madera Del Presidio. The stream drains an area of about 6 square miles from the upper reaches of Mt. Tamalpais. Exhibit 3.7-1 depicts the watersheds within Mill Valley.

## Drainage

Marin County Flood Control and Water Conservation District oversees storm drainage within Mill Valley. The Flood Control District consists of 10 zones, each with its own budgets and master plans. Mill Valley is located within Zone 3, which encompasses the Richardson Bay watershed. Principal drainage areas tributary to Richardson Bay include Coyote Creek, Corte Madera del Presidio, and Warner Creek. Maintenance activities include regular servicing of pump stations, tide gates, levees and drainage ditches, and an annual vegetation maintenance program.

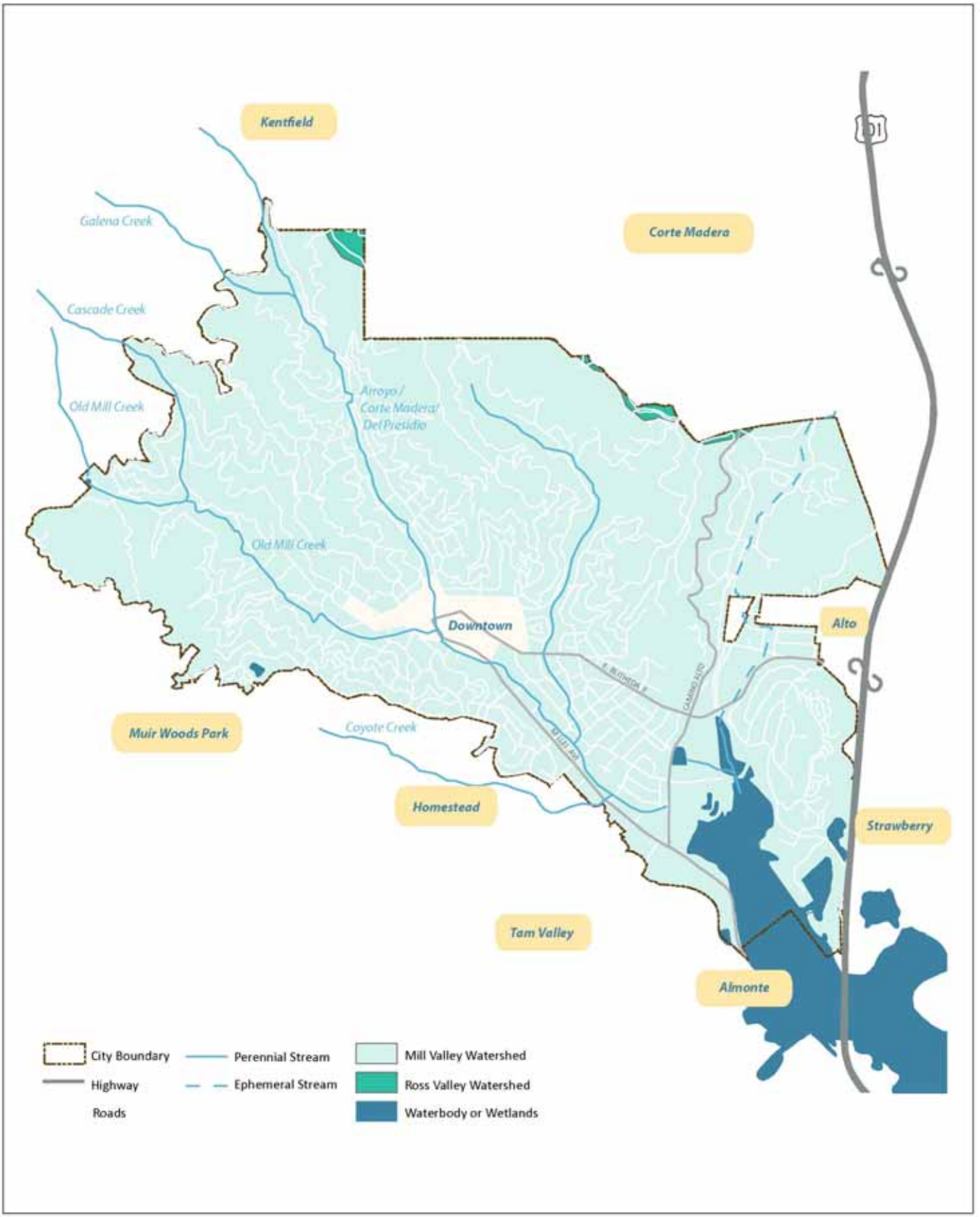
## Water Quality

Total Maximum Daily Loads (TMDLs) are action plans to restore impaired water bodies. Section 303(d) of the federal Clean Water Act requires states to identify water bodies that do not meet water quality standards, and the pollutants that impair them. TMDLs examine the water quality problems, identify sources of pollutants, and specify actions that create solutions. They are adopted by the Regional Water Quality Control Board (RWQCB) as amendments to the Region's Basin Plan.

Richardson Bay and Arroyo Corte Madera del Presidio are listed on the 303(d) list of impaired water bodies. Table 3.7-2 summarizes the pollutants and stressors that impair each water body. As shown in the table, Total Maximum Daily Load (TMDL) completion dates for the various pollutants range from 2005 (high priority) to 2021 (low priority).

**Table 3.7-2: Impaired Water Body Summary**

| Water Body | Pollutant/ Stressor | Source(s) | TMDL Completion Date |
|---|---|---|---|
| Richardson Bay | Chlordane | Nonpoint Source | 2013 |
| | Coliform bacteria | Boat Discharges/Vessel Wastes, Septage Disposal, Urban Runoff/Storm Sewers | 2008 |
| | DDT | Nonpoint Source | 2013 |
| | Dieldrin | Unknown Nonpoint Source | 2013 |
| | Dioxin compounds | Atmospheric Deposition | 2019 |
| | Furan compounds | Atmospheric Deposition | 2019 |
| | Invasive species | Ballast Water | 2019 |
| | Mercury | Atmospheric Deposition, Municipal Point Sources, Natural Sources, Nonpoint Source, Resource Extraction | 2008 |
| | PCBs | Unknown Nonpoint Source | 2008 |
| Arroyo Corte Madera del Presidio | Diazinon | Urban Runoff/Storm Sewer | 2007 |
| Source: San Francisco Bay Regional Water Quality Control Board, 2013. | | | |

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# Exhibit 3.7-1
# Watersheds & Wetlands

## Groundwater

There is very limited published information about groundwater in Mill Valley. Regardless, groundwater is not used as a local municipal water source given the availability of surface water sources.

## Flood Hazard Mapping

A large portion of developed and undeveloped Mill Valley lands are subject to flooding, which is due to a combination of factors including periodic heavy winter rainfalls, tidal fluctuations, and potentials for tsunami and dam failure caused by seismic activity.

Mill Valley drains into Richardson Bay mainly by way of the Arroyo Corte Madera Del Presidio. The stream drains an area of about 6 square miles from the upper reaches of Mt. Tamalpais. Stream gradients are, therefore, exceptionally steep in the upper elevations, and flatten markedly as the creek continues over alluvial plains and enters the tidal marshlands along the periphery of Richardson Bay. Consequently, the creek often overflows its banks in the lower reaches during periods of heavy rainfall.

Significant encroachment has occurred along Arroyo Corte Madera by urban development and vegetative growth. Both factors have imposed extreme limitations on channel flow capacities along substantial portions of the stream, resulting in major flood problems. During heavy rainfall conditions, floodwaters cascade down the steep, upper reaches of the main tributary streams and flow through the central portions of the City where they overflow the flatter, generally constricted, and inadequate channels. Damaging floods have periodically occurred over this area as a result.

Mill Valley areas subject to frequent flooding in the past are predominantly former marshlands (Bay Mud areas) which have previously been filled for urban expansion purposes. Consequently, the flood problem in Mill Valley has increased with time. Areas subject to less frequent but more damaging stormwater inundation include the center of the City, a major portion of the City's commercial areas, and considerable residential areas. Mill Valley has experienced the impacts of flooding from winter storms, most notably in 1982, 1997, 1998, 2005, and 2006. These experiences have demonstrated the variety of potential hazards to the community. Winter storms can cause any combination of destruction, ranging from floods to landslides, disruption of public utilities and transportation routes, or direct injuries or structural damage. Expected impacts are dependent on the nature and severity of the storm. Exhibit 3.7-2 depicts flood hazard areas within Mill Valley.

## Tsunamis

A tsunami is series of powerful waves triggered by a seismic event (i.e., earthquake), usually thousands of miles away. Although the San Francisco Bay Area has not experienced a significant tsunami in recent history, other parts of California such as Crescent City have sustained significant damage to their waterfront areas from tsunamis, most recently following the 2011 earthquake in Japan.

Although Mill Valley does not have a direct exposure to ocean waters, there remains a threat from tsunami due to the "bathtub" effect on the waters of the San Francisco Bay. This effect, caused by

the atypical draining and filling of the bay from the effects of tsunami waves, may cause a sloshing effect that can create water swells on the bay that exceed the heights of levees and other tidal barriers. The result of this would lead to flooding of low-lying areas, similar to a winter storm-related slow rise flood, but much more rapid and less predictable. Exhibit 3.7-3 depicts the portions of Mill Valley susceptible to tsunami hazards.

## 3.7.3 - Regulatory Framework

### Federal

#### *Clean Water Act*

Section 303 of the Clean Water Act requires states to adopt water quality standards for all surface waters of the United States. Water quality standards are typically numeric, although narrative criteria based upon biomonitoring methods may be employed where numerical standards cannot be established or where they are needed to supplement numerical standards. See a description of State Porter-Cologne Water Quality Control Act, below. Standards are based on the designated beneficial use(s) of the water body. Where multiple uses exist, water quality standards must protect the most sensitive use.

Section 402 of the Clean Water Act mandates that certain types of construction activity comply with the requirements of the National Pollutant Discharge Elimination System (NPDES) stormwater program. The Phase II Rule, issued in 1999, requires that construction activities that disturb land equal to or greater than 1 acre require permitting under the NPDES program. In California, permitting occurs under the General Permit for Stormwater Discharges Associated with Construction Activity, issued to the State Water Resources Control Board (SWRCB) and implemented and enforced by the nine Regional Water Quality Control Boards (RWQCBs). The project site is within the boundaries of the San Francisco Bay RWQCB.

This General Permit requires all dischargers, where construction activity disturbs one (1) or more acres, to take the following measures:

1. Develop and implement a Storm Water Pollution Prevention Plan (SWPPP), which specifies Best Management Practices (BMPs) that will prevent all construction pollutants from contacting stormwater and with the intent of keeping all products of erosion from moving off site into receiving waters.
2. Eliminate or reduce non-stormwater discharges to storm sewer systems and other waters of the nation.
3. Perform inspections of all BMPs.

To obtain coverage, the landowner must file a Notice of Intent with the SWRCB. The notice is required to include the requirements listed above. When project construction is completed, the landowner must file a notice of termination.

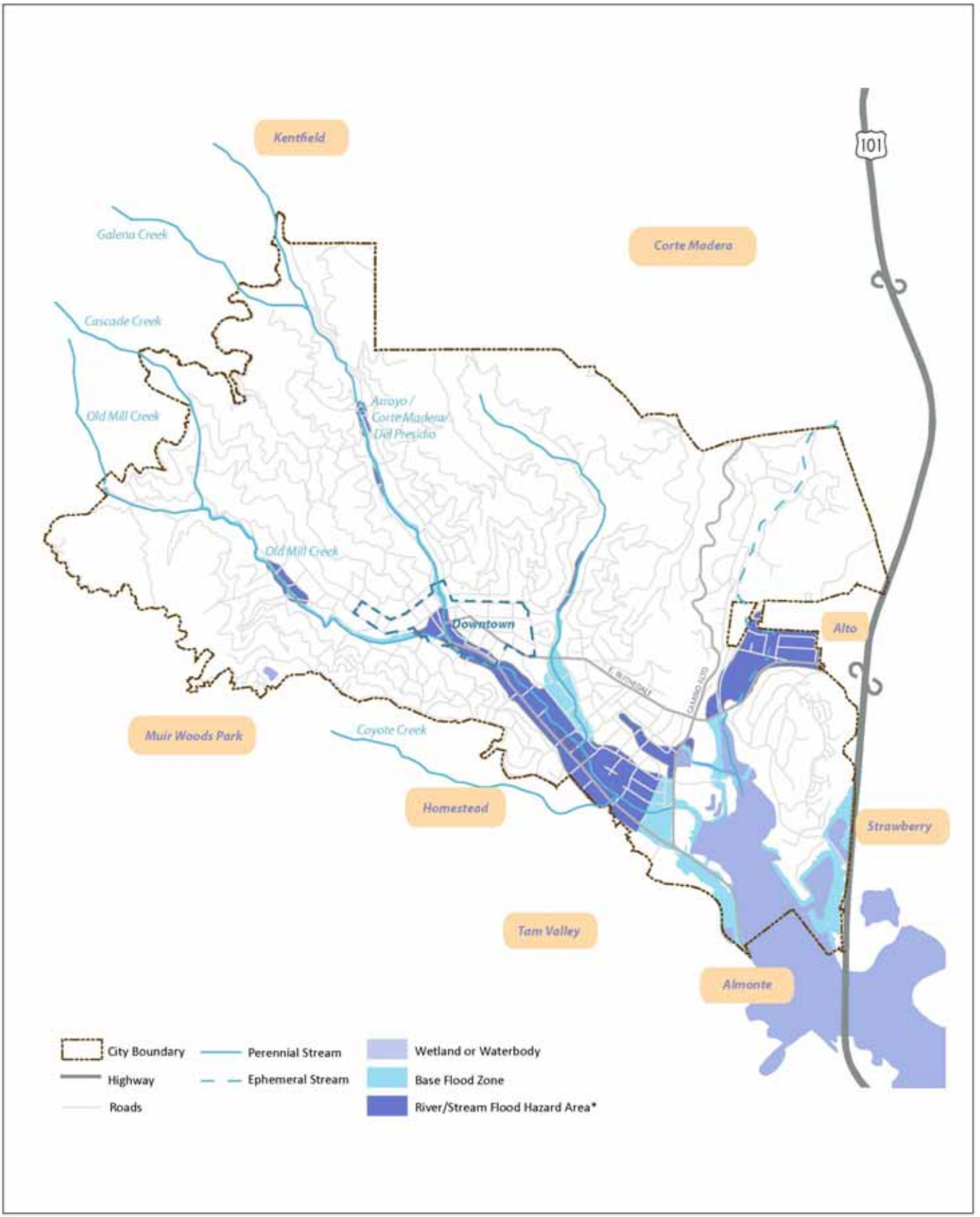


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Exhibit 3.7-2
FEMA Floodplain & Floodway

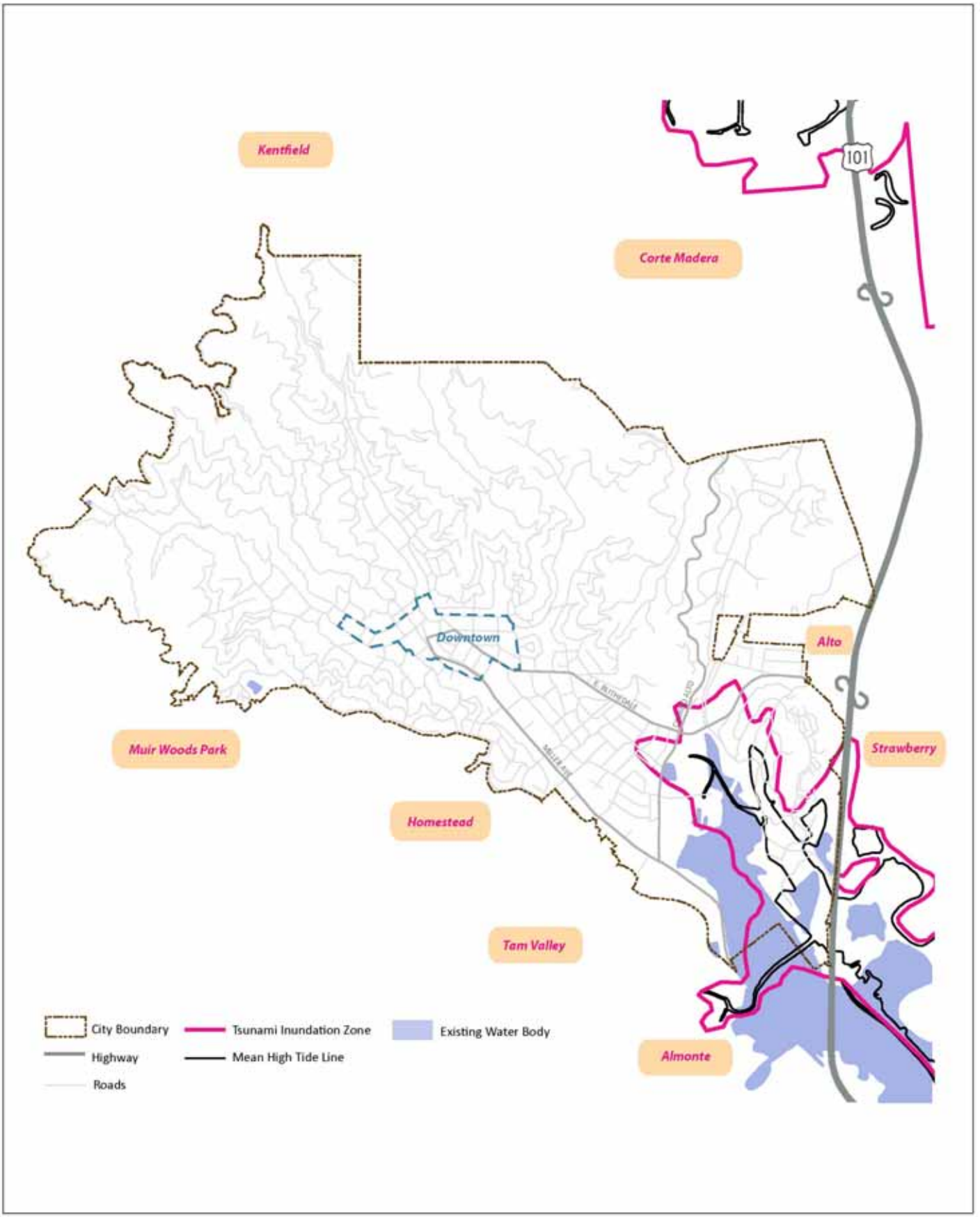


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Exhibit 3.7-3
Tsunami Risk

### *Floodplain Regulations*

Executive Order (EO) 11988 for Floodplain Management (May 24, 1977) directs all federal agencies to evaluate potential effects of any actions it may take in the floodplain and to avoid all adverse impacts associated with modifications to floodplains. It also directs federal agencies to avoid floodplain development whenever there is a practicable alternative and to restore and preserve the natural and beneficial values served by the floodplains.

The Federal Emergency Management Agency (FEMA) oversees floodplains and administers the National Flood Insurance Program (NFIP) adopted under the National Flood Insurance Act of 1968. The program makes federally subsidized flood insurance available to property owners within communities that participate in the program. Areas of special flood hazard (those subject to inundation by a 100-year flood) are identified by FEMA through regulatory flood maps titled Flood Insurance Rate Maps. The NFIP mandates that development cannot occur within the regulatory floodplain (typically the 100-year floodplain) if that development results in an increase of more than 1 foot in flood elevation. In addition, development is not allowed in delineated floodways within the regulatory floodplain.

## State

### *Porter-Cologne Water Quality Control Act*

The Porter-Cologne Water Quality Control Act of 1969 authorized the SWRCB to provide comprehensive protection for California's waters through water allocation and water quality protection. The SWRCB implements the requirement of the Clean Water Act Section 303, indicating that water quality standards have to be set for certain waters by adopting water quality control plans under the Porter-Cologne Act. The Porter-Cologne Act established the responsibilities and authorities of the nine RWQCBs, which include preparing water quality plans for areas in the region, identifying water quality objectives, and issuing NPDES permits and Waste Discharge Requirements. Water quality objectives are defined as limits or levels of water quality constituents and characteristics established for reasonable protection of beneficial uses or prevention of nuisance. The Porter-Cologne Act was later amended to provide the authority delegated from EPA to issue NPDES permits.

### *Water Quality Control Plan for the San Francisco Bay Basin*

The Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) is the RWQCB's master water quality control planning document. The Basin Plan designates beneficial uses and water quality objectives for waters of the State located within the 4,603-square-mile basin, including surface waters and groundwater. It also includes programs of implementation to achieve water quality objectives.

### *Bay Conservation and Development Commission*

The Bay Conservation and Development Commission (BCDC) has jurisdiction over all areas of San Francisco Bay that are subject to tidal action. (Tidal action is defined by the shoreline that extends up to mean high water, except in marsh areas, where BCDC's jurisdiction extends to 5 feet above mean sea level.) BCDC also has "shoreline band" jurisdiction over an area 100 feet wide inland and parallel to the shoreline. For projects within BCDC jurisdiction, permits may be required, depending

on the nature of the activity. Those projects requiring a permit must comply with the requirements of the McAteer-Petris Act and the Bay Plan.

### Local

#### *City of Mill Valley*

*2040 General Plan*

The proposed 2040 General Plan sets forth the following goals and policies that are relevant to hydrology and water quality:

- **Goal NE.3 Water:** Protect and Improve Water Quality, System Supply and System Integrity.
- **Policy NE.3 Water Quality, System Supply and Integrity:** Improve water quality, and expand and diversify water supply.
- **Policy NE.4 Conservation of Water Resources:** Promote the increased use of pervious paving, rainwater storage and greywater systems to improve water quality and conserve potable water.
- **Goal HZ-1 Community Hazard Resilience:** Minimize loss of life, property, and important elements of the natural ecosystem and maximize Mill Valley's ability to prepare for, respond to, and recover from disaster.
- **Policy HZ.1 Hazard Identification and Mitigation:** Identify all hazards that threaten the city as either "sudden onset" disasters (e.g., earthquakes, wildfire) or "slow onset" disasters/phenomena (e.g., drought, extreme heat, sea level rise) and strengthen hazard mitigation policies and regulations.
- **Policy HZ.2 Administrative and Equipment Capacity:** Maintain adequate concentration and distribution of staff, facilities, materials, and equipment to provide a timely disaster response consistent with the needs of a demographically changing community and a challenging natural environment, while recognizing the difficulties of maintaining these systems on a daily basis.
- **Policy HZ.3 Critical Infrastructure:** Develop strategies for critical facilities and services (local and regional) that will minimize problems during post-disaster evacuations, rescues, and major clean-up operations following a major disaster.
- **Policy HZ.4 Civic Duty and Responsibility:** Promote education and events that reinforce the personal responsibility of all residents, business owners, and City staff to plan for, respond to, and recover from disasters.
- **Policy HZ.5 Emergency Response and Evacuation Routes:** Maintain and expand the network of anticipated emergency response routes and regularly exercise evacuation protocols and procedures.
- **Policy HZ.6 Prevention and Protection:** Reduce injury and damage from hazards.

## 3.7.4 - Methodology

FirstCarbon Solutions evaluated potential impacts on hydrology and water quality through review of the existing 1989 General Plan and proposed 2040 General Plan, and information provided by the Western Regional Climate Center, California Department of Water Resources, and the San Francisco Bay Regional Water Quality Control Board.

## 3.7.5 - Thresholds of Significance

According to Appendix G, Environmental Checklist, of the CEQA Guidelines, hydrology and water quality impacts resulting from the implementation of the proposed project would be considered significant if the project would:

a) Violate any water quality standards or waste discharge requirements?

b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted?

c) Substantially alter the existing drainage pattern of 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?

d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner, which would result in flooding on- or off-site?

e) 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?

f) Otherwise substantially degrade water quality?

g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

h) Place within a 100-year flood hazard area structures, which would impede or redirect flood flows?

i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam? (Refer to Section 7, Effects Found Not To Be Significant)

j) Inundation by seiche, tsunami, or mudflow?

## 3.7.6 - Project Impacts and Mitigation Measures

### Water Quality Standards/Waste Discharge Requirements

| | |
|---|---|
| **Impact HYD-1:** | **Implementation of the 2040 General Plan would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade water quality.** |

#### *Impact Analysis*

Development and land use activities that occur pursuant to the proposed 2040 General Plan may result in construction activities that could have the potential to create polluted runoff. These

pollutants could be conveyed offsite potentially affect the water quality within local streams, Richardson Bay. Generally, development activities that increase in impervious surfaces could generate pollutants such as increased silts, ground rubber, oils from automobiles, debris, litter, chemicals, dust, and dissolved solids related to grading, excavating, dredging, building construction, and painting.

The 2040 General Plan establishes a goal and two policies that concern water quality. Goal NE.3 and Policies NE.3 and NE.4 call for improving water quality and increasing the use of pervious paving, rainwater storage and greywater systems to improve water quality.

Moreover, new development activities are subject to federal, state, and local requirements that pertain to water quality. For example, development projects that involve disturbance of 1 acre of more are required to prepare SWPPPs for construction activities. In addition, new development is required to adhere to Low Impact Development principles in designing stormwater management systems.

Therefore, based on the existing regulatory requirements and the goals and policies contained within the proposed 2040 General Plan, there is certainty that future development and land use activities contemplated by the 2040 General Plan would not have significant water quality impacts. Impacts would be less than significant.

### *Level of Significance Before Mitigation*
Less than significant impact.

### *Mitigation Measures*
No mitigation is necessary.

### *Level of Significance After Mitigation*
Less than significant impact.

## Groundwater

**Impact HYD-2: Implementation of the 2040 General Plan would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge.**

### *Impact Analysis*
There is very limited published information about groundwater in Mill Valley. Regardless, groundwater is not used as a local municipal water source given the availability of surface water sources. To the extent that individual property owners have onsite wells, this is a condition that would remain unchanged by implementation of the 2040 General Plan. Therefore, development and land use activities contemplated by the 2040 General Plan would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level. Impacts would be less than significant.

### *Level of Significance Before Mitigation*
Less than significant impact.

### *Mitigation Measures*
No mitigation is necessary.

### *Level of Significance After Mitigation*
Less than significant impact.

## Erosion/Siltation

| | |
|---|---|
| **Impact HYD-3:** | **Implementation of the 2040 General Plan would not substantially alter the existing drainage pattern in a manner which would result in substantial erosion or siltation.** |

### *Impact Analysis*
Development and land use activities that occur pursuant to the proposed 2040 General Plan may result in construction activities that could have the potential to cause erosion and siltation in downstream waterways. Development activities that involve ground disturbance have the greatest potential to cause soil and sediment to enter streams and ultimately Richardson Bay.

The 2040 General Plan establishes a goal and two policies that concern erosion and sedimentation. Goal NE.3 and Policies NE.3 and NE.4 call for improving water quality and increasing the use of pervious paving, rainwater storage and greywater systems to improve water quality.

Furthermore, new development activities are subject to federal, state, and local requirements that pertain to water quality. For example, development projects that involve disturbance of 1 acre of more are required to prepare SWPPPs for construction activities. In addition, new development is required to adhere to Low Impact Development principles in designing stormwater management systems.

Therefore, based on the existing regulatory requirements and the goals and policies contained within the proposed 2040 General Plan, there is certainty that future development and land use activities contemplated by the 2040 General Plan would not have significant erosion and sedimentation impacts. Impacts would be less than significant.

### *Level of Significance Before Mitigation*
Less than significant impact.

### *Mitigation Measures*
No mitigation is necessary.

### *Level of Significance After Mitigation*
Less than significant impact.

## Storm Drainage

**Impact HYD-4: Implementation of the 2040 General Plan would not substantially alter the existing drainage pattern or substantially increase the rate or amount of surface runoff in a manner, which would result in downstream flooding or require new or expanded storm drainage facilities.**

### *Impact Analysis*

Marin County Flood Control and Water Conservation District oversees storm drainage within Mill Valley. Principal drainages within Mill Valley include Coyote Creek, Corte Madera del Presidio, and Warner Creek.

The 2040 General Plan 2030 establishes a goal and two policies that concern storm drainage. Goal NE-1 and Policies NE.3 and NE.4 call for improving water quality and promoting the use of pervious paving, rainwater storage and greywater systems to improve water quality. Collectively, these measures would promote reductions in pollutants and runoff rates in storm drainage facilities.

Therefore, based on the existing regulatory requirements and the policies contained within the proposed 2040 General Plan, there is certainty that future development and land use activities contemplated by the 2040 General Plan would not create a need for new or expanded storm drainage facilities. Impacts would be less than significant.

### *Level of Significance Before Mitigation*

Less than significant impact.

### *Mitigation Measures*

No mitigation is necessary.

### *Level of Significance After Mitigation*

Less than significant impact.

## 100-Year Flood Hazard Areas

**Impact HYD-5: Implementation of the 2040 General Plan would not place housing or structures within a 100-year flood hazard area.**

### *Impact Analysis*

Exhibit 3.7-2 depicts flood hazard areas within Mill Valley. Generally, 100-year flood hazard areas are located along creek corridors and Richardson Bay. In particular, 100-year flood hazard areas exist along Miller Avenue and overlap with commercial and residential development.

The 2040 General Plan establishes a goal and several policies that concern mitigation of hazards, including flooding. Goal HZ-1 and Policies HZ.1 through HZ.6 call for emergency preparedness, identification of hazards, equipping emergency responses with adequate resources, protected critical infrastructure, maintaining emergency response and evacuation routes, and reducing injury and damage from hazards.

Furthermore, new development that occurs with 100-year flood hazard areas must elevate structures to at least 1 foot above the flood elevation. As such, any new development that occurs pursuant to the 2040 General Plan within a 100-year flood hazard area would be elevated above the flood elevation.

Therefore, based on the existing regulatory requirements and the policies contained within the proposed 2040 General Plan, there is certainty that future development and land use activities contemplated by the 2040 General Plan would not increase susceptibility to 100-year flood hazard areas. Impacts would be less than significant.

### *Level of Significance Before Mitigation*
Less than significant impact.

### *Mitigation Measures*
No mitigation is necessary.

### *Level of Significance After Mitigation*
Less than significant impact.

## Seiche, Tsunamis, or Mudflows

| | |
|---|---|
| **Impact HYD-6:** | **Implementation of the 2040 General Plan would not result in inundation by seiche, tsunami, or mudflow.** |

### *Impact Analysis*
The potential for seiches, tsunamis, and mudflows are discussed separately.

*Seiches*
There are no inland water bodies within Mill Valley that are susceptible to seiches. No impacts would occur.

*Tsunamis*
Although Mill Valley does not have a direct exposure to ocean waters, there remains a threat from tsunami due to the “bathtub” effect on the waters of the San Francisco Bay. This effect, caused by the atypical draining and filling of the bay that is due to the effects of tsunami waves, may cause a sloshing effect that can create water swells on the bay that exceed the heights of levees and other tidal barriers. The result of this would lead to flooding of low-lying areas, similar to a winter storm related slow rise flood, but much more rapid and less predictable. Exhibit 3.7-3 depicts the portions of Mill Valley susceptible to tsunami hazards.

The areas depicted in Exhibit 3.7-3 as being susceptible to tsunami inundation are primarily located within 500 feet of Richardson Bay. Most of these areas are designated open space and do not contain residential or commercial structures, although there are small areas that contain existing residential and commercial development within the inundation area. However, the proposed 2040 General Plan does not change any land use designations within these areas and, therefore, does not increase susceptibility to tsunami inundation.

Furthermore, the 2040 General Plan establishes a goal and several policies that concern mitigation of hazards, including tsunami inundation. Goal HZ-1 and Policies HZ.1 through HZ.6 call for emergency preparedness, identification of hazards, equipping emergency responses with adequate resources, protected critical infrastructure, maintaining emergency response and evacuation routes, and reducing injury and damage from hazards.

Therefore, based on the existing regulatory requirements and the policies contained within the proposed 2040 General Plan, there is certainty that future development and land use activities contemplated by the 2040 General Plan would not increase susceptibility to tsunami inundation. Impacts would be less than significant.

*Mudflows*
Mudflows typically occur along slopes that are denuded by fire or human modification or have underlying unstable geologic conditions. The slopes that ring Mill Valley are mostly forested and protected as open space. The proposed 2040 General Plan designates most these areas "Open Space" and, thus, does not contemplate new development within these areas. As such, implementation of the 2040 General Plan would not increase exposure to mudflows beyond existing conditions.

Moreover, the 2040 General Plan establishes a goal and several policies that concern mitigation of hazards, including tsunami inundation. Goal HZ-1 and Policies HZ.1 through HZ.6 call for emergency preparedness, identification of hazards, equipping emergency responses with adequate resources, protected critical infrastructure, maintaining emergency response and evacuation routes, and reducing injury and damage from hazards.

Therefore, based on the existing regulatory requirements and the policies contained within the proposed 2040 General Plan, there is certainty that future development and land use activities contemplated by the 2040 General Plan would not increase susceptibility to mud flows. Impacts would be less than significant.

### *Level of Significance Before Mitigation*
Less than significant impact.

### *Mitigation Measures*
No mitigation is necessary.

### *Level of Significance After Mitigation*
Less than significant impact.

# 3.8 - Land Use

## 3.8.1 - Introduction

This section describes the existing land use setting and potential effects from the City of Mill Valley 2040 General Plan implementation on the Planning Area and surroundings

## 3.8.2 - Environmental Setting

### Land Use

#### *Planning Area*

Mill Valley totals 4.8 square miles in size with a population of 13,903 residents. Mill Valley is bounded by the hillsides and steep ridges of the coastal mountains and the water of Richardson Bay, which form natural boundaries to urban growth. Many of the ridgelines that create the dominant visual backdrop for the community are preserved as open space. Similarly, much of the bayfront lands have been preserved as park and open space. Creeks, marshes, redwood groves, heavily forested and grass-covered hillsides, and chaparral are commonplace. Single-family residential neighborhoods are located in the valleys and on the hillsides, with commercial and more intensive residential uses clustered on the flat low lands. Overall, the compact urban footprint and natural setting that forms the edges of the community serve to create a small-town character. Exhibit 3.1-1 depicts the protected lands and topography within Mill Valley.

#### *Neighboring Jurisdictions*

*Unincorporated Marin County*

Unincorporated Marin County forms the western, eastern, and southern boundaries of the Planning Area. The western area contains the slopes and ridgelines of Mt. Tamalpais. Much of this area is publicly owned by the National Park Service, State of California, or Marin County. The eastern area contains Strawberry, which is characterized by commercial, multi-family residential, and single-family residential uses. The southern area contains the unincorporated communities of Tam Valley and Homestead, which are characterized by low-density and hillside residential uses and open space.

*Town of Corte Madera*

The Town of Corte Madera forms a portion of the northern boundary of the Planning Area. Corte Madera is a suburban community with a significant highway commercial area along US 101.

## 3.8.3 - Regulatory Framework

### State

#### *General Plan Law*

Government Code Section 65300 establishes requirements for General Plans. The legislation requires that a General Plan contain seven mandated elements that address specific issues. The seven mandated elements and associated issues are listed below.

- **Land Use:** This element must address the proposed distribution, location, and extent of land uses, with a statement of the standards for population density and building intensity. The element must also address flood plains, timberlands, and military installations.

- **Circulation:** This element must address transportation facilities including roadways, airports, ports, terminals, and other facilities. The element must be correlated with the land use element.
- **Housing:** This element must address and analyze existing and projected housing needs and identify strategies for the development of housing for all income levels. The element must be submitted to the California Department of Housing and Community Development for approval.
- **Conservation:** This element must address natural resources including water, forests, soils, rivers, harbors, fisheries, wildlife, and minerals. The discussion of water resources shall be developed in coordination with relevant water resource agencies.
- **Open Space:** This element must address open space areas used for the preservation of natural resources, the managed production of resources, outdoor recreation, and the protection of public health and safety.
- **Noise:** This element must address current and projected noise levels from roadways, railroads, aviation, industrial uses, military installation, and other ground stationary sources. Noise contours must be shown for these noise sources in terms of Community Noise Equivalent Level (CNEL) or day-night average ($L_{dn}$).
- **Safety:** This element must address the protection of the community from unreasonable risks associated with seismic hazards, geologic hazards, flooding, and fires. The safety element must be submitted to California Geological Survey for review.

## Local

### *City of Mill Valley*

*Existing 1989 General Plan*

The current General Plan, which was adopted by the Mill Valley City Council in 1989, serves as a blueprint for development and land use activities within the City limits. The General Plan establishes goals, policies, and land use designations that are intended to facilitate orderly and planned growth within the City.

*Proposed 2040 General Plan*

The proposed 2040 General Plan consists of a comprehensive update to the City of Mill Valley 1989 General Plan. The proposed 2040 General Plan consists of nine topical elements (including the seven state-mandated elements).

The proposed 2040 General Plan sets forth the following goals and policies that are relevant to land use:

- **Goal LU.1 Community Character:** Protect and enhance the natural beauty and small town character of Mill Valley.
- **Policy LU-1 Residential Development:** Residential development shall be compatible with, integrated into, and subordinate to its natural setting.

- **Policy LU-2 Commercial Development:** Provide commercial services in a convenient, safe and attractive environment that complements the residential character of Mill Valley, supports local business development and growth, and strengthens the sense of community.
- **Goal LU.2 Downtown:** Maintain Downtown Mill Valley as one of the social, commercial, intellectual, cultural, and entertainment centers of the community.
- **Policy LU-3 Community Gathering Space:** Sustain a diverse array of functions – shopping, dining, services, community events, entertainment, and recreation – that will continue to attract locals and visitors to the downtown area.
- **Policy LU-4 Good Neighbor Policy:** Establish clear and consistent "good neighbor" practices (e.g. noise, litter, waste disposal, customer conduct, etc.) for all businesses operating adjacent to established residential uses and make sure that property owners, businesses owners, and residents acknowledge those practices and the operational commitment they represent.
- **Goal LU.3 Commercial Areas:** Enhance the city's principal commercial areas (Downtown, Miller Avenue, Highway 101, East Blithedale/Alto Center).
- **Policy LU-5 Coordinated Strategy;** Work with commercial property owners and the Chamber of Commerce to create and implement a commercial development strategy for the city's principal commercial areas that makes the most of their distinctive locations, amenities, and uses and results in a complete and complementary range of goods and services in the community.
- **Goal LU.5 Sphere of Influence and Annexation:** Establish a Sphere of Influence for Mill Valley that supports the efficient provision of services and a logical City boundary.
- **Policy LU-9 Coordination with LAFCO:** Work with the Marin County Local Agency Formation Commission (LAFCO) and other affected agencies to resolve issues related to the efficient provision of services or related boundary issues.
- **Policy LU-10 Provision of Services:** Discourage the provision of City services outside of the boundaries of the City.

## 3.8.4 - Methodology

FirstCarbon Solutions evaluated potential impacts on land use through review of the existing 1989 General Plan and proposed 2040 General Plan, aerial photographs, and applicable state laws.

## 3.8.5 - Thresholds of Significance

According to Appendix G, Environmental Checklist, of the CEQA Guidelines, land use impacts resulting from the implementation of the proposed project would be considered significant if the project would:

a) Physically divide an established community?

b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

c) Conflict with any applicable habitat conservation plan or natural communities conservation plan? (Refer to Section 7, Effects Found Not To Be Significant.)

## 3.8.6 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the development of the project and provides mitigation measures where appropriate.

### Division of an Established Community

| | |
|---|---|
| **Impact LU-1:** | **Implementation of the City of Mill Valley 2040 General Plan would not divide an established community.** |

***Impact Analysis***

Implementation of the 2040 General Plan would guide future development and land use activities within the City of Mill Valley. The 2040 General Plan would maintain existing land use patterns and designations within the existing City limits. This aspect of the 2040 General Plan reflects the fact that Mill Valley is essentially built out and the surrounding natural constraints provide limited opportunities for new growth.

New development that occurs within Mill Valley is anticipated to consist of infill development and redevelopment of existing developed properties. Generally, these types of development characteristics do not divide established communities, as they typically occur within individual parcels or adjoining parcels.

Moreover, the 2040 General Plan does not propose any changes to the roadway circulation network such that new or expanded roadways are contemplated. On the contrary, 2040 General Plan amends the Level of Service criteria to permit lower performance standards at certain signalized intersections within Mill Valley to avoid the need to implement improvements that may have detrimental impacts on public transit, bicycles, pedestrians, and community character. This aspect of the 2040 General Plan would serve to avoid the division of an established community.

For these reasons, impacts would be less than significant.

***Level of Significance Before Mitigation***

Less than significant impact.

***Mitigation Measures***

No mitigation is necessary.

***Level of Significance After Mitigation***

Less than significant impact.

## Consistency with Applicable Plans and Requirements

**Impact LU-2: Implementation the City of Mill Valley 2040 General Plan would not conflict with applicable plans adopted for the purpose of avoiding or mitigating an environmental effect.**

### *Impact Analysis*

General Plan consistency with applicable plans is addressed within the context of state requirements and consistency with regional and local plans.

*State Requirements*

The 2040 General Plan includes the seven elements mandated by Government Code Section 65300 (Land Use, Mobility [Circulation], Natural Environment [Conservation], Hazards and Safety [Safety], Noise, Housing, and General Plan Administration, as well as the following optional elements: Community Vitality and Climate Action. These elements will be submitted for review and approval by applicable state agencies in conformance with General Plan law.

Further, when the project itself entails amendments to the general plan, inconsistency with the existing adopted general plan is an element of the project itself, which then necessitates a legislative policy decision by the agency and does not signify a potential environmental effect. As such, the adoption of the 2040 General Plan would serve as a self-mitigating aspect of project that would serve to correct this conflict. Impacts would be less than significant.

*The San Francisco Bay Plan*

The San Francisco Bay Plan contains the following policy that is relevant to Mill Valley:

- **Transportation Policy 4:** Transportation projects on the Bay shoreline and bridges over the Bay or certain waterways should include pedestrian and bicycle paths that will either be a part of the Bay Trail or connect the Bay Trail with other regional and community trails. Transportation projects should be designed to maintain and enhance visual and physical access to the Bay and along the Bay shoreline.

The Bay Trail traverses Mill Valley in a north-south direction using a combination of off-street (Class I) paths and on-street segments. The 2040 General Plan recognizes the Bay Trail and identifies it as part of the City's bicycle and pedestrian network. The 2040 General Plan contains a goal and policies (Goal M.3; Policies M.10, M.11, and M.12) that call for maintaining a safe and convenient bicycle and pedestrian network and, thus, further Transportation Policy 4. Impacts would be less than significant.

### *Level of Significance Before Mitigation*

Less than significant impact.

### *Mitigation Measures*

No mitigation is necessary.

### *Level of Significance After Mitigation*

Less than significant impact.

# 3.9 - Noise

## 3.9.1 - Introduction

This section describes the existing noise setting and potential effects from the City of Mill Valley 2040 General Plan implementation on the Planning Area and surroundings. Descriptions and analysis in this section are based on noise modeling performed by Illingworth & Rodkin.

## 3.9.2 - Environmental Setting

### Acoustical Terminology

Sound is mechanical energy transmitted by pressure waves in a compressible medium such as air. Noise is generally defined as unwanted sound. Sound is characterized by various parameters that describe the rate of oscillation of sound waves, the distance between successive troughs or crests, the speed of propagation, and the pressure level or energy content of a given sound wave. In particular, the sound pressure level has become the most common descriptor used to characterize the loudness of an ambient sound level. The unit of sound pressure, a ratio of the faintest sound detectable by a keen human ear, is called a decibel (dB).

A decibel (dB) is a unit of measurement that indicates the relative intensity of a sound. The zero point on the dB scale is based on the lowest sound level that the healthy, unimpaired human ear can detect. Changes of 3 dB or fewer are only perceptible in laboratory environments. Audible increases in noise levels generally refer to a change of 3 dB or more, as this level has been found to be barely perceptible to the human ear in outdoor environments. Sound levels in dB are calculated on a logarithmic basis. An increase of 10 dB represents a 10-fold increase in acoustic energy, while 20 dB is 100 times more intense, and 30 dB is 1,000 times more intense. Each 10-dB increase in sound level is perceived as approximately a doubling of loudness.

Because sound or noise can vary in intensity by over 1 million times within the range of human hearing, a logarithmic loudness scale similar to the Richter scale used for earthquake magnitude is used to keep sound intensity numbers at a convenient and manageable level. Since the human ear is not equally sensitive to all sound frequencies within the entire spectrum, noise levels at maximum human sensitivity are factored more heavily into sound descriptions in a process called A weighting, written as dBA. This scale gives greater weight to the frequencies of sound to which the human ear is most sensitive. Any further reference to decibels in this report written as dB should be understood to be A-weighted values.

Time variations in noise exposure are typically expressed in terms of a steady-state energy level equal to the energy content of the time-varying period (called $L_{eq}$), or, alternately, as a statistical description of the sound pressure level that is exceeded over some fraction of a given observation period. Finally, because community receptors are more sensitive to unwanted noise intrusion during the evening and at night, State law requires that, for planning purposes, an artificial dB increment be added to quiet-time noise levels in a 24-hour noise descriptor called the Community Noise Equivalent Level (CNEL).

Many methods have been developed for evaluating community noise to account for, among other things:

- Variation in noise levels over time
- Influence of periodic individual loud events
- Community response to changes in the community noise environment

Several methods have been developed to measure sound over a period of time, including:

- Equivalent Sound Level ($L_{eq}$)
- Community Noise Equivalent Level (CNEL)
- Day/Night Average Sound Level ($L_{dn}$)

These methods are described and defined below.

***$L_{eq}$***

Time variations in noise exposure are typically expressed in terms of a steady-state energy level equal to the energy content of the time-varying period (called $L_{eq}$), or, alternately, as a statistical description of the sound pressure level that is exceeded over some fraction of a given observation period. For example, the noise levels exceeded on 10 percent of readings is called $L_{10}$, the median (50th percentile) reading is called $L_{50}$, etc.

***CNEL***

Because community receptors are more sensitive to unwanted noise intrusion during the evening and at night, State law requires that, for planning purposes, an artificial dB increment penalty be added to quiet time noise levels in a 24-hour noise descriptor called CNEL.

***$L_{dn}$***

Another commonly used method is the day/night average level or $L_{dn}$. The $L_{dn}$ is a measure of the 24-hour average noise level at a given location. It was adopted by the U.S. Environmental Protection Agency (EPA) for developing criteria for the evaluation of community noise exposure. It is based on a measure of the average noise level over a given time period, called the $L_{eq}$. The $L_{dn}$ is calculated by averaging the $L_{eqs}$ for each hour of the day at a given location after penalizing the sleeping hours (defined as 10:00 p.m. to 7:00 a.m.) by 10 dBA to account for the increased sensitivity of people to noises that occur at night. The maximum noise level recorded during a noise event is typically expressed as $L_{max}$. The sound level exceeded over a specified time can be expressed as $L_n$ (e.g., $L_{90}$, $L_{50}$, $L_{10}$, etc.). $L_{50}$ equals the level exceeded 50 percent of the time, $L_{10}$ equals the level exceeded 10 percent of the time, etc.

As previously mentioned, people respond to changes in sound pressure, which are measured on a noise scale in a logarithmic manner. In general, a 3-dB change in sound pressure level is considered a just detectable difference in most situations. A 5-dB change is readily noticeable, and a 10-dB change is considered a doubling (or halving) of the subjective loudness. Note that a 3-dB increase or decrease in the average traffic nose level is realized by a doubling or halving of the traffic volume, or by about a 7-mile-per-hour increase or decrease in speed.

For each doubling of distance from a point noise source, the sound level will decrease by 6 dB. In other words, if a person is 100 feet from a machine and moves 200 feet from that source, sound levels will drop by approximately 6 dB. Moving 400 feet away, sound levels will drop approximately another 6 dB. For each doubling of distance from a line source, such as a roadway, noise levels are reduced 3 to 5 decibels, depending on the ground cover between the source and the receiver.

## Noise Exposure

An interior CNEL of 45 dB is mandated by the State of California Noise Insulation Standards (California Code of Regulations, Title 24, Part 6, Section T25 28) for multiple-family dwellings and hotel and motel rooms. In 1988, the State Building Standards Commission expanded that standard to include all habitable rooms in residential use, including single-family dwelling units. Since normal noise attenuation within residential structures with closed windows is about 20 dB, an exterior noise exposure of 65 dB CNEL allows the interior standard to be met without any specialized structural attenuation (e.g., dual-paned windows). A noise level of 65 dB is also the level at which ambient noise begins to interfere with one's ability to carry on a normal conversation at reasonable separation without raising one's voice. Table 3.9-1 summarizes typical noise sources, levels, and responses.

**Table 3.9-1: Noise Levels and Human Response**

| Noise Source | Noise Level (dBA) | Response |
|---|---|---|
| Library | 30 | Very quiet |
| Refrigerator humming | 40 | Quiet |
| Quiet office | 50 | Quiet |
| Normal conversation | 60 | Intrusive |
| Vacuum cleaner | 70 | Telephone use difficult |
| Freight train at 50 feet | 80 | Interferes with conversation |
| Heavy-duty truck at 50 feet | 90 | Annoying |
| Jet takeoff at 2,000 feet | 100 | Very annoying; hearing damage at sustained exposure levels |
| Unmuffled motorcycle | 110 | Maximum vocal effect; physical discomfort |
| Jet takeoff at 200 feet | 120 | Regular exposure over one minute risks permanent hearing loss |
| Shotgun firing | 130 | Pain threshold |
| Carrier jet operation | 140 | Harmfully loud |
| Source: Melville C. Branch and R. Dale Beland, 1970. | | |

## Existing Noise Levels

Illingworth & Rodkin performed a noise measurement survey in January 2013 to establish existing noise levels in Mill Valley. Long-term measurements made hour-by-hour over a period of 24 hours or more provide information on how noise levels vary throughout the day and night and may vary from day-to-day. A series of attended short-term measurement were also made. These measurements are also useful because they identify the noise sources that occur during the measurement and note the level of noise associated with identifiable events. This assists in quantitatively and qualitatively characterizing the noise environments along the major roadways and also in the quieter areas of the City.

Major roadways cause most of the ambient noise in Mill Valley. US 101 runs along the eastern border of the city. Major local roadways include Miller Avenue, East Blithedale Avenue, and Camino Alto. Hamilton Drive, Lomita Drive, and Sycamore Avenue are relatively quiet roads, but they are adjoined by a large number of residences and, therefore, contribute to residential noise exposure in Mill Valley.

### *Noise Measurement Results*

The noise survey was from the afternoon of Monday, January 7, 2013 to the afternoon of Wednesday, January 9, 2013, and (at one location) from the afternoon of Wednesday, January 9, 2013 to the afternoon of Friday, January 11, 2013. Noise measurement locations are shown on Exhibit 3.9-1. During the noise survey, weather conditions were moderate in terms of temperature and wind. The noise survey was conducted with Larson Davis Laboratories Type 820 precision sound level meters. Instrumentation was calibrated at the beginning and the end of the noise survey. No calibration corrections were necessary. During the survey, the microphones were fitted with windscreens.

*Long-Term Noise Measurement Results*

Table 3.9-2 summarizes the day/night average noise level ($L_{dn}$) at each of the four long-term noise measurement locations. The discussion after the table provides a description of the noise environment at each location.

**Table 3.9-2: Long-Term Noise Measurement Data Summary**

| Measurement | | |
|---|---|---|
| **No.** | **Location** | **Ldn** |
| LT-1 | 100 feet west of the near edge of US 101, near Acqua Hotel | 71 |
| LT-2 | 90 feet from the Miller Avenue centerline, near Tamalpais High School | 67 |
| LT-3 | 100 feet from the Camino Alto centerline, near Pickleweed Inlet | 65 |
| LT-4 | 75 feet from the E. Blithedale Avenue centerline, near Lomita Drive | 71 |
| Source: Illingworth & Rodkin, 2013. | | |

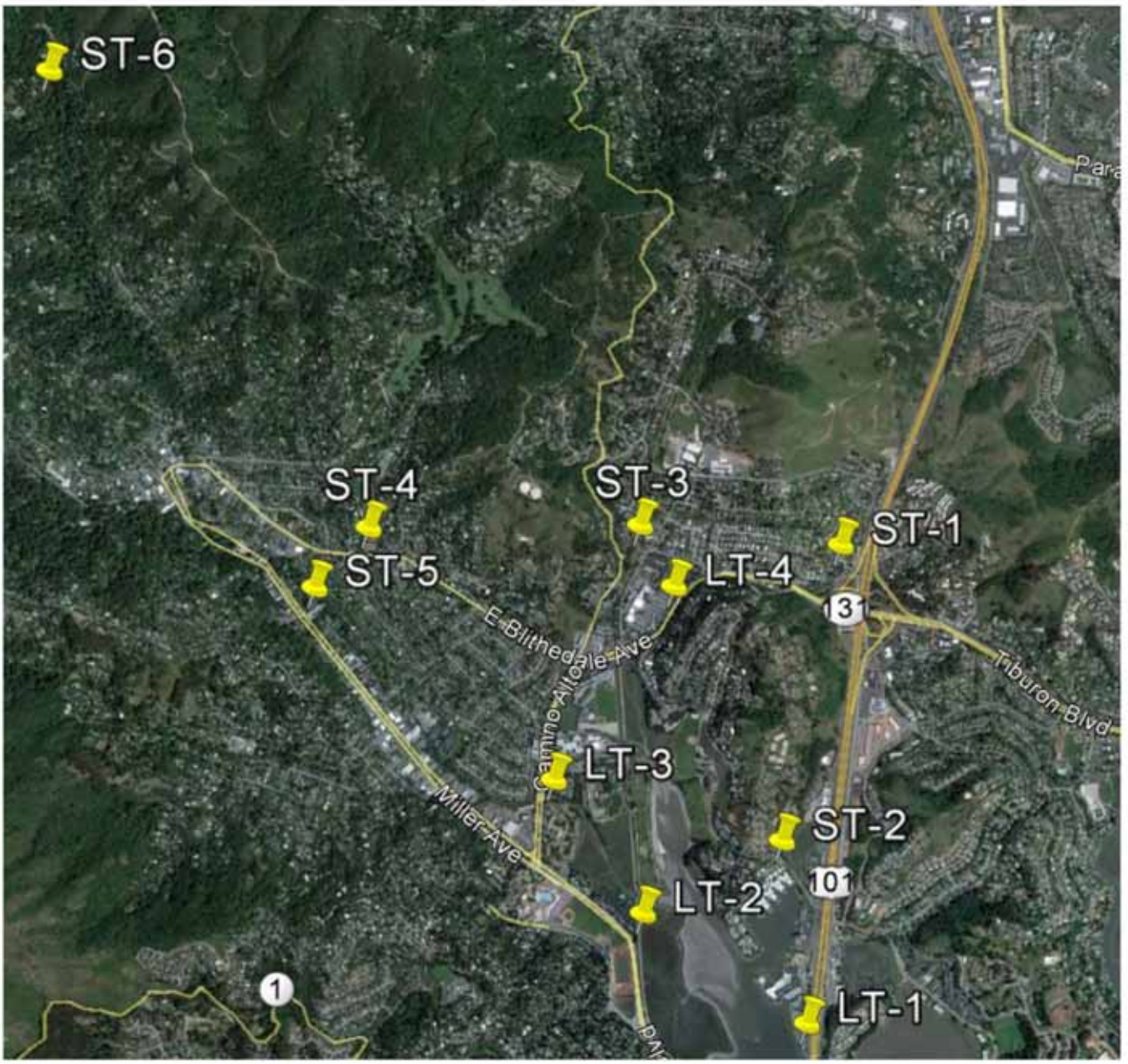


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Exhibit 3.9-1
Noise Measurement Locations in Mill Valley

**Measurement LT-1** was taken 100 feet west of the near edge of US 101. The measurement position was at a small park near the Acqua Hotel parking lot and a waterfront walkway, about 60 feet from the centerline of the frontage road Redwood Highway. Vehicular traffic on US 101 was the dominant noise source affecting the noise measurement. The daily trend in noise levels at this location is shown on Exhibit 3.9-2. The measured day/night average noise level at this location was about 71 dBA $L_{dn}$. This measurement location was well below the grade of the roadway, resulting in a lower $L_{dn}$ level than would be expected at other portions of the highway at the same distance, as shown in the modeled noise levels below. Activities in the parking lot such as starting car engines, slamming car doors, talking, etc. may be considered significant intermittent noise sources, but did not affect the overall 24-hour average noise level. The data clearly demonstrate the difference in noise levels between nighttime when the noise level dropped to 35 dBA $L_{90}$ (in the absence of any local traffic and activities in the parking lot) and during the daytime, when the noise level reached 92 dBA $L_{max}$.

**Measurement LT-2** was taken on Miller Avenue. This measurement location was also selected to characterize noise levels along a major road. The measurement position was in a tree near the Mill Valley-Sausalito path about 90 feet from the centerline of Miller Avenue. The measurement was across Miller Avenue from Mount Tamalpais High School athletic fields. The dominant source of noise was vehicular traffic on Miller Avenue. Measured data at Location LT-2 are shown on Exhibit 3.9-2. The measured noise level at this location was 67 dBA $L_{dn}$.

**Measurement LT-3** was taken on the east side of Camino Alto along a creek of Pickleweed Inlet. The measurement position was about 100 feet from the centerline of the roadway. Vehicular traffic along Camino Alto was the major source of noise. At night, it is likely that light winds in vegetation and creek water also contributed to the background noise levels. The day/night average noise level was measured to be about 65 dBA $L_{dn}$. The measured data are shown on Exhibit 3.9-3. The data show that it is quiet during the night when noise levels drop to about 37 dBA $L_{90}$ in the absence of any local traffic.

**Measurement LT-4** was taken on E. Blithedale Avenue near the shopping center northeast of Lomita Drive. The measurement position was about 75 feet from the centerline of East Blithedale Avenue. Vehicular traffic along E. Blithedale Avenue was the major source of noise at this location, which is busier than other local roadways in Mill Valley. The day/night average noise level at this site was measured to be about 71 dBA $L_{dn}$. Noise levels at this portion of the road varied from as low as 35 dBA $L_{90}$ when there is little local traffic at night to as high as 87 dBA $L_{max}$ during daytime hours when there are bus and truck pass-bys and high engine vehicle noise. The measurement data are summarized on Exhibit 3.9-3.

*Short-Term Peak Noise Measurements*

Short-term noise measurements were conducted during the day on January 8, 2013. The measured data are summarized in Table 3.9-3. Location ST-1 was on Valley Road; traffic on US 101 was the significant contributor to measured noise levels. At Location ST-2, local traffic on Hamilton Drive and traffic on US 101 were the dominant sources of noise at this measurement location. A loud car pass-by on Hamilton Drive generated a maximum instantaneous noise level of 73 dBA $L_{max}$. At Location ST-3, vehicular traffic on Camino Alto was the only significant contributor to measured noise levels. At Location ST-4, vehicular traffic along E. Blithedale Avenue was the dominant source of noise. At

Location ST-5, traffic along Miller Avenue was the only significant contributor to measured noise levels. ST-6 was located along a less dense residential stretch of E. Blithedale Avenue, northwest of downtown Mill Valley, where traffic on E. Blithedale Avenue was the only significant contributor to measured noise levels.

**Table 3.9-3: Short-Term Noise Measurement Data Summary**

| Measurement | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No. | Location | $L_{max}$ | $L_{(1)}$ | $L_{(10)}$ | $L_{(50)}$ | $L_{(90)}$ | $L_{eq}$ | $L_{dn}$ |
| ST-1 | 260 feet from the US 101 barrier | 57 | 56 | 54 | 51 | 49 | 52 | 55 |
| ST-2 | 40 feet from Hamilton Drive along Shelter Bay Avenue | 73 | 67 | 63 | 55 | 50 | 59 | 61 |
| ST-3 | 240 feet from the Camino Alto centerline | 64 | 62 | 57 | 52 | 50 | 54 | 56 |
| ST-4 | 90 feet from the E. Blithedale Avenue centerline | 71 | 66 | 63 | 60 | 55 | 51 | 53 |
| ST-5 | 180 feet from Miller Avenue centerline along Park Avenue | 64 | 60 | 56 | 51 | 44 | 53 | 54 |
| ST-6 | 150 feet from the W. Blithedale Avenue centerline near Blithedale Park | 59 | 52 | 49 | 48 | 48 | 48 | 49 |

Note:
$L_{dn}$ approximated by correlating to corresponding period at long-term site.
Source: Illingworth & Rodkin, 2013.

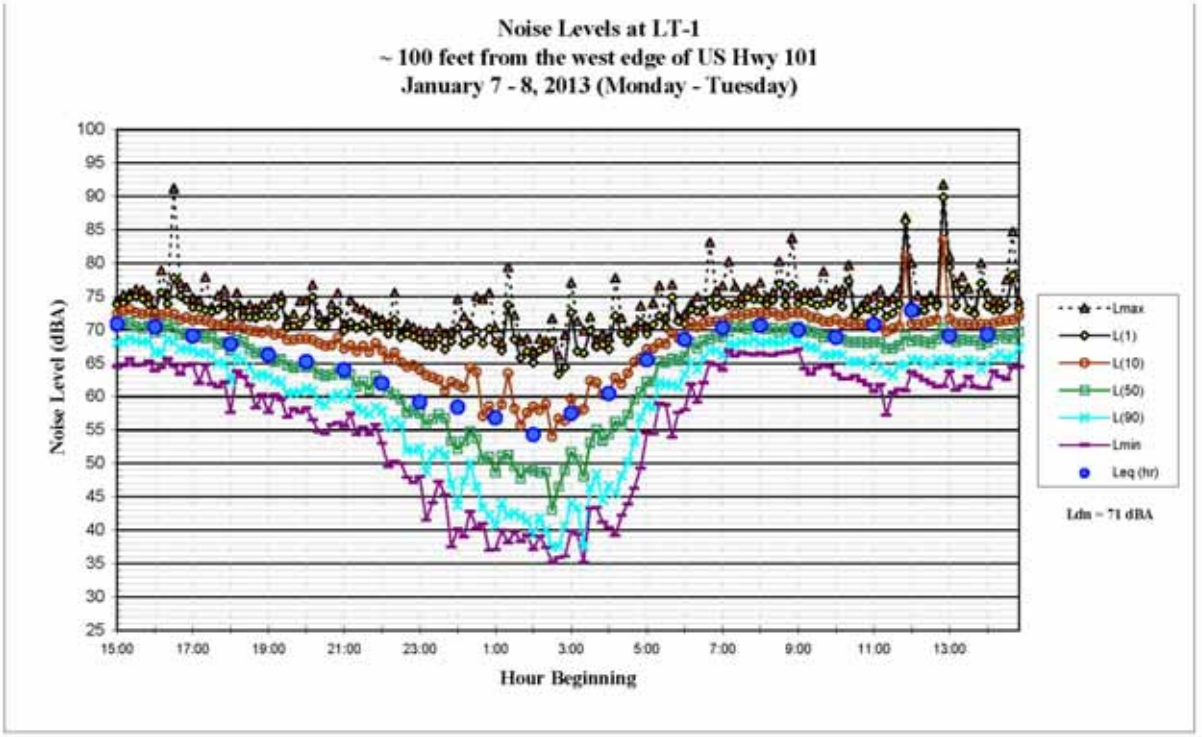
### *Stationary Noise Sources*

In general, stationary noise sources (e.g. large mechanical equipment and loading areas) are often located in primarily commercial areas and are isolated from noise sensitive land uses. However, the possibility of sensitive development encroaching on some of these stationary noise sources remains, which could result in some land use conflicts. Noise sources that affect sensitive receptors within the community would also include commercial land uses or those normally associated with and/or secondary to residential development. These include entertainment venues, nightclubs, outdoor dining areas, gas stations, car washes, fire stations, drive-throughs, air conditioning units, swimming pool pumps, school playgrounds, athletic and music events, and public parks.

The majority of stationary noise sources in Mill Valley are from rooftop and loading dock equipment at commercial uses located north of E. Blithedale Avenue near Camino Alto and Lomita Drive. Commercial uses are also located along the Redwood Highway frontage road.

### *Temporary Noise Sources*

Construction is a temporary source of noise for residences and businesses located near construction sites. Construction noise can be significant for short periods of time at any particular location as a result of public improvement projects, private development projects, remodeling, etc.



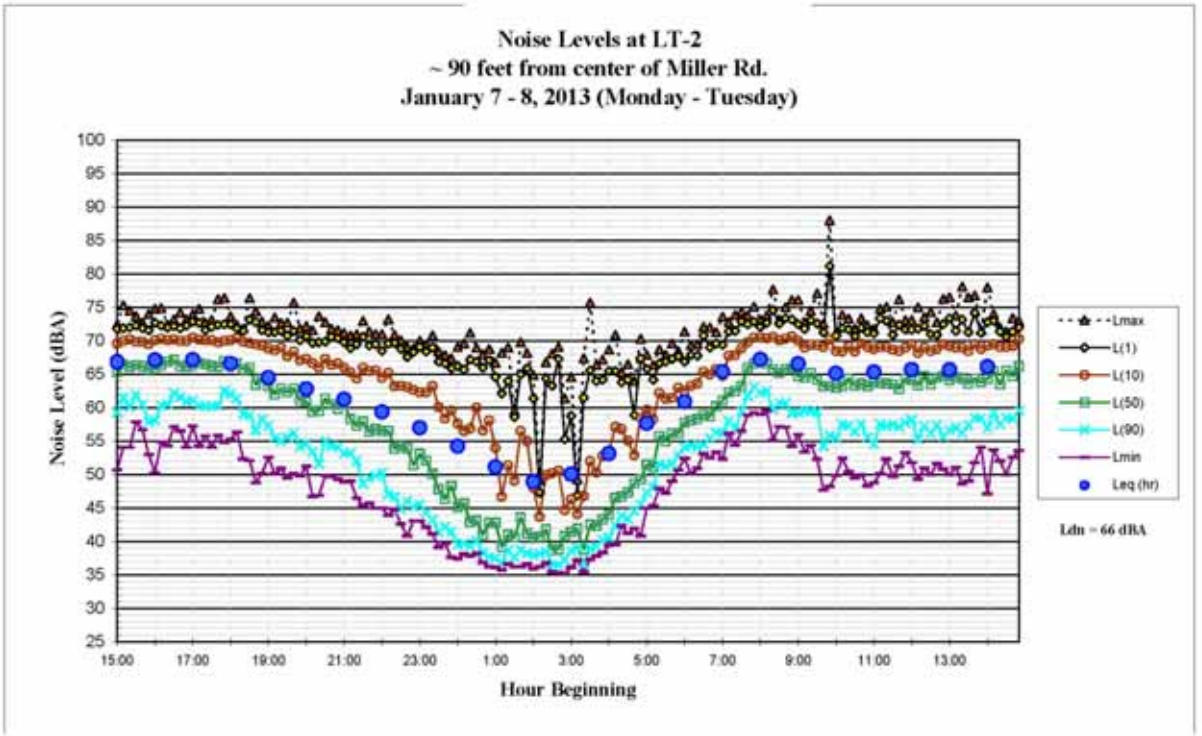




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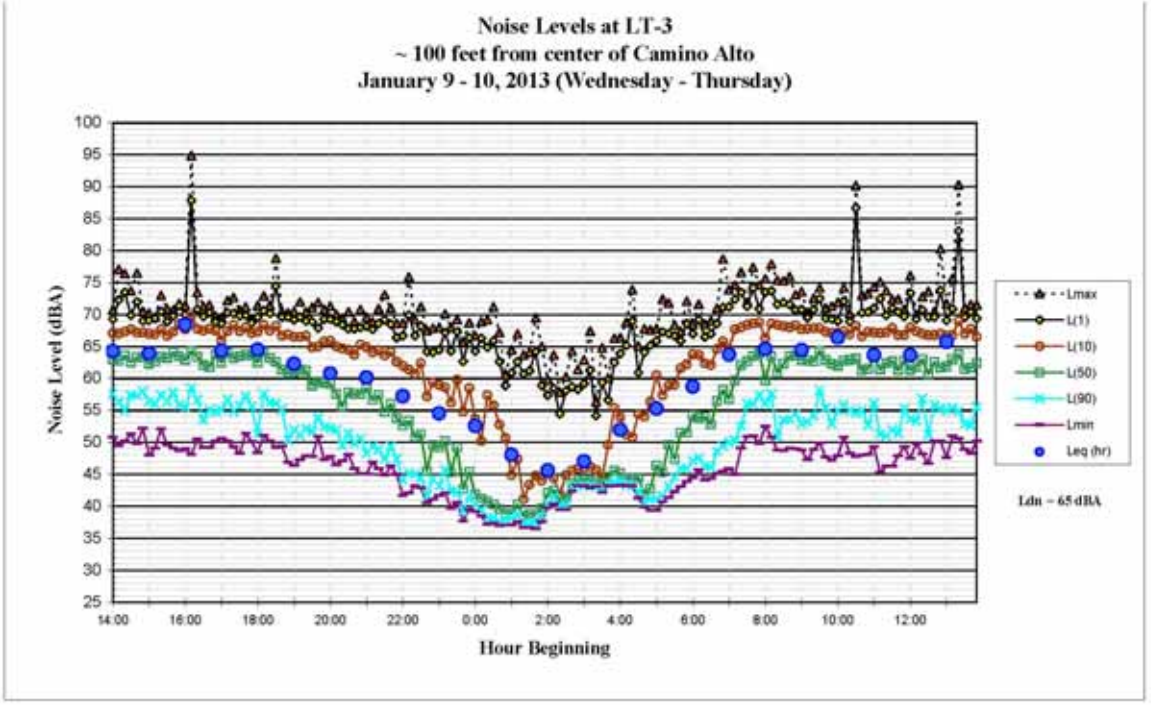
Exhibit 3.9-2
Noise Measurement Graph - LT-1 and LT-2



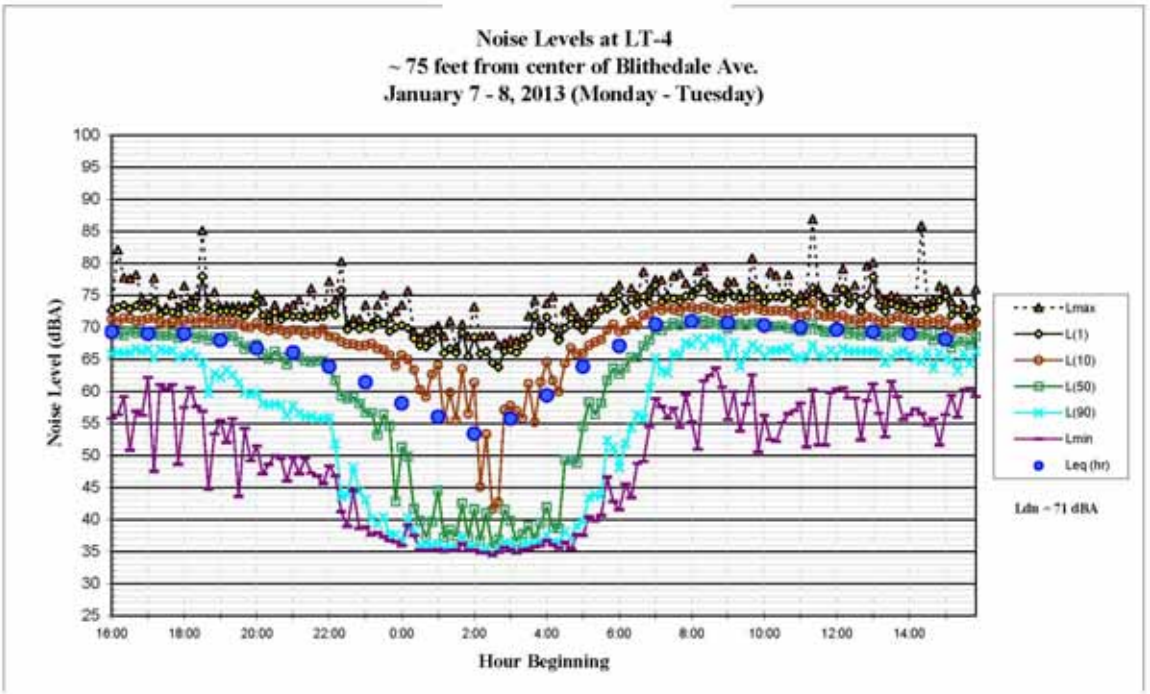




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Exhibit 3.9-3
Noise Measurement Graph - LT-3 and LT-4

The highest construction noise levels are normally generated during grading and excavation, with lower noise levels occurring during building construction. Large pieces of earth-moving equipment, such as graders, scrapers, and bulldozers, generate maximum noise levels of 85 to 90 dBA at a distance of 50 feet. Typical hourly average construction-generated noise levels are about 80 to 85 dBA measured at a distance of 50 feet from the site during busy construction periods. Some construction techniques, such as impact pile driving, can generate very high levels of noise (105 dBA $L_{max}$ at 50 feet) that are difficult to control. Construction activities can elevate noise levels at adjacent businesses and residences by 15 to 20 dBA or more.

## Groundborne Vibration

Groundborne vibration consists of rapidly fluctuating motions within the ground that have an average motion of zero. The effects of groundborne vibration typically cause a nuisance only to people, but at extreme vibration levels, damage to buildings may occur. Although groundborne vibration can be felt outdoors, it is typically an annoyance only indoors, where the associated effects of the shaking of a building can be notable. Groundborne noise is an effect of groundborne vibration and typically only exists indoors. It is produced from noise radiated from the motion of the walls and floors of a room and may consist of the rattling of windows or dishes on shelves.

Peak particle velocity (PPV) relates to the maximum instantaneous peak of the vibration signal and is often used in measuring the magnitude of vibration. Scientific studies have shown that human responses to vibration vary by the source of vibration: continuous or transient. Continuous sources of vibration include construction, while transient sources include truck movements. Generally, the thresholds of perception and annoyance are higher for transient sources than continuous sources. Table 3.9-4 shows PPV levels for continuous and transient sources and the associated human response.

**Table 3.9-4: Response to Groundborne Vibration**

| Peak Particle Velocity (inches/second) | | Human Response |
|---|---|---|
| Continuous | Transient | |
| 0.40 | 2.00 | Severe |
| 0.10 | 0.90 | Strongly perceptible |
| 0.04 | 0.25 | Distinctly perceptible |
| 0.01 | 0.04 | Barely perceptible |
| Source: California Department of Transportation, 2004. | | |

### *Existing Vibration Sources*

*Transportation-Related Vibration Sources*

There are no fixed railroad lines that pass through Mill Valley. Transportation-related ground vibration would only occur in Mill Valley from heavy truck pass-bys on US 101 and occasionally on major local roadways. The resulting vibration levels at the nearest receivers are normally below the threshold of perception.

*Temporary Vibration Sources*
Construction activities such as demolition, site preparation work, excavation, and foundation work can generate ground-borne vibration at land uses adjoining construction sites. Impact pile driving has the potential to generate the highest ground vibration levels and is of primary concern to structural damage. Other project construction activities, such as caisson drilling, the use of jackhammers, rock drills and other high-power or vibratory tools, and rolling stock equipment (tracked vehicles, compactors, etc.) can generate substantial vibration levels in the immediate vicinity.

## 3.9.3 - Regulatory Framework

### State

#### *Office of Noise Control Standards*
The California Office of Noise Control has set the land use compatibility noise standards and has encouraged local jurisdictions to adopt them. Pursuant to the land use compatibility noise standards, for commercial and industrial uses, noise levels up to 65 dBA CNEL are "normally acceptable;" noise levels between 65 and 75 dBA CNEL are "conditionally acceptable," which means that noise levels are acceptable only when a detailed noise analysis is conducted, and needed noise-insulation features are included in the design. Conventional construction with closed windows and a fresh-air supply system or air conditioning will normally suffice as "acceptable noise insulation" features. Noise levels between 70 and 80 dBA CNEL are generally unacceptable, and development of land uses in noise environments that exceed 75 dBA CNEL are discouraged. For residential development and schools, exterior noise levels ranging up to 60 dBA CNEL are classified as "normally acceptable," based upon the assumption that the homes are built with normal, conventional construction. Noise levels ranging from 55 to 70 dBA CNEL are conditionally acceptable. Noise levels in the 70- to 75-dBA CNEL range are classified as "generally unacceptable," and new construction or development is discouraged but may proceed if a detailed noise analysis is conducted, and needed noise-insulation features are included in the design.

#### *Caltrans Vibration Guidance*
Construction vibration is regulated in accordance with standards established by the Transportation and Construction-Induced Vibration Guidance Manual, issued by the California Department of Transportation (Caltrans). Table 3.9-5 presents these standards. Transient sources create a single, isolated vibration event, such as blasting or drop-ball impacts. Continuous/frequent intermittent sources include multiple impacts from pile drivers, the use of vibratory compaction equipment, and other construction equipment that creates vibration other than in single events.

**Table 3.9-5: Groundborne Vibration Exposure Standards**

| Structure and Condition | Maximum Peak Particle Velocity (inches/second) | |
|---|---|---|
| | Transient Sources | Continuous/Frequent Intermittent Sources |
| Extremely fragile historic building, ruins, ancient monuments | 0.12 | 0.08 |

**Table 3.9-5 (cont.): Groundborne Vibration Exposure Standards**

| Structure and Condition | Maximum Peak Particle Velocity (inches/second) | |
|---|---|---|
| | Transient Sources | Continuous/Frequent Intermittent Sources |
| Fragile buildings | 0.20 | 0.10 |
| Historic and older residential structures with plaster walls and ceilings | 0.50 | 0.25 |
| New residential structures with gypsum board walls and ceilings | 1.00 | 0.50 |
| Modern commercial and industrial buildings | 2.00 | 0.50 |
| Source: California Department of Transportation, 2004. | | |

## Local

### *City of Mill Valley*

*2040 General Plan*

The proposed 2040 General Plan establishes the following goal and policies relevant to noise:

- **Goal N.1:** Maintain a Quiet Community.
- **Policy N-1:** Interior noise levels shall not exceed 45 Ldn in all new residential units (single- and multi-family). Residential development sites exposed to noise levels exceeding 60 Ldn shall be analyzed following protocols in the most recent adopted version of the California Building Code.
- **Policy N-2:** Reduce Noise From Traffic.
- **Policy N-3:** Maintain the Current Quality of the Acoustical Environment.
- **Policy N-4:** Manage noise from construction.

Exhibit 3.9-4 provides the City of Mill Valley 2040 General Plan land use compatibility matrix.

In addition, the 2040 General Plan contains the follow statement about construction noise:

> Noise from construction activities, and particularly construction activities associated with the construction of new residences, remodeling or demolition and reconstruction of residential properties, has an adverse effect on the peace and quiet in the City of Mill Valley. The term “construction” covers a large range of projects ranging from new construction or the demolition and construction of a large residence to someone repairing a deck on a Saturday afternoon.
>
> The primary method for addressing construction noise management methods is through standards that limit work to specified times and provide guidance on equipment use and maintenance. The following is a representative list of standard controls:

a) Limit construction to the hours of 8:00 a.m. to 5:00 p.m. on weekdays, and 9:00 a.m. to 5:00 p.m. on Saturdays, with no noise-generating construction on Sundays or holidays.

b) Control noise from construction workers' radios to the point where they are not audible at existing residences that border the Project site.

c) Equip all internal combustion engine-driven equipment with mufflers which are in good condition and appropriate for the equipment.

d) Utilize quiet models of air compressors and other stationary noise sources where technology exists.

e) Locate stationary noise-generating equipment as far as possible from sensitive receptors when sensitive receptors adjoin or are near a construction project area.

f) Prohibit unnecessary idling of internal combustion engines.

g) Notify residents adjacent to the Project site of the construction schedule in writing.

h) Designate a noise disturbance coordinator who would be responsible for responding to any local complaints about construction noise. The disturbance coordinator would determine the cause of the noise complaints (e.g., starting too early, bad muffler, etc.) and institute reasonable measures warranted to correct the problem. Conspicuously post a telephone number for the disturbance coordinator at the construction site.

## 3.9.4 - Methodology

FirstCarbon Solutions evaluated potential impacts on noise through review of the existing 1989 General Plan and proposed 2040 General Plan, as well as the noise analysis performed by Illingworth & Rodkin.

## 3.9.5 - Thresholds of Significance

According to Appendix G, Environmental Checklist, of the CEQA Guidelines, noise impacts resulting from the implementation of the proposed project would be considered significant if the project would cause:

a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

| Land Use Category | Exterior Noise Exposure ($L_{dn}$) 55 60 65 70 75 80 |
|---|---|
| Single-Family Residential | |
| Multi-Family Residential, Hotels, and Motels | (a) |
| Outdoor Sports and Recreation, Neighborhood Parks and Playgrounds | |
| Schools, Libraries, Museums, Hospitals, Personal Care, Meeting Halls, Churches | |
| Office Buildings, Business Commercial, and Professional | |
| Auditoriums, Concert Halls, Amphitheaters | |

(a) See Policy 4

**NORMALLY ACCEPTABLE**
Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special insulation requirements.

**CONDITIONALLY ACCEPTABLE**
Specified land use may be permitted only after detailed analysis of the noise reduction requirements and needed noise insulation features included in the design.

**UNACCEPTABLE**
New construction or development should generally not be undertaken because mitigation is usually not feasible to comply with noise element policies.

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Exhibit 3.9-4
Land Use Compatibility
For Transportation Noise

d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels? (Refer to Section 7, Effects Found Not To Be Significant.)

## 3.9.6 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the development of the project and provides mitigation measures where appropriate.

### Exposure of Persons to Excessive Noise

| | |
|---|---|
| **Impact NOI-1:** | **Implementation of the City of Mill Valley 2040 General Plan may expose persons to noise levels in excess of adopted standards for residential uses along major roadways.** |

***Impact Analysis***

The City has established noise standards for residential and non-residential land uses in the General Plan Noise Element and Municipal Code. These standards apply to noise-sensitive land uses within the existing noise environment and to noise created by future development.

For the proposed General Plan 2040, the significance of anticipated noise effects is based on a comparison between predicted noise levels and noise criteria defined by the City of Mill Valley. Noise impacts are considered significant if existing or proposed noise-sensitive land uses would be exposed to noise levels in excess of the 2040 General Plan Noise Element and Municipal Code standards.

*Short-Term Construction Impacts*

Development and land use activities contemplated by the 2040 General Plan would involve construction activities at various periods of time over the planning horizon of the plan. Construction equipment can generate intermittent noise ranging from 70 dB to 105 dB and may result in a significant impact where noise-sensitive land uses adjoin construction sites.

The 2040 General Plan calls for the following noise abatement measures to be implemented to minimize the adverse effects of construction noise:

- Limit construction to the hours of 8:00 a.m. to 5:00 p.m. on weekdays, and 9:00 a.m. to 5:00 p.m. on Saturdays, with no noise-generating construction on Sundays or holidays.
- Control noise from construction workers' radios to the point where they are not audible at existing residences that border the project site.

- Equip all internal combustion engine-driven equipment with mufflers which are in good condition and appropriate for the equipment.
- Utilize quiet models of air compressors and other stationary noise sources where technology exists.
- Locate stationary noise-generating equipment as far as possible from sensitive receptors when sensitive receptors adjoin or are near a construction project area.
- Prohibit unnecessary idling of internal combustion engines.
- Notify residents adjacent to the Project site of the construction schedule in writing.
- Designate a noise disturbance coordinator who would be responsible for responding to any local complaints about construction noise. The disturbance coordinator would determine the cause of the noise complaints (e.g., starting too early, bad muffler, etc.) and institute reasonable measures warranted to correct the problem. Conspicuously post a telephone number for the disturbance coordinator at the construction site.

Because construction noise is temporary and applicants would be required to implement the noise abatement measures listed above, construction noise would not expose persons to noise levels in excess of adopted standards.

*Long-Term Roadway Noise Impacts*

Roadway noise is the primary source of ambient noise in a suburban community such as Mill Valley. Illingworth & Rodkin used SoundPlan Version 7.0, a three-dimensional ray-tracing computer program, to calculate traffic noise levels along major roadways throughout Mill Valley. The noise map prepared from existing conditions is shown on Exhibit 3.9-5, and the noise map prepared from year 2035 conditions is shown on Exhibit 3.9-6. Calculations took into account the source of noise, the frequency spectra of the noise source, and the topography of the area. The geometric data used to create the model were based on GIS information provided by Wallace Roberts & Todd, LLC. Existing and year 2035 average daily trip (ADT) data and travel speeds were also input into the model. For US 101, traffic volumes and truck mix data input into the model was based on information published by Caltrans. The predicted noise levels were then compared to measured noise levels for calibration purposes and adjustments were made as necessary to create an accurate model. Table 3.9-6 presents existing and year 2035 day-night ($L_{dn}$) average noise levels calculated at a reference distance of 75 feet from the center of the near travel lane for roadways in Mill Valley.

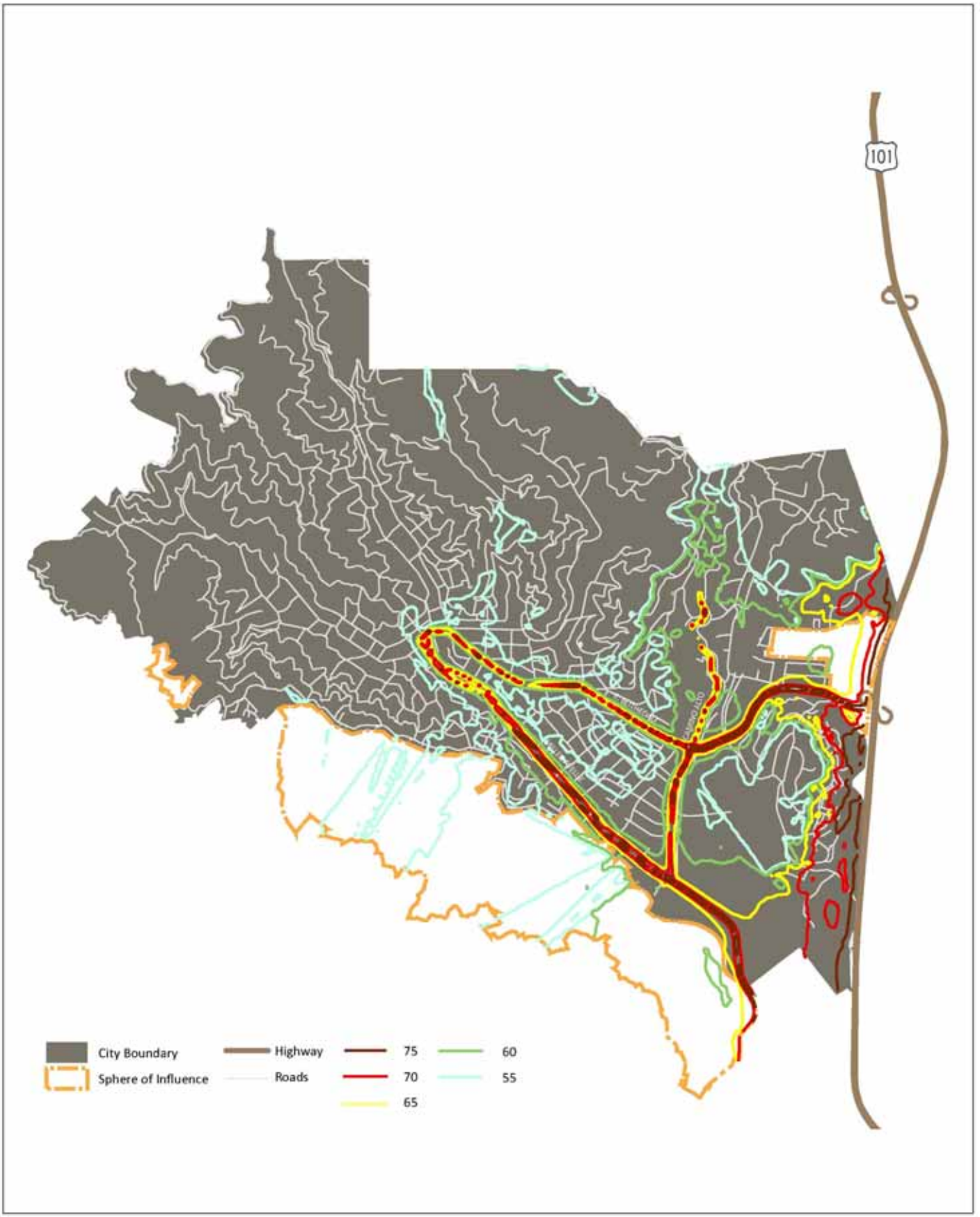


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Exhibit 3.9-5
Existing Noise Contours

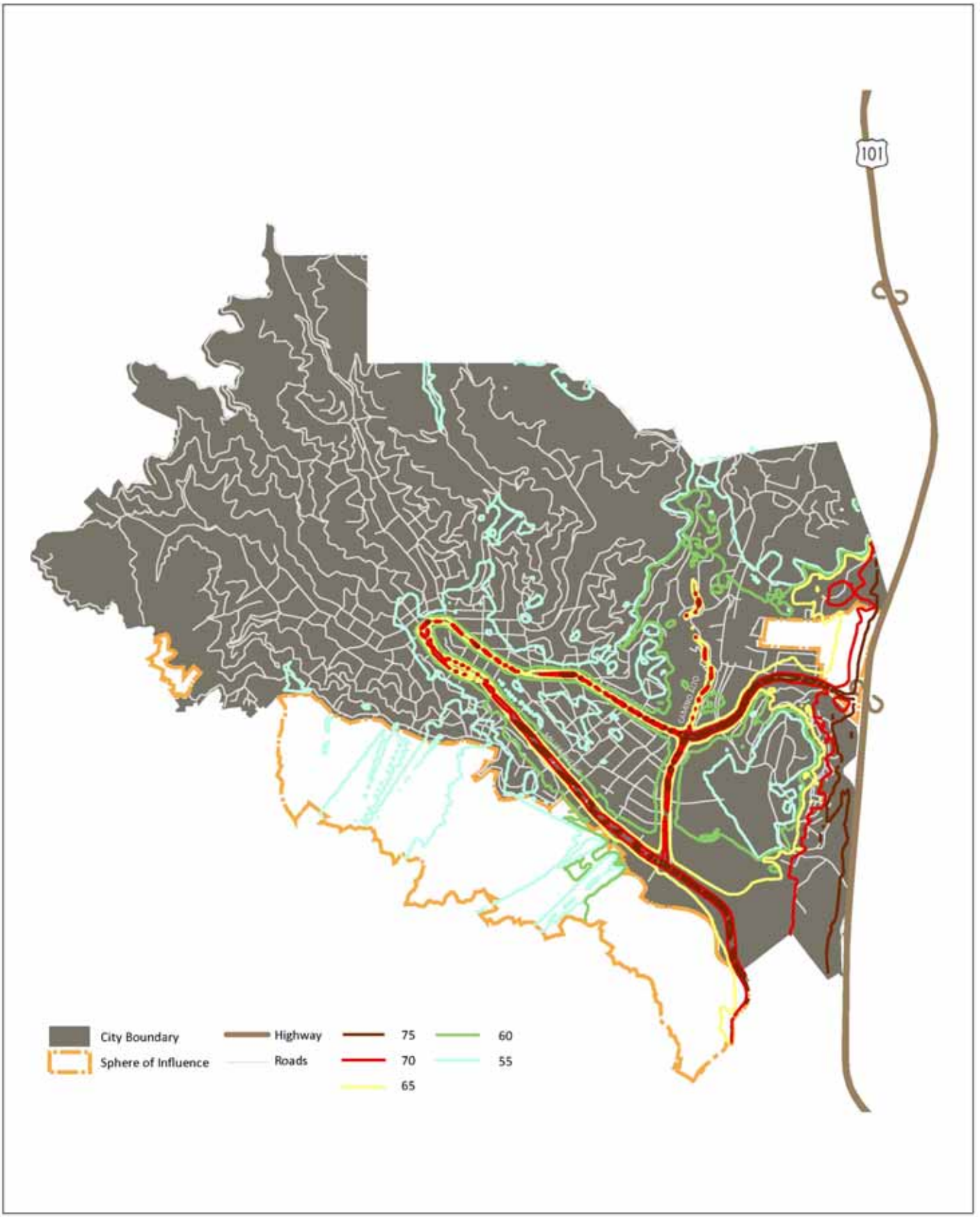


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Exhibit 3.9-6
2035 Noise Contours

## Table 3.9-6: Existing and Future Modeled Roadway Noise Levels

| Roadway Segment | Adjoining Land Use(s) | $L_{dn}$ @ 75 feet from Centerline (dBA) | |
|---|---|---|---|
| | | Existing | 2035 |
| US 101 – North of E. Blithedale Avenue | Single-Family Residential | 79 | 79 |
| US 101 – South of E. Blithedale Avenue | Single-Family Residential | 78 | 79 |
| E. Blithedale Avenue – US 101 to Camino Alto | Commercial, Single-Family Residential | 70 | 70 |
| E. Blithedale Avenue – Downtown | Commercial, Single-Family Residential, Multi-Family Residential | 60 | 61 |
| E. Blithedale Avenue – East of US 101 | Commercial | 69 | 69 |
| E. Blithedale Avenue – West of Camino Alto | Single-Family Residential | 64 | 64 |
| Camino Alto – North of E. Blithedale Avenue | Commercial | 63 | 64 |
| Camino Alto – South of E. Blithedale Avenue | Commercial, Single-Family Residential | 65 | 66 |
| Miller Avenue – Downtown | Commercial, Single-Family Residential, Multi-Family Residential | 61 | 61 |
| Miller Avenue – East of Camino Alto | Multi-Family Residential, School | 68 | 69 |
| Miller Avenue – West of Camino Alto | Commercial | 65 | 65 |
| Source: Illingworth & Rodkin, 2013. | | | |

As shown in Exhibit 3.9-4, the upper limit for "normally acceptable" exterior noise levels at single-family residential uses is 60 dBA $L_{dn}$ and the upper limit for "conditionally acceptable" exterior noise levels are 75 dBA $L_{dn}$. As shown in Table 3.9-6, roadway noise contours from every city street listed in the table is currently at or exceeds 60 dBA $L_{dn}$, although all but the US 101 segments are below 75 dBA $L_{dn}$. (Note that sound walls or earthen berms exist along US 101 in Mill Valley; therefore, adjoining receptors experience lower noise levels than reported in Table 3.9-6).

The noise values in Table 3.9-6 are a function of the high traffic volumes experienced along roadways such as E. Blithedale Avenue (36,000 daily trips), Camino Alto (22,300 daily trips), and Miller Avenue (26,000 daily trips) under existing conditions. Because of the land use and circulation patterns within Mill Valley, there is no feasible way to lower traffic volumes on these roadways such that "normally acceptable" exterior noise level standard of 60 dBA $L_{dn}$ can be achieved.

In recognition of this, 2040 General Plan Policy N-1 establishes that residential development sites exposed to noise levels exceeding 60 $L_{dn}$ shall be analyzed following protocols in the most recent adopted version of the California Building Code. Policy N-1 also establishes an interior noise limit of

45 $L_{dn}$, which provides an unequivocal performance standard that must be met by all new residential projects. This latter requirement reflects that building materials and techniques (concrete, insulation, sound-rated door and window assemblies, etc.) can yield noise attenuation rates of 25 dB or more between exterior and interior noise levels and thus provides a very effective method of reducing noise in environments with high ambient noise levels.

In summary, single-family residential land uses along major roadways within Mill Valley are currently exposed to exterior noise levels in excess of the "normally acceptable" exterior noise level standard of 60 dBA $L_{dn}$. The 2040 General Plan acknowledges this condition and sets forth a policy requiring that new residential development within these areas employ noise attenuating measures to achieve an interior noise standard of no more than 45 $L_{dn}$, which is the most effective means of minimizing sensitive receptor exposure to excessive noise. However, there is no feasible mitigation to reduce exterior noise levels at new residential development sites to "normally acceptable" levels; therefore, the residual significance of this impact is significant and unavoidable.

### *Level of Significance Before Mitigation*
Potentially significant impact.

### *Mitigation Measures*
No feasible mitigation is available.

### *Level of Significance After Mitigation*
Significant unavoidable impact.

## Vibration

| | |
|---|---|
| **Impact NOI-2:** | **Implementation of the City of Mill Valley 2040 General Plan would not expose persons to excessive vibration levels.** |

### *Impact Analysis*
Groundborne vibrations consist of rapidly fluctuating motions within the ground that have an average motion of zero. The effects of groundborne vibrations typically only cause a nuisance to people, but at extreme vibration levels, damage to buildings may occur. Construction activities and the operation of heavy trucks and buses can produce vibration that may be felt by adjacent uses.

Construction equipment such as pile drivers are known to generate substantial vibration levels that if used in the vicinity of sensitive land uses may expose persons to excessive vibration levels as well as have the potential to damage buildings. Other construction equipment such as bulldozers and vibratory rollers do not create the vibration levels of pile drivers; however, these types of equipment are more likely to operate continuously and closer to sensitive receptors, and they may expose persons to noticeable vibration levels. Many of the construction noise abatement measures discussed in Impact NOI-1 and Impact NOI-4 would serve to avoid or minimize vibration impacts. Examples include the limits on the hours of construction activities, locating stationary equipment as far as possible from nearby receptors, and designating a noise disturbance coordinator who can respond to complaints. As with construction noise, vibration would be temporary and cease upon

the completion of the project. This would limit the potential for sustained exposure that could cause significant damage to older buildings.

The operation of heavy trucks and buses within the City can generate ground vibration, which varies considerably depending on vehicle type, weight, pavement conditions, and soil conditions. Groundborne vibration levels generated from vehicular traffic are not typically perceptible outside of the right-of-way of public roadways. However, there is a potential for vibration impacts to occur when heavy trucks are operating on private loading areas that are located adjacent to sensitive land uses. The proposed 2040 General Plan maintains the existing land use patterns and circulation routes within in Mill Valley. To the extent that heavy trucks and buses may cause noticeable vibration at nearby receptors, this is an existing condition that would remain unchanged.

For these reasons, development and land use activities contemplated by the City of Mill Valley 2040 General Plan would not expose persons to excessive vibration levels. Impacts would be less than significant.

### *Level of Significance Before Mitigation*
Less than significant impact.

### *Mitigation Measures*
No mitigation is necessary.

### *Level of Significance After Mitigation*
Less than significant impact.

## Permanent Increase in Ambient Noise Levels

| | |
|---|---|
| **Impact NOI-3:** | **Implementation of the City of Mill Valley 2040 General Plan may expose persons to a permanent increase in ambient noise levels for residential uses along major roadways.** |

### *Impact Analysis*
As discussed in Impact NOI-1, the upper limit for "normally acceptable" exterior noise levels at single-family residential uses is 60 dBA $L_{dn}$ and the upper limit for "conditionally acceptable" exterior noise levels are 75 dBA $L_{dn}$. As shown in Table 3.9-6, roadway noise contours from every city street listed in the table is currently at or exceeds 60 dBA $L_{dn}$, although all but the US 101 segments are below 75 dBA $L_{dn}$. (Note that sound walls or earthen berms exist along US 101 in Mill Valley and, therefore, adjoining receptors experience lower noise levels than reported in Table 3.9-6).

The noise values in Table 3.9-6 are a function of the high traffic volumes experienced along roadways such as E. Blithedale Avenue (36,000 daily trips), Camino Alto (22,300 daily trips), and Miller Avenue (26,000 daily trips) under existing conditions. Because of the land use and circulation patterns within Mill Valley, there is no feasible way to lower traffic volumes on these roadways such that "normally acceptable" exterior noise level standard of 60 dBA $L_{dn}$ can be achieved.

In recognition of this, 2040 General Plan Policy N-1 establishes that residential development sites exposed to noise levels exceeding 60 $L_{dn}$ shall be analyzed following protocols in the most recent

adopted version of the California Building Code. Policy N-1 also establishes an interior noise limit of 45 $L_{dn}$, which provides an unequivocal performance standard that must be met by all new residential projects. This latter requirement reflects that building materials and techniques (concrete, insulation, sound-rated door and window assemblies, etc.) can yield noise attenuation rates of 25 dB or more between exterior and interior noise levels and thus provides a very effective method of reducing noise in environments with high ambient noise levels.

In summary, single-family residential land uses along major roadways within Mill Valley are currently exposed to exterior noise levels in excess of the "normally acceptable" exterior noise level standard of 60 dBA $L_{dn}$. The 2040 General Plan acknowledges this condition and sets forth a policy requiring that new residential development within these areas employ noise attenuating measures to achieve an interior noise standard of no more than 45 $L_{dn}$, which is the most effective means of minimizing sensitive receptor exposure to excessive noise. However, there is no feasible mitigation to reduce exterior noise levels at new residential development sites to "normally acceptable" levels; therefore, the residual significance of this impact is significant and unavoidable.

### *Level of Significance Before Mitigation*
Potentially significant impact.

### *Mitigation Measures*
No feasible mitigation is available.

### *Level of Significance After Mitigation*
Significant unavoidable impact.

## Temporary Increase in Ambient Noise Levels

| | |
|---|---|
| **Impact NOI-4:** | **Implementation of the City of Mill Valley 2040 General Plan would not expose persons to temporary increases in ambient noise levels.** |

### *Impact Analysis*
As discussed in Impact NOI-1, development and land use activities contemplated by the 2040 General Plan would involve construction activities at various periods of time over the planning horizon of the plan. Construction equipment can generate intermittent noise ranging from 70 dB to 105 dB and may result in a significant impact where noise-sensitive land uses adjoin construction sites.

The 2040 General Plan calls for the following noise abatement measures to be implemented to minimize the adverse effects of construction noise:

- Limit construction to the hours of 8:00 a.m. to 5:00 p.m. on weekdays, and 9:00 a.m. to 5:00 p.m. on Saturdays, with no noise-generating construction on Sundays or holidays.
- Control noise from construction workers' radios to the point where they are not audible at existing residences that border the Project site.

- Equip all internal combustion engine-driven equipment with mufflers which are in good condition and appropriate for the equipment.
- Utilize quiet models of air compressors and other stationary noise sources where technology exists.
- Locate stationary noise-generating equipment as far as possible from sensitive receptors when sensitive receptors adjoin or are near a construction project area.
- Prohibit unnecessary idling of internal combustion engines.
- Notify residents adjacent to the Project site of the construction schedule in writing.
- Designate a noise disturbance coordinator who would be responsible for responding to any local complaints about construction noise. The disturbance coordinator would determine the cause of the noise complaints (e.g., starting too early, bad muffler, etc.) and institute reasonable measures warranted to correct the problem. Conspicuously post a telephone number for the disturbance coordinator at the construction site.

Because construction noise is temporary and applicants would be required to implement the noise abatement measures listed above, construction noise would not expose persons to temporary increases in ambient noise levels.

***Level of Significance Before Mitigation***
Less than significant impact.

***Mitigation Measures***
No mitigation is necessary.

***Level of Significance After Mitigation***
Less than significant impact.

# 3.10 - Public Services, Recreation, and Utilities

## 3.10.1 - Introduction

This section describes the existing public services, recreation, and utilities setting and potential effects from the City of Mill Valley 2040 General Plan implementation on the Planning Area and surroundings.

## 3.10.2 - Environmental Setting

### Fire Protection and Emergency Medical Services

#### *Mill Valley Fire Department*

The Mill Valley Fire Department provides fire protection to the City of Mill Valley.

Mill Valley Fire Department members are specialized in a wide range of skills in addition to firefighting and emergency medicine. Most members have additional expertise in such skills as fire investigations, high-angle cliff rescue, Neighborhood Emergency Response Teams, CPR, and first aid instruction, to name a few. The main concern remains the threat of a major wild fire in Mill Valley. Heavily wooded canyons and the steep terrain create a dangerous combination in the event of a wildfire.

*Fire Stations*

The Fire Department operates two stations, which are summarized in Table 3.10-1.

**Table 3.10-1: Fire Station Summary**

| Station No. | Address | Apparatus |
|---|---|---|
| 6<br>(City Hall) | 26 Corte Madera Avenue | Type 1 Engine (2) |
| 7<br>(Public Safety Building) | 1 Hamilton Avenue | Type 1 Engine; Type 3 Engine |
| Source: City of Mill Valley, 2013. | | |

*Staffing*

The two stations are manned with 7 firefighters on duty and 24 line personnel. All firefighters and line personnel are trained in firefighting and emergency medicine, and some possess additional expertise in such skills as fire investigations, high-angle cliff rescue, Neighborhood Emergency Response Teams, Cardio Pulmonary Resuscitation (CPR), and first aid instruction.

*ISO Rating*

Insurance Services Office (ISO) is an independent organization that serves insurance companies, fire departments, insurance regulators and others by providing information about risk. ISO collects information about municipal fire protection efforts and assigns a rating on a 1 to 10 scale. Class 1

represents exemplary fire protection and a Class 10 indicates the fire suppression program does not meet minimum criteria. The Mill Valley Fire Department is rated Class 3.

*Mutual Aid Agreements*
The Mill Valley Fire Department participates with other local and state fire agencies to respond to fires that occur within Mount Tamalpais Mutual Threat Zone. The Fire Department, along with other nearby local Fire Departments and Fire Districts, are assigned Local Responsibility Areas, while the Marin County Fire Department—a Contract County for Cal Fire—is responsible for the State Response Area. Incident Commanders have the ability to draw upon local and state resources to respond to fires that occur within the Mount Tamalpais Mutual Threat Zone.

### *Southern Marin Emergency Medical Paramedic System*

The Southern Marin Emergency Medical Paramedic System (SEMPS) provides emergency medical services to Mill Valley, Sausalito, Belvedere, Tiburon, and nearby portions of unincorporated Marin County. SEMPS is a joint-powers agency comprising the City of Mill Valley; the City of Tiburon; the City of Belvedere; the Southern Marin Fire District, Sausalito; and the County of Marin, and is headquartered at 679 Tiburon Boulevard, Tiburon.

Mill Valley Fire Department operates an advanced life support ambulance (Medic 6) that is staffed with a firefighter and a firefighter paramedic available on a 24-hour basis. Each participating agency in SEMPS is responsible for providing an element of emergency medical service to fulfill the needs of emergency patients.

## Police Protection

The Mill Valley Police Department provides police protection to Mill Valley. The Police Department is headquartered in the Public Safety Building at 1 Hamilton Drive.

### *Staffing*

The Police Department is staffed by 22 sworn positions, including one chief, two lieutenants, four patrol sergeants, one detective sergeant, two detectives, four corporals, and eight patrol officers (including two motorcycle officers). Non-sworn personnel include two parking enforcement officers, one community service officer, three administrative clerks, and one volunteer.

## Schools

Two school districts serve Mill Valley: Mill Valley Elementary School District and Tamalpais Union High School District. Each is described separately.

### *Mill Valley Elementary School District*

The Mill Valley Elementary School District provides K–8 education to Mill Valley and the surrounding unincorporated areas including Homestead, Tam Valley, Almonte, and Strawberry (Table 3.10-2). During Academic Year 2011–2012, the Elementary School District's enrollment was 2,968.

**Table 3.10-2: Mill Valley School District Summary (2011–2012)**

| School | Grade Levels | Enrollment | Average Class Size | Full Time Equivalent Teachers |
|---|---|---|---|---|
| Edna Maguire Elementary | K–5 | 470 | 23.5 | 24.4 |
| Old Mill Elementary | K–5 | 320 | 24.6 | 15.1 |
| Park Elementary | K–5 | 382 | 23.8 | 18.8 |
| Strawberry Point Elementary | K–5 | 410 | 22.6 | 21.7 |
| Tamalpais Valley Elementary | K–5 | 514 | 23.6 | 26.5 |
| Mill Valley Middle | 6–8 | 868 | 25.0 | 45.5 |
| Source: Ed-Data, 2013. | | | | |

*Facilities Modernization*
The Mill Valley Elementary School District is undertaking a facilities modernization program funded by a $59.8 million bond approved by voters in 2009. The bond proceeds are being applied to capital improvements intended to increase enrollment capacity, enhance safety, upgrade building systems, and improve disabled accessibility.

As part of this effort, Edna Maguire Elementary is being completely rebuilt and expanded to accommodate 600 students. Improvements have been completed to Old Mill Elementary, Park Elementary, Strawberry Point Elementary, and Tamalpais Valley Elementary.

### *Tamalpais Union High School District*
Tamalpais Union High School District provides 9–12 education to Mill Valley, Larkspur, San Anselmo, and surrounding unincorporated areas including Homestead, Tam Valley, Almonte, and Strawberry. During Academic Year 2011–2012, the High School District's enrollment was 3,839.

The High School District operates three comprehensive high schools (Tamalpais, Redwood, and Sir Francis Drake) and two continuation high schools (San Andreas and Tamiscal). Tamalpais High School serves Mill Valley and is summarized in Table 3.10-3.

**Table 3.10-3: Tamalpais High School Summary (2011–2012)**

| School | Grade Levels | Enrollment | Average Class Size | Full Time Equivalent Teachers |
|---|---|---|---|---|
| Tamalpais High | 9–12 | 1,231 | 20.6 | 70.7 |
| Source: Ed-Data, 2013. | | | | |

*Facilities Modernization*
The Tamalpais Union High School District is undertaking a facilities modernization program funded by two voter-approved bonds: a $121.0 million bond in 2001 and a $79.2 million bond in 2006. The bond proceeds are being applied to capital improvements intended to increase enrollment capacity, enhance safety, upgrade building systems, and improve disabled accessibility.

## Parks and Recreation

The City of Mill Valley, the County of Marin, the State of California, and the National Park Service own and maintain park and recreational facilities within and adjacent to Mill Valley. Each agency's facilities are discussed separately.

### *City of Mill Valley*

The City of Mill Valley owns and maintains 11 park and recreational facilities that are summarized in Table 3.10-4.

**Table 3.10-4: Parks and Recreational Facilities Summary**

| Name | Characteristics |
|---|---|
| Bayfront Park | Soccer field, large grassy area, hiking/running trail, picnic tables |
| Blithedale Park | Hiking trail, creek access |
| Ernest Bloch Memorial Park | Historical marker |
| Boyle Park | Tennis courts, baseball diamond, large grassy area, playground, creek access, barbeque grill and picnic tables |
| Cascade Park | Hiking trail, creek access |
| Community Garden | 35 garden plots |
| Community Center | Building 1: Large reception hall; teen and senior centers, meeting spaces, and activity rooms<br>Building 2: Indoor swimming pool with retractable roof, a 120-foot spiral waterslide, jacuzzi spa, outdoor patio |
| Dog Run | Large grassy area, picnic tables |
| Freeman Park | Basketball court (half), large grassy area, playground, barbeque grill and picnic tables |
| Friends Field | Baseball diamond, soccer field, large grassy area |
| Mill Valley Golf Course | 9-hole golf course |
| Source: City of Mill Valley, 2013 | |

### *County of Marin*

The County of Marin owns and maintains several open space preserves and a trail within and adjacent to Mill Valley.

*Bothin Marsh Preserve*

Bothin Marsh Preserve encompasses 106 acres on the eastside of US 101 along Richardson Bay. Bothin Marsh provides trails for hiking and biking.

*Baltimore Canyon, Blithedale Summit, Camino Alto, and King Mountain Preserves*

Baltimore Canyon (193 acres), Blithedale Summit (899 acres), Camino Alto (170 acres), and King Mountain Preserves (108 acres) are four contiguous open space preserves along the northern

ridgeline of Mill Valley. Collectively, the four preserves total 1,370 acres. A network of fire roads and trails links the four preserves to each other as well as to Mount Tamalpais State Park and city streets in Mill Valley and Corte Madera.

*Horse Hill Open Space Preserve*
Horse Hill is an 87-acre preserve located adjacent to Lomita Drive and US 101 in the northeastern corner of Mill Valley. The preserve features a trail connection between Lomita Drive and the Alto Bowl Open Space preserve in Corte Madera.

*Mill Valley-Sausalito Path*
The Mill Valley-Sausalito Path extends 3.5 miles along a former railroad right-of-way between the Scott Valley Swimming and Tennis Club in Mill Valley and Gate 5 Road in Sausalito. The Class I paved trail is part of the San Francisco Bay Trail network and provides access to Bayfront Park and Bothin Marsh.

### *State of California*
*Mount Tamalpais State Park*
Mount Tamalpais State Park encompasses approximately 6,300 acres adjacent to the western boundary of the City of Mill Valley. The park contains more than 50 miles of trails, three campgrounds, and a mountain theatre.

### *National Park Service*
*Muir Woods National Monument*
Muir Woods National Monument encompasses 554 acres and is wholly surrounded by Mount Tamalpais State Park. The park features 6 miles of trails, including 1.5 miles of boarded trails.

## Potable Water

Marin Municipal Water District (MMWD) provides potable water service to a 147-square-mile service area consisting of central and southern Marin County, including the City of Mill Valley. MMWD serves approximately 190,000 customers and approximately 61,000 active service connections.

### *Distribution System and Treatment Plants*
MMWD's potable water distribution system includes approximately 941 miles of water mains, 90 pump stations, and 124 treated water storage tanks with a combined storage capacity of 82 million gallons.

MMWD operates three water treatment plants. The three treatment plants have a combined maximum daily treatment capacity 59 million gallons per day and an average daily treatment capacity of 25 million gallons per day.

### *Water Supply*
MMWD obtains its water from two sources: local reservoirs and Sonoma County Water Agency (SCWA). Each source is discussed separately.

*Local Reservoirs*
MMWD obtains 75 percent of its water supply from seven local reservoirs that are tributary to 21,000 acres of protected watershed on Mt. Tamalpais and in the hills of west Marin. Table 3.10-5 summarizes the seven reservoirs.

**Table 3.10-5: Marin Municipal Water District Reservoir Summary**

| Reservoir | Capacity (Acre-Feet) | Percent of Total Capacity | Year Built |
|---|---|---|---|
| Lagunitas | 350 | 0.4 | 1872 |
| Phoenix | 411 | 0.5 | 1905 |
| Alpine | 8,891 | 11.2 | 1918 |
| Bon Tempe | 4,017 | 5.1 | 1948 |
| Kent | 32,895 | 41.3 | 1953 |
| Nicasio | 22,430 | 28.2 | 1960 |
| Soulajule | 10,572 | 13.3 | 1979 |
| **Total** | **79,566** | **100.0** | **—** |
| Source: Marin Municipal Water District, 2013. | | | |

*Sonoma County Water Agency*
MMWD obtains the remaining 25 percent of its water supply from SCWA as part of a contractual arrangement that dates to the 1970s. MMWD voters approved a bond measure in 1992 to increase incrementally the quantity of water obtained from SCWA.

SCWA's imported water originates at Lake Mendocino in Mendocino County and flows 55 miles down the Russian River to the Wohler Pump Station. Along the way, the flow is augmented by releases from Warm Springs Dam. At the Wohler Pump Station, located 8 miles northwest of Santa Rosa, water is removed from the river using a belowground collection and filtration system. The water is disinfected and transported to customers in Sonoma and Marin Counties via pipeline.

### *Water Use*
Table 3.10-6 summarizes observed and project water use between 2005 and 2035. As shown in the table, MMWD forecasts a decrease in future unaccounted-for water from its leak detection and repair program.

**Table 3.10-6: Total Water Use (2005–2035)**

| Category | Year (Acre-Feet) | | | | | | |
|---|---|---|---|---|---|---|---|
| | 2005 | 2010 | 2015 | 2020 | 2025 | 2030 | 2035 |
| Total Water Deliveries | 24,763 | 22,471 | 24,971 | 24,401 | 24,034 | 24,406 | 24,486 |
| Additional Water Uses and Losses | 4,757 | 3,510 | 3,697 | 3,911 | 3,897 | 3,849 | 3,895 |

**Table 3.10-6 (cont.): Total Water Use (2005–2035)**

| Category | Year (Acre-Feet) | | | | | | |
|---|---|---|---|---|---|---|---|
| | 2005 | 2010 | 2015 | 2020 | 2025 | 2030 | 2035 |
| **Total** | **29,520** | **25,981** | **28,668** | **28,312** | **28,201** | **28,301** | **28,381** |

Note:
Data obtained from Table 3-11 of the 2010 Urban Water Management Plan.
Source: Marin Municipal Water District, 2011.

## Wastewater

The City of Mill Valley provides wastewater collection, and the Sewerage Agency of Southern Marin (SASM) provides collection and wastewater treatment to Mill Valley. The City of Mill Valley owns and maintains all sewer collection lines that are 8 inches in diameter or less.

### *Sewerage Agency of Southern Marin*

SASM is a joint powers agency that provides wastewater collection to City of Mill Valley, Tamalpais Community Services District, Almonte Sanitary District, Alto Sanitary District, Homestead Valley Sanitary District, and Richardson Bay Sanitary District. The SASM service area contains approximately 28,000 residents.

*Collection System*

SASM operates 9 miles of sewer mains and six pumping stations that convey effluent to its wastewater treatment plant.

*Wastewater Treatment Plant*

SASM owns and operates a wastewater treatment plant located near Bayfront Park in Mill Valley. The wastewater treatment plant has a dry weather capacity of 3.6 million gallons per day. Treated effluent is either piped 6 miles to Raccoon Straits for deep-water discharge into San Francisco Bay or further treated and used for landscape irrigation in Bay Front Park. The wastewater treatment plant has an average daily dry-weather flow of 2.0 million gallons per day.

## Storm Drainage

Marin County Flood Control and Water Conservation District oversees storm drainage within Mill Valley. The Flood Control District consists of 10 zones, each with its own budgets and master plans. Mill Valley is located within Zone 3, which encompasses the Richardson Bay watershed. Principal drainage areas tributary to Richardson Bay include Coyote Creek, Corte Madera del Presidio, and Warner Creek. Maintenance activities include regular servicing of pump stations, tide gates, levees and drainage ditches, and an annual vegetation maintenance program.

## Solid Waste

Mill Valley Refuse Service provides franchise solid waste, green waste, and recycling collection to residential and business customers in Mill Valley. Recycling is offered for paper, cardboard, glass, plastic, and metal materials.

### *Landfills*

Solid waste from Mid Valley is landfilled at the Redwood Landfill and the Central Disposal Site. The characteristics of both landfills in summarized in Table 3.10-7.

**Table 3.10-7: Landfill Summary**

| Facility | Location | Disposal Area | Maximum Capacity | Remaining Capacity | Maximum Daily Throughput |
|---|---|---|---|---|---|
| Redwood Landfill | 8950 Redwood Highway, Novato | 222 acres | 19.1 million cubic yards | 12.9 million cubic yards | 2,310 tons |
| Central Disposal Site | 500 Meacham Road, Petaluma | 173 acres | 19.8 million cubic yards | 9.4 million cubic yards | 2,500 tons |
| Source: California Department of Resources Recycling and Recovery, 2013. | | | | | |

## Energy

Marin Energy Authority (MEA) and Pacific Gas and Electric Company (PG&E) provide energy to Mill Valley. Each entity is discussed separately.

### *Marin Energy Authority*

MEA was formed in 2008 pursuant to California's Community Choice Aggregation law, which allows local governments to procure electricity and sell it competitively within their jurisdictions. MEA is a joint powers authority comprising the seven incorporated cities in Marin County, the County of Marin, and the City of Richmond, and it administers Marin Clean Energy, the Community Choice Aggregation Program that purchases renewable and clean electricity. Marin Clean Energy has a stated objective of stabilizing costs and reducing greenhouse gas emissions.

Marin Clean Energy purchases electricity from variety of sources including hydroelectric, landfill gas, solar, wind, and biomass. Marin Clean Energy offers its customers two energy products: Light Green (50 percent renewable energy) and Deep Green (100 percent renewable energy). As of 2013, Marin Clean Energy had 14 purchase power agreements covering more than 99,000 megawatts of renewable electricity, with another 56 megawatts under development. Marin Clean Energy supplements its renewable electricity sources with purchase of electricity generated from natural gas sources. Marin Clean Energy is prohibited from purchasing electricity from coal or nuclear sources.

### *Pacific Gas and Electric Company*

PG&E delivers electricity to Marin Clean Energy customers and provides billing and customer service.

PG&E also supplies and delivers natural gas to customers in Mill Valley. PG&E provides natural gas to all or part of 39 counties in California, including Marin County, comprising most of the northern and central portions of the State. PG&E obtains most of its natural gas supplies from western Canada and the balance from U.S. sources. PG&E operates approximately 48,000 miles of transmission and distribution pipelines, and three underground storage fields with a combined storage capacity of 48.7 billion cubic feet (Bcf). In 2012, PG&E delivered 248 billion cubic feet (Bcf) of natural gas to its 4.4 million natural gas customers.

## 3.10.3 - Regulatory Framework

### State

#### *California Building Standards Code*

Title 24 of the California Code of Regulations, also known as the California Building Standards Code, is a compilation of three types of building standards from three different origins:

- Building standards that have been adopted by state agencies without change from building standards contained in national model codes
- Building standards that have been adopted and adapted from the national model code standards to meet California conditions
- Building standards, authorized by the California legislature, that constitute extensive additions not covered by the model codes that have been adopted to address particular California concerns

The California Fire Code is a component of the California Building Standards Code and contains fire safety-related building standards.

#### *California Green Building Standards Code*

The California Green Building Standard Code was adopted January 12, 2009. The purpose of this 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:

- Planning and design
- Energy efficiency
- Water efficiency and conservation
- Material conservation and resource efficiency
- Environmental air quality

The Code addresses exterior envelope, water efficiency, and material conservation components. The aim is to reduce energy usage in non-residential buildings by 20 percent by 2015 and help meet reductions contemplated in Assembly Bill (AB) 32. With the 2008 Building Code, a 15-percent energy reduction over the 2007 edition is expected. Compliance became mandatory as of January 1, 2011.

#### *California Urban Water Management Planning Act*

The Urban Water Management Planning Act (California Water Code Sections 10610-10656) requires that all urban water suppliers with at least 3,000 customers prepare urban water management plans and update them every 5 years. The act requires that urban water management plans include a description of water management tools and options used by that entity that will maximize resources and minimize the need to import water from other regions. Specifically, urban water management plans must:

- Provide current and projected population, climate, and other demographic factors affecting the supplier's water management planning;
- Identify and quantify, to the extent practicable, the existing and planned sources of water available to the supplier;
- Describe the reliability of the water supply and vulnerability to seasonal or climatic shortage;
- Describe plans to supplement or replace that source with alternative sources or water demand management measures;
- Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis (associated with systems that use surface water);
- Quantify past and current water use;
- Provide a description of the supplier's water demand management measures, including schedule of implementation, program to measure effectiveness of measures, and anticipated water demand reductions associated with the measures;
- Assess the water supply reliability.

Pursuant to the Urban Water Management Planning Act, the Marin County Water Agency prepared and maintains an Urban Water Management Plan.

### *Model Water Efficient Landscape Ordinance*

The Model Water Efficient Landscape Ordinance was adopted by the Office of Administrative Law in September 2009 and requires local agencies to implement water efficiency measures as part of its review of landscaping plans. Local agencies can either adopt the Model Water Efficient Landscape Ordinance or incorporate provisions of the ordinance into code requirements for landscaping. For new landscaping projects of 2,500 square feet or more that require a discretionary or ministerial approval, the applicant is required to submit a detailed "Landscape Documentation Package" that discusses water efficiency, soil management, and landscape design elements.

### *California Integrated Waste Management Act*

To minimize the amount of solid waste that must be disposed of by transformation and land disposal, the State Legislature passed AB 939, the California Integrated Waste Management Act of 1989, effective January 1990. The legislation required each local jurisdiction in the State to set diversion requirements of 25 percent by 1995 and 50 percent by 2000; established a comprehensive statewide system of permitting, inspections, enforcement, and maintenance for solid waste facilities; and authorized local jurisdictions to impose fees based on the types or amounts of solid waste generated. In 2007, SB 1016, Wiggins, Chapter 343, Statutes of 2008, introduced a new per capita disposal and goal measurement system that moves the emphasis from an estimated diversion measurement number to using an actual disposal measurement number as a per capita disposal rate factor. As such, the new disposal-based indicator (pounds per person per year) uses only two factors: a jurisdiction's population (or in some cases employment) and its disposal as reported by disposal facilities.

### *California Public Utilities Commission*

The California Public Utilities Commission (CPUC) regulates privately owned telecommunication, electric, natural gas, water, railroad, rail transit, and passenger transportation companies. It is the responsibility of the CPUC to (1) assure California utility customers have safe, reliable utility service at reasonable rates, (2) protect utility customers from fraud, and (3) promote a healthy California economy. The Public Utilities Code, adopted by the legislature, defines the jurisdiction of the CPUC.

### *Title 24, California's Energy Efficiency Standards for Residential and Nonresidential Buildings*

Title 24, Part 6, of the California Code of Regulations establishes California's Energy Efficiency Standards for Residential and Nonresidential Buildings. The standards were updated in 2005 and recently amended in 2008. The 2008 standards set a goal of reducing growth in electricity use by 561.2 gigawatt-hours per year (GWh/y) and growth in natural gas use by 19 million therms per year (therms/y). The savings attributable to new nonresidential buildings are 151.2 GWh/y of electricity savings and 3.3 million therms. For nonresidential buildings, the standards establish minimum energy efficiency requirements related to building envelope, mechanical systems (e.g., heating, ventilation, and air conditioning [HVAC]; and water heating systems), indoor and outdoor lighting, and illuminated signs.

## Local

### *City of Mill Valley*

*2040 General Plan*

The proposed 2040 General Plan establishes the following goals and policies associated with public services, recreation, and utilities:

- **Goal CV.1 Economic Vitality:** Maintain a strong, diverse, and vibrant local economy.
- **Policy CV.1 Business Attraction and Retention:** Create the operational, informational, and regulatory framework to attract and retain businesses that have a positive economic impact, create sustainable commercial success, support Mill Valley's small town character and enhance the quality of life of the community (including, but not limited to, local-serving businesses that provide goods, services, or medical, educational, cultural, artistic, entertainment, or recreational amenities for the community).
- **Goal CV.2 Healthy Community:** Create a built environment and local social structure that encourage physical activity and healthy living, and strengthen opportunities for social interaction and building of community relationships.
- **Policy CV.4 Public/Commercial Space and Events:** Create well-designed, accessible public and private spaces that will encourage and support community interaction and activity for all ages.
- **Goal CV.3 Healthy Community:** Maintain a broad range of public and private physical and mental health programs, including arts, recreational, intellectual, educational, and cultural programs and services that meet diverse community needs.
- **Policy CV.6 Diverse Programs and Services:** Continue to place high priority on programs and facilities that serve the entire community, and ensure that programs and services meet the diverse needs in the community for users such as seniors, youth, and special needs groups with facilities and/or amenities planned and designed to accommodate a range of ages and abilities and changing definitions of recreation.

- **Policy CV.7 Library:** Continue to support and enhance the role of the Mill Valley Library as an important cultural and intellectual center of the community.
- **Goal CV.7 Healthy Community:** Provide a complete and integrated system of public parks and open space areas throughout Mill Valley that provide opportunities for both passive and active recreation.
- **CV.8 Parks and Recreation Facilities:** Design and implement parks and recreational facilities to meet the unique and anticipated needs and interests of residents.
- **Goal NE.3 Water:** Protect and Improve Water Quality, System Supply and System Integrity.
- **Policy NE.3 Water Quality, System Supply and Integrity:** Improve water quality, and expand and diversify water supply.
- **Policy NE.4 Conservation of Water Resources:** Promote the increased use of pervious paving, rainwater storage and greywater systems to improve water quality and conserve potable water.
- **Goal HZ-1 Community Hazard Resilience:** Minimize loss of life, property, and important elements of the natural ecosystem and maximize Mill Valley's ability to prepare for, respond to, and recover from disaster.
- **Policy HZ.1 Hazard Identification and Mitigation:** Identify all hazards that threaten the city as either "sudden onset" disasters (e.g., earthquakes, wildfire) or "slow onset" disasters/phenomena (e.g., drought, extreme heat, sea level rise) and strengthen hazard mitigation policies and regulations.
- **Policy HZ.2 Administrative and Equipment Capacity:** Maintain adequate concentration and distribution of staff, facilities, materials, and equipment to provide a timely disaster response consistent with the needs of a demographically changing community and a challenging natural environment, while recognizing the difficulties of maintaining these systems on a daily basis.
- **Policy HZ.3 Critical Infrastructure:** Develop strategies for critical facilities and services (local and regional) that will minimize problems during post-disaster evacuations, rescues, and major clean-up operations following a major disaster.
- **Policy HZ.4 Civic Duty and Responsibility:** Promote education and events that reinforce the personal responsibility of all residents, business owners, and City staff to plan for, respond to, and recover from disasters.
- **Policy HZ.5 Emergency Response and Evacuation Routes:** Maintain and expand the network of anticipated emergency response routes and regularly exercise evacuation protocols and procedures.
- **Policy HZ.6 Prevention and Protection:** Reduce injury and damage from hazards.
- **Goal PS.1:** Provide the highest quality police services that proactively prevents crime, controls crime that the community cannot prevent and reduces fear and enhances the security of the community.
- **Policy PS.1 Community Services:** Provide extensive community-based service and education programs designed to prevent crime and emphasize citizen protection and involvement.
- **Policy PS.2 Technology and Performance:** Ensure that the Police Department utilizes modern technology and provides adequate training to maximize job performance.
- **Goal CL.3 Zero Waste:** Implement Zero Waste Strategies for Solid Waste Management.

- **Policy CL.5 Recycling and Waste Management:** Reduce the volume of the waste stream by encouraging recycling and composting and moving toward Zero Waste objectives that minimize or eliminate waste sent to landfills.

## 3.10.4 - Methodology

FirstCarbon Solutions evaluated potential impacts on noise through review of the existing 1989 General Plan and proposed 2040 General Plan, as well as review of information provided by the City of Mill Valley, SEMPS, Mill Valley Elementary School District, Tamalpais Union High School District, County of Marin, the State of California, the National Park Service, MMWD, SASM, Marin County Flood Control and Water Conservation District, MEA, and PG&E.

## 3.10.5 - Thresholds of Significance

According to Appendix G, Environmental Checklist, of the CEQA Guidelines, public services and utilities impacts resulting from the implementation of the proposed project would be considered significant if the project would:

> Would the project 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:
>
> a) Fire Protection?
> b) Police Protection?
> c) Schools?
> d) Parks?
> e) Other public facilities?

To determine whether impacts to utilities and services are significant environmental effects, the following questions are analyzed and evaluated. Would the project:

- Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?
- Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?
- Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?
- Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

- 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?
- Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?
- Comply with federal, state, and local statutes and regulations related to solid waste?
- Result in inefficient, wasteful, or unnecessary consumption of energy?

## 3.10.6 - Project Impacts and Mitigation Measures

### Fire Protection and Emergency Medical Services

**Impact PSU-1: Implementation of the 2040 General Plan would not create a need for new or expanded fire protection or emergency medical services facilities.**

***Impact Analysis***

The Mill Valley Fire Department and the SEMPS provide fire protection and emergency medical services to Mill Valley, respectively.

The 2040 General Plan 2030 establishes a goal and five policies that concern fire protection and emergency medical services. Goal HZ-1 and Policies HZ.1 and HZ.5 call for emergency preparedness, strengthening hazard mitigation policies and regulations, maintaining adequate emergency response capabilities, planning for disaster response, and designating emergency response routes.

Finally, all new development is subject to the fire safety requirements set forth in the California Building Standards Code, including those pertaining to fire alarms and suppression systems. Additionally, state law allows local agencies to assess impact fees to fund the development of fire protection facilities. Therefore, payment of impact fees would address related individual project impacts.

Therefore, based on the existing regulatory requirements and the policies contained within the proposed 2040 General Plan, there is certainty that future development and land use activities contemplated by the 2040 General Plan would not create a need for new or expanded fire protection or emergency medical services facilities. Impacts would be less than significant.

***Level of Significance Before Mitigation***

Less than significant impact.

***Mitigation Measures***

No mitigation is necessary.

***Level of Significance After Mitigation***

Less than significant impact.

## Police Protection

**Impact PSU-2: Implementation of the 2040 General Plan would not create a need for new or expanded police protection facilities.**

### *Impact Analysis*

The Mill Valley Police Department provides police protection to Mill Valley.

The 2040 General Plan 2030 establishes a goal and two policies that concern police protection. Goal PS.1 and Policies PS.1 and PS.2 call for providing high-quality police services, providing community-based service and education programs designed to prevent crime, and ensuring that the Police Department utilizes modern technology and provides adequate training to maximize job performance.

Finally, state law allows local agencies to assess impact fees to fund the development of police protection facilities. Therefore, payment of impact fees would address related individual project impacts.

Therefore, based on the existing regulatory requirements and the policies contained within the proposed 2040 General Plan, there is certainty that future development and land use activities contemplated by the 2040 General Plan would not create a need for new or expanded police protection. Impacts would be less than significant.

### *Level of Significance Before Mitigation*

Less than significant impact.

### *Mitigation Measures*

No mitigation is necessary.

### *Level of Significance After Mitigation*

Less than significant impact.

## Schools

**Impact PSU-3: Implementation of the 2040 General Plan would not create a need for new or expanded schools.**

### *Impact Analysis*

The Mill Valley Elementary School District provides K-8 education and Tamalpais Union High School District provides 9–12 education to Mill Valley. As previously discussed, both school districts have undertaken facilities modernization programs during the past decade to provide additional student capacity.

The 2040 General Plan 2030 sets forth Policy CV.1, which calls for enhancing the quality of life by providing adequate community services, including education, to attract and retain businesses.

Moreover, Government Code Section 65995 prohibits a local agency from either denying approval of a land use project because of inadequate school facilities or imposing school impact mitigation

measures other than designated fees. As such, payment of fees is the only method by which new development projects can mitigate their impacts on schools. Both school districts assess school impact fee on new development; therefore, payment of development fees to each school district would address individual project impacts on schools.

Therefore, based on the existing regulatory requirements and the policies contained within the proposed 2040 General Plan, there is certainty that future development and land use activities contemplated by the 2040 General Plan would not create a need for new and expanded school facilities beyond what the local school districts have contemplated. Impacts would be less than significant.

### *Level of Significance Before Mitigation*
Less than significant impact.

### *Mitigation Measures*
No mitigation is necessary.

### *Level of Significance After Mitigation*
Less than significant impact.

## Parks, Recreation, and Other Public Facilities

| | |
|---|---|
| **Impact PSU-4:** | **Implementation of the 2040 General Plan would not create a need for new or expanded parks, recreation, or other public facilities.** |

### *Impact Analysis*
The City of Mill Valley, the County of Marin, the State of California, and the National Park Service own and maintain park and recreational facilities within and adjacent to Mill Valley. Facilities include active parks, passive open space areas, multi-use paths, State Parks, and National Monuments.

The 2040 General Plan 2030 establishes several goals and policies that concern parks, recreation, and other public facilities. Goals GV.2, GV.3, and GV.3 call for provide providing facilities and services that promote a health community, maintaining a range of community programs, and providing a complete and integrated system of public parks and open space areas throughout Mill Valley. Policies CV.1, CV.4, CV.6, and CV.8 call for enhancing the quality of life by providing adequate community services to attract and retain businesses, creating well-designed, accessible public and private spaces, emphasizing programs and facilities that serve the entire community, and developing parks and recreational facilities to meet the needs and interests of residents.

Moreover, the Quimby Act allows local agencies to assess impact fees to fund the development of park and recreational facilities. Therefore, payment of impact fees to local agencies that oversee park and recreational facilities would address individual project impacts in this regard.

Therefore, based on the existing regulatory requirements and the policies contained within the proposed 2040 General Plan, there is certainty that future development and land use activities contemplated by the 2040 General Plan would not create a need or new or expanded park, recreation, or other public facilities. Impacts would be less than significant.

### *Level of Significance Before Mitigation*
Less than significant impact.

### *Mitigation Measures*
No mitigation is necessary.

### *Level of Significance After Mitigation*
Less than significant impact.

## Potable Water

| | |
|---|---|
| **Impact PSU-5:** | **Implementation of the 2040 General Plan would not result in the construction of new or expanded water treatment facilities or require additional supplies or entitlements.** |

### *Impact Analysis*
MMWD provides potable water service to Mill Valley. MMWD obtains three quarters of its supply from local reservoirs and the balance from imported sources. MMWD projects adequate water supplies over the planning horizon of the 2040 General Plan.

The 2040 General Plan 2030 establishes a goal and two policies that concern potable water. Goal NE-1 and Policies NE.3 and NE.4 call for protecting and improving the water supply system, improving and diversifying water supplies, and promoting the use of water conservation measures such as rainwater storage and greywater systems.

Finally, state law (specifically, Model Water Efficient Landscape Ordinance) establishes water conservation requirements for new development projects.

Therefore, based on the existing regulatory requirements and the policies contained within the proposed 2040 General Plan, there is certainty that future development and land use activities contemplated by the 2040 General Plan would not create a need for new or expanded water treatment facilities or require additional supplies or entitlements. Impacts would be less than significant.

### *Level of Significance Before Mitigation*
Less than significant impact.

### *Mitigation Measures*
No mitigation is necessary.

### *Level of Significance After Mitigation*
Less than significant impact.

## Wastewater

**Impact PSU-6: Implementation of the 2040 General Plan would not exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board or result in the construction of new or expanded wastewater treatment facilities.**

### *Impact Analysis*

SASM provides wastewater collection and treatment service to Mill Valley. SASM's treatment plant has a dry weather capacity of 3.6 million gallons per day and currently treats an average of 2.0 million gallons per day (dry weather).

The 2040 General Plan 2030 establishes a goal and two policies that concern potable water and, thus, indirectly pertain to wastewater. Goal NE-1 and Policies NE.3 and NE.4 call for protecting and improving the water supply system, improving and diversifying water supplies, and promoting the use of water conservation measures such as rainwater storage and greywater systems. To the extent that these goals and policies reduce water consumption and improve infrastructure, they reduce potential adverse affects on the wastewater collection and treatment system.

Therefore, based on the goals and policies contained within the proposed 2040 General Plan, there is certainty that future development and land use activities contemplated by the 2040 General Plan would not exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board or result in the construction of new or expanded wastewater treatment facilities. Impacts would be less than significant.

### *Level of Significance Before Mitigation*

Less than significant impact.

### *Mitigation Measures*

No mitigation is necessary.

### *Level of Significance After Mitigation*

Less than significant impact.

## Storm Drainage

**Impact PSU-7: Implementation of the 2040 General Plan would not result in the construction of new or expanded storm drainage facilities.**

### *Impact Analysis*

Marin County Flood Control and Water Conservation District oversees storm drainage within Mill Valley. Principal drainages within Coyote Creek, Corte Madera del Presidio, and Warner Creek.

The 2040 General Plan 2030 establishes a goal and two policies that concern storm drainage. Goal NE-1 and Policies NE.3 and NE.4 call for improving water quality and promoting the use of pervious paving, rainwater storage, and greywater systems to improve water quality. Collectively, these measures would promote reductions in pollutants and runoff rates in storm drainage facilities.

Therefore, based on the existing regulatory requirements and the policies contained within the proposed 2040 General Plan, there is certainty that future development and land use activities contemplated by the 2040 General Plan would not create a need for new or expanded storm drainage facilities. Impacts would be less than significant.

### *Level of Significance Before Mitigation*
Less than significant impact.

### *Mitigation Measures*
No mitigation is necessary.

### *Level of Significance After Mitigation*
Less than significant impact.

## Solid Waste

| | |
|---|---|
| **Impact PSU-8:** | **Implementation of the 2040 General Plan would not result in a need for additional landfill capacity or conflict with federal, state, and local statutes and regulations related to solid waste.** |

### *Impact Analysis*
Mill Valley Refuse Service provides franchise solid waste, green waste, and recycling collection to customers in Mill Valley. Solid waste from Mid Valley Refuse Service is landfilled at the Redwood Landfill and the Central Disposal Site.

The 2040 General Plan 2030 establishes a goal and a policy that concern solid waste. Goal CL.3 and Policy CL.5 set objectives of zero waste and reducing sold waste generation by promoting recycling and composting.

Additionally, state law establishes solid waste disposal targets for each local jurisdiction and requires annual reporting to document whether the targets are being met.

Therefore, based on the existing regulatory requirements and the policies contained within the proposed 2040 General Plan, there is certainty that future development and land use activities contemplated by the 2040 General Plan would not result in a need for additional landfill capacity or conflict with federal, state, and local statutes and regulations related to solid waste. Impacts would be less than significant.

### *Level of Significance Before Mitigation*
Less than significant impact.

### *Mitigation Measures*
No mitigation is necessary.

### *Level of Significance After Mitigation*
Less than significant impact.

## Energy

**Impact PSU-9: Implementation of the 2040 General Plan would not result in inefficient, wasteful, or unnecessary consumption of energy.**

### *Impact Analysis*

MEA and PG&E provide energy to Mill Valley. MEA administers Marin Clean Energy, the Community Choice Aggregation Program that purchases renewable and clean electricity. PG&E delivers electricity to Marin Clean Energy customers and provides billing and customer service. PG&E also supplies and delivers natural gas to customers in Mill Valley.

The 2040 General Plan 2030 establishes a goal and policy that concern energy. Goal CL.1 and Policy CL.1 call for reducing the community's carbon footprint by utilizing and investing in clean energy end energy efficiency solutions.

Additionally, all new development is subject to the energy efficiency requirements set forth in the California Building Standards Code, which are widely regarded as some of the most stringent in the world.

Therefore, based on the existing regulatory requirements and the policies contained within the proposed 2040 General Plan, there is certainty that future development and land use activities contemplated by the 2040 General Plan would not result in inefficient, wasteful, or unnecessary consumption of energy. Impacts would be less than significant.

### *Level of Significance Before Mitigation*

Less than significant impact.

### *Mitigation Measures*

No mitigation is necessary.

### *Level of Significance After Mitigation*

Less than significant impact.

# 3.11 - Transportation

## 3.11.1 - Introduction

This section describes the existing transportation setting and potential effects from the City of Mill Valley 2040 General Plan implementation on the Planning Area and surroundings. Descriptions and analysis in this section are based on transportation modeling performed by Parisi Associates that is wholly contained in the 2040 General Plan.

## 3.11.2 - Environmental Setting

### Roadway System

Mill Valley has more than 61 miles of roadways. The City's arterial roadways—Miller Avenue, E. Blithedale Avenue, and Camino Alto—account for 9.5 miles of the City's streets, with local streets comprising the other 50 miles of roadways. Mill Valley lies west of U.S. 101, the major freeway connecting Marin County to San Francisco to the south and Sonoma County to the north. Three freeway interchanges connect the area to U.S. 101:

- E. Blithedale Avenue/Tiburon Boulevard
- Seminary Drive/Redwood Highway Frontage Road
- Shoreline Highway/Miller Avenue

Mill Valley's circulation is largely determined by its location and topography. Because Mill Valley is nestled into the eastern slopes of Mt. Tamalpais, there are no roadways that carry through traffic to the west, and Camino Alto provides the only connection to the north to Larkspur and Corte Madera. The primary arterials into and out of Mill Valley are E. Blithedale Avenue and Miller Avenue, which connect to U.S. 101. Exhibit 3.11-1 illustrates Mill Valley's roadway system, and Table 3.11-1 shows the City's designated truck routes.

### Circulation Characteristics

#### *Travel Modes and Commuting*

U.S. Census data provides information on commute patterns for the nation, as well as local counties and jurisdictions. Although work-related trips are not the only trips generated in Mill Valley, they do represent a large portion of travel within the City and serve to illustrate travel choices and behaviors. Table 3.11-1 compares commuter patterns by travel mode. Compared with the nation, state, region, or county, Mill Valley generally has a lower percentage of residents who drive to work (67.6 percent) and a higher proportion of residents who walk, bicycle, and take transit to work, and a substantially higher percentage who work from home (15.6 percent). Although working from home may reduce work-related traffic, it also may account for the larger number of personal vehicle trips generated per household, as discussed after the table.

### Table 3.11-1: Commute Patterns by Travel Mode

| Geographic Area | Total Work Trips | Percent | | | | |
|---|---|---|---|---|---|---|
| | | In-Vehicle (Car, Van, Motorcycle) | Pedestrian | Bicycle | Public Transit | Work at Home |
| Mill Valley | 6,519 | 67.6 | 4.5 | 3.0 | 9.0 | 15.6 |
| Marin County | 121,608 | 75.7 | 3.3 | 1.5 | 8.5 | 9.9 |
| Bay Area | 3,522,748 | 78.1 | 3.6 | 1.5 | 9.8 | 5.5 |
| California | 16,251,032 | 84.7 | 2.8 | 1.0 | 5.1 | 5.1 |
| United States | 139,488,206 | 86.3 | 2.8 | 0.5 | 5.0 | 4.2 |

Notes:
"Bay Area" constitutes the nine counties of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, and Sonoma. Percentage totals may not add to 100 because "other means" of travel are not included in the table.
Source: United States Census Bureau, 2012.

Table 3.11-2 shows a breakdown of commute characteristics by vehicle type and travel time. While Mill Valley has a lower percentage of residents that drive alone to work when compared with Marin County, the Bay Area, the State, and the nation, the percentage of Mill Valley residents who carpool to work is also lower.

### Table 3.11-2: Mill Valley Residents Commuting to Work by Driving

| Geographical Area | Mean Travel Times (Minutes) | Total Workers | Percent | | |
|---|---|---|---|---|---|
| | | | Drive Alone (Car, Truck, Van) | Carpool | Motorcycle |
| Mill Valley | 25.5 | 6,519 | 61.6 | 6.0 | 0.3 |
| Marin County | 26.5 | 121,068 | 67.0 | 8.7 | 0.4 |
| Bay Area | 25.9 | 3,522,748 | 67.5 | 10.6 | 0.4 |
| California | 26.3 | 16,251,032 | 73.0 | 11.7 | 0.3 |
| United States | 24.5 | 139,488,206 | 76.1 | 10.2 | 0.2 |

Source: United States Census Bureau, 2012.

*Existing Traffic Volumes*

In 2001, the City of Mill Valley formed the Mill Valley Transportation Committee, which prepared a study titled "Solving Transportation Problems in Mill Valley: A Community Responsibility." According to the study conclusions, which are still valid as of this writing, Mill Valley's traffic levels are a function of four types of traffic:

- Direct traffic caused by existing Mill Valley residents and businesses that are generating more vehicle-trips on a daily basis than in previous years.
- Indirect traffic generated by residential and commercial business (such as construction and remodeling).

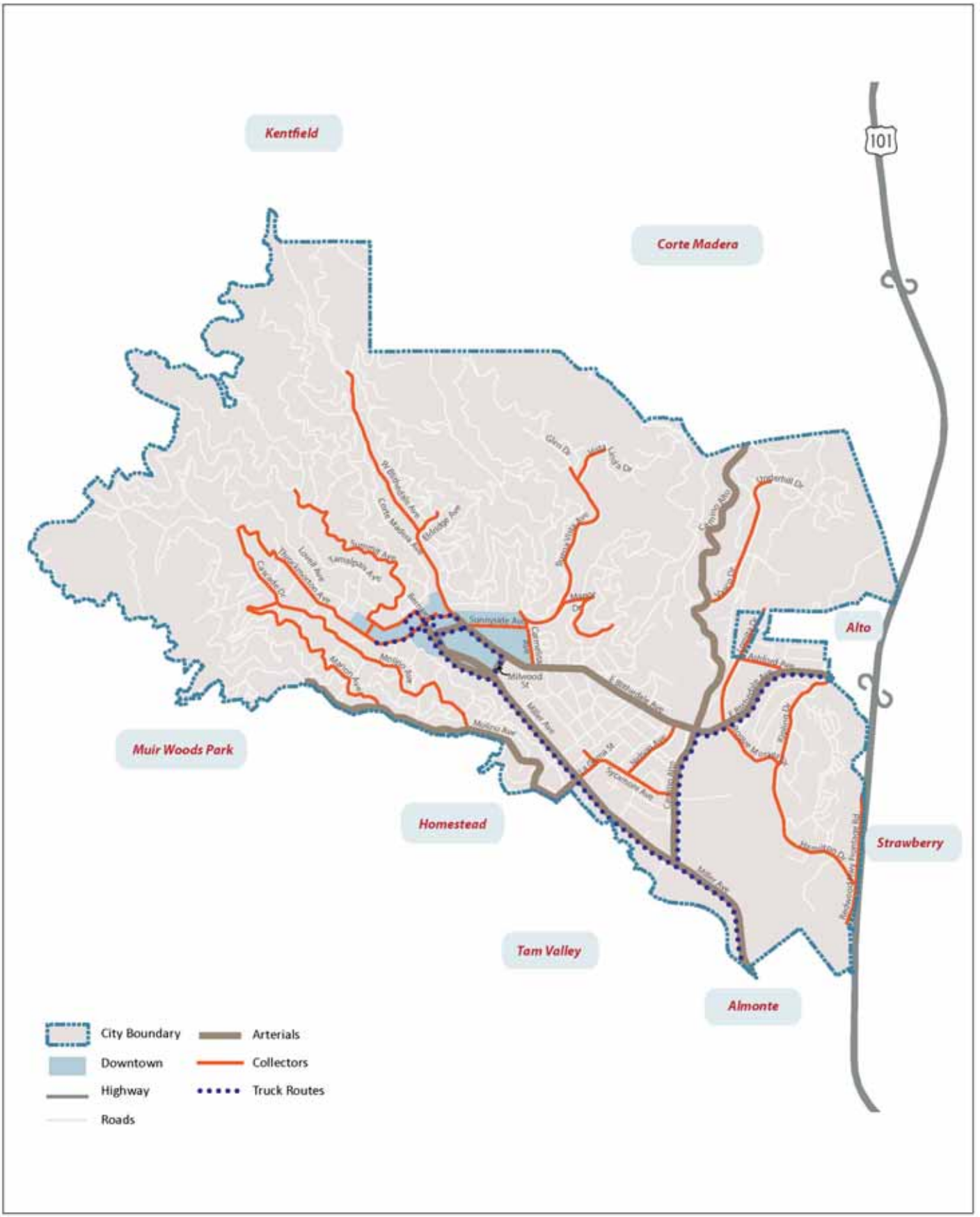


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Exhibit 3.11-1
Roadway Network

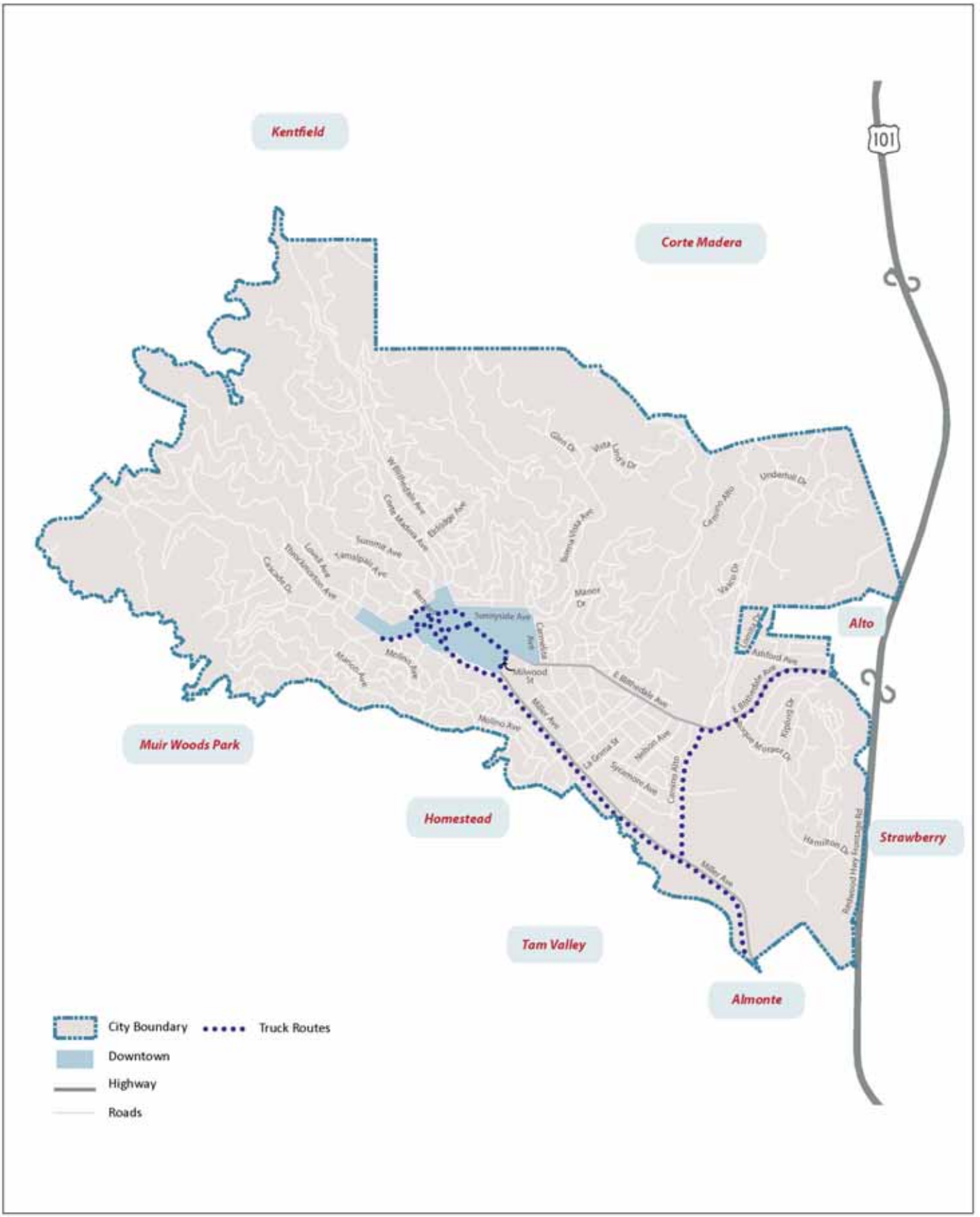


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Exhibit 3.11-2
Truck Routes

- School-related traffic due to the high number of students being driven to and from school.
- Local and short trips within Mill Valley made via driving instead of walking or bicycling due to an actual or perceived lack of good or safe walking and bicycling routes.

The Transportation Committee found that some neighborhoods in Mill Valley were generating over 11 vehicle-trips per day per household, almost twice what Mill Valley roadways were originally designed to handle. It was also discovered that 26 percent of weekday morning peak-hour traffic volumes consist of school-related traffic.

As previously discussed, Mill Valley's network of streets is constrained for through traffic by its topographic setting. As a result, the heaviest traffic volumes occur on E. Blithedale Avenue and Miller Avenue, the two arterials that provide direct connection to U.S. 101 and State Route 1 (SR-1). On weekdays, approximately 36,000 vehicles traverse E. Blithedale Avenue to the west of U.S. 101 and approximately 20,000 vehicles enter and exit the City via Miller Avenue. Table 3.11-3 summarizes traffic volumes on Mill Valley's arterial roadways on weekdays and Saturdays.

**Table 3.11-3: Existing 24-Hour Traffic Volumes (Weekday and Saturday)**

| Location | Weekday | Saturday |
|---|---|---|
| E. Blithedale Avenue east of Lomita Drive/Roque Moraes Drive | 36,000 | 32,500 |
| E. Blithedale Avenue west of Camino Alto | 22,200 | 20,700 |
| E. Blithedale Avenue west of Carmelita Avenue | 14,100 | 13,200 |
| Miller Avenue west of Almonte Boulevard | 19,700 | 17,400 |
| Miller Avenue west of Camino Alto | 26,000 | 23,100 |
| Miller Avenue west of Park Avenue | 12,900 | 11,900 |
| Camino Alto south of E. Blithedale Avenue | 22,300 | 19,900 |
| Source: Parisi Associates, 2013. | | |

Historically, Mill Valley's traffic volumes grew considerably between 1950 and 1990. For example, traffic volumes on E. Blithedale Avenue grew more than sevenfold during that period, from less than 5,000 daily trips to over 35,000. Between 1990 and 2000, daily traffic volumes along the City's major arterial roadways rose less rapidly, increasing by 10 to 15 percent. Over the past decade, traffic volumes on these key arterials generally have leveled off.

*Level of Service*

Level of service describes the operations of an intersection in terms of the average delay experienced by motorists using the intersection. Table 3.11-4 provides the level of service criteria for signalized and unsignalized intersections. The level of service criteria for a stop sign-controlled intersection is different from that used for a signalized intersection because drivers expect different level of performance between signalized and unsignalized intersections.

### Table 3.11-4: Intersection Level of Service Definitions

| Level of Service | Control Delay Per Vehicle (Seconds) | |
|---|---|---|
| | Signalized | Unsignalized |
| A | ≤ 10 | < 10 |
| B | > 10 and ≤ 20 | > 10 and < 15 |
| C | > 20 and ≤ 30 | > 15 and < 25 |
| D | > 35 and ≤ 55 | > 25 and < 35 |
| E | > 55 and ≤ 80 | > 35 and < 50 |
| F | > 80 | > 50 |
| Source: Transportation Research Board, 2000. | | |

Existing weekday AM, midday, and PM peak-hour service levels were determined at 15 key intersections in Mill Valley. Existing levels of service at these intersections are shown in Table 3.11-5.

### Table 3.11-5: Existing Intersection Level of Service

| No. | Intersection | Control | AM Peak | | Midday Peak | | PM Peak | |
|---|---|---|---|---|---|---|---|---|
| | | | Delay | LOS | Delay | LOS | Delay | LOS |
| 1 | E. Blithedale Ave./Tower Dr./ Kipling Dr. | Signal | 28.6 | C | 29.7 | C | 25.2 | C |
| 2 | E. Blithedale Ave./Lomita Dr./ Roque Moraes Dr. | Signal | 36.2 | D | 37.3 | D | 34.1 | D |
| 3 | E. Blithedale Ave./Camino Alto | Signal | 48.5 | D | 49.9 | D | 48.4 | D |
| 4 | E. Blithedale Ave./Elm Ave. | Signal | 11.5 | B | 11.5 | B | 11.3 | B |
| 5 | E. Blithedale Ave./ Carmelita Ave. | 1-Way Stop | >50 | F | >50 | F | >50 | F |
| 6 | E. Blithedale Ave./ Sunnyside Ave. | 2-Way Stop | 22.1 | C | 27.4 | D | 22.3 | C |
| 7 | E. Blithedale Ave./ Throckmorton Ave. | 3-Way Stop | 12.7 | B | 14.4 | B | 14.5 | B |
| 8 | Miller Ave./Bernard St./ Throckmorton Ave. | 3-Way Stop | 11.5 | B | 10.9 | B | 11.7 | B |
| 9 | Miller Ave./Sunnyside Ave. | 3-Way Stop | 8.9 | A | 10.8 | B | 9.8 | A |
| 10 | Miller Ave./Locust Ave. | 2-Way Stop | 20.8 | C | 31.7 | D | 25.0 | D |
| 11 | Miller Ave./La Goma St./ Montford Ave. | 4-Way Stop | 30.0 | C | 38.7 | E | 48.4 | E |
| 12 | Miller Ave./Evergreen Ave. | 2-Way Stop | 21.8 | C | 33.6 | D | 35.3 | E |
| 13 | Miller Ave./Valley Cir./Reed St. | 2-Way Stop | 25.4 | D | 31.9 | D | >50 | F |

**Table 3.11-5 (cont.): Existing Intersection Level of Service**

| No. | Intersection | Control | AM Peak | | Midday Peak | | PM Peak | |
|---|---|---|---|---|---|---|---|---|
| | | | Delay | LOS | Delay | LOS | Delay | LOS |
| 14 | Miller Ave./Camino Alto | Signal | 28.9 | C | 32.6 | C | 32.4 | C |
| 15 | Camino Alto/Sycamore Ave. | Signal | 34.6 | C | 40.4 | D | 33.1 | C |
| Source: Parisi Associates, 2013. | | | | | | | | |

The 1989 General Plan established a minimum performance standard of LOS C or better at all major signalized intersection locations other than E. Blithedale Avenue/Camino Alto, which is permitted to operate at LOS D or better. As shown in Table 3.11-5, two signalized intersections (East Blithedale Avenue/Lomita Drive/Roque Moraes Drive and Camino Alto/Sycamore Avenue) operate below LOS C during one or more peak hours and, thus, do not meet the 1989 General Plan's minimum performance standard. The E. Blithedale Avenue/Camino Alto intersection operates at acceptable LOS D.

As will be discussed further in Impact TRANS-1, the 2040 General Plan proposes to amend the minimum LOS values to accept LOS E-plus conditions at the E. Blithedale Avenue/Camino Alto intersection, and LOS D at all other signalized intersections in recognition that the improvements necessary to achieve the 1989 General Plan LOS values would have detrimental impacts on public transit, bicycles, pedestrians, and community character.

### *Pedestrian and Bicycle Network*

Mill Valley's pedestrian network includes sidewalks and a system of steps, lanes, and paths. The bicycle network includes both on- and off-street facilities.

*Bicycle Facilities*

Mill Valley has three different classifications of bikeways, described as follows:

- **Class I** paths provide a completely separated right-of-way for exclusive use for both bicyclists and pedestrians.
- **Class II** bike lanes provide a striped lane for one-way travel on a street or highway.
- **Class III** bike routes provide for shared use of the vehicular travel lane, typically on lower volume roadways.

Altogether, Mill Valley has approximately 7 miles of bikeways within its boundaries. In addition to existing facilities, Exhibit 3.11-3 also shows the proposed bicycle facilities identified in Mill Valley's Bicycle & Pedestrian Transportation Plan, which is adopted by reference as part of the 2040 General Plan.

The Bay Trail is an Association of Bay Area Governments project to develop a 400-mile loop around the San Francisco Bay and its surrounding area. The Mill Valley-Sausalito Path, south of Sycamore Avenue, is a segment on the Bay Trail, as is Sycamore Avenue between the Mill Valley-Sausalito path

and Roque Moraes Drive. The Bay Trail continues on Roque Moraes Drive to US 101 with a spur off Shelter Bay Avenue.

*Pedestrian Facilities*
Pedestrian facilities in Mill Valley consist of Class I paths and sidewalks. Existing Class I paths include the Alto Hill Path, the Mill Valley-Sausalito Path, and paths adjacent to Sycamore Avenue and Camino Alto. Mill Valley has an almost complete network of sidewalks in the downtown area between Throckmorton Avenue and Camino Alto.

Mill Valley is also part of the Safe Routes to School Program, which focuses on reducing school area congestion and encouraging healthy exercise and transportation habits among school-age children. This program has completed projects aimed at education, bicycle and pedestrian facility improvements, incentives, and safety enhancements.

Mill Valley's network of steps, lanes, and paths provides approximately 6 miles of steps and dirt and gravel paths that connect many of Mill Valley's neighborhoods. They serve as an important complement to the City's network of sidewalks, frequently providing residents with more direct routes to key destinations such as Golden Gate Transit bus stops. Those steps, lanes, and paths also provide an alternative to vehicle travel in the event of an emergency. Exhibit 3.11-4 shows the location of Mill Valley's steps, lanes, and paths.

## Transit Network

Mill Valley residents have two different public transit options: bus and ferry. In Marin County, there is local and regional bus service and ferry service to San Francisco. Table 3.11-6 summarizes the number and percent of Mill Valley residents that commute by bus or ferry to work.

**Table 3.11-6: Mill Valley Residents Commuting to Work via Ferry or Bus**

| Geographical Area | Total Work Trips | Percent | | |
|---|---|---|---|---|
| | | Ferry to Work | Bus to Work | Total Ferry/Bus to Work |
| Mill Valley | 6,519 | 3.20 | 5.8 | 9.0 |
| Marin County | 121,068 | 2.20 | 6.1 | 8.3 |
| Bay Area | 3,522,748 | 0.10 | 5.4 | 5.5 |
| California | 16,251,032 | 0.03 | 3.8 | 3.8 |
| United States | 139,488,206 | 0.03 | 2.6 | 2.7 |
| Source: United States Census Bureau, 2012. | | | | |

Mill Valley has a high percentage of transit commuters compared with the State of California and the United States. Having multiple transit options in the region and in a large city like San Francisco likely influences the high public transit commute percentages. Since there are ferry commuting options in Sausalito and Larkspur, Mill Valley's commute population by ferry (3.2 percent) is relatively high compared with the State and the United States. Mill Valley's percentage of bus commuters (5.8 percent) is consistent with Marin County and the Bay Area, and higher than California and the U.S.

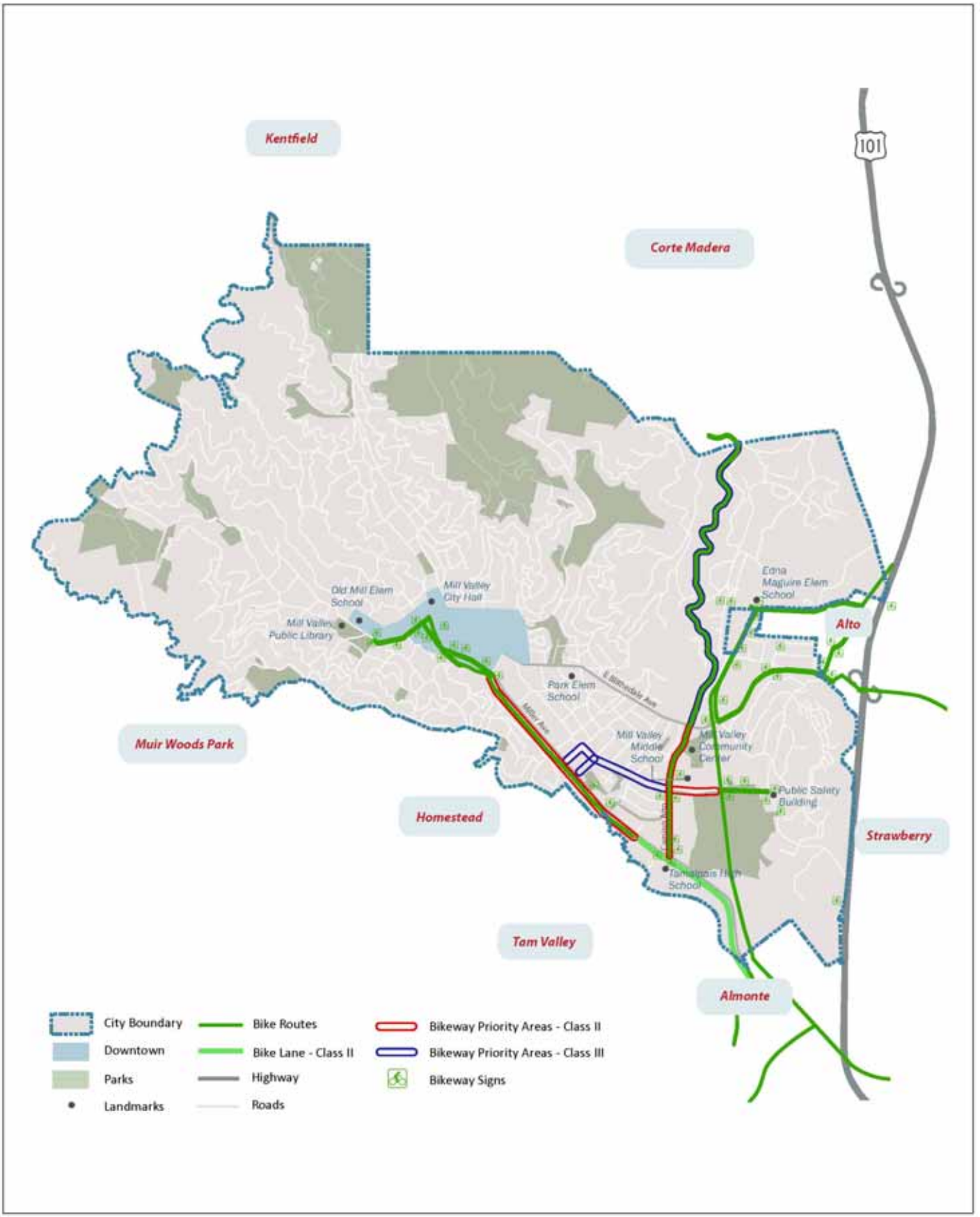


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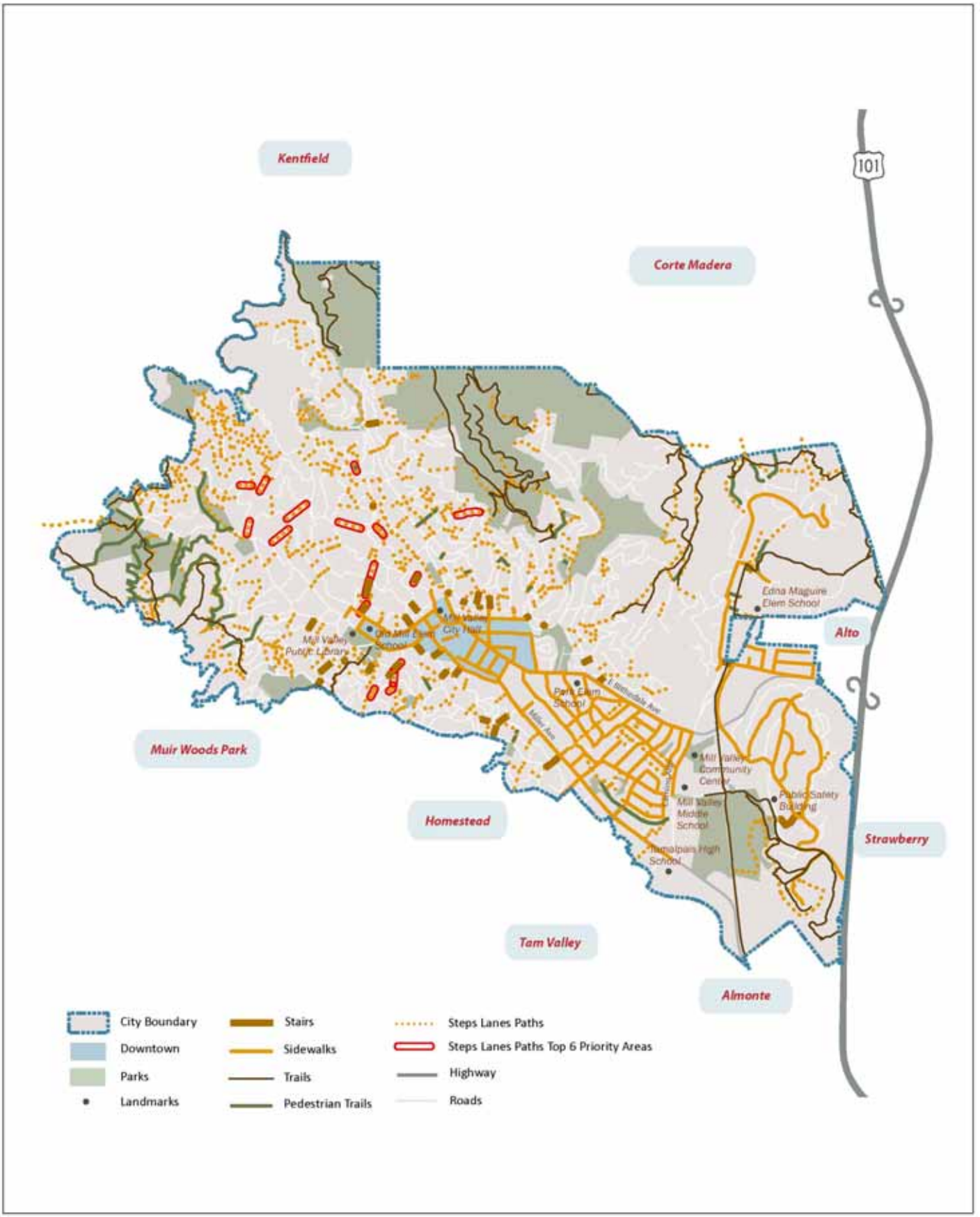
Exhibit 3.11-3
Bicycle Network

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# Exhibit 3.11-4
# Pedestrian Network

Golden Gate Transit and Marin Transit provide transit service in and around Mill Valley. Golden Gate Transit provides bus service throughout Marin County, north to Sonoma County, south to San Francisco and southeast to the East Bay. Golden Gate Transit also provides ferry service out of the Larkspur and Sausalito Ferry Terminals. The ferries connect with the San Francisco Ferry Terminal. Marin Transit provides local bus service in Marin County from Mill Valley to West Marin. Table 3.11-7 summarizes the transit providers, service locations, bus frequencies, and time of weekday and weekend service in Mill Valley. Exhibit 3.11-5 illustrates the bus routes.

**Table 3.11-7: Bus Route Summary**

| Service Provider | Line | Destination(s) | Frequency | Hours of Service | |
|---|---|---|---|---|---|
| | | | | Weekday | Weekend |
| Golden Gate Transit | 4 | San Francisco | 5 to 30 minutes | 5:00 a.m.–8:45 a.m.<br>3:30 p.m.–9:00 p.m. | No service |
| | 17 | San Rafael Transit Center/Marin City | 10 to 60 minutes | 6:15 a.m.–8:15 p.m. | 8:00 a.m.–10:00 p.m. |
| | 19 | Tiburon/Marin City | 30 to 60 minutes | 7:30 a.m.–9:15 p.m. | 8:30 a.m.–9:15 p.m. |
| | 22 | San Rafael Transit Center/ Sausalito Ferry Terminal | 60 minutes | 8:00 a.m.–9:00 p.m. | 8:00 a.m.–9:00 p.m. |
| | 36 | San Rafael/Marin City | 30 minutes | 7:15 a.m.–5:30 p.m. | No service |
| Marin Transit | 61 | Olema/Bolinas/Stinson Beach/Marin City | 4 trips per day | 7:30 a.m.–7:00 p.m. | 9:15 a.m.–9:00 p.m. (March 15 to November 15) |
| | 66 | Muir Woods/Marin City | 20 to 30 minutes | No service | 9:35 a.m.–6:40 p.m. (May 5 to October 28) |
| Source: Golden Gate Transit, 2013: Marin Transit, 2013. | | | | | |

In 2002, the City of Mill Valley appointed a Task Force to determine the feasibility of a citywide shuttle bus system. The Task Force concluded that the most sustainable system would consist of a school bus shuttle connecting neighborhoods to Mill Valley schools. The Task Force also found that additional weekday (during the midday and evening) and weekend service along the City's key arterial roadways and connecting adjacent activity centers would likely have only marginal ridership. The Task Force recommended that the City further engage the Mill Valley School District in exploring a partnership for a school shuttle bus system, developing a more refined shuttle bus plan (consisting of routes, frequencies, vehicle types, etc.), and exploring alternative funding strategies.

## 3.11.3 - Regulatory Framework

### State

#### *California Department of Transportation*

The California Department of Transportation (Caltrans) manages California's highway and freeway system. In the vicinity of Mill Valley, Caltrans owns and maintains US 101 and SR-1, the two primary regional routes providing access to the City.

### Regional

#### *Metropolitan Transportation Commission*

The majority of federal, state, and local financing available for transportation projects is allocated at the regional level by the Metropolitan Transportation Commission (MTC), the transportation planning, coordinating, and financing agency for the Bay Area.

#### *Transportation Authority of Marin*

The Transportation Authority of Marin (TAM) is Marin County's Congestion Management Agency and is responsible for programming funding for all transportation programs in Marin County. It also administers the Transportation Sales Tax Expenditure Plan funded by Measure A, a 20-year, half-cent sales tax. Mill Valley benefits from Measure A-funded projects such as expanded bus service in Marin, completion of the Highway 101 carpool lane through San Rafael, the provision of regional and local roadway improvements such as the Miller Avenue Streetscape Plan, and improvements that enable safer multi-modal access to schools.

The TAM Board includes representatives from each city and town in Marin County, plus five members of the County's Board of Supervisors.

#### *Golden Gate Bridge, Highway and Transportation District*

The Golden Gate Bridge, Highway and Transportation District operates the Golden Gate Bridge and two public transit systems: Golden Gate Transit buses and the Golden Gate Ferry. Several Golden Gate Transit routes connect Mill Valley with regional centers, including destinations within Marin and in San Francisco.

#### *Marin County Transit District*

The Marin County Transit District (MCTD) provides local transit service within Marin County. Although MCTD has responsibility for local services, it does not own any buses or facilities and does not employ its own drivers. Instead, MCTD contracts with other providers, including Golden Gate Transit and Whistlestop Wheels, for local bus and paratransit services.

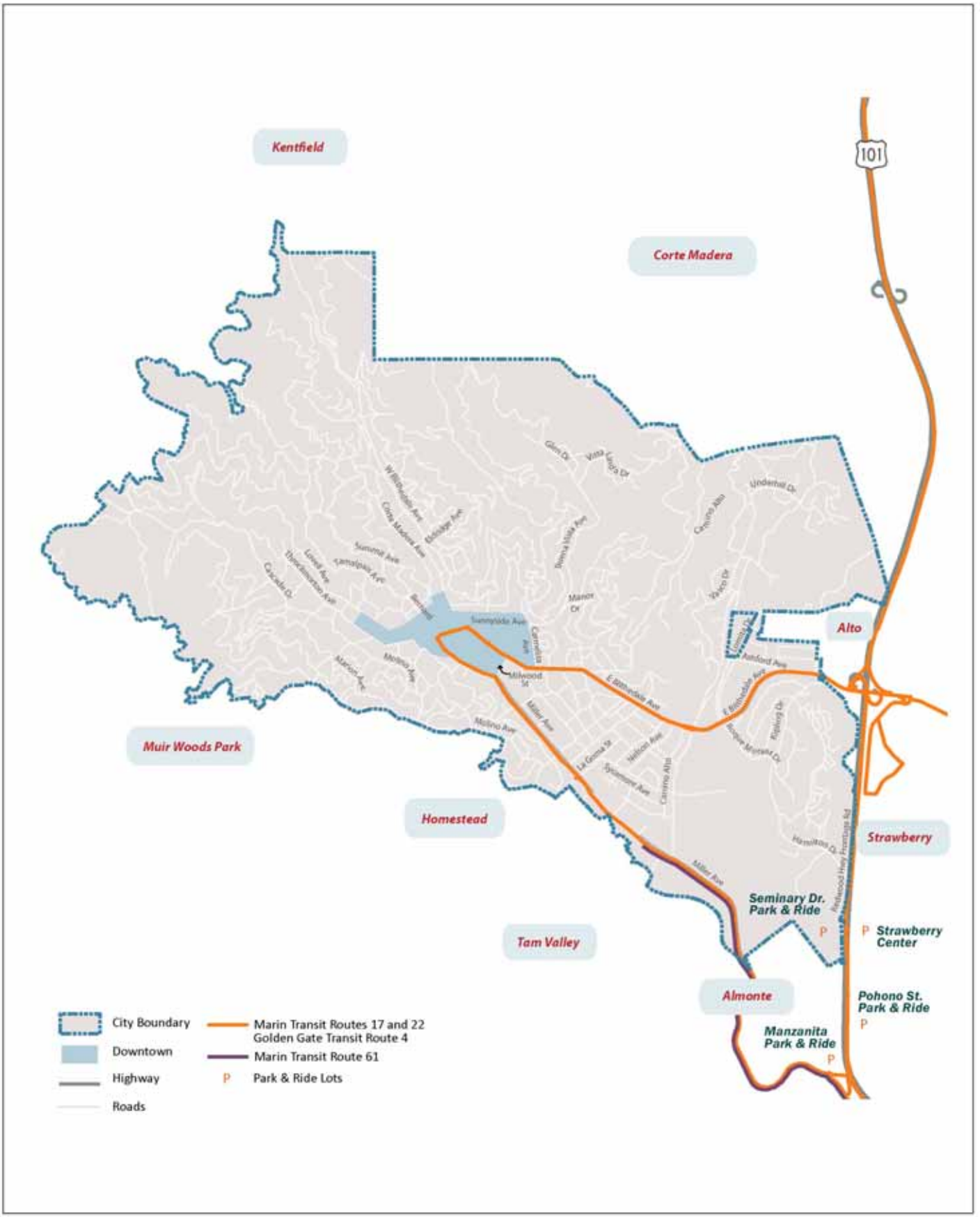


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Exhibit 3.11-5
Transit Network

## Local

### *City of Mill Valley*

*2040 General Plan*

The 2040 General Plan establishes the following goals and policies that are relevant to transportation:

- **Goal M.1 Regional Transportation:** Provide leadership within the region by influencing decisions to advance mobility, safety, and sustainability for all travel modes.
- **Policy M.1 Leadership and Coordination:** Take a leadership role in countywide and regional transportation planning and funding issues that supports local needs and control while actively engaging with federal, state, regional, and county transportation agencies; neighboring cities and towns; transit districts; and local bicycle/pedestrian groups and organizations.
- **Policy M.2 Education and Training:** Ensure that staff, key decision-makers and the community are well-informed of and trained in new and innovative mobility policies and programs.
- **Goal M.2 Sustainable Transportation:** Reduce transportation-related emissions by reducing traffic congestion and vehicle miles traveled while promoting the use of lower emission vehicles and non-automotive modes of travel.
- **Policy M.3 Leadership and Coordination:** Coordinate with cities and regional transportation leaders to identify, develop, and fund alternative fuels and forms of transportation.
- **Policy M.4 Interconnected Transportation Network:** Foster an interconnected transportation system that allows for the safe and efficient transport of goods and people, as well as easy and effective transitions between modes of travel.
- **Policy M.5 Education and Technology:** Encourage sustainable transportation and educate the community on ways to reduce vehicle miles traveled.
- **Goal M.3 Sustainable Transportation:** Create a safe and sustainable transportation network that balances the needs of pedestrians, bicyclists, motorists, and transit users.
- **Policy M.8 Compact Development:** Support new development and redevelopment of existing buildings through regulations and design guidelines that encourage alternative modes of transportation and/or discourage reliance on single-occupancy vehicle use.
- **Policy M.9 Traffic Management:** Maintain a well-functioning roadway network that provides for the safe and efficient flow of vehicular traffic.
- **Policy M.10 Bicycle and Pedestrian Access:** Provide a consistent standard of pedestrian and bicycle access within the roadway network.
- **Policy M.11 Improved Pedestrian and Bicycle Network:** Establish and maintain a well-connected pedestrian and bicycle system that is accessible, easy to navigate, and comfortable for all types of users.
- **Policy M.12 Steps, Lanes & Paths Network.** Maintain, preserve and restore Mill Valley's network of steps, lanes and paths.
- **Policy M.13 Pedestrian and Bicycle Safety, Education and Outreach:** Foster a common understanding among cyclists, pedestrians, and the police about the California Motor Vehicle Code and the rights and duties of all road users.
- **Policy M.14 Improved Transit Network:** Work with Marin Transit to support the continued development of and improvements to safe, efficient, and reliable transit service.

- **Policy M.15 Local Shuttle Service:** Plan and implement a shuttle system that connects local neighborhoods, facilities, services, and adjacent communities.
- **Goal M.4 Parking:** Recognize on- and off-street parking as a finite resource and effectively manage parking demand and capacity for all uses.
- **Policy M.16 Parking Standards:** Establish new parking requirements for vehicles and bicycles and parking programs that enhance local economic vitality and manage parking demand and capacity.
- **Policy M.17 Parking:** Adopt a mix of parking regulations and management strategies that support economic vitality and recognize that public parking is a valuable and limited resource.
- **Policy M.18 Funding:** Seek funding from all possible sources for continued improvements and on-going maintenance of roadways and bicycle, transit and pedestrian facilities.

## 3.11.4 - Methodology

FirstCarbon Solutions evaluated potential impacts on transportation through review of the existing 1989 General Plan and proposed 2040 General Plan, and the transportation modeling performed by Parisi Associates that was wholly contained in the 2040 General Plan.

## 3.11.5 - Thresholds of Significance

According to Appendix G, Environmental Checklist, of the CEQA Guidelines, transportation impacts resulting from the implementation of the proposed project would be considered significant if the project would:

a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?

b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?

c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks? (Refer to Section 7, Effects Found Not To Be Significant)

d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

e) Result in inadequate emergency access?

f) Conflict with adopted policies, plans or programs supporting alternative transportation (e.g. bus turnouts, bicycle racks)?

## 3.11.6 - Project Impacts and Mitigation Measures

### Measures of Effectiveness

**Impact TRANS-1: Implementation of General Plan 2040 would not conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system.**

### *Impact Analysis*

This impact assesses the potential for implementation of General Plan 2040 to conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation, including mass transit and non-motorized travel, and relevant components of the circulation system.

*Traffic Volumes*

In order to plan for the future, vehicular traffic volumes have been forecast for the year 2035 along Mill Valley's arterial roadways and at key intersections. The forecasts were developed assuming vehicle trips generated from projected residential growth consistent with the City's 2009–2014 Housing Element. The 2035 forecasts also assume that there will be some additional increase in "background" traffic volumes associated with new non-residential development, other potential changes in land use, and general traffic increases of one-quarter of one percent (0.25 percent) per year. Altogether, these assumptions equate to about a 6-percent increase in background (i.e., non-residential) traffic volumes over the next 22 years. These assumptions are consistent with the stable-to-low growth in Mill Valley traffic volumes since 2000.

Table 3.11-8 summarizes the estimated 2035 weekday and Saturday daily traffic volumes along arterial roadways. Note that 24-hour traffic volumes are presented for informational purposes; they are not used as the basis for assessing the significance of traffic impacts.

**Table 3.11-8: Existing and Year 2035 24-Hour Traffic Volumes (Weekday and Saturday)**

| Location | Existing | | Year 2035 | | Increase (Percent) |
|---|---|---|---|---|---|
| | Weekday | Saturday | Weekday | Saturday | |
| E. Blithedale Ave. east of Lomita Dr./ Roque Moraes Dr. | 36,000 | 32,500 | 39,000 | 35,200 | 8.2 |
| E. Blithedale Ave. west of Camino Alto | 22,200 | 20,700 | 24,000 | 22,400 | 8.3 |
| E. Blithedale Ave. west of Carmelita Ave. | 14,100 | 13,200 | 15,400 | 14,300 | 8.9 |
| Miller Ave. west of Almonte Blvd. | 19,700 | 17,400 | 21,600 | 19,100 | 9.8 |
| Miller Ave. west of Camino Alto | 26,000 | 23,100 | 28,300 | 25,100 | 8.7 |
| Miller Ave. west of Park Ave. | 12,900 | 11,900 | 14,600 | 13,400 | 12.8 |
| Camino Alto south of E. Blithedale Ave. | 22,300 | 19,900 | 24,000 | 21,500 | 7.8 |
| Source: Parisi Associates, 2013. | | | | | |

By 2035, daily traffic levels are estimated to increase by between 8 and 9 percent along East Blithedale Avenue. Traffic volumes are projected to increase by 9 to 10 percent along the higher-volume segments of Miller Avenue, and by about 13 percent in the lower-volume segments. Camino Alto traffic is estimated to increase by about 8 percent. As noted above, about 6 percent of the total growth is estimated to be general background growth, i.e., not associated with additional residential development.

*Intersection Operations*

The concept of LOS was first developed for highways in the era of rapid expansion in the use and availability of the automobile. LOS is intended to measure traffic congestion based on the relationship between the number of vehicles travelling on a given segment of a roadway or through an intersection during a given period of time and the estimated capacity of the facility based on the number of lanes and other roadway design factors. It was commonly held for many years that expanding the capacity of roadways and intersections (that is, adding more lanes) would keep congestion in check and keep levels of service low. Since the 1950s, level of service has been graded on a scale of “A” through “F”, with “A” indicating fast speeds with no to slight delays and “F” representing capacity conditions with excessive delays. According to the 2010 Highway Capacity Manual (produced by the federal Transportation Research Board), for signalized intersections, LOS C is indicative of conditions when average motorist delays are between 20 and 35 seconds, while LOS D equates to average delays between 35 and 55 seconds. Average delays are calculated by estimating the delays for all motorists using the intersection; actual delays are usually lower for travelers along the main arterial roadway compared to motorists waiting on the cross-street.

Table 3.11-9 presents existing and estimated year 2035 service levels for Mill Valley’s key intersections.

## Table 3.11-9: Existing and Year 2035 Intersection Level of Service

| No. | Intersection | Control | Existing | | | | | | Year 2035 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | AM Peak | | Midday Peak | | PM Peak | | AM Peak | | Midday Peak | | PM Peak | |
| | | | Delay | LOS | Delay | LOS | Delay | LOS | Delay | LOS | Delay | LOS | Delay | LOS |
| 1 | E. Blithedale Ave./Tower Dr./Kipling Dr. | Signal | 28.6 | C | 29.7 | C | 25.2 | C | 36.6 | D | 38.8 | D | 33.8 | D |
| 2 | E. Blithedale Ave./Lomita Dr./Roque Moraes Dr. | Signal | 36.2 | D | 37.3 | D | 34.1 | D | 44.8 | D | 48.0 | D | 40.6 | D |
| 3 | E. Blithedale Ave./Camino Alto | Signal | 48.5 | D | 49.9 | D | 48.4 | D | 56.0 | E | 55.0 | E | 55.7 | E |
| 4 | E. Blithedale Ave./Elm Ave. | Signal | 11.5 | B | 11.5 | B | 11.3 | B | 12.4 | B | 12.2 | B | 12.4 | B |
| 5 | E. Blithedale Ave./Carmelita Ave. | 1-Way Stop | >50 | F | >50 | F | >50 | F | >50 | F | >50 | F | >50 | F |
| 6 | E. Blithedale Ave./Sunnyside Ave. | 2-Way Stop | 22.1 | C | 27.4 | D | 22.3 | C | 25.7 | D | 35.1 | E | 26.4 | C |
| 7 | E. Blithedale Ave./Throckmorton Ave. | 3-Way Stop | 12.7 | B | 14.4 | B | 14.5 | B | 14.7 | B | 16.5 | C | 20.3 | C |
| 8 | Miller Ave./Bernard St./Throckmorton Ave. | 3-Way Stop | 11.5 | B | 10.9 | B | 11.7 | B | 13.0 | B | 11.8 | B | 13.8 | B |
| 9 | Miller Ave./Sunnyside Ave. | 3-Way Stop | 8.9 | A | 10.8 | B | 9.8 | A | 9.6 | A | 11.7 | B | 11.1 | B |
| 10 | Miller Ave./Locust Ave. | 2-Way Stop | 20.8 | C | 31.7 | D | 25.0 | D | 30.7 | D | >50 | F | >50 | F |
| 11 | Miller Ave./La Goma St./Montford Ave. | 4-Way Stop | 30.0 | C | 38.7 | E | 48.4 | E | >50 | F | >50 | F | >50 | F |
| 12 | Miller Ave./Evergreen Ave. | 2-Way Stop | 21.8 | C | 33.6 | D | 35.3 | E | 27.3 | D | 44.9 | E | >50 | F |
| 13 | Miller Ave./Valley Cir./Reed St. | 2-Way Stop | 25.4 | D | 31.9 | D | >50 | F | 38.0 | E | >50 | F | >50 | F |
| 14 | Miller Ave./Camino Alto | Signal | 28.9 | C | 32.6 | C | 32.4 | C | 30.1 | C | 33.5 | C | 35.9 | D |
| 15 | Camino Alto/Sycamore Ave. | Signal | 34.6 | C | 40.4 | D | 33.1 | C | 35.0 | D | 43.3 | D | 33.5 | C |

Source: Parisi Associates, 2013.

The 1989 General Plan includes LOS policies that require the City to maintain LOS C or better at all major signalized intersections, with the exception of the E. Blithedale Avenue/Camino Alto intersection, which should be maintained at LOS D or better. When comparing the level-of-service results between existing and Year 2035 (Table 3.11-9), the following can be concluded:

- E. Blithedale Avenue/Tower Drive-Kipling Drive: This intersection is under the jurisdiction of the County of Marin. It currently operates at LOS C during peak periods and is expected to function at LOS D by year 2035.
- E. Blithedale Avenue/Lomita Drive-Roque Moraes Drive: The intersection currently operates at LOS D during peak periods. By 2035, it is expected to continue functioning at LOS D during peak periods. According to the 1989 General Plan, the intersection should operate at LOS C or better.
- E. Blithedale Avenue/Camino Alto: The intersection currently operates at LOS D during peak periods. By 2035, it is expected to function at LOS E during all peak periods. According to the 1989 General Plan, the intersection should operate at LOS D or better.
- E. Blithedale Avenue/Elm Avenue: The intersection currently operates at LOS B during all peak periods and is expected to continue functioning at LOS B by 2035.
- Miller Avenue/Camino Alto: The intersection currently operates at LOS C during peak periods. By 2035, it is expected to function at LOS D during the early evening peak hour. According to the 1989 General Plan, the intersection should operate at LOS C or better.
- Camino Alto/Sycamore Avenue: The intersection currently operates at LOS D during the afternoon school peak period and is expected to continue functioning at LOS D in this period in year 2035. According to the 1989 General Plan, the intersection should operate at LOS C or better.

In addition to the signalized intersections described above, four unsignalized intersections are expected to continue to operate with high delays for specific traffic movements. Left turns from Carmelita Avenue onto East Blithedale Avenue will continue to average over 50 seconds per vehicle during peak periods, as will left turns from Miller Avenue onto Reed Street and left turns from Locust Avenue onto Miller Avenue. The left-turn volumes are low compared with the arterial roadway through traffic movements. Adding stop signs or traffic signals to control traffic on East Blithedale Avenue or Miller Avenue at these locations would result in a substantial amount of traffic being unnecessarily delayed, and could potentially divert some traffic to neighborhood streets to bypass new traffic controls. Thus, traffic control mitigation is not recommended.

The Miller Avenue/La Goma Street-Montford Avenue intersection, which has four-way stop sign-control for a total of 10 approaching vehicle lanes, currently operates at LOS D during the morning peak hour and LOS E during the afternoon peak periods. The highest delays are experienced by traffic on the Miller Avenue approaches to the intersection. By 2035, this intersection is expected to degrade to LOS F during all peak periods. Installation of a traffic signal would reduce the service level to LOS C or better conditions. However, based on public input received during the

development of the Miller Avenue Streetscape Plan, a traffic signal is not proposed at this location for the near future. The City will continue to monitor the intersection's operation and safety.

In order to just maintain compliance with the 1989 General Plan LOS policies for signalized intersections, immediate capacity enhancements—that is, additional through and turn lanes—would be required at the East Blithedale Avenue/Lomita Drive-Roque Moraes Drive and Miller Avenue/Camino Alto intersections. Taking into account expected traffic growth through 2035, additional capacity enhancements would be required at the East Blithedale Avenue/Camino Alto and Camino Alto/Sycamore Avenue intersections. Furthermore, application of the current LOS policy would require additional through travel lanes along East Blithedale Avenue, and added turning lanes on Lomita Drive, Sycamore Avenue, and Camino Alto. These additional enhancements not only are physically and financially infeasible, but they would dramatically alter the character of Mill Valley.

There are several quirks about LOS that contradict the development and performance of the balanced, multimodal transportation system called for by this General Plan. For example, LOS delay is measured at peak traffic hours. The concept reflects the belief that a street or intersection's design should be based on its most congested hour(s), rather than configured to handle a wide range of travel modes throughout the day. In addition, mitigating LOS by increasing roadway capacity (i.e., street widening) degrades environmental quality by increasing vehicle trips and, consequently, increasing air pollution and greenhouse gas emissions. Finally, the use of unsustainable LOS measures ostensibly favors preserving motor vehicle LOS at the expense of transit, bicycle, and pedestrian movements and safety; and ultimately designing roadways and intersections that could negatively change the City's character.

Consistent with the community's desire to create a safe and sustainable transportation network that balances the needs of all modes of travel (see Goal M.3), this General Plan amends the automobile Level of Service policy originally adopted in the 1989 General Plan to accept LOS E-plus conditions at the East Blithedale Avenue/Camino Alto intersection, and LOS D at all other signalized intersections. Use of LOS E-plus, which would be unique to Mill Valley, would enable average motorist delays of between 55 and 65 seconds but not delays between 65 and 80 seconds (LOS E is defined as average delays between 55 and 80 seconds). These conditions would be deemed acceptable during the morning, after-school, and evening one-hour peak traffic periods on weekdays, as well as during peak periods on weekends. These standards align with the other General Plan mobility goals and policies that focus on the creation of a balanced transportation network, and they support the concept of replacing traditional motor vehicle LOS with a multi-modal assessment of capacity (see Program M.9-10). Multi-modal transportation is a methodology that balances all modes of transportation, including providing facilities for pedestrians and bicycles as well as vehicles.

*Conclusion*

Mill Valley is expected to experience a 7.8- to 12.8-percent increase in traffic volumes on its major arterials between 2013 and 2035. The increased traffic volumes would result in four signalized intersections operating below the 1989 General Plan standard of LOS C at all major signalized intersections other than E. Blithedale Avenue/Camino Alto, which is permitted to operate at LOS D or better.

The 2040 General Plan proposes to amend the minimum LOS values to accept LOS E-plus conditions at the East Blithedale Avenue/Camino Alto intersection, and LOS D at all other signalized intersections in recognition that the improvements necessary to achieve the 1989 General Plan LOS values would have detrimental impacts on public transit, bicycles, pedestrians, and community character. When the proposed 2040 General Plan minimum performance standards are used as the basis for assessing impacts, all signalized intersections would operate at acceptable LOS. Impacts would be less than significant.

***Level of Significance Before Mitigation***
Less than significant impact.

***Mitigation Measures***
No mitigation is necessary.

***Level of Significance After Mitigation***
Less than significant impact.

## Congestion Management Plan

**Impact TRANS-2: Implementation of the 2040 General Plan would not conflict with an applicable congestion management program.**

***Impact Analysis***
Within Mill Valley, US 101 is a Congestion Management Plan roadway. Table 3.11-10 summarizes Mill Valley's contributions to northbound and southbound US 101 at the E. Blithedale Avenue/ Tiburon Boulevard interchange during the AM, Midday, and PM peak hours in 2035. As shown in the table, the maximum contribution would 70 trips peak-hour trips.

**Table 3.11-10: Mill Valley Contributions to US 101 Traffic Volumes (2035)**

| Peak Hour | US 101 Segment | Direction | Mill Valley Trips |
|---|---|---|---|
| AM | North of E. Blithedale Ave./Tiburon Blvd. | North | 70 |
| | | South | 50 |
| | South of E. Blithedale Ave./Tiburon Blvd. | North | 40 |
| | | South | 50 |
| Midday | North of E. Blithedale Ave./Tiburon Blvd. | North | 50 |
| | | South | 50 |
| | South of E. Blithedale Ave./Tiburon Blvd. | North | 40 |
| | | South | 40 |
| PM | North of E. Blithedale Ave./Tiburon Blvd. | North | 50 |
| | | South | 70 |
| | South of E. Blithedale Ave./Tiburon Blvd. | North | 50 |
| | | South | 40 |
| Source: Parisi Associates, 2013. | | | |

A 2012 Transportation Authority of Marin report[1] estimated Year 2035 traffic volumes to be 7,700 during the AM peak hour in the northbound direction north of E. Blithedale Avenue/Tiburon Boulevard interchange and 7,200 during the PM peak hour in southbound direction north of E. Blithedale Avenue/Tiburon Boulevard interchange. Mill Valley's contribution of 70 peak-hour trips would represent less than 1 percent of peak-hour traffic volumes during both peak hours and, therefore, would be considered less than significant.

### *Level of Significance Before Mitigation*
Less than significant impact.

### *Mitigation Measures*
No mitigation is necessary.

### *Level of Significance After Mitigation*
Less than significant impact.

## Roadway Safety

**Impact TRANS-3: Implementation of the 2040 General Plan would not substantially increase hazards due to a design feature or incompatible uses.**

### *Impact Analysis*
The 2040 General Plan acknowledges that Mill Valley is essentially built out and, thus, maintains the land use designations and allowable densities set forth within the 1989 General Plan. As such, the Mobility Element of the 2040 General Plan does not propose any significant changes to the roadway network in terms of new roads, new intersections, additional lanes, or similar improvements. Proposed development and land use activities that occur pursuant to the 2040 General Plan would be reviewed for compliance with state and local requirements for ~~of~~ adequacy of vehicular access points, site distance, and similar issues, as relevant. As such, development and land use activities contemplated by the 2040 General Plan would not substantially increase hazards due to a design feature or incompatible uses. Impacts would be less than significant.

### *Level of Significance Before Mitigation*
Less than significant impact.

### *Mitigation Measures*
No mitigation is necessary.

### *Level of Significance After Mitigation*
Less than significant impact.

[1] "Highway 101 Greenbrae/Twin Cities Corridor Improvements Project Approval/Environmental Document," prepared by Fehr & Peers Transportation Consultants, April 12, 2012.

## Emergency Access

**Impact TRANS-4: Implementation of the 2040 General Plan would not result in inadequate emergency access.**

### *Impact Analysis*

The 2040 General Plan acknowledges that Mill Valley is essentially built out and, thus, maintains the land use designations and allowable densities set forth within the 1989 General Plan. As such, the Mobility Element of the 2040 General Plan does not propose any significant changes to land use patterns or the roadway network such that potential impairments to emergency access would be created (road closures, road narrowing, new roadways with steep grades, etc.). Proposed development and land use activities that occur pursuant to the 2040 General Plan would be reviewed for compliance with state and local requirements for emergency access. For example, buildings 30 feet in height or higher would need to provide a minimum of two access points suitable for fire apparatus. As such, development and land use activities contemplated by the 2040 General Plan would not result in inadequate emergency access. Impacts would be less than significant.

### *Level of Significance Before Mitigation*

Less than significant impact.

### *Mitigation Measures*

No mitigation is necessary.

### *Level of Significance After Mitigation*

Less than significant impact.

## Public Transit, Bicycles, and Pedestrians

**Impact TRANS-5: Implementation of the 2040 General Plan would not conflict with plans, programs, or policies intended to support public transit, bicycles, or pedestrians.**

### *Impact Analysis*

The 2040 General Plan is predicated on two concepts that serve to promote public transit, bicycles, and pedestrian modes of transportation:

- The 2040 General Plan acknowledges that Mill Valley is essentially built out and, thus, maintains the land use designations and allowable densities set forth within the 1989 General Plan. As such, new roadways or significant improvements to existing roadways are not envisioned by the 2040 General Plan.
- The 2040 General Plan proposes to amend the minimum LOS values to accept LOS E-plus conditions at the E. Blithedale Avenue/Camino Alto intersection, and LOS D at all other signalized intersections in recognition that the improvements necessary to achieve the 1989 General Plan LOS values would have detrimental impacts on public transit, bicycles, pedestrians, and community character.

These concepts are supporting by Goal M.1 through Goal M.3 and Policy M.1 through Policy M.15, which establish objectives associated with improving mobility and safety for public transit, bicycles, and pedestrians in order to reduce traffic congestion, vehicle miles traveled, and tailpipe emissions. Specifically, Policies M.10, M.11, M.12, and M.14 promote call for continued improvements to bicycle and pedestrian facilities to make these modes more convenient and safer for users, and Policies M.14 and M.15, which set forth objectives associated with improving transit service, including the establishment of a local shuttle system.

Thus, the 2040 General Plan sets forth plans, policies, and programs intended to further the development of alternative transportation within Mill Valley. Impacts would be less than significant.

### *Level of Significance Before Mitigation*
Less than significant impact.

### *Mitigation Measures*
No mitigation is necessary.

### *Level of Significance After Mitigation*
Less than significant impact.

# SECTION 4: CUMULATIVE EFFECTS

## 4.1 - Introduction

CEQA Guidelines Section 15130 requires the consideration of cumulative impacts within an EIR when a project's incremental effects are cumulatively considerable. Cumulatively considerable means that ". . . the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects." In identifying projects that may contribute to cumulative impacts, the CEQA Guidelines allow the use of a list of past, present, and reasonably anticipated future projects, producing related or cumulative impacts, including those which are outside of the control of the lead agency.

In accordance with CEQA Guidelines Section 15130(b), ". . . the discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, the discussion need not provide as great [a level of] detail as is provided for the effects attributable to the project alone." The discussion should be guided by standards of practicality and reasonableness, and it should focus on the cumulative impact to which the identified other projects contribute rather than on the attributes of other projects that do not contribute to the cumulative impact.

The proposed 2040 General Plan's cumulative impacts were considered in conjunction with the One Bay Area 2040 Projections for Marin County. This geographical area was selected because the Planning Area is wholly contained in Marin County. Table 4-1 provides a summary of projections.

**Table 4-1: Marin County 2040 Projections**

| Jurisdiction | Employment | Population | Households | Dwelling Units |
|---|---|---|---|---|
| Marin County | 129,000 | 285,000 | 112,000 | 119,000 |
| Source: Association of Bay Area Governments, Metropolitan Transportation Commission, 2013. | | | | |

## 4.2 - Cumulative Impact Analysis

The cumulative impact analysis below is guided by the requirements of CEQA Guidelines Section 15130. Key principles established by this section include:

- A cumulative impact only occurs from impacts caused by the proposed project and other projects. An EIR should not discuss impacts that do not result from the proposed project.
- When the combined cumulative impact from the increment associated with the proposed project and other projects is not significant, an EIR need only briefly explain why the impact is not significant; detailed explanation is not required.
- An EIR may determine that a project's contribution to a cumulative effect impact would be rendered less than cumulatively considerable if a project is required to implement or fund its fair share of mitigation intended to alleviate the cumulative impact.

- The cumulative impact analysis that follows relies on these principles as the basis for determining the significance of the proposed 2040 General Plan's cumulative contribution to various impacts.

## 4.3 - Cumulative Impact Analysis

### 4.3.1 - Aesthetics, Light, and Glare

The geographic scope of the cumulative aesthetics, light, and glare analysis is the Planning Area and nearby areas within view of the Planning Area. These areas are within view of the project and, therefore, are most likely to experience changes in visual character or experience light and glare impacts.

Development and land use activities within both the Planning Area and nearby areas have the potential to result in changes to scenic vistas and visual character. Both the 2040 General Plan and other planning documents (Zoning Ordinance, Design Guidelines, etc.) establish policies to guide future development and land use activities in a manner that protects significant visual resources, ensures land use compatibility, and facilitates well-designed projects. Therefore, development and land use activities contemplated by the 2040 General Plan and other land use plans would not have cumulatively considerable aesthetic impacts.

Development and land use activities within both the Planning Area and nearby areas also have the potential to introduce new sources of light and glare. Both the 2040 General Plan and other long-term planning documents establish policies to promote appropriate urban growth, reduce energy usage (e.g., lighting), and ensure land use compatibility, which collectively would serve to minimize adverse impacts associated with light and glare. Therefore, development and land use activities contemplated by the 2040 General Plan and other land use plans would not have cumulatively considerable light and glare impacts.

### 4.3.2 - Air Quality and Greenhouse Gas Emissions

The geographic scope of the cumulative air quality analysis is the San Francisco Bar Area Air Basin. Air pollution is regarded as a regional issue; therefore, this area would be the area most likely to be impacted by project emissions.

Development and land use activities within the Planning Area and Marin County would result air emissions from construction and operational activities. Air emissions are regulated at the regional level by the Bay Area Air Quality Management District, which uses ABAG population and employment projections as the basis for its air quality management planning. Growth in various jurisdictions within the Air Basin may or may not be within projected levels. Growth contemplated by the 2040 General Plan would be within ABAG population and employment projections for the City of Mill Valley; therefore, no conflicts would occur with regional clean air planning assumptions. Additionally, the 2040 General Plan would not alter existing land use designations within Mill Valley and, therefore, would not increase exposure to toxic air contaminants or objectionable odors beyond existing levels. Finally, the 2040 General Plan contains a Climate Action Element, which serves as

Mill Valley's Climate Action Plan, and seeks to reduce greenhouse gas emissions to within adopted targets. As such, the 2040 General Plan would not have a cumulatively considerable contribution to air quality or greenhouse gas emissions impacts.

### 4.3.3 - Biological Resources

The geographic scope of the cumulative agricultural resources analysis is the Planning Area and areas within 2 miles of the Planning Area. Generally, biological resource impacts tend to be localized; therefore, a 2-mile buffer around the Planning Area provides for a conservative evaluation of cumulative impacts.

Development and land use activities within both the Planning Area and nearby areas have the potential to result in impacts to special-status plant and animal species, sensitive natural habitat, federally protected wetlands, and wildlife movement. The 2040 General Plan, other long-term planning documents, and regulatory agency guidance establish policies that require mitigation for impacts on potential biological resources (e.g., focused surveys and resource replacement ratios). Furthermore, these documents generally emphasize permanently protecting high-value biological resources as open space and restoration of degraded areas. Therefore, development and land use activities contemplated by the 2040 General Plan and other land use plans would not have cumulatively considerable biological resource impacts.

### 4.3.4 - Cultural Resources

The geographic scope of the cumulative cultural resources analysis is the Planning Area and areas within 1 mile of the Planning Area. Generally, cultural resource impacts tend to be localized; therefore, a 1-mile buffer around the Planning Area provides for a conservative evaluation of cumulative impacts.

Development and land use activities within both the Planning Area and nearby areas have the potential to result in impacts to documented and undiscovered cultural resources such as artifacts, fossils, and burial sites. The 2040 General Plan, other long-term planning documents, and regulatory agency guidance establish policies that require mitigation for impacts on potential cultural resources (e.g., evaluation requirements and inadvertent discovery procedures). Additionally, the 2040 General Plan calls for preserving and protecting potential and listed historic and archaeological resources, working with the Mill Valley Historical Society to develop a comprehensive inventory of potential historic and archaeological resources, protecting the value of historic and cultural resources, and promoting education about historic preservation. Therefore, development and land use activities contemplated by the 2040 General Plan and other land use plans would not have cumulatively considerable cultural resource impacts.

### 4.3.5 - Geology, Soils, and Seismicity

The geographic scope of the cumulative geology, soils, and seismicity analysis is the Planning Area and areas within 1 mile of the Planning Area. Generally, geologic, soil, and seismic impacts tend to be localized; therefore, a 1-mile buffer around the Planning Area provides for a conservative evaluation of cumulative impacts.

Development and land use activities within both the Planning Area and nearby areas have the potential to result in impacts to seismic hazards (e.g., fault rupture, ground shaking, liquefaction, landsliding), erosion, unstable soils and geologic units, and expansive soils. The 2040 General Plan, other long-term planning documents, and regulatory agency guidance establish policies that call for emergency preparedness, identification of seismic hazards, and measures to reduce injury and damage from seismic hazards. Therefore, development and land use activities contemplated by the 2040 General Plan and other land use plans would not have cumulatively considerable geologic, soil, and seismic impacts.

## 4.3.6 - Hazards and Hazardous Materials

The geographic scope of the cumulative hazards and hazardous materials analysis is the Planning Area and areas within 2 miles of the Planning Area. Generally, hazards impacts tend to be localized; therefore, a 2-mile buffer around the Planning Area provides for a conservative evaluation of cumulative impacts.

Development and land use activities within both the Planning Area and nearby areas have the potential to result in impacts associated with hazardous materials usage, risk of upset, exposure of schools, emergency evacuation, and wildfires. The 2040 General Plan, other long-term planning documents, and regulatory agency guidance establish policies that require compliance with hazardous materials handling regulations, inspection and reporting requirements, first responder training, identification of evacuation and response procedures, and wildfire protection measures. Furthermore, the 2040 General Plan sets for goals and policies that call for emergency preparedness, identification of potential hazards, maintaining adequate emergency response capabilities, ensuring that critical infrastructure is available during response to emergencies, planning for disasters, maintaining emergency response and evacuation routes, and implementing measures to reduce injury and damage from hazards. Therefore, development and land use activities contemplated by the 2040 General Plan and other land use plans would not have cumulatively considerable hazard and hazardous material impacts.

## 4.3.7 - Hydrology and Water Quality

The geographic scope of the cumulative hydrology and water quality analysis consists of the Richardson Bay watershed, which is tributary to the Planning Area. Hydrologic and water quality issues have the potential to affect downstream areas; therefore, using the Planning Area watershed provides for a conservative evaluation of cumulative impacts.

Development and land use activities within both watersheds have the potential to create adverse impacts associated with water quality, groundwater, flooding, and drainage. The 2040 General Plan, other long-term planning documents, and regulatory agency guidance establish policies that call for improving water quality, and increasing the use of pervious paving, rainwater storage, and greywater systems to improve water quality. Therefore, development and land use activities contemplated by the 2040 General Plan and other land use plans would not have cumulatively considerable hydrologic and water quality impacts.

## 4.3.8 - Land Use

The geographic scope of the cumulative land use analysis is the Planning Area and jurisdictions that border the Planning Area. Land use decisions are made at the jurisdictional level; therefore, using jurisdictions is an appropriate geographic scope.

Development and land use activities within the Planning Area and neighboring jurisdictions have the potential to create adverse impacts associated with division of an established community and inconsistency with adopted land use plans. The 2040 General Plan, other long-term planning documents, and regulatory agency guidance establish policies that require the evaluation of land use compatibility and compliance with applicable requirements. It should be noted that development and land use activities are required to be consistent with the General Plan and Zoning Ordinance. Therefore, development and land use activities contemplated by the 2040 General Plan and other land use plans would not have cumulatively considerable land use impacts.

## 4.3.9 - Noise

The geographic scope of the cumulative noise analysis is the project vicinity, including surrounding sensitive receptors. Noise impacts tend to be localized; therefore, the area near the project site would be the area most affected by project activities.

Development and land use activities within the Planning Area and neighboring jurisdictions have the potential to create adverse impacts associated with noise level increases that expose receptors to unacceptable ambient noise levels. As discussed in Section 3.9, Noise, the upper limit for "normally acceptable" exterior noise levels at single-family residential uses is 60 dBA $L_{dn}$ and the upper limit for "conditionally acceptable" exterior noise levels are 75 dBA $L_{dn}$. Roadway noise contours associated with every major arterial roadways are currently at or exceed 60 dBA $L_{dn}$. Roadway noise is a function of the high traffic volumes experienced along roadways such as E. Blithedale Avenue (36,000 daily trips), Camino Alto (22,300 daily trips), and Miller Avenue (26,000 daily trips) under existing conditions. Because of the land use and circulation patterns within Mill Valley, there is no feasible way to lower traffic volumes on these roadways such that "normally acceptable" exterior noise level standard of 60 dBA $L_{dn}$ can be achieved.

In recognition of this, 2040 General Plan Policy N-1 establishes that residential development sites exposed to noise levels exceeding 60 $L_{dn}$ shall be analyzed, following protocols in the most recent adopted version of the California Building Code. Policy N-1 also establishes an interior noise limit of 45 $L_{dn}$, which provides an unequivocal performance standard that must be met by all new residential projects. This latter requirement reflects that building materials and techniques (concrete, insulation, sound-rated door and window assemblies, etc.) can yield noise attenuation rates of 25 dB or more between exterior and interior noise levels and, thus, provides a very effective method of reducing noise in environments with high ambient noise levels. However, noise levels would exceed "normally acceptable" exterior noise level standard of 60 dBA $L_{dn}$ and, there is no feasible mitigation to reduce exterior noise levels to acceptable levels. As such, development and land use activities contemplated by the 2040 General Plan would contribute to cumulatively significant noise impacts.

## 4.3.10 - Public Services, Recreation, and Utilities

The geographic scope of the cumulative public services and recreation analysis is the Planning Area and the service areas of the public service providers that serve the Planning Area: Mill Valley Fire Department, Southern Marin Emergency Medical Paramedic System, Mill Valley Police Department, Mill Valley Elementary School District, Tamalpais Union High School District, Marin Municipal Water District, Sewerage Agency of Southern Marin, Marin County Flood Control and Water Conservation District (Zone 3), Mill Valley Refuse Service, Marin Energy Authority, and Pacific Gas and Electric Company.

Development and land use activities within the Planning Area and neighboring jurisdictions have the potential to increase demands for public services including fire protection, emergency medical response, police protection, schools, parks, libraries, and recreational facilities. The 2040 General Plan, other long-term planning documents, and regulatory agency guidance establish policies that identify minimum service levels, require payment of development fees and installation of necessary facilities, and set forth mechanisms to ensure the continued maintenance of services and facilities. Collectively, these measures would ensure that public services and facilities provide adequate service delivery for existing and future development and land use activities. Therefore, development and land use activities contemplated by the 2040 General Plan and other land use plans would not have cumulatively considerable public service and recreation impacts.

Development and land use activities within the Planning Area and neighboring jurisdictions have the potential to increase demands for utilities, including water, wastewater, storm drainage, solid waste, and energy. The 2040 General Plan, other long-term planning documents, and regulatory agency guidance establish policies that promote the wise and sustainable use of resources, require the installation of necessary infrastructure, and encourage conservation. Collectively, these measures would ensure that utility systems have adequate capacity to serve existing and future development and land use activities. Therefore, development and land use activities contemplated by the 2040 General Plan and other land use plans would not have cumulatively considerable utility system impacts.

## 4.3.11 - Transportation

The geographic scope of the cumulative transportation analysis is the Planning Area and Central and Southern Marin County (Corte Madera, San Rafael, Larkspur, Tiburon, and Sausalito).

Development and land use activities within the Planning Area and neighboring jurisdictions would increase for various modes of transportation. The 2040 General Plan and other long-term planning documents identify necessary transportation improvements and set forth policies that identify mechanisms to implement the improvements. Collectively, these measures would ensure that adequate transportation infrastructure and services are available for existing and future development and land use activities. Therefore, development and land use activities contemplated by the 2040 General Plan and other land use plans would not have cumulatively considerable transportation impacts.

# SECTION 5: ALTERNATIVES TO THE PROPOSED PROJECT

## 5.1 - Introduction

In accordance with CEQA Guidelines Section 15126.6, this Environmental Impact Report (EIR) contains a comparative impact assessment of alternatives to the proposed project. The primary purpose of this section is to provide decision makers and the general public with a reasonable number of feasible project alternatives that could attain most of the basic project objectives, while avoiding or reducing any of the project's significant adverse environmental effects. Important considerations for these alternatives analyses are noted below (as stated in CEQA Guidelines Section 15126.6).

- An EIR need not consider every conceivable alternative to a project;
- An EIR should identify alternatives that were considered by the lead agency, but rejected as infeasible during the scoping process;
- Reasons for rejecting an alternative include:
  - Failure to meet most of the basic project objectives;
  - Infeasibility; or
  - Inability to avoid significant environmental effects.

### 5.1.1 - Significant Unavoidable Impacts

The proposed project would result in the following significant unavoidable impacts:

- **Exposure of Persons to Excessive Noise:** Development and land use activities contemplated by the City of Mill Valley 2040 General Plan may expose residential land uses to excessive exterior noise as a result of additional vehicle trips on local roadways. Although the General Plan contains policies requiring new residential uses to comply with California Building Standards Code requirements for interior noise attenuation, there is no feasible mitigation to reduce exterior noise levels at new residential development sites along major roadways to "normally acceptable" levels due to existing noise levels; therefore, the residual significance of this impact is significant and unavoidable.
- **Permanent Increase in Ambient Noise Levels:** Development and land use activities contemplated by the City of Mill Valley 2040 General Plan may expose residential land uses adjacent to major roadways to a permanent increase in ambient noise levels as a result of additional vehicle trips on local roadways. Although the General Plan contains policies requiring new residential uses to comply with California Building Standards Code requirements for noise attenuation, it would not fully reduce the impact to a level of less than significant.

### 5.1.2 - Alternatives to the Proposed Project

The three alternatives to the proposed project analyzed in this section are as follows:

- **No Project Alternative/1989 General Plan:** Under this alternative, the 1989 General Plan would remain as the comprehensive planning document for the City of Mill Valley. The 1989 General Plan requires higher level of service (LOS) values for roadway facilities compared with the 2040 General Plan and does not contain a Climate Action Element. However, there is no significant difference in residential or commercial buildout potential between the two plans.
- **Increased Population Alternative:** Under this alternative, policies would be added to the 2009–2014 Housing Element and Mill Valley 2040 General Plan ~~to incentivize the development of second units and senior housing units~~ in order to accommodate increased ~~anticipated~~ population growth resulting ~~that results~~ from demographic shifts in Mill Valley.
- **Mobility Improvement Alternative:** Under this alternative, the 2040 General Plan Mobility Element would be amended to identify various mobility improvements that would allow higher LOS standards to be achieved at three major intersections.

Three alternatives to the proposed project are analyzed in the following section. These analyses compare the proposed project and each individual project alternative. In several cases, the description of the impact may be the same under each alternative when compared with the CEQA Thresholds of Significance (i.e., both the project and the alternative would result in a less than significant impact). The actual degree of impact may be slightly different between the proposed project and each alternative, and this relative difference is the basis for a conclusion of greater or lesser impacts.

## 5.2 - Project Objectives

As stated in Section 2, Project Description, the objectives of the proposed project are to:

1. Provide a user-friendly General Plan that guides policy making and actions that are consistent with identified community values and Mill Valley's small-town character.
2. Provide a comprehensive update of the City of Mill Valley in accordance with State law.
3. Revise and update the General Plan map, policies, and text to reflect changes that have occurred since the plan was last comprehensively updated.
4. Maintain the existing land use pattern of Mill Valley in a manner that respects the existing mostly built-out character of the community, but also allowing development where appropriate.
5. Recognize lower Level of Service values at select locations in order to avoid requiring improvements that may adversely affect other modes of transportation or negatively affect the City's small-town character.

6. Use the General Plan as a vehicle to implement a Climate Action Plan that will guide the City of Mill Valley in meeting its greenhouse gas reduction targets.
7. Achieve a certified Housing Element that meets state and regional housing requirements without diminishing local control or Mill Valley's small-town character.

## 5.3 - Alternative 1 – No Project/1989 General Plan Alternative

Under the No Project/1989 General Plan Alternative, the 2040 General Plan would not be implemented and the City of Mill Valley would continue to use the 1989 General Plan as its comprehensive land use planning document for the foreseeable future.

As discussed in Section 2, Project Description, both the 1989 General Plan and the 2040 General Plan set forth similar land use patterns and allowable densities. As such, there is no significant difference in buildout potential between the two plans.

The key difference between the two plans is that 1989 General Plan requires higher levels of service (LOS) be maintained at signalized intersections in Mill Valley. The 1989 General Plan requires LOS C at all signalized intersections, with the exception of E. Blithedale Avenue/Camino Alto where LOS D is permitted. In contrast, the 2040 General Plan allows LOS D at all signalized intersections, with the exception of E. Blithedale Avenue/Camino Alto where LOS E-plus is permitted. Because Year 2035 intersection operations at five signalized intersections in Mill Valley would be below the 1989 General Plan LOS standards under one or more peak hours, traffic improvements such as additional through and turn lanes would be necessary at these locations. Such improvements may require right-of-way acquisition from adjoining properties.

Another difference between the two plans is that the 1989 General Plan does not contain a Climate Action Element. Although such an element is elective, the City of Mill Valley would not realize the benefit of having its greenhouse gas reduction strategies incorporated into its comprehensive land use planning document.

### 5.3.1 - Impact Analysis

#### Aesthetics, Light, and Glare

The No Project/1989 General Plan Alternative sets forth similar land use patterns and allowable densities as the proposed 2040 General Plan and, there is no significant difference in buildout potential between the two plans. As such, there would not be any significant differences in terms of aesthetics, light, or glare impacts; therefore, this alternative would yield the same less than significant conclusions as the proposed 2040 General Plan. Thus, this alternative would have aesthetics, light, and glare impacts similar to the proposed 2040 General Plan.

#### Air Quality and Greenhouse Gas Emissions

The No Project/1989 General Plan Alternative sets forth land use patterns and allowable densities similar to the proposed 2040 General Plan. As such, there is no significant difference in buildout potential between the two plans and, thus, no significant difference in emissions of criteria

pollutants or greenhouse gases. However, the 1989 General Plan does not contain a Climate Action Element, nor does it address multi-modal "Complete Streets" policies or programs; therefore, the City of Mill Valley would not realize the benefit of having its greenhouse gas reduction strategies incorporated into its comprehensive land use planning document. From an air quality and greenhouse gas emissions perspective, this would be considered less beneficial. Thus, this alternative would have greater air quality and greenhouse gas emissions impacts than the proposed 2040 General Plan.

### Biological Resources

The No Project/1989 General Plan Alternative sets forth land use patterns and allowable densities similar to the proposed 2040 General Plan. As such, there is no significant difference in buildout potential between the two plans, and there would not be any significant differences in terms of biological impacts; therefore, this alternative would yield the same less than significant conclusions as the proposed 2040 General Plan. Thus, this alternative would have biological resources impacts similar to the proposed 2040 General Plan.

### Cultural Resources

The No Project/1989 General Plan Alternative sets forth land use patterns and allowable densities similar to the proposed 2040 General Plan. As such, there is no significant difference in buildout potential between the two plans, and there would not be any significant differences in terms of cultural impacts; therefore, this alternative would yield the same less than significant conclusions as the proposed 2040 General Plan. Thus, this alternative would have cultural resources impacts similar to the proposed 2040 General Plan.

### Geology, Soils, and Seismicity

The No Project/1989 General Plan Alternative sets forth land use patterns and allowable densities similar to the proposed 2040 General Plan. As such, there is no significant difference in buildout potential between the two plans, and there would not be any significant differences in terms of geologic, soil, or seismic impacts; therefore, this alternative would yield the same less than significant conclusions as the proposed 2040 General Plan. Thus, this alternative would have geology, soils, and seismicity impacts similar to the proposed 2040 General Plan.

### Hazards and Hazardous Materials

The No Project/1989 General Plan Alternative sets forth land use patterns and allowable densities similar to the proposed 2040 General Plan. As such, there is no significant difference in buildout potential between the two plans, and there would not be any significant differences in terms of hazards impacts; therefore, this alternative would yield the same less than significant conclusions as the proposed 2040 General Plan. Thus, this alternative would have hazards and hazardous materials impacts similar to the proposed 2040 General Plan.

### Hydrology and Water Quality

The No Project/1989 General Plan Alternative sets forth land use patterns and allowable densities similar to the proposed 2040 General Plan. As such, there is no significant difference in buildout

potential between the two plans, and there would not be any significant differences in terms of hydrologic or water quality impacts; therefore, this alternative would yield the same less than significant conclusions as the proposed 2040 General Plan. Thus, this alternative would have hydrology and water quality impacts similar to the proposed 2040 General Plan.

### Land Use

The No Project/1989 General Plan Alternative sets forth land use patterns and allowable densities similar to the proposed 2040 General Plan. As such, there is no significant difference in buildout potential between the two plans, and there would not be any significant differences in terms of land use impacts; this alternative would yield the same less than significant conclusions as the proposed 2040 General Plan. Thus, this alternative would have land use impacts similar to the proposed 2040 General Plan.

### Noise

The No Project/1989 General Plan Alternative sets forth land use patterns and allowable densities similar to the proposed 2040 General Plan. As such, there is no significant difference in buildout potential between the two plans, and there would not be any significant differences in terms of noise impacts; therefore, this alternative would yield the same significant unavoidable conclusions as the proposed 2040 General Plan. Thus, this alternative would have noise impacts similar to the proposed 2040 General Plan.

### Public Services, Recreation, and Utilities

The No Project/1989 General Plan Alternative sets forth land use patterns and allowable densities similar to the proposed 2040 General Plan. As such, there is no significant difference in buildout potential between the two plans, and there would not be any significant differences in terms of public service, recreation, or utility impacts; therefore, this alternative would yield the same less than significant conclusions as the proposed 2040 General Plan. Thus, this alternative would have public services, recreation, and utilities impacts similar to the proposed 2040 General Plan.

### Transportation

The No Project/1989 General Plan Alternative establishes higher LOS standards at signalized intersections in Mill Valley than the 2040 General Plan. The 1989 General Plan requires LOS C at all signalized intersections, with the exception of E. Blithedale Avenue/Camino Alto where LOS D is permitted. In contrast, the 2040 General Plan allows LOS D at all signalized intersections, with the exception of E. Blithedale Avenue/Camino Alto where LOS E-plus is permitted. Because Year 2035 intersection operations at five signalized intersections in Mill Valley would be below the 1989 General Plan LOS standards under one or more peak hours, traffic improvements such as additional through and turn lanes would be necessary at these locations. Such improvements may require right-of-way acquisition from adjoining properties, which may render these improvements infeasible from an economic or political perspective. Nonetheless, higher LOS values are regarded as more desirable from a transportation perspective, as motorists experience less delay. Finally, the 1989 General Plan is silent regarding the issue of “Complete Streets,” although this does not outweigh its

higher LOS values. Thus, this alternative would have less impact to transportation than the proposed 2040 General Plan.

### 5.3.2 - Conclusion

The No Project/1989 General Plan Alternative lessens the severity of transportation impacts relative to the 2040 General Plan, but it increases the severity of air quality and greenhouse gas impacts; for all other topical areas, impacts would be similar. The severity of transportation impacts would be lessened because higher LOS standards would be required to be achieved, while the severity of air quality and greenhouse gas impacts would be increased because a Climate Action Element would not be adopted. <u>However, the absence of a Climate Action Element would not be expected to result in the disclosure of a new significant impact because it would be expected that the City would be able to demonstrate greenhouse gas reductions via other methods.</u>

The No Project/1989 General Plan Alternative would advance two of the project objectives to the same degree as the 2040 General Plan (Objectives No. 1 and No. 4) but does not advance the other four objectives (Objective Nos. 2, 3, 5, and 6). Moreover, this alternative would be inconsistent with state law, which calls for cities and counties to undertake periodic updates of their General Plans on a regular basis.

## 5.4 - Alternative 2 – Increased Population Growth Alternative

The Increased Population Growth Alternative is based upon economic and demographic projections for Mill Valley that are anticipated to result in higher population growth than what is reflected in data from the U.S. Census and the Association of Bay Area Governments (ABAG). Both the 2040 General Plan and the 2009–2014 Housing Element identify an increasing percentage of single-person households (primarily seniors) and a recent influx of families with school-age children ~~(estimated to be 200 households)~~ as significant contributors to the City's demographic mix through 2040. However, the Increased Population Growth Alternative anticipates that older, single-occupant households will continue to turn over to younger households with school-aged children over the long term and at a greater rate, thereby yielding a significant net increase in population growth—as much as 12 percent (or more than 1,500 persons) over the next 30 years—that is more than the regional projections for Mill Valley.

In recognition of these trends, this alternative would entail adding policies to the 2009–2014 Housing Element <u>and Mill Valley 2040 General Plan</u> to ~~facilitate the development of second units and senior housing units closer to services and transit within the city limits. Incentives would take the form of density bonuses and more flexible development standards (setbacks, height limits, parking, etc.), and other measures that would promote the development of 1- and 2-person dwelling units~~ <u>address potential impacts to the existing transportation network, housing demand and public services from the anticipated demographic shift</u>. This alternative differs from the 2040 General Plan and the 2009–2014 Housing Element in that the incentives are intended to ~~facilitate the development of new dwelling unit types and facilities for seniors as soon as possible in order to~~ accommodate the long-term anticipated growth pressures from younger families with school-aged children seeking to locate in Mill Valley over the life of the General Plan.

The Increased Population Growth Alternative would maintain all other aspects of the proposed 2040 General Plan, such as the inclusion of a Climate Action Plan and amending the LOS standards.

## 5.4.1 - Impact Analysis

### Aesthetics, Light, and Glare

The Increased Population Growth Alternative sets forth land use patterns and allowable densities similar to the proposed 2040 General Plan, but establishes incentives to develop second units and senior housing units within the city limits to accommodate more population that forecasted by ABAG. Because the dwelling units contemplated by this alternative would be distributed among existing urbanized areas of Mill Valley, aesthetic impacts would be expected to be minimal. As such, there would not be any significant differences in terms of aesthetics impacts; therefore, this alternative would yield the same less than significant conclusions as the proposed 2040 General Plan. Thus, this alternative would have aesthetics, light, and glare impacts similar to the proposed 2040 General Plan.

### Air Quality and Greenhouse Gas Emissions

The Increased Population Growth Alternative sets forth land use patterns and allowable densities similar to the proposed 2040 General Plan, but establishes incentives to develop second units and senior housing units within the city limits to accommodate more population that forecasted by ABAG. Although these dwelling units would be expected to be tenanted by residents who may not have cars or drive relatively short distances, there would nonetheless be an increase in vehicle miles traveled and associated tailpipe emissions. This alternative includes a Climate Action Element; therefore, the City of Mill Valley would realize the benefit of having its greenhouse gas reduction strategies incorporated into its comprehensive land use planning document. From an air quality and greenhouse gas emissions perspective, the increase in tailpipe emissions would slightly outweigh the benefits associated with the Climate Action Element. Thus, this alternative would have a greater impact to air quality and greenhouse gas emissions than the proposed 2040 General Plan.

### Biological Resources

The Increased Population Growth Alternative sets forth land use patterns and allowable densities similar to the proposed 2040 General Plan, but establishes incentives to develop second units and senior housing units within the city limits to accommodate more population that forecasted by ABAG. Because the dwelling units contemplated by this alternative would be distributed among existing urbanized areas of Mill Valley, biological impacts would be expected to be minimal. As such, there would not be any significant differences in terms of biological impacts; therefore, this alternative would yield the same less than significant conclusions as the proposed 2040 General Plan. Thus, this alternative would have biological resources impacts similar to the proposed 2040 General Plan.

### Cultural Resources

The Increased Population Growth Alternative sets forth land use patterns and allowable densities similar to the proposed 2040 General Plan, but establishes incentives to develop second units and senior housing units within the city limits to accommodate more population that forecasted by

ABAG. Because the dwelling units contemplated by this alternative would be distributed among existing urbanized areas of Mill Valley, cultural impacts would be expected to be minimal. As such, there would not be any significant differences in terms of cultural impacts; therefore, this alternative would yield the same less than significant conclusions as the proposed 2040 General Plan. Thus, this alternative would have cultural resources impacts similar to the proposed 2040 General Plan.

### Geology, Soils, and Seismicity

The Increased Population Growth Alternative sets forth land use patterns and allowable densities similar to the proposed 2040 General Plan, but establishes incentives to develop second units and senior housing units within the city limits to accommodate more population that forecasted by ABAG. Because the dwelling units contemplated by this alternative would be distributed among existing urbanized areas of Mill Valley, geologic, soil, and seismic impacts would be expected to be minimal. As such, there would not be any significant differences in terms of geologic, soil, and seismic impacts; therefore, this alternative would yield the same less than significant conclusions as the proposed 2040 General Plan. Thus, this alternative would have geology, soils, and seismicity impacts similar to the proposed 2040 General Plan.

### Hazards and Hazardous Materials

The Increased Population Growth Alternative sets forth land use patterns and allowable densities similar to the proposed 2040 General Plan, but establishes incentives to develop second units and senior housing units within the city limits to accommodate more population that forecasted by ABAG. Because the dwelling units contemplated by this alternative would be distributed among existing urbanized areas of Mill Valley, hazard impacts would be expected to be minimal. As such, there would not be any significant differences in terms of hazards impacts; therefore, this alternative would yield the same less than significant conclusions as the proposed 2040 General Plan. Thus, this alternative would have hazards and hazardous materials impacts similar to the proposed 2040 General Plan.

### Hydrology and Water Quality

The Increased Population Growth Alternative sets forth land use patterns and allowable densities similar to the proposed 2040 General Plan, but establishes incentives to develop second units and senior housing units within the city limits to accommodate more population that forecasted by ABAG. Because the dwelling units contemplated by this alternative would be distributed among existing urbanized areas of Mill Valley, hydrologic and water quality impacts would be expected to be minimal. As such, there would not be any significant differences in terms of hydrologic and water quality impacts; therefore, this alternative would yield the same less than significant conclusions as the proposed 2040 General Plan. Thus, this alternative would have hydrology and water quality impacts similar to the proposed 2040 General Plan.

### Land Use

The Increased Population Growth Alternative sets forth land use patterns and allowable densities similar to the proposed 2040 General Plan, but establishes incentives to develop second units and senior housing units within the city limits to accommodate more population that forecasted by

ABAG. Because the dwelling units contemplated by this alternative would be distributed among existing urbanized areas of Mill Valley, land use impacts would be expected to be minimal. As such, there would not be any significant differences in terms of land use impacts; therefore, this alternative would yield the same less than significant conclusions as the proposed 2040 General Plan. Thus, this alternative would have land use impacts similar to the proposed 2040 General Plan.

### Noise

The Increased Population Growth Alternative sets forth land use patterns and allowable densities similar to the proposed 2040 General Plan, but establishes incentives to develop second units and senior housing units within the city limits to accommodate more population that forecasted by ABAG. As such, there would be a corresponding increase in traffic volumes along roadways in Mill Valley, including along roadways where noise levels exceed the City standards for residential uses. Because this alternative would exacerbate noise levels that exceed acceptable levels, it would increase the severity of this impact. Thus, this alternative would have greater noise impacts than the proposed 2040 General Plan.

### Public Services, Recreation, and Utilities

The Increased Population Growth Alternative sets forth land use patterns and allowable densities similar to the proposed 2040 General Plan, but establishes incentives to develop second units and senior housing units within the city limits to accommodate more population that forecasted by ABAG. As such, this alternative would increase the City's population at buildout, which in turn would increase demand for public services (e.g., schools), recreation, and utilities, and this alternative would increase the severity of public service, recreation, and utility impacts relative to the proposed 2040 General Plan. Thus, this alternative would have greater public services, recreation, and utilities impacts than the proposed 2040 General Plan.

### Transportation

The Increased Population Growth Alternative amends various General Plan policies to permit lower LOS values at various intersections in Mill Valley in a manner similar to the proposed 2040 General Plan. However, this alternative establishes incentives to develop second units and senior housing units within the city limits. Therefore, there is also an anticipated increase in trip generation. Thus, this alternative would contribute to increased delays at intersections where the LOS standard has been lowered by the 2040 General Plan, although it would not necessarily result in delays so severe that the LOS standard would be violated. Regardless, the increase in delay would increase the severity of transportation impacts relative to the 2040 General Plan. Thus, this alternative would have greater transportation impacts than the proposed 2040 General Plan.

## 5.4.2 - Conclusion

The Increased Population Growth Alternative would increase the severity of air quality, noise, public service (e.g., schools), recreation, and utility and transportation impacts relative to the 2040 General Plan; for all other topical areas, impacts would be similar. <u>However, this alternative would not be expected to result in the disclosure of new significant impacts because population growth would not be significantly greater than what was contemplated by the 2040 General Plan.</u>

The Increased Population Growth Alternative would advance all of the six project objectives to the same degree as the 2040 General Plan.

## 5.5 - Alternative 3 – Mobility Improvement Alternative

The Mobility Improvement Alternative consists of amending the 2040 General Plan Mobility Element to add policies that would promote improvements in mobility in Mill Valley in order to maintain the existing 1989 General Plan Level of Service (LOS) standards at as many locations as possible.

Policies would be added to the 2040 General Plan Mobility Element to identify the following strategies to improve mobility:

- **Traditional Traffic Improvements:** Install signals, travel lanes, or turn lanes at intersections that are appropriately suited for these improvements. Potential candidates for these improvements include E. Blithedale Avenue/Carmelita Avenue, Miller Avenue/Reed Street, Locust Avenue/Miller Avenue, and Miller Avenue/La Goma Street-Montford Avenue.
- **Citywide Shuttle:** Institute a citywide shuttle service to provide alternatives to passenger vehicle use. The shuttle would provide service to destinations including Downtown, Lower Miller Avenue, Alto Center, and various school sites.
- **Roundabouts:** Install roundabouts at appropriate identified locations to improve LOS where traditional traffic improvements are not desirable or feasible. Roundabout locations would include E. Blithedale Avenue/Camino Alto, E. Blithedale Avenue/Lomita Drive – Roque Moraes Drive, and Miller Avenue/Camino Alto.

Of the three strategies listed, the first two have drawbacks. Traditional traffic improvements would require additional right-of-way acquisition; result in impairments to bicycle, pedestrian, and transit mobility; and negatively affect the community character. The citywide shuttle has previously been considered by Mill Valley and, although it received considerable community support, it faces hurdles concerning funding, ridership, routes, and service frequency.

For the purposes of this alternative, the roundabouts strategy is considered the most viable, as it requires minimal right-of-way acquisition, accommodates all transportation modes, is compatible with the community character, and would improve LOS.

In recognition that the first two strategies may not be feasible, the Mobility Element would be amended to maintain the 1989 General Plan LOS standards (noted in parenthesis) at the following locations:

- E. Blithedale Avenue/Camino Alto (LOS D)
- E. Blithedale Avenue/Lomita Drive – Roque Moraes Drive (LOS C)
- Miller Avenue/Camino Alto (LOS C)

The Mobility Improvement Alternative would maintain all other aspects of the proposed 2040 General Plan, including the inclusion of a Climate Action Plan, addressing multi-modal “Complete

Streets" and amending the LOS standards at all other intersections other than the three listed previously.

## 5.5.1 - Impact Analysis

### Aesthetics, Light, and Glare

The Mobility Improvement Alternative sets forth land use patterns and allowable densities similar to the proposed 2040 General Plan. As such, there is no significant difference in buildout potential between the two plans, and there would not be any significant differences in terms of aesthetic, light, and glare impacts; therefore, this alternative would yield the same less than significant conclusions as the proposed 2040 General Plan. Thus, this alternative would have aesthetics, light, and glare impacts similar to the proposed 2040 General Plan.

### Air Quality and Greenhouse Gas Emissions

The Mobility Improvement Alternative sets forth land use patterns and allowable densities similar to the proposed 2040 General Plan. As such, there is no significant difference in buildout potential between the two plans and, thus, no significance difference in emissions of criteria pollutants or greenhouse gases. Moreover, the Mobility Improvement Alternative includes a Climate Action Element; therefore, the City of Mill Valley would realize the benefit of having its greenhouse gas reduction strategies incorporated into its comprehensive land use planning document. Finally, the mobility improvement contemplated by the alternative be expected to reduce delays and associated idling at intersections, which would be expected to reduce local carbon monoxide concentrations (hot spots). From an air quality and greenhouse gas emissions perspective, this would be considered beneficial. Thus, this alternative would have less impact to air quality and greenhouse gas emissions than the proposed 2040 General Plan.

### Biological Resources

The Mobility Improvement Alternative sets forth land use patterns and allowable densities similar to the proposed 2040 General Plan. As such, there is no significant difference in buildout potential between the two plans, and there would not be any significant differences in terms of biological impacts; therefore, this alternative would yield the same less than significant conclusions as the proposed 2040 General Plan. Thus, this alternative would have biological resources impacts similar to the proposed 2040 General Plan.

### Cultural Resources

The Mobility Improvement Alternative sets forth land use patterns and allowable densities similar to the proposed 2040 General Plan. As such, there is no significant difference in buildout potential between the two plans, and there would not be any significant differences in terms of cultural impacts; therefore, this alternative would yield the same less than significant conclusions as the proposed 2040 General Plan. Thus, this alternative would have cultural resources impacts similar to the proposed 2040 General Plan.

### Geology, Soils, and Seismicity

The Mobility Improvement Alternative sets forth land use patterns and allowable densities similar to the proposed 2040 General Plan. As such, there is no significant difference in buildout potential between the two plans, and there would not be any significant differences in terms of geologic, soils, and seismic impacts; therefore, this alternative would yield the same less than significant conclusions as the proposed 2040 General Plan. Thus, this alternative would have geology, soils, and seismicity impacts similar to the proposed 2040 General Plan.

### Hazards and Hazardous Materials

The Mobility Improvement Alternative sets forth land use patterns and allowable densities similar to the proposed 2040 General Plan. As such, there is no significant difference in buildout potential between the two plans, and there would not be any significant differences in terms of hazards impacts; therefore, this alternative would yield the same less than significant conclusions as the proposed 2040 General Plan. Thus, this alternative would have hazards and hazardous materials impacts similar to the proposed 2040 General Plan.

### Hydrology and Water Quality

The Mobility Improvement Alternative sets forth land use patterns and allowable densities similar to the proposed 2040 General Plan. As such, there is no significant difference in buildout potential between the two plans, and there would not be any significant differences in terms of hydrologic and water quality impacts; therefore, this alternative would yield the same less than significant conclusions as the proposed 2040 General Plan. Thus, this alternative would have hydrology and water quality impacts similar to the proposed 2040 General Plan.

### Land Use

The Mobility Improvement Alternative sets forth land use patterns and allowable densities similar to the proposed 2040 General Plan. As such, there is no significant difference in buildout potential between the two plans, and there would not be any significant differences in terms of land use impacts; therefore, this alternative would yield the same less than significant conclusions as the proposed 2040 General Plan. Thus, this alternative would have land use impacts similar to the proposed 2040 General Plan.

### Noise

The Mobility Improvement Alternative sets forth land use patterns and allowable densities similar to the proposed 2040 General Plan. As such, there is no significant difference in buildout potential between the two plans. Although the mobility improvements identified in this alternative would decrease delay for motorists, this would not have any material affect on roadway noise levels because it would not alter traffic volumes, and there would not be any significant differences in terms of noise impacts; therefore, this alternative would yield the same significant unavoidable conclusions as the proposed 2040 General Plan. Thus, this alternative would have noise impacts similar to the proposed 2040 General Plan.

### Public Services, Recreation, and Utilities

The Mobility Improvement Alternative sets forth land use patterns and allowable densities similar to the proposed 2040 General Plan. As such, there is no significant difference in buildout potential between the two plans, and there would not be any significant differences in terms of public services, recreation, and utility impacts; therefore, this alternative would yield the same less than significant conclusions as the proposed 2040 General Plan. Thus, this alternative would have public services, recreation, and utilities impacts similar to the proposed 2040 General Plan.

### Transportation

The Mobility Improvement Alternative identifies various strategies that would be expected to improve mobility within Mill Valley and allow higher LOS standards to be achieved at three signalized intersections compared to the 2040 General Plan. As previously discussed, higher LOS standards would be achieved at three major intersections; therefore, motorists would experience less delay during all peak hours relative to what would occur under the 2040 General Plan. For these reasons, roundabouts are regarded as more beneficial from a transportation perspective. Thus, this alternative would have less impact to transportation than the proposed 2040 General Plan.

## 5.5.2 - Conclusion

The Mobility Improvement Alternative lessens the severity of air quality and transportation impacts relative to the 2040 General Plan; for all other topical areas, impacts would be similar.

The Mobility Improvement Alternative would advance five of the six project objectives to the same degree as the 2040 General Plan (Objectives No. 1, 2, 3, 4, and No. 6). Because the Mobility Improvement Alternative would maintain the existing LOS standards at three signalized intersections rather than lower them, this alternative would not further Objective No. 5 to the same degree as the project.

# 5.6 - Environmentally Superior Alternative

CEQA Guidelines Section 15126(e)(2) requires an EIR to identify an “environmentally superior” alternative. The qualitative environmental effects of each alternative in relation to the proposed project described earlier in the section are summarized in Table 5-1.

**Table 5-1: Comparison of Alternatives**

| Environmental Topic Area | No Project/1989 General Plan Alternative | Increased Population Growth Alternative | Mobility Improvements Alternative |
|---|---|---|---|
| Aesthetics, Light, and Glare | Similar Impact | Similar Impact | Similar Impact |
| Air Quality and Greenhouse Gas Emissions | Greater Impact | Greater Impact | Less Impact |
| Biological Resources | Similar Impact | Similar Impact | Similar Impact |
| Cultural Resources | Similar Impact | Similar Impact | Similar Impact |

**Table 5-1 (cont.): Comparison of Alternatives**

| Environmental Topic Area | No Project/1989 General Plan Alternative | Increased Population Growth Alternative | Mobility Improvements Alternative |
|---|---|---|---|
| Geology, Soils, and Seismicity | Similar Impact | Similar Impact | Similar Impact |
| Hazards and Hazardous Materials | Similar Impact | Similar Impact | Similar Impact |
| Hydrology and Water Quality | Similar Impact | Similar Impact | Similar Impact |
| Land Use | Similar Impact | Similar Impact | Similar Impact |
| Noise | Similar Impact | Greater Impact | Similar Impact |
| Public Services, Recreation, and Utilities | Similar Impact | Greater Impact | Similar Impact |
| Transportation | Less Impact | Greater Impact | Less Impact |
| Source: FirstCarbon Solutions, 2013. | | | |

As shown in Table 5-1, the Mobility Improvement Alternative is the environmentally superior alternative, as it contains buildout potential similar to the 2040 General Plan but yields better LOS at three major intersections through the use of roundabouts. Thus, the Mobility Improvement Alternative is the environmentally superior alternative.

## 5.7 - Alternatives Rejected From Further Consideration

The following are alternatives that were initially considered, but rejected from further consideration for the reasons described below.

### 5.7.1 - Alternative Location

CEQA Guidelines Section 15126.6(f)(2) sets forth considerations to be used in evaluating an alternative location. The section states that if a lead agency concludes that no feasible alternative locations exist for the proposed action, it must disclose its reasons for that conclusion.

In this case, an alternative location does not constitute a feasible alternative because the project in question consists of a comprehensive update to the City of Mill Valley General Plan. A General Plan serves as the comprehensive land use planning document for the jurisdiction that adopts it; as such, the geographical area encompassed by the plan is an immutable, fundamental characteristic. Thus, it is not possible to evaluate an alternative location for the proposed 2040 General Plan.

### 5.7.2 - Infill intensification

A common land use alternative considered by many jurisdictions is to increase allowable densities within existing developed areas in order to promote infill intensification, particularly on older, lower-density commercial and residential properties along main thoroughfares. Jurisdictions may also use

approaches such as reduced or shared parking arrangements, reduced setback requirements (such as zero lot lines), elimination of maximum height requirements, or establishment of minimum density requirements to facilitate infill intensification in conjunction with increased allowable densities. Often, densities in excess of 50 dwelling units per acre are pursued under this approach. The intent of an Infill Intensification Alternative would be to concentrate new growth within existing developed areas to promote higher-and-better uses on underutilized properties, maximize efficient use of infrastructure, and create vibrant urban areas.

Infill intensification strategies are considered incompatible with the established community character. Mill Valley's existing land use patterns have been established for more than 50 years and date back almost 100 years in certain parts of the city limits. Moreover, because of the age of many properties, parcel sizes tend to be much smaller than those in communities that primarily developed in later decades. Larger parcel sizes tend to be better suited to infill intensification development, due to the economics of this type of development, whereas smaller parcels are not as suitable unless aggregated together.

Moreover, given the constraints of the roadway network in Mill Valley, infill intensification—particularly in the downtown area—would be expected to exacerbate delay at stop-controlled and signalized intersections. Infill intensification may require extensive improvements along the E. Blithedale Avenue, Miller Avenue, and Camino Alto corridors involving significant right-of-way acquisition that may not be economically of politically viable.

Finally, the 2040 General Plan permits densities of up to 29 dwelling units per acre for developments within certain land use designations. Such densities would allow signalized intersections to operate at LOS D or better under Year 2035, with the exception E. Blithedale Ave/Camino Alto, which would operate at LOS E-plus, in accordance with the 2040 General Plan Mobility Element policies. Combined with the elimination of a Conditional Use Permit requirement for residential development in commercial zoning districts, this is considered a more compatible approach, given the constraints and character of Mill Valley.

For these reasons, an Infill Intensification Alternative has been rejected from further consideration.

# SECTION 6: OTHER CEQA CONSIDERATIONS

## 6.1 - Significant Unavoidable Impacts

CEQA Guidelines Section 15126.2(a)(b) requires an EIR to identify and focus on the significant environmental effects of the proposed project, including effects that cannot be avoided if the proposed project were implemented.

This section describes significant impacts, including those that can be mitigated but not reduced to a level of less than significant. Where there are impacts that cannot be alleviated without imposing a project alternative, their implications, and the reason why the project is being proposed, notwithstanding their effect, is described. With implementation of the proposed project, two significant impacts that cannot be avoided would occur. Each significant unavoidable impact is discussed below.

- **Exposure of Persons to Excessive Noise:** Development and land use activities contemplated by the City of Mill Valley 2040 General Plan may expose residential land uses to excessive exterior noise as a result of additional vehicle trips on local roadways. Although the General Plan contains policies requiring new residential uses to comply with California Building Standards Code requirements for interior noise attenuation, there is no feasible mitigation to reduce exterior noise levels at new residential development sites along major roadways to "normally acceptable" levels due to existing noise levels; therefore, the residual significance of this impact is significant and unavoidable.
- **Permanent Increase in Ambient Noise Levels:** Development and land use activities contemplated by the City of Mill Valley 2040 General Plan may expose residential land uses adjacent to major roadways to a permanent increase in ambient noise levels as a result of additional vehicle trips on local roadways. Although the General Plan contains policies requiring new residential uses to comply with California Building Standards Code requirements for noise attenuation, it would not fully reduce the impact to a level of less than significant.

## 6.2 - Growth-Inducing Impacts

There are two types of growth-inducing impacts that a project may have: direct and indirect. To assess the potential for growth-inducing impacts, the project's characteristics that may encourage and facilitate activities that individually or cumulatively may affect the environment must be evaluated (CEQA Guidelines Section 15126.2(d)).

Direct growth-inducing impacts occur when the development of a project imposes new burdens on a community by directly inducing population growth, or by leading to the construction of additional developments in the same area. Also included in this category are projects that remove physical obstacles to population growth (such as a new road into an undeveloped area or a wastewater treatment plant with excess capacity that could allow additional development in the service area).

Construction of these types of infrastructure projects cannot be considered isolated from the development they facilitate and serve. Projects that physically remove obstacles to growth, or projects that indirectly induce growth may provide a catalyst for future unrelated development in an area such as a new residential community that requires additional commercial uses to support residents.

The 2040 General Plan acknowledges that Mill Valley is essentially built out and, thus, maintains the land use designations and allowable densities set forth within the 1989 General Plan. As such, there would be no significant change in buildout potential between the two plans, which precludes the possibility of substantial population growth inducement. No impacts would occur.

## 6.3 - Energy Conservation

Public Resources Code Section 21100(b)(3) and CEQA Guidelines Section 15126.4 require EIRs to describe, where relevant, the wasteful, inefficient, and unnecessary consumption of energy caused by a project. In 1975, largely in response to the oil crisis of the 1970s, the State Legislature adopted Assembly Bill (AB) 1575, which created the California Energy Commission (CEC). The statutory mission of the CEC is to forecast future energy needs, license thermal power plants of 50 megawatts or larger, develop energy technologies and renewable energy resources, plan for and direct state responses to energy emergencies, and—perhaps most importantly—promote energy efficiency through the adoption and enforcement of appliance and building energy efficiency standards. AB 1575 also amended Public Resources Code Section 21100(b)(3) to require EIRs to consider the wasteful, inefficient, and unnecessary consumption of energy caused by a project. Thereafter, the State Resources Agency created Appendix F of the CEQA Guidelines. Appendix F is an advisory document that assists EIR preparers in determining whether a project will result in the inefficient, wasteful, and unnecessary consumption of energy. For the reasons set forth below, this EIR concludes that the proposed project will not result in the wasteful, inefficient, and unnecessary consumption of energy, will not cause the need for additional natural gas or electrical energy-producing facilities, and, therefore, will not create a significant impact on energy resources.

### 6.3.1 - Energy Requirements of the Proposed 2040 General Plan

Short-term construction and long-term operational energy consumption are discussed below.

Adoption of the proposed 2040 General Plan itself would not result in changes to energy consumption patterns. However, development and land use activities that occur pursuant to the 2040 General Plan would consume energy. Below are discussions of short-term construction and long-term operational energy consumption and associated 2040 General Plan goals and policies.

#### Short-Term Construction

Development and land use activities contemplated by the 2040 General Plan would include short-term construction activities that would consume energy, primarily in the form of diesel fuel (e.g., mobile construction equipment) and electricity (e.g., power tools). It is not possible to reasonably estimate the amount of energy consumed by construction activities, as a number of hard-to-predict

variables influence energy consumption (e.g., length of activities, size of buildings, equipment fleet, management practices).

The 2040 General Plan establishes a goal and policy that indirectly relates to construction energy consumption. Goal CL.1 calls for reducing the community's carbon footprint, and Policy CL.1 calls for supporting and providing incentives for utilizing and investing in clean energy end energy efficiency solutions. Additionally, construction projects that occur pursuant to the 2040 General Plan would be subject to federal, state, and regional air quality rules and regulations.

Finally, there are no aspects to the 2040 General Plan that would foreseeably result in the inefficient, wasteful, or unnecessary consumption of energy during construction activities. For example, there are no policies that would directly or indirectly cause construction activities to be any less efficient than would otherwise occur elsewhere (restrictions on equipment, labor, types of activities, etc.).

In summary, the 2040 General Plan would not result in the inefficient, wasteful, or unnecessary consumption of energy during construction activities.

### Long-Term Operations

Development and land use activities contemplated by the 2040 General Plan would include long-term operational activities that would consume energy, both in the form of transportation fuel and building/equipment energy (e.g., electricity and natural gas). It is not possible to reasonably estimate the amount of energy consumed by operational activities, as a number of hard-to-predict variables influence energy consumption.

The 2040 General Plan establishes a goal and policy that indirectly relates to construction energy consumption. Goal CL.1 calls for reducing the community's carbon footprint and Policy CL.1 calls for supporting and providing incentives for utilizing and investing in clean energy end energy efficiency solutions. Additionally, the 2040 General Plan sets forth a number of other policies that promote reductions in vehicle miles traveled and use of alternative modes of transportation. Finally, there are no aspects to the 2040 General Plan 2030 that would foreseeably result in the inefficient, wasteful, or unnecessary consumption of energy during operational activities.

In summary, the 2040 General Plan would not result in the inefficient, wasteful, or unnecessary consumption of energy during operational activities.

## 6.4 - Significant Irreversible Changes

The environmental effects of the proposed 2040 General Plan are summarized in Section ES, Executive Summary and are analyzed in detail in Section 3, Environmental Impact Analysis of this EIR.

As mandated by the CEQA Guidelines, the EIR must address any significant irreversible environmental change that would result from implementation of the proposed project. Specifically, pursuant to the CEQA Guidelines (Section 15126.2(c)), such an impact would occur if:

- The project would involve a large commitment of nonrenewable resources;
- Irreversible damage can result from environmental accidents associated with the project; and
- The proposed consumption of resources is not justified (e.g., the project results in the wasteful use of energy).

The proposed project consists of the Mill Valley 2040 General Plan, which would serve as the comprehensive planning document for the City of Mill Valley. The 2040 General Plan acknowledges that Mill Valley is essentially built out and maintains existing land use patterns and densities. Thus, it would not be expected facilitate significant changes in land use patterns that result in the types of significant irreversible environmental change outlined by the CEQA Guidelines.

Although the 2040 General Plan itself does not result in an irretrievable commitment of non-renewable resources, cause irreversible damage from environmental accidents, or result in unjustified consumption of resources, development and land use activities that occur pursuant to the plan have the potential to do so. For example, new construction activities would use non-renewable resources such as petroleum products, aggregate, metals, and other construction-related materials. Day-to-day activities would involve the use of non-renewable resources such as petroleum and natural gas during operations. New development projects would be required to adhere to the latest adopted edition of the California Building Standards Code, which includes a number of standards that would reduce energy demand, water consumption, wastewater generation, and solid waste generation that would collectively reduce the demand for resources. This would result in the emission and generation of less pollution and effluent and lessen the severity of corresponding environmental effects. Although development activities that occur pursuant to the 2040 General Plan would result in an irretrievable commitment of non-renewable resources, the commitment of these resources would not be significantly inefficient, unnecessary, or wasteful.

Mill Valley is primarily a residential community and has a limited number of commercial/ industrial/public facility land uses that have the potential to cause significant environmental accidents through releases into the environment. Those facilities that handle large quantities of hazardous materials are required to comply with federal and state statutes and regulations concerning transport, use, handling, storage, and disposal of these materials. Thus, compliance with applicable requirements would make the likelihood of hazardous materials release very low.

# SECTION 7: EFFECTS FOUND NOT TO BE SIGNIFICANT

## 7.1 - Introduction

This section is based on the Notice of Preparation (NOP), dated May 2, 2013, and contained in Appendix A of this Environmental Impact Report (EIR). The NOP was prepared to identify the potentially significant effects of the proposed projects and was circulated for public review between May 2, 2013 and May 31, 2013. In the course of this evaluation, certain impacts were found to be less than significant because the proposed project's characteristics would not create such impacts. This section provides a brief description of effects found not to be significant or less than significant, based on the NOP comments or more detailed analysis conducted as part of the EIR preparation process. Note that a number of impacts that are found to be less than significant are addressed in the various EIR topical sections (Sections 3.1 through 3.11) to provide more comprehensive discussion of why impacts are less than significant, in order to better inform decision makers and the general public.

## 7.2 - Effects Found Not To Be Significant

### 7.2.1 - Aesthetics, Light, and Glare

#### State Scenic Highways

US 101, the only state highway located within the Mill Valley Planning Area, is neither an "Officially Designated" State Scenic Highway nor is it eligible for such a designation. This condition precludes the possibility of development and land use activities contemplated by the 2040 General Plan from adversely impacting scenic resources within a state scenic highway. No impacts would occur.

### 7.2.2 - Agriculture and Forest Resources

#### Important Farmland

The California Department of Conservation Farmland Mapping and Monitoring Program indicates that the Planning Area does not contain Prime Farmland, Farmland of Statewide Importance, or Unique Farmland, which fall under "Important Farmland" umbrella. This condition precludes the possibility of development and land use activities contemplated by the 2040 General Plan from converting Important Farmland to non-agricultural use. No impacts would occur.

#### Williamson Act Contracts or Agricultural Zoning

There is no active farmland or grazing land within the Planning Area, a condition that precludes the possibility of any properties becoming encumbered by Williamson Act contracts. Additionally, as shown in General Plan Figure 2.5, the Mill Valley Zoning Ordinance does not establish any agricultural zoning districts. This condition precludes the possibility of development and land use activities contemplated by the 2040 General Plan from conflicting with Williamson Act contracts or agricultural zoning. No impacts would occur.

### Conversion of Forest Land to Non-Forest Use

The upper slopes of the western and northern portions of the Planning Area contain forested areas that may meet state definitions of "forest land." However, these areas are controlled by public agencies and the 2040 General Plan designates these areas as "Publicly Owned"; thus, urban development is not contemplated within these areas. This condition precludes the conversion of forest land to non-forest use. No impacts would occur.

### Conflicts with Forest Zoning

The Planning Area does not contain any areas zoned for forest. Therefore, land use and development activities contemplated by the 2040 General Plan would not impact these resources. No impacts would occur.

### Pressures to Convert Farmland to Non-Agricultural Use

As previously noted, there is no active farmland within the Planning Area. Therefore, land use and development activities contemplated by the 2040 General Plan would not have the potential to create pressures to convert farmland to non-agricultural use. No impacts would occur.

## 7.2.3 - Biological Resources

### Conservation Plans

The Planning Area is not within the boundaries of an adopted Habitat Conservation Plan or Natural Community Conservation Plan. Therefore, land use and development activities contemplated by the 2040 General Plan would not conflict with the provisions of such a plan. No impacts would occur.

## 7.2.4 - Geology, Soils, and Seismicity

### Septic and Alternative Wastewater Disposal Systems

The Mill Valley city limits are served by sewer service provided by the Sewerage Agencies of Southern Marin. Septic tanks or alternative wastewater disposal systems exist only in rural residential areas outside the city limits. New development within the City limits would be required to employ sanitary sewer. Therefore, land use and development activities contemplated by the 2040 General Plan would not result in the use of septic tanks or alternative wastewater disposal systems. No impacts would occur.

## 7.2.5 - Hazards and Hazardous Materials

### Airports

The Planning Area does not contain any airports and does not overlap with any airport influence areas. The closest airport to the Planning Area is San Rafael Airport, located approximately 8 miles to the north. (Note that the Richardson Bay Seaplane Base is located east of the Planning Area in Richardson Bay; however, seaplane aviation activities occur outside of the Mill Valley city limits and, thus, do not represent a hazard to the Planning Area.) Therefore, land use and development activities contemplated by the 2040 General Plan would not expose persons residing or working in the Planning Area to aviation safety hazards. No impacts would occur.

### Private Airstrips

The Planning Area does not contain any private airstrips. Therefore, land use and development activities contemplated by the 2040 General Plan would not impact private airstrips. No impacts would occur.

## 7.2.6 - Hydrology and Water Quality

### Levee and Dam Failure

The Planning Area does not contain any levees or dams, nor are any such facilities located upstream of the Planning Area. Therefore, land use and development activities contemplated by the 2040 General Plan would not be susceptible to flooding from levee or dam failure. No impacts would occur.

## 7.2.7 - Land Use

### Conservation Plans

The Planning Area is not within the boundaries of an adopted Habitat Conservation Plan or Natural Community Conservation Plan. Therefore, land use and development activities contemplated by the 2040 General Plan would not conflict with the provisions of such a plan. No impacts would occur.

## 7.2.8 - Mineral Resources

### Mineral Resources of Statewide or Local Importance

The California Department of Conservation Division of Oil, Gas, and Geothermal Resources indicates that the Planning Area does not contain any known mineral deposits or active mineral extraction operations. This condition precludes the possibility of the loss of important mineral resources as a result of development and land use activities contemplated by the 2040 General Plan.

## 7.2.9 - Noise

### Aviation Noise

The Planning Area does not contain any airports and does not overlap with any airport influence areas. The closest airport to the Planning Area is San Rafael Airport, located approximately 8 miles to the north. (Note that the Richardson Bay Seaplane Base is located east of the Planning Area in Richardson Bay; however, seaplane aviation activities occur outside of the Mill Valley city limits and, thus, do not represent a significant source of noise within the Planning Area.) Therefore, land use and development activities contemplated by the 2040 General Plan would not expose persons residing or working in the Planning Area to excessive aviation noise. No impacts would occur.

## 7.2.10 - Population and Housing

### Growth Inducement

The 2040 General Plan acknowledges that Mill Valley is essentially built out and, thus, maintains the land use designations and allowable densities set forth within the 1989 General Plan. As such, there

would be no significant change in buildout potential between the two plans, which precludes the possibility of substantial population growth inducement. No impacts would occur.

### Displacement of Persons or Housing

Buildout of the proposed 2040 General Plan would not result in the displacement of persons or housing. Therefore, land use and development activities contemplated by the 2040 General Plan would not impact population or housing. No impacts would occur.

## 7.2.11 - Transportation

### Air Traffic Patterns

The Planning Area does not contain any airports and does not overlap with any airport influence areas. The closest airport to the Planning Area is San Rafael Airport, located approximately 8 miles to the north. (Note that the Richardson Bay Seaplane Base is located east of the Planning Area in Richardson Bay; however, seaplane aviation activities occur outside of the Mill Valley city limits and its approach and departure patterns are primarily over water.) Therefore, land use and development activities contemplated by the 2040 General Plan would not alter air traffic patterns. No impacts would occur.

# SECTION 8: PERSONS AND ORGANIZATIONS CONSULTED/LIST OF PREPARERS

## 8.1 - Persons and Organizations Consulted

### 8.1.1 - Lead Agency

**City of Mill Valley**

***City Manager's Office***
City Manager ..... James McCann

***Department of Planning & Building***
Director ..... Mike Moore
Senior Planner ..... Danielle Staude

### 8.1.2 - Public Agencies

**State Agencies**

***Bay Conservation and Development Commission***
Coastal Planner ..... Lindsey Fransen

***California Department of Transportation, District 4***
District Branch Chief – Local Development/Intergovernmental Review ..... Erik Alm, AICP

***Governor's Office of Planning and Research, State Clearinghouse and Planning Unit***
Director ..... Scott Morgan

### 8.1.3 - Private Parties and Organizations

**Mill Valley Streamkeepers**

President ..... Betsy Bikle

**Watershed Alliance of Marin**

Director ..... Laura Chariton

## 8.2 - List of Preparers

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## 8.2.3 - Technical Subconsultants

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Senior Noise Analyst ..... Mike Thill

### Parisi Associates Transportation Consultants

Principal ..... David Parisi, P.E., T.E.

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