DRAFT ENVIRONMENTAL IMPACT REPORT

FOR THE

2016 SEBASTOPOL GENERAL PLAN UPDATE

SCH# 2016032001

MAY 2016

Prepared for:

City of Sebastopol
Planning Department
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Sebastopol, CA 95472

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De Novo Planning Group

A Land Use Planning, Design, and Environmental Firm

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DRAFT EIR

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PURPOSE

The City of Sebastopol (City) as lead agency, has determined that the 2016 General Plan project (2016 General Plan, General Plan, or project) is a "project" within the definition of the California Environmental Quality Act (CEQA), and requires the preparation of an Environmental Impact Report (EIR). This Draft EIR has been prepared to evaluate the environmental impacts associated with implementation of the project. This EIR is designed to fully inform decision-makers in the City, other responsible and trustee agencies, and the general public of the potential environmental consequences of approval and implementation of the 2016 General Plan. A detailed description of the proposed project, including the components and characteristics of the project, project objectives, and how the EIR will be used, is provided in Chapter 2.0, Project Description.

AREAS OF CONTROVERSY AND ISSUES TO BE RESOLVED

This Draft EIR addresses environmental impacts associated with the project that are known to the City, raised during the Notice of Preparation (NOP) scoping process, or were raised during preparation of the Draft EIR. This Draft EIR addresses the potentially significant impacts associated with aesthetics, agricultural resources, air quality, biological resources, cultural resources, geology/soils, greenhouse gases/climate change, hazards, hydrology/water quality, land use planning/population, noise, public services/recreation, transportation/circulation, utilities, and cumulative impacts. During the NOP process, three comments were received. The Native American Heritage Commission (NAHC) submitted a comment letter regarding the requirements of Assembly Bill (AB) 52 and recommendations for cultural resources assessments. Additionally, the California Department of Transportation (Caltrans) submitted a comment letter regarding traffic impacts, fees, and studies, multi-modal planning, habitat restoration and management, and encroachment permits. Further, the County of Sonoma Permit and Resource Management Department submitted a comment regarding climate change, groundwater, health, and urban growth boundary expansion. The comments are summarized in Chapter 1.0, Introduction, and are also provided in Appendix A.

ALTERNATIVES TO THE PROPOSED PROJECT

The CEQA Guidelines require an EIR to describe a reasonable range of alternatives to the project or to the location of the project which would reduce or avoid significant impacts, and which could feasibly accomplish the basic objectives of the proposed project. The alternatives analyzed in this EIR include the following:

- Alternative 1: No Project Alternative. Under Alternative 1, the City would not adopt the General Plan Update. The 1994 General Plan would continue to be implemented and no changes to the General Plan, including the Land Use Map (see Figure 3.10-1), Economic Vitality Element, Community Health and Wellness Element, Circulation Diagram, goals, policies, or actions would occur.

- Alternative 2: Increased Open Space Alternative. As shown on Figure 5.0-1, Alternative 2 would revise the proposed General Plan Land Use Map to include expanded areas of Open Space and Very Low Density Residential Uses around the periphery of the City, primarily within the Sphere of Influence (SOI) and Urban Growth Boundary (UGB). Under Alternative 2, all of the proposed General Plan goals, policies, and action items would be adopted, but development levels and intensities under Cumulative General Plan Buildout Conditions would decrease.

- Alternative 3: Downtown Intensification Alternative. Under Alternative 3, development potential within the Downtown Core would be intensified, and residential uses would not be permitted in non-residential land use designations outside of the Downtown Core (precluding residential development in the Commercial/Office, Office/Light Industrial, and Office designations). The minimum FAR in the Downtown Core designation would increase from 1.0 under the Proposed General Plan to 1.5 under Alternative 3. Additionally, all new development within the Downtown Core designation would be required to provide on-site residential uses at a density of 44 dwelling units/acre above ground-floor commercial or office uses. This alternative further assumes that a downtown parking district would be created, and that the majority of on-site parking requirements for structures in the Downtown Core would be accommodated via an in-lieu fee payment towards the construction of a new parking structure.

CEQA requires that an environmentally superior alternative be identified among the alternatives that are analyzed in the EIR. If the No Project Alternative is the environmentally superior alternative, an EIR must also identify an environmentally superior alternative among the other alternatives (CEQA Guidelines Section 15126.6(e)(2)). The environmentally superior alternative is that alternative with the least adverse environmental impacts when compared to the proposed project.

As summarized in Table ES-1 below, Alternative 2 (Increased Open Space) is the environmentally superior alternative because it provides the greatest reduction of potential impacts in comparison to the other alternatives. Alternatives 3 (Downtown Intensification) and 1 (No Project) would have reduced environmental impacts compared to the proposed project.

TABLE ES-1: COMPARISON OF ALTERNATIVES TO THE PROPOSED PROJECT

ENVIRONMENTAL ISSUE	*PROPOSED PROJECT*	*ALTERNATIVE 1*	*ALTERNATIVE 2*	*ALTERNATIVE 3*
Aesthetics	3 – Same	2 – Better	1 – Best	2 – Better
Agriculture	3 – Same	2 – Better	1 – Best	2 – Better
Air Quality	3 – Same	4 – Worse	1 – Best	2 – Better
Biological Resources	3 – Same	2 – Better	1 – Best	2 – Better
Cultural Resources	3 – Same	2 – Better	1 – Best	2 – Better
Geology and Soils	3 – Same	2 – Better	1 – Best	2 – Better
Greenhouse Gases and Climate Change	3 – Same	2 – Better	1 – Best	2 – Better
Hazards and Hazardous Materials	3 – Same	2 – Better	1 – Best	2 – Better
Hydrology and Water Quality	3 – Same	4 – Worse	1 – Best	2 – Better
Land Use, Population, and Housing	3 – Same	4 – Worse	1 – Best	2 – Better
Noise	3 – Same	4 – Worse	1 – Best	2 – Better
Public Services / Recreation	3 – Same	4 – Worse	1 – Best	2 – Better
Circulation	3 – Same	4 – Worse	1 – Best	2 – Better
Utilities	3 – Same	2 – Better	1 – Best	2 – Better
Cumulative Impacts	3 – Same	2 – Better	1 – Best	2 – Better
Irreversible Effects	3 – Same	2 – Better	1 – Best	2 – Better
SUMMARY	**48 - Same**	**44 - Better**	**16 - Best**	**32 - Better**

SUMMARY OF IMPACTS AND MITIGATION MEASURES

In accordance with the CEQA Guidelines, this EIR focuses on the significant effects on the environment. The CEQA Guidelines defines a significant effect as a substantial adverse change in the physical conditions which exist in the area affected by the proposed project. A less than significant effect is one in which there is no long or short-term significant adverse change in environmental conditions. Some impacts are reduced to a less than significant level with the implementation of mitigation measures and/or compliance with regulations. The definition of "beneficial" effect is not defined in the CEQA Guidelines, but for purposes of this EIR a beneficial effect is one in which an environmental condition is enhanced or improved.

The environmental impacts of the proposed project, the impact level of significance prior to mitigation, the proposed mitigation measures to mitigate an impact, and the impact level of significance after mitigation are summarized in Table ES-2.

TABLE ES-2: PROJECT IMPACTS AND PROPOSED MITIGATION MEASURES

ENVIRONMENTAL IMPACT	*LEVEL OF SIGNIFICANCE WITHOUT MITIGATION*	*MITIGATION MEASURE*	*RESULTING LEVEL OF SIGNIFICANCE*
AESTHETICS AND VISUAL RESOURCES			
Impact 3.1-1: General Plan implementation could result in substantial adverse effects on visual character, including scenic vistas or scenic resources	PS	*Mitigated to the greatest extent feasible through General Plan Policies and Actions. No additional feasible mitigation is available.*	SU
Impact 3.1-2: General Plan implementation could result in the creation of new sources of nighttime lighting and daytime glare	PS	*General Plan Policies and Actions mitigate this impact to a less than significant level.*	LS
AGRICULTURAL RESOURCES			
Impact 3.2-1: General Plan implementation would result in the conversion of farmlands, including Prime Farmland, Unique Farmland, and Farmland of Statewide Importance	PS	*General Plan Policies and Actions mitigate this impact to a less than significant level.*	LS
Impact 3.2-2: General Plan implementation may result in conflicts with existing Williamson Act Contracts, or Conflict with existing zoning for agricultural use	LS	*None Required*	LS
AIR QUALITY			
Impact 3.3-1: The General Plan would not conflict with or obstruct implementation of the applicable air quality plan	PS	*General Plan Policies and Actions mitigate this impact to a less than significant level.*	LS

CC – cumulatively considerable *LCC – less than cumulatively considerable* *LS – less than significant*

PS – potentially significant *B – beneficial impact* *SU – significant and unavoidable*

ENVIRONMENTAL IMPACT	*LEVEL OF SIGNIFICANCE WITHOUT MITIGATION*	*MITIGATION MEASURE*	*RESULTING LEVEL OF SIGNIFICANCE*
Impact 3.3-2: The General Plan would not cause health risks associated with toxic air contaminants	PS	*General Plan Policies and Actions mitigate this impact to a less than significant level.*	LS
Impact 3.3-3: The General Plan would not create objectionable odors	LS	*None Required*	LS
Impact 3.3-4: The General Plan would not conflict with regional plans	LS	*None Required*	LS
BIOLOGICAL RESOURCES			
Impact 3.4-1: General Plan implementation could 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	PS	*General Plan Policies and Actions mitigate this impact to a less than significant level.*	LS
Impact 3.4-2: General Plan implementation could have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service	PS	*General Plan Policies and Actions mitigate this impact to a less than significant level.*	LS
Impact 3.4-3: The General Plan could have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not	PS	*General Plan Policies and Actions mitigate this impact to a less than significant level.*	LS

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ENVIRONMENTAL IMPACT	*LEVEL OF SIGNIFICANCE WITHOUT MITIGATION*	*MITIGATION MEASURE*	*RESULTING LEVEL OF SIGNIFICANCE*
limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means			
Impact 3.4-4: General Plan implementation would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites	PS	*General Plan Policies and Actions mitigate this impact to a less than significant level.*	LS
Impact 3.4-5: The General Plan would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance	PS	*General Plan Policies and Actions mitigate this impact to a less than significant level.*	LS
Impact 3.4-6: The General Plan would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan	LS	*None Required*	LS
CULTURAL RESOURCES			
Impact 3.5-1: General Plan implementation has the potential to result in a substantial adverse change in the significance of a historical or archaeological resource	PS	*General Plan Policies and Actions mitigate this impact to a less than significant level.*	LS
Impact 3.5-2: General Plan implementation has the potential to result in disturbance of human remains	PS	*General Plan Policies and Actions mitigate this impact to a less than significant level.*	LS

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ENVIRONMENTAL IMPACT	*LEVEL OF SIGNIFICANCE WITHOUT MITIGATION*	*MITIGATION MEASURE*	*RESULTING LEVEL OF SIGNIFICANCE*
Impact 3.5-3: General Plan implementation has the potential to result in damage to or the destruction of paleontological resources	LS	*None Required*	LS
GEOLOGY AND SOILS			
Impact 3.6-1: The General Plan has the potential to expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, strong seismic ground shaking, seismic-related ground failure, including liquefaction	PS	*General Plan Policies and Actions mitigate this impact to a less than significant level.*	LS
Impact 3.6-2: The General Plan has the potential to result in substantial soil erosion or the loss of topsoil	PS	*General Plan Policies and Actions mitigate this impact to a less than significant level.*	LS
Impact 3.6-3: The General Plan has the potential to result in development that would 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	PS	*General Plan Policies and Actions mitigate this impact to a less than significant level.*	LS
Impact 3.6-4: The General Plan has the potential to result in development on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property	PS	*General Plan Policies and Actions mitigate this impact to a less than significant level.*	LS

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ENVIRONMENTAL IMPACT	*LEVEL OF SIGNIFICANCE WITHOUT MITIGATION*	*MITIGATION MEASURE*	*RESULTING LEVEL OF SIGNIFICANCE*
Impact 3.6-5: The General Plan does not have the potential to have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water	PS	*General Plan Policies and Actions mitigate this impact to a less than significant level.*	LS
Impact 3.6-6: The General Plan does not result in the loss of availability of a known mineral resources that would be of value to the region and the residents of the state; or result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan	LS	*None Required*	LS
GREENHOUSE GASES AND CLIMATE CHANGE			
Impact 3.7-1: General Plan implementation could generate GHGs, either directly or indirectly, that may have a significant effect on the environment	PS	*General Plan Policies and Actions mitigate this impact to a less than significant level.*	LS
Impact 3.7-2: Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases	LS	*None Required*	LS
HAZARDS AND HAZARDOUS MATERIALS			
Impact 3.8-1: General Plan implementation has the potential to create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous	PS	*General Plan Policies and Actions mitigate this impact to a less than significant level.*	LS

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ENVIRONMENTAL IMPACT	*LEVEL OF SIGNIFICANCE WITHOUT MITIGATION*	*MITIGATION MEASURE*	*RESULTING LEVEL OF SIGNIFICANCE*
materials, or through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment			
Impact 3.8-2: General Plan implementation has the potential to emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school	LS	*None Required*	LS
Impact 3.8-3: General Plan implementation has the potential to result in projects located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5	PS	*General Plan Policies and Actions mitigate this impact to a less than significant level.*	LS
Impact 3.8-4: The General Plan Area is not located within an airport land use plan, two miles of a public airport or public use airport, or within the vicinity of a private airstrip, and would not result in a safety hazard for people residing or working in the project area	LS	*None Required*	LS
Impact 3.8-5: General Plan implementation does not have the potential to impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan	PS	*General Plan Policies and Actions mitigate this impact to a less than significant level.*	LS
Impact 3.8-6: General Plan implementation does not have the potential to expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where	PS	*General Plan Policies and Actions mitigate this impact to a less than significant level.*	LS

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ENVIRONMENTAL IMPACT	*LEVEL OF SIGNIFICANCE WITHOUT MITIGATION*	*MITIGATION MEASURE*	*RESULTING LEVEL OF SIGNIFICANCE*
wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands			
HYDROLOGY AND WATER QUALITY			
Impact 3.9-1: General Plan implementation could result in a violation of water quality standards or waste discharge requirements	PS	*General Plan Policies and Actions mitigate this impact to a less than significant level.*	LS
Impact 3.9-2: General Plan implementation could result in the depletion of groundwater supplies or interfere substantially with groundwater recharge	PS	*General Plan Policies and Actions mitigate this impact to a less than significant level.*	LS
Impact 3.9-3: General Plan implementation could alter the existing drainage pattern in a manner which would result in substantial erosion, siltation, flooding, or polluted runoff	PS	*General Plan Policies and Actions mitigate this impact to a less than significant level.*	LS
Impact 3.9-4 General Plan implementation could otherwise substantially degrade water quality	PS	*General Plan Policies and Actions mitigate this impact to a less than significant level.*	LS
Impact 3.9-5 General Plan implementation could place housing and structures 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	PS	*Mitigated to the greatest extent feasible through General Plan Policies and Actions. No additional feasible mitigation is available.*	SU
Impact 3.9-6: The General Plan would not expose people or structures to a significant risk	LS	*None Required*	LS

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of loss, injury, or death involving flooding as a result of failure of a levee or dam, seiche, tsunami, or mudflow			
LAND USE, POPULATION, AND HOUSING			
Impact 3.10-1: Potential to physically divide an established community	LS	*None Required*	LS
Impact 3.10-2: Potential to conflict with an applicable land use plan, policy, or regulation of an agency with jurisdiction over the project adopted to avoid or mitigate an environmental effect	LS	*None Required*	LS
Impact 3.10-3: Potential to induce substantial population growth	LS	*None Required*	LS
Impact 3.10-4: Potential to displace substantial numbers of people or existing housing	LS	*None Required*	LS
NOISE			
Impact 3.11-1: Traffic Noise Sources	PS	*Mitigated to the greatest extent feasible through General Plan Policies and Actions. No additional feasible mitigation is available.*	SU
Impact 3.11-2: Stationary Noise Sources	PS	*General Plan Policies and Actions mitigate this impact to a less than significant level.*	LS
Impact 3.11-3: Construction Noise Sources	PS	*General Plan Policies and Actions mitigate this impact to a less than significant level.*	LS
Impact 3.11-4: Construction Vibration	PS	*General Plan Policies and Actions mitigate this impact to a less than significant level.*	LS

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PUBLIC SERVICES AND RECREATION			
Impact 3.12-1: Adverse Physical Impacts on the Environment Associated with Governmental Facilities and the Provision of Public Services	PS	*General Plan Policies and Actions mitigate this impact to a less than significant level.*	LS
Impact 3.12-2: Adverse Physical Impacts Associated with the Deterioration of Existing Parks and Recreation Facilities or the Construction of New Parks and Recreation Facilities	PS	*General Plan Policies and Actions mitigate this impact to a less than significant level.*	LS
CIRCULATION			
Impact 3.13-1: Implementation of the proposed General Plan would result in acceptable traffic operation at the study intersections and roadway segments controlled by the City of Sebastopol	LS	*None Required*	LS
Impact 3.13-2: General Plan buildout would require improvements to Caltrans facilities (SR 12 and SR 116)	PS	*Mitigated to the greatest extent feasible through General Plan Policies and Actions. No additional feasible mitigation is available.*	SU
Impact 3.13-3: The proposed General Plan would not conflict with an applicable congestion management program	LS	*None Required*	LS
Impact 3.13-4: The proposed General Plan would not result in a change in air traffic patterns	LS	*None Required*	LS

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ENVIRONMENTAL IMPACT	*LEVEL OF SIGNIFICANCE WITHOUT MITIGATION*	*MITIGATION MEASURE*	*RESULTING LEVEL OF SIGNIFICANCE*
Impact 3.13-5: Implementation of the proposed General Plan would not substantially increase hazards due to a design feature	PS	*General Plan Policies and Actions mitigate this impact to a less than significant level.*	LS
Impact 3.13-6: Emergency Access	PS	*General Plan Policies and Actions mitigate this impact to a less than significant level.*	LS
Impact 3.13-7: The proposed General Plan would accommodate increased demand for public transit and supports a shift in trips from automobile to transit modes	PS	*General Plan Policies and Actions mitigate this impact to a less than significant level.*	LS
Impact 3.13-8: The proposed General Plan is consistent with adopted bicycle and pedestrian plans, and supports enhancements that emphasize bicycle and pedestrian circulation	PS	*General Plan Policies and Actions mitigate this impact to a less than significant level.*	LS
UTILITIES			
Impact 3.14-1: Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed	PS	*General Plan Policies and Actions mitigate this impact to a less than significant level.*	LS
Impact 3.14-2: Require or result in the construction of new water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects	PS	*General Plan Policies and Actions mitigate this impact to a less than significant level.*	LS
Impact 3.14-3: Potential to exceed wastewater treatment capacity or the requirements of the RWQCB	PS	*Mitigated to the greatest extent feasible through General Plan Policies and Actions. No additional feasible mitigation is available.*	SU

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ENVIRONMENTAL IMPACT	*LEVEL OF SIGNIFICANCE WITHOUT MITIGATION*	*MITIGATION MEASURE*	*RESULTING LEVEL OF SIGNIFICANCE*
Impact 3.14-4: Require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects	PS	*General Plan Policies and Actions mitigate this impact to a less than significant level.*	LS
Impact 3.14-5: The project would be served by a landfill for solid waste disposal needs and will require compliance with various laws and regulations	PS	*General Plan Policies and Actions mitigate this impact to a less than significant level.*	LS
OTHER CEQA-REQUIRED TOPICS			
Impact 4.1: Cumulative Degradation of the Existing Visual Character of the Region	PS	*Mitigated to the greatest extent feasible through General Plan Policies and Actions. No additional feasible mitigation is available.*	CC and SU
Impact 4.2: Cumulative Impacts on Agricultural Lands	LS	*None Required*	--
Impact 4.3: Cumulative Impact on the Region's Air Quality	PS	*General Plan Policies and Actions mitigate this impact to a less than significant level.*	LCC
Impact 4.4: Cumulative Loss of Biological Resources Including Habitats and Special Status Species	PS	*General Plan Policies and Actions mitigate this impact to a less than significant level.*	LCC
Impact 4.5: Cumulative Impacts on Known and Undiscovered Cultural Resources	PS	*General Plan Policies and Actions mitigate this impact to a less than significant level.*	LCC
Impact 4.6: Cumulative Impacts related to Geology and Soils	PS	*General Plan Policies and Actions mitigate this impact to a less than significant level.*	LCC

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Impact 4.7: Increased Greenhouse Gas Emissions May Contribute to Climate Change	PS	*General Plan Policies and Actions mitigate this impact to a less than significant level.*	LCC
Impact 4.8: Cumulative impacts from hazardous materials and human health risks	PS	*General Plan Policies and Actions mitigate this impact to a less than significant level.*	LCC
Impact 4.9: Cumulative impacts to Hydrology and Water Quality	PS	*General Plan Policies and Actions mitigate this impact to a less than significant level.*	LCC
Impact 4.10: Cumulative Impact on Communities and Local Land Uses	PS	*General Plan Policies and Actions mitigate this impact to a less than significant level.*	LCC
Impact 4.11: Cumulative Exposure of Noise-Sensitive Land Uses to Noise in Excess of Normally Acceptable Noise Levels or to Substantial Increases in Noise	PS	*Mitigated to the greatest extent feasible through General Plan Policies and Actions. No additional feasible mitigation is available.*	CC and SU
Impact 4.12: Cumulative Impact on Public Services and Recreation	PS	*General Plan Policies and Actions mitigate this impact to a less than significant level.*	LCC
Impact 4.13: Cumulative Impact on the Transportation Network	PS	*Mitigated to the greatest extent feasible through General Plan Policies and Actions. No additional feasible mitigation is available.*	CC and SU
Impact 4.14: Cumulative Impact on Utilities	PS	*Mitigated to the greatest extent feasible through General Plan Policies and Actions. No additional feasible mitigation is available.*	CC and SU
Impact 4.15: Irreversible Effects	PS	*Mitigated to the greatest extent feasible through General Plan Policies and Actions. No additional feasible mitigation is available.*	SU

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1.1 INTRODUCTION

In early 2014, Sebastopol began a multi-year process to update the City's 1994 General Plan. State law requires every city and county in California to prepare and maintain a planning document called a general plan. A general plan is a "constitution" or "blueprint" for the future physical development of a county or city. As part of the Sebastopol General Plan Update process, a General Plan Existing Conditions Report was prepared to establish a baseline of existing conditions in the city. Additionally, an Issues and Opportunities Report was prepared to identify the challenges facing the community and to provide an opportunity for citizens and policymakers to come together in a process of developing a common vision for the future. The General Plan update includes a framework of goals, policies, and actions that will guide the community toward their common vision. The General Plan is supported with a variety of maps including a Land Use Map and Circulation Diagram.

SEBASTOPOL GENERAL PLAN UPDATE

General Plan

The 2016 Sebastopol General Plan (General Plan, General Plan Update, or proposed project) is the overarching policy document that guides land use, housing, transportation, infrastructure, community design, and other policy decisions throughout the City of Sebastopol. The General Plan includes the seven elements mandated by State law, to the extent that they are relevant locally: Circulation, Conservation, Housing, Land Use, Noise, Open Space, and Safety Elements. The City may also address other topics of interest; this General Plan includes Community Services and Facilities, Economic Vitality, Community Character, and Community Health and Wellness elements. The General Plan sets out the goals, policies, and actions in each of these areas and serves as a policy guide for how the City will make key planning decisions in the future, and how the City will interact with Sonoma County, surrounding cities, and other local, regional, State, and Federal agencies.

The General Plan contains the goals and policies that will guide future decisions within the City. It also identifies implementation programs (actions) that will ensure the goals and policies in the General Plan are carried out. As part of the General Plan Update, the City and the consultant team prepared several support documents that serve as the building blocks for the Policy Document and analyze the environmental impacts associated with implementing the General Plan.

The following paragraphs describe a summary of the key component documents that are the building blocks of the proposed General Plan.

Existing Conditions Report

The Existing Conditions Report takes a "snapshot" of Sebastopol's current (2014) trends and conditions. It provides a detailed description of a wide range of topics within the city, such as demographic and economic conditions, land use, public facilities, and environmental resources. The Existing Conditions Report provides the General Plan Advisory Committee (GPAC), decision-makers,

the public, and local agencies with context for making policy decisions. The Existing Conditions Report also serves as the environmental setting and description contained within this Draft EIR.

Issues and Opportunities Report

Based on public input, community visioning workshops, focused GPAC meetings, direction from City staff, and direction from the Planning Commission and City Council, the Issues and Opportunities Report identifies key issues and opportunities to be addressed in the General Plan and identifies land use themes and priorities for key areas within Sebastopol. The Report provided the General Plan Advisory Committee, Planning Commission and City Council with tools and information in order for them to provide direction for the development of the General Plan Policy Document and the General Plan Land Use Map.

Environmental Impact Report

An EIR responds to the requirements of the California Environmental Quality Act (CEQA) as set forth in Sections 15126, 15175, and 15176 of the CEQA Guidelines. The Planning Commission and City Council will use the EIR during the General Plan Update process in order to understand the potential environmental implications associated with implementing the General Plan. This EIR was prepared concurrently with the General Plan policy document in order to facilitate the development of a General Plan that is largely self-mitigating. In other words, as environmental impacts associated with the new General Plan, including the Land Use Map, are identified; policies, programs and measures may be incorporated into the General Plan policy document in order to reduce or avoid potential environmental impacts.

1.2 PURPOSE OF THE EIR

The City of Sebastopol, as lead agency, determined that the 2016 Sebastopol General Plan is a "project" within the definition of the California Environmental Quality Act (CEQA). CEQA requires the preparation of an environmental impact report (EIR) prior to approving any project that may have a significant impact on the environment. For the purposes of CEQA, the term "project" refers to the whole of an action, which has the potential for resulting in a direct physical change or a reasonably foreseeable indirect physical change in the environment (CEQA Guidelines Section 15378[a]).

This Draft EIR has been prepared according to CEQA requirements to evaluate the potential environmental impacts associated with the implementation of the proposed General Plan. A copy of the Public Draft General Plan is available online at: www.sebastopolgeneralplan.org. The Draft EIR also discusses alternatives to the General Plan, and proposes mitigation measures that will offset, minimize, or otherwise avoid significant environmental impacts. This Draft EIR has been prepared in accordance with CEQA, California Resources Code Section 21000 et seq.; the Guidelines for the California Environmental Quality Act (California Code of Regulations, Title 14, Chapter 3); and the rules, regulations, and procedures for implementing CEQA as adopted by the City of Sebastopol.

An EIR must disclose the expected direct and indirect environmental impacts associated with a project, including impacts that cannot be avoided, growth-inducing effects, impacts found not to be significant, and significant cumulative impacts, as well as identify mitigation measures and

alternatives to the proposed project that could reduce or avoid its adverse environmental impacts. CEQA requires government agencies to consider and, where feasible, minimize environmental impacts of proposed development, and an obligation to balance a variety of public objectives, including economic, environmental, and social factors.

1.3 TYPE OF EIR

The State CEQA Guidelines identify several types of EIRs, each applicable to different project circumstances. This EIR has been prepared as a Program EIR pursuant to CEQA Guidelines Section 15168. Section 15168 states:

A program EIR is an EIR which may be prepared on a series of actions that can be characterized as one large project and are related either:

1) Geographically,
2) As logical parts in the chain of contemplated actions,
3) In connection with issuance of rules, regulations, plans or other general criteria to govern the conduct of a continuing program, or
4) As individual activities carried out under the same authorizing statutory or regulatory authority and having generally similar environmental effects which can be mitigated in similar ways.

The program-level analysis considers the broad environmental effects of the proposed project. This EIR will be used to evaluate subsequent projects and activities under the proposed project. This EIR is intended to provide the information and environmental analysis necessary to assist public agency decision-makers in considering approval of the proposed project, but not to the level of detail to consider approval of subsequent development projects that may occur after adoption of the General Plan.

Additional environmental review under CEQA may be required for subsequent projects and would be generally based on the subsequent project's consistency with the General Plan and the analysis in this EIR, as required under CEQA. It may be determined that some future projects or infrastructure improvements may be exempt from environmental review. When individual subsequent projects or activities under the General Plan are proposed, the lead agency that would approve and/or implement the individual project will examine the projects or activities to determine whether their effects were adequately analyzed in this program EIR (CEQA Guidelines Section 15168). If the projects or activities would have no effects beyond those disclosed in this EIR, no further CEQA compliance would be required.

1.4 INTENDED USES OF THE EIR

The City of Sebastopol, as the lead agency, has prepared this EIR to provide the public and responsible and trustee agencies with an objective analysis of the potential environmental impacts resulting from adoption of the Sebastopol General Plan and subsequent implementation of projects consistent with the General Plan. The environmental review process enables interested parties to evaluate the proposed project in terms of its environmental consequences, to examine and recommend methods to eliminate or reduce potential adverse impacts, and to consider a reasonable range of alternatives to the project. While CEQA requires that consideration be given to avoiding adverse environmental effects, the lead agency must balance adverse environmental effects against other public objectives, including the economic and social benefits of a project, in determining whether a project should be approved.

This EIR will be used as the primary environmental document to evaluate all subsequent planning and permitting actions associated with the General Plan. Subsequent actions that may be associated with the General Plan are identified in Chapter 2.0, Project Description. This EIR may also be used by other agencies within Sonoma County, including the Sonoma Local Agency Formation Commission (LAFCO), which may use this EIR during the preparation of environmental documents related to Municipal Service Reviews and Spheres of Influence relevant to Sebastopol.

1.5 KNOWN RESPONSIBLE AND TRUSTEE AGENCIES

The term "Responsible Agency" includes all public agencies other than the Lead Agency that have discretionary approval power over the project or an aspect of the project (CEQA Guidelines Section 15381). For the purpose of CEQA, a "Trustee" agency has jurisdiction by law over natural resources that are held in trust for the people of the State of California (CEQA Guidelines Section 15386). While no Responsible Agencies or Trustee Agencies are responsible for approvals associated with adoption of the proposed General Plan, implementation of future projects within Sebastopol may require permits and approvals from Trustee and Responsible Agencies, which may include the following:

- California Department of Fish and Wildlife (CDFW)
- California Department of Transportation (Caltrans)
- Regional (North Coast) Water Quality Control Board (RWQCB)
- U.S. Army Corps of Engineers (ACOE)
- U.S. Fish and Wildlife Service (USFWS)
- Sonoma Local Agency Formation Commission (LAFCO)

1.6 ENVIRONMENTAL REVIEW PROCESS

The review and certification process for the EIR has involved, or will involve, the following general procedural steps:

NOTICE OF PREPARATION

The City of Sebastopol circulated a Notice of Preparation (NOP) of an EIR for the proposed project on March 1, 2016 to trustee and responsible agencies, the State Clearinghouse, and the public. A scoping meeting was held on March 22, 2016 with the Sebastopol Planning Commission. No public or agency comments on the NOP related to the EIR analysis were presented or submitted during the scoping meeting. However, during the 30-day public review period for the NOP, which ended on March 31, 2016, three written comment letters were received. A list of the comments is provided later in this chapter. The NOP and all comments received on the NOP are presented in Appendix A.

DRAFT EIR

This document constitutes the Draft EIR. The Draft EIR contains a description of the project, description of the environmental setting, identification of the project's direct and indirect impacts on the environment, and mitigation measures for impacts found to be significant, as well as an analysis of project alternatives, identification of significant irreversible environmental changes, growth-inducing impacts, and cumulative impacts. This Draft EIR identifies issues determined to have no impact or a less than significant impact, and provides detailed analysis of potentially significant and significant impacts. Comments received in response to the NOP were considered in preparing the analysis in this EIR. Upon completion of the Draft EIR, the City of Sebastopol will file the Notice of Completion (NOC) with the State Clearinghouse of the Governor's Office of Planning and Research to begin the public review period.

PUBLIC NOTICE/PUBLIC REVIEW

Concurrent with the NOC, the City of Sebastopol will provide a public notice of availability (NOA) for the Draft EIR, and invite comment from the general public, agencies, organizations, and other interested parties. Consistent with CEQA requirements, the review period for this Draft EIR is forty-five (45) days. Public comment on the Draft EIR will be accepted in written form. All comments or questions regarding the Draft EIR should be addressed to:

Kenyon Webster, Planning Director
City of Sebastopol Planning Department
7120 Bodega Avenue
Sebastopol, CA 95472
Phone: 707-823-6167
Email: kwebster@cityofsebastopol.org

RESPONSE TO COMMENTS/FINAL EIR

Following the public review period, a Final EIR will be prepared. The Final EIR will respond to written comments received during the public review period and to any oral comments received during such review period. The Final EIR may also contain minor corrections, additions, or "errata" to the Draft EIR analysis as a result of comments received.

CERTIFICATION OF THE EIR/PROJECT CONSIDERATION

The City of Sebastopol will review and consider the Final EIR. If the City finds that the Final EIR is "adequate and complete," the City Council may certify the Final EIR in accordance with CEQA. As set forth by CEQA Guidelines Section 15151, the standards of adequacy require an EIR to provide a sufficient degree of analysis to allow decisions to be made regarding the proposed project that intelligently take account of environmental consequences.

Upon review and consideration of the Final EIR, the City Council may take action to approve, revise, or reject the project. A decision to approve the proposed project, for which this EIR identifies significant environmental effects, must be accompanied by written findings in accordance with State CEQA Guidelines Sections 15091 and 15093. A Mitigation Monitoring and Reporting Program (MMRP) would also be adopted in accordance with Public Resources Code Section 21081.6(a) and CEQA Guidelines Section 15097 for mitigation measures that have been incorporated into or imposed upon the project to reduce or avoid significant effects on the environment. The Mitigation Monitoring and Reporting Program will be designed to ensure that these measures are carried out during project implementation, in a manner that is consistent with the EIR.

1.7 ORGANIZATION AND SCOPE

Sections 15122 through 15132 of the State CEQA Guidelines identify the content requirements for Draft and Final EIRs. An EIR must include a description of the environmental setting, an environmental impact analysis, mitigation measures, alternatives, significant irreversible environmental changes, growth-inducing impacts, and cumulative impacts. Discussion of the environmental issues addressed in the Draft EIR was established through review of environmental and planning documentation developed for the project, environmental and planning documentation prepared for recent projects located within the City of Sebastopol, and responses to the Notice of Preparation (NOP).

This Draft EIR is organized in the following manner:

EXECUTIVE SUMMARY

The Executive Summary summarizes the characteristics of the proposed project, known areas of controversy and issues to be resolved, and provides a concise summary matrix of the project's environmental impacts and possible mitigation measures. This chapter identifies alternatives that reduce or avoid at least one significant environmental effect of the proposed project.

CHAPTER 1.0 – INTRODUCTION

Chapter 1.0 briefly describes the proposed project, the purpose of the environmental evaluation, identifies the lead, trustee, and responsible agencies, summarizes the process associated with preparation and certification of an EIR, identifies the scope and organization of the Draft EIR, and summarizes comments received on the NOP.

CHAPTER 2.0 – PROJECT DESCRIPTION

Chapter 2.0 provides a detailed description of the proposed project, including the location, intended objectives, background information, the physical and technical characteristics, including the decisions subject to CEQA, subsequent projects and activities, and a list of related agency action requirements.

CHAPTER 3.0 - ENVIRONMENTAL SETTING, IMPACTS AND MITIGATION MEASURES

Chapter 3.0 contains an analysis of environmental topic areas as identified below. Each subchapter addressing a topical area is organized as follows:

Environmental Setting. A description of the existing environment as it pertains to the topical area.

Regulatory Setting. A description of the regulatory environment that may be applicable to the project.

Impacts and Mitigation Measures. Identification of the thresholds of significance by which impacts are determined, a description of project-related impacts associated with the environmental topic, identification of appropriate mitigation measures, and a conclusion as to the significance of each impact.

The following environmental topics are addressed in this section:

- 3.1 Aesthetics and Visual Resources
- 3.2 Agricultural Resources
- 3.3 Air Quality
- 3.4 Biological Resources
- 3.5 Cultural Resources
- 3.6 Geology, Soils, and Mineral Resources
- 3.7 Greenhouse Gases and Climate Change
- 3.8 Hazards and Hazardous Materials
- 3.9 Hydrology and Water Quality
- 3.10 Land Use, and Population
- 3.11 Noise
- 3.12 Public Services and Recreation
- 3.13 Transportation and Circulation
- 3.14 Utilities

CHAPTER 4.0 – OTHER CEQA-REQUIRED TOPICS

Chapter 4.0 evaluates and describes the following CEQA required topics: impacts considered less-than-significant, significant and irreversible impacts, growth-inducing effects, cumulative, and significant and unavoidable environmental effects.

CHAPTER 5.0 - ALTERNATIVES TO THE PROJECT

Chapter 5.0 provides a comparative analysis between the merits of the proposed project and the selected alternatives. State CEQA Guidelines Section 15126.6 requires that an EIR describe a range of reasonable alternatives to the project, which could feasibly attain the basic objectives of the project and avoid and/or lessen any significant environmental effects of the project.

CHAPTER 6 - REPORT PREPARERS

Chapter 6.0 lists all authors and agencies that assisted in the preparation of the Draft EIR, by name, title, and company or agency affiliation.

APPENDICES

This section includes all notices and other procedural documents pertinent to the Draft EIR, as well as technical material prepared to support the analysis.

1.8 COMMENTS RECEIVED ON THE NOTICE OF PREPARATION

The City received three comment letters on the NOP. A copy of these letters is provided in Appendix A of this Draft EIR. Commenting organizations and agencies are summarized below.

- California Native American Heritage Commission: The Native American Heritage Commission provided comments relating to regulatory and consultation requirements, potential mitigation measures, and assessment of cultural resources.
- California Department of Transportation (Caltrans): Caltrans provided comments relating to traffic impacts, impact fees, traffic impact study, multi modal planning, habitat restoration, and encroachment permitting as they relate to state transportation facilities in the Sebastopol area.
- County of Sonoma Permit and Resource Management Department. The County of Sonoma Permit and Resource Management Department commented that the EIR should address topics relating to climate change, groundwater, health, and growth inducing impacts resulting from expansions of the UGB.

2.1 BACKGROUND AND OVERVIEW

STATE GENERAL PLAN LAW

California Government Code Section 65300 et seq. requires all counties and cities in the State to prepare and maintain a general plan for the long-term growth, development, and management of the land within the jurisdiction's planning boundaries. The general plan acts as a "constitution" for development, and is the City's lead legal document in relation to growth, development, and resource management issues. Development regulations (e.g., zoning and subdivision standards and public improvement plans and projects, such as a Capital Improvement Program) are required by law to be consistent with the General Plan.

General plans must address a broad range of topics, including, at a minimum, the following mandatory elements: land use, circulation, housing, conservation, open space, noise, and safety. At the discretion of each jurisdiction, the General Plan may combine these elements and may add optional elements relevant to the physical features the jurisdiction.

The California Government Code also requires that a General Plan be comprehensive, internally consistent, and plan for the long term. The General Plan should be clearly written, easy to administer, and available to all those concerned with the community's development.

State planning and zoning law (California Government Code Section 65000 et seq.) establishes that zoning ordinances are required to be consistent with the general plan and any applicable specific plans, area plans, master plans, and other related planning documents. When amendments to the general plan are made, corresponding changes in the zoning ordinance may be required within a reasonable time to ensure consistency between the revised land use designations in the general plan (if any) and the permitted uses or development standards of the zoning ordinance (Gov. Code Section 65860, subd. [c]).

GENERAL PLAN UPDATE PROCESS

The process to update the Sebastopol General Plan began in March 2014, and is scheduled to be completed with the adoption of the General Plan by the City Council in late 2016. The 2016 Sebastopol General Plan (General Plan, General Plan Update, or proposed project) was developed with extensive community input and reflects the community's vision for Sebastopol. A summary of the community outreach and public participation process is provided below.

Visioning Workshops

In April and May 2014, the General Plan Update team held two public visioning workshops and a housing workshop to help kick-off the General Plan Update process. City residents and stakeholders attended workshops at the Sebastopol Center for the Arts. The workshops provided an opportunity for the public to offer their thoughts on what they value about their community and the city, and what important issues should be addressed in updating the General Plan. Each workshop included a presentation by the consultant team that explained the role of the General Plan, an overview of

the General Plan Update process, and an opportunity for the workshop participants to ask questions and seek clarification on the process and the role of the community. Workshop participants were asked to complete activities and exercises in order to provide information to the General Plan Update team. Each workshop focused on different themes and topics to be addressed in the General Plan. A summary of the visioning workshops is provided in Chapter 2.0 of the Issues and Opportunities Report, which is available for review online at: www.sebastopol.generalplan.org.

Online Surveys and Polls

City staff and the consultant team developed an online survey to gather additional information from the public related to the General Plan Update. The online survey was available through the General Plan Update website, and was developed to pose similar questions to those posed at the visioning workshops, and to gather additional details regarding City service levels, residential homeownership, employment locations, and economic development priorities. The survey included 21 specific questions, and was completed or partially completed by approximately 700 people. Detailed survey results and responses are contained in Appendix C of the Issues and Opportunities Report, which is available for review online at: www.sebastopol.generalplan.org.

General Plan Advisory Committee (GPAC)

The City Council appointed a 16-member General Plan Advisory Committee (GPAC), which consisted of members from the Planning Commission, local business owners, residents, and the community at-large. The GPAC collaborated with City staff and the General Plan Update consultant team throughout the development of the General Plan. The GPAC met 12 times between July 2014 and December 2015, to identify key issues and challenges that Sebastopol faces over the next 20-30 years, and to develop the comprehensive set of goals, policies, and actions contained in the General Plan. Each GPAC meeting was open to the public, and numerous members of the public and other local interested agencies attended the meetings and provided detailed input to the GPAC.

City Council and Planning Commission Workshops

The City Council and Planning Commission has held, and continues to hold, public workshops and hearings to review and consider the goals and policies of the existing General Plan, review input from the Visioning Workshops, receive information relevant to the specific topics addressed at the GPAC meetings, and provide specific direction and guidance to staff and the consultant team regarding how goals should be achieved and how to address current issues in the General Plan Update.

2.2 PROJECT LOCATION

REGIONAL SETTING

The City of Sebastopol is located in Sonoma County, approximately 15 miles east of the Pacific Ocean, and 52 miles north of San Francisco. The Sebastopol City limits and Sphere of Influence (SOI) encompass approximately 1,400 acres. Sebastopol's regional location is shown on Figure 2.0-1.

Sebastopol is at the crossroads of two State Highways, Highways 116 and 12, and is just eight miles from Sonoma County's largest city, Santa Rosa. The city has a population of approximately 7,500, and is considered the hub of West Sonoma County. While the incorporated area is small, Sebastopol serves a much larger unincorporated area stretching to the Pacific Ocean and the Russian River. The City's 'market area' comprises a population of approximately 40,000-50,000 people, who, to varying degrees, use Sebastopol as their 'town' for goods, services, and recreational and cultural activities. Thus, the city has far more economic activity, traffic, and recreational and cultural services than would be apparent based simply on the incorporated area's population.

STUDY AREA

There are three key boundary lines addressed by the General Plan. These include the city limits, the Sphere of Influence (SOI), and the Urban Growth Boundary (UGB). The Sebastopol city limits, SOI, and UGB are shown on Figure 2.0-2. A description of the key planning boundary lines is provided below:

- **City Limits:** Includes the area within the City's corporate boundary, over which the City exercises land use authority and provides public services.

- **Sphere of Influence (SOI):** The probable physical boundary and service area of the City, as adopted by the Local Agency Formation Commission (LAFCO). The SOI includes both incorporated and unincorporated areas within which Sebastopol will have the primary responsibility for the provision of public facilities and services. Lands within the SOI but outside existing city limits may be considered for development after annexation. Until that time, the area within the SOI is under the jurisdiction of Sonoma County and its General Plan; however, City policies will influence the County's considerations of development proposals for lands within the SOI.

- **Urban Growth Boundary (UGB):** The City's 1994 General Plan established an Urban Growth Boundary (UGB). The Urban Growth Boundary is a line beyond which development will not be allowed, except for public parks and public schools. Measure O, approved by Sebastopol voters in November 1996, amended the 1994 General Plan to reaffirm the City's UGB and amend the 1994 General Plan to keep the UGB in effect until December 31, 2016. The UGB is shown on Figure 2.0-2. Measure O also amended the 1994 General Plan to prohibit extension of City services outside the UGB, except under specific extraordinary circumstances.

2.3 DESCRIPTION OF PROPOSED GENERAL PLAN PROJECT

The 2016 General Plan is a blueprint for growth in Sebastopol for the next 20 years. The overall purpose of the Sebastopol General Plan is to create a policy framework that articulates a vision for the City's long-term physical form and development, while preserving and enhancing the quality of life for Sebastopol residents, and increasing opportunities for high-quality local job growth balanced with robust environmental sustainability principles. The key components of the General Plan will include broad goals for the future of Sebastopol, and specific policies and actions that will help implement the stated goals. Upon adoption, the 2016 General Plan will replace the City's existing General Plan, which was adopted in 1994.

The City updated the Housing Element for the 2015-2023 planning cycle separately from the rest of the General Plan update, and the full 2016 General Plan is drafted for consistency with the policies in the Housing Element, which was adopted March 30, 2015.

GENERAL PLAN ELEMENTS

The proposed General Plan includes a comprehensive set of goals, policies, and actions (implementation measures), as well as a revised Land Use Map (Figure 2.0-3). The State requires that the General Plan contain seven mandatory elements: Land Use, Circulation, Housing, Open Space, Noise, Safety, and Conservation. The Sebastopol General Plan will include all of the State-mandated elements, as well as several optional elements, including: Community Services and Facilities, Economic Vitality, Community Character, and Community Health and Wellness.

- The **Land Use Element** designates the general distribution and intensity of residential, commercial, industrial, open space, public/semi-public, and other categories of public and private land uses. The Land Use Element includes the Land Use Map, which identifies land use designations for each parcel in the city limits and SOI/UGB.

- The **Circulation Element** correlates closely with the Land Use Element, and identifies the general locations and extent of existing and proposed major thoroughfares, transportation routes, and alternative transportation facilities necessary to support a multi-modal transportation system. This element is intended to facilitate mobility of people and goods throughout Sebastopol by a variety of transportation modes, with an emphasis on bicycle, pedestrian, and transit.

- The **Community Services and Facilities Element** includes goals, policies, and actions that address public services and facilities, including: parks, trails, and recreation facilities; police services; fire protection services; schools; and civic, library, medical, and other community facilities. While not specifically required by State law for inclusion in the General Plan, the Community Services and Facilities Element is a critical component in meeting the infrastructure and public services needs of businesses and residents.

- The **Conservation and Open Space Element** addresses the conservation, development, and use of natural resources, riparian environments, native plant and animal species, soils, mineral deposits, cultural/historical resources, air quality, and alternative energy. It also

details plans and measures for preserving open space for natural resources and the managed production of resources.

- The **Noise Element** establishes standards and policies to protect the community from the harmful and annoying effects of exposure to excessive noise levels. This element includes strategies to reduce land use conflicts that may result in exposure to unacceptable noise levels.

- The **Community Design Element** focuses on the ways in which Sebastopol's buildings, streets, and open spaces work together to define the City's sense of place. The purpose of this Element is to provide an overall policy framework for the continued design improvement and evolution of the City.

- The **Safety Element** establishes policies and programs to protect the community from risks associated with geologic, flood, and fire hazards, as well as setting standards for emergency preparedness.

- The **Economic Vitality Element** seeks to sustain and diversify the city's economy, recognizing the importance of supporting existing and local businesses while broadening and expanding the employment base and economic opportunities within the city. Long-term fiscal sustainability will be supported by economic growth from increasing the range of business, commercial services, and high-quality jobs in the city. Providing a broader economic base is intended to improve the city's economic vitality while increasing access for residents to local goods and services and local employment opportunities.

- The **Community Health and Wellness Element** addresses a wide range of community health topics, including access to healthy foods, substance abuse, access to medical care, and maintaining healthy lifestyles.

Goals, Policies and Actions

Each element of the Sebastopol General Plan contains a series of goals, policies, and actions. The goals, policies, and actions provide guidance to the City on how to direct change, manage growth, and manage resources over the 20-year life of the General Plan. The following provides a description of each and explains the relationship of each:

A **goal** is a description of the general desired result that the City seeks to create through the implementation of the General Plan.

A **policy** is a specific statement that guides decision-making as the City works to achieve its goals and objectives. Once adopted, policies represent statements of City regulations. The General Plan's policies set out the standards that will be used by City staff, the Planning Commission, and the City Council in their review of land development projects, resource protection activities, infrastructure improvements, and other City actions. Policies are on-going and require no specific action on behalf of the City.

An **action** is an implementation measure, procedure, technique, or specific program to be undertaken by the City to help achieve a specified goal or implement an adopted policy. The City must take additional steps to implement each action item in the General Plan. An action item is something that can and will be completed.

General Plan Land Use Map

The General Plan Land Use Map identifies land use designations for each parcel within the City of Sebastopol and the City's SOI/UGB. The proposed Sebastopol General Plan Land Use Map is shown on Figure 2.0-3.

General Plan Land Use Designations

The Land Use Element of the Sebastopol General Plan defines various land use designations by their allowable uses, minimum parcel sizes, and maximum development densities. The following describes the proposed land use designations for the General Plan. Table 2.0-1 shows the total acreage for each land use designation shown on the proposed Land Use Map.

Very Low Density Single Family Residential: Designates areas suitable for single family dwellings at a density up to one unit per acre. Smaller existing parcels within this designation would not be precluded from developing one housing unit.

Low Density Single Family Residential: Designates areas suitable for single family dwellings at a density of 1.1 to 2.5 units per acre. Smaller existing parcels within this designation would not be precluded from developing one housing unit.

Medium Density Single Family Residential: Designates areas suitable for single family dwellings at a density of 2.6 to 12.0 units per acre. Smaller existing parcels within this designation would not be precluded from developing one housing unit.

High Density Single Family Residential: Designates areas suitable for multifamily dwellings at a density of 12.1 to 25 units per acre. This designation is suitable for duplexes, apartments, townhouses, and other attached dwelling units.

Commercial/Office: This designation provides areas for commercial and office uses with off-street parking and/or clusters of street-front stores. This designation permits primarily local-serving retail establishments, specialty shops, banks, professional offices, motels, professional, administrative, medical, dental, and business offices, bed and breakfast users, and business and personal services, along with ancillary commercial and service uses. This designation is typically assigned to parcels, located on a major arterial street, that can provide sufficient land for commercial establishments that do not benefit from high-volume pedestrian concentrations found Downtown. The following types of retail uses are discouraged in this land use designation: factory outlets; large regional-serving shopping centers; and other similar retail uses generating high traffic volumes. Maximum floor area ratio (FAR) shall not exceed 1.5. Residential uses are permitted as a secondary use to the primary commercial uses permitted in this land use designation if generally located above the ground floor at the High Density Residential density of 12.1 to 25 units per acre. The residential space will not be counted in calculating the FAR for a development.

Downtown Core: This designation applies to Sebastopol's Downtown and permits office, commercial, and retail uses, as well as mixed-use residential developments. Residential uses are permitted at a density of 15.1 to 44 units per acre if combined with commercial land uses, such as office and retail. Projects shall achieve a minimum FAR of 1.0, and the maximum FAR shall not exceed 2.5 (not including the residential use). This designation is intended to implement the Downtown Plan and enhance the vitality and character of Sebastopol's historic commercial area. Housing is encouraged on upper stories.

Office/Light Industrial: This designation synthesizes Office and Light Industrial classifications and is intended to promote well planned, integrated business parks, which will serve as major employment centers within the community. The Office/Light Industrial designations only applies to sites of three (3) acres or larger and must be implemented through the PC-Planned Community zoning process. Land uses within business parks shall be limited to non-polluting, "clean" industries and businesses with primary permitted uses including corporate and administrative offices and research development uses. Ancillary uses shall be permitted under this designation, which may include warehousing and distribution, exercise facilities, child care uses, and food service uses which provides support services to primary uses. FAR shall not exceed 1.5.

Light Industrial: This designation provides for a wide variety of commercial, wholesale, service, and processing uses which do not generate excessive adverse environmental impacts. Other uses permitted in this designation include office ancillary to industrial uses; warehousing and agricultural products sales and services; auto sales and repair; food and drink processing; construction yards; research and development, laboratories, light manufacturing; and similar uses. Residential uses are permitted as a secondary use to the primary light industrial uses permitted in this land use designation at the High Density Residential density of 12.1 to 25 units per acre. Maximum FAR shall not exceed 0.75 (not including the residential use).

Open Space: This designation applies to areas of land which are essentially unimproved and devoted to the preservation of natural resources, agriculture, outdoor recreation, and for the maintenance of public health and safety. The only structures permitted are shelters, restrooms, storage sheds, and other structures needed to accommodate public use or provide for maintenance of the land. Maximum FAR shall not exceed 0.10.

Parkland: This designation applies to existing and proposed active and passive parks, and linear parks (landscaped paths) in urban areas. Structures allowed are shelters, restrooms, storage sheds, other structures needed to accommodate public use or provide for maintenance of the land, and recreational facilities. Maximum FAR shall not exceed 0.10.

Community Facilities: This designation includes public buildings and facilities, utility facilities and related easements, public libraries, city offices, fire and police stations, and school sites. Maximum FAR shall not exceed 2.0.

TABLE 2.0-1:PROPOSED LAND USE DESIGNATION ACREAGES

LAND USE DESIGNATION	*TOTAL ACRES*	
	CITY LIMITS	*SOI/UGB*
Very Low Density Residential	7.40	68.95
Low Density Residential	81.17	22.03
Medium Density Residential	356.35	67.00
High Density Residential	148.58	6.38
Downtown Core	50.83	0
Commercial Office	101.38	0
Office / Light Industrial	13.31	0
Light Industrial	29.02	44.78
Open Space	115.65	10.37
Parkland	19.11	0
Community Facilities	93.17	0
Right of Way	171.45	15.54
Totals	**1187.42**	**235.05**

SOURCE: DE NOVO PLANNING GROUP, 2016

2.4 GENERAL PLAN BUILDOUT ANALYSIS

The analysis in this EIR addresses two "buildout" scenarios associated with the proposed General Plan, as described in greater detail below.

Table 2.0-3 shows the maximum level of new development that may occur within the existing City Limits under General Plan buildout conditions, while taking into account growth restrictions identified in the proposed General Plan.

Table 2.0-4 shows the maximum level of additional new development (beyond the General Plan Buildout Scenario) that may occur within the existing City Limits and the SOI/UGB under General Plan buildout conditions, without taking into account development constraints identified in the proposed General Plan.

In most cases in this EIR, the buildout analysis utilizes an approximately 20-year horizon, and 2035 is assumed to be the buildout year of the General Plan. The year 2035 is used as the benchmark year for the cumulative analysis contained in this EIR. However, the traffic analysis is based on a future horizon year of 2040. The year 2040 was selected for the traffic analysis based on the future traffic volumes and analysis contained in the Sonoma County Transportation Agency (SCTA) regional travel demand model. The approach and methodology used in the cumulative traffic analysis is described in greater detail in Section 3.13 of this Draft EIR.

EXISTING ASSESSED USES

Table 2.0-2 below summarizes the existing land uses in the City of Sebastopol based on Sonoma County Assessor's data.

TABLE 2.0-2: EXISTING LAND USES –CITY OF SEBASTOPOL

USE DESCRIPTION[1]	ACRES	RESIDENTIAL UNITS	SQUARE FEET[2]
Residential	*561.3*	*3,446*	*4,488,381*
Commercial	*119.24*	*49*	*1,393,557*
Industrial	*27*	*0*	*342,334*
Agriculture	*7.1*	*0*	*0*
Governmental	*174.8*	0	*63,245*
Institutional	*54.4*	1	*145,770*
Miscellaneous	*185.3*	*87*	*0*
Vacant	*59.2*	0	*11,273*
TOTALS	***1,188.3***	***3,583***	***6,444,560***

[1]USE DESCRIPTION BASED PRIMARILY ON ASSESSOR USE CODES

[2]SQUARE FOOTAGE REPRESENTS THE PRIMARY AND SECONDARY SQUARE FOOTAGES. SQUARE FOOTAGE OF MIXED USE BUILDINGS INCLUDES BOTH RESIDENTIAL AND NON-RESIDENTIAL USES.

SOURCE: SONOMA COUNTY ASSESSOR'S OFFICE, 2014; DE NOVO PLANNING GROUP, 2014

CITY LIMITS BUILDOUT

This EIR evaluates the maximum projected development that could occur within the existing City Limits if every single parcel in the City developed at or near the higher end of densities and intensities allowed under the proposed General Plan. Table 2.0-3 shows the maximum level of new development that may occur within the existing City Limits under General Plan buildout conditions, while taking into account growth restrictions identified in the proposed General Plan.

TABLE 2.0-3: PROJECTED NEW DEVELOPMENT – CITY LIMITS BUILDOUT

LAND USE	*SINGLE FAMILY (UNITS)*	*MULTI FAMILY (UNITS)*	*COMMERCIAL (S.F.)*	*OFFICE (S.F.)*	*INDUSTRIAL (S.F.)*	*HOTEL (ROOMS)*
CD	(1)	112	203,051	62,557	0	65
CF	0	0	0	0	0	0
CO	(3)	36	132,608	50,380	0	18
HDR	131	247	0	0	0	0
LDR	29	0	0	0	0	0
LI	0	5	5,500	0	(7,665)	90
MDR	167	0	0	0	-	0
OLI	0	22	0	28,982	67,624	0
OS	0	0	0	0	0	0
VDR	5	0	0	(4,544)	0	0
Total General Plan	***328***	***422***	***341,159***	***137,375***	***59,959***	***173***

SOURCE: DE NOVO PLANNING GROUP, 2016

As shown in Table 2.0-3, buildout of the General Plan could yield up to 750 new residential units, 341,159 square feet of new commercial space, 59,959 square feet of new industrial space, and 137,375 square feet of new office space within the City Limits.

This new growth would increase the City's population by approximately 1,658 residents.[1] The full development of the new commercial, office, and industrial uses shown in Table 2.0-3 would increase the employment opportunities in Sebastopol by approximately 1,545 employees.[2] The jobs: housing ratio associated with new development within the City would be approximately .93, with full buildout of residential and employee-generating uses.

GENERAL PLAN CUMULATIVE BUILDOUT

The second development scenario addressed in this EIR is the maximum projected development that could occur within the existing City Limits and the City's Sphere of Influence (SOI) and Urban Growth Boundary (UGB) if every single parcel in the City and the SOI/UGB developed at or near the higher end of densities and intensities allowed under the proposed General Plan.

Table 2.0-4 shows the maximum level of additional new development (beyond the City LImits Buildout Scenario) that may occur within the existing City Limits and the SOI/UGB under General Plan buildout conditions, without taking into account development constraints identified in the proposed General Plan.

[1] Based on the 2015 California Department of Finance estimate of 2.21 persons per household in Sebastopol.

[2] Assumes one employee generated for: every 350 square feet of commercial space, every 295 square feet of office space, and every 575 square feet of industrial space.

TABLE 2.0-4: PROJECTED NEW DEVELOPMENT – GENERAL PLAN CUMULATIVE

LAND USE	*SINGLE FAMILY (UNITS)*	*MULTI FAMILY (UNITS)*	*COMMERCIAL (S.F.)*	*OFFICE (S.F.)*	*INDUSTRIAL (S.F.)*	*HOTEL (ROOMS)*
HDR	(13)	113	0	0	-	0
LDR	6	0	0	0	-	0
LI	(6)	136	0	0	624,930	0
MDR	190	0	0	0	-	0
VDR	9	0	0	0	-	0
Total Cumulative GP	***186***	***249***	***0***	***0***	***624,930***	***0***
Grand Total General Plan + Cumulative GP	514	671	341,159	137,375	684,889	173

SOURCE: DE NOVO PLANNING GROUP, 2016

As shown in Table 2.0-4, cumulative buildout of the General Plan within the City Limits and the SOI/UGB could yield up to 1,185 new residential units, 341,159 square feet of new commercial space, 684,889 square feet of new industrial space, and 137,375 square feet of new office space within the City Limits and the Sphere of Influence.

This new growth would increase the City's population by approximately 2,619 residents.[3] The full development of the new commercial, office, and industrial uses shown in Table 2.0-4 would increase the employment opportunities in Sebastopol by approximately 2,632 employees.[4] The jobs: housing ratio associated with new development within the City and SOI/UGB would be approximately 1.00, with full buildout of residential and employee-generating uses.

COMPARISON TO 1994 GENERAL PLAN

The proposed General Plan would update the City's General Plan to address issues raised during the update process and would also address requirements of State law related to the content of a General Plan. Since adoption of the 1994 General Plan, state legislation has been passed requiring the City to address new safety and circulation requirements in the General Plan and to address greenhouse gas emissions. Chapter 5.0, Alternatives describes the differences between the proposed project and the 1994 General Plan and provides an analysis of the potential impacts of the proposed project compared to the 1994 General Plan (Alternative 1).

As described in Chapter 5.0, the 1994 General Plan does not include the updated goals, objectives, policies, and actions, as well as the Land Use Map changes, that address the vision and concerns of

[3] Based on the 2013 California Department of Finance estimate of 2.21 persons per household in Sebastopol.

[4] Assumes one employee generated for: every 350 square feet of commercial space, every 295 square feet of office space, and every 575 square feet of industrial space.

the City's residents, property owners, decision-makers, and other stakeholders that actively participated in the Visioning and goal and policy development process.

The 1994 General Plan would result in the continuation of existing conditions and development levels, as described in Chapter 5.0. Land use changes associated with the proposed General Plan compared to the existing General Plan are shown in Table 2.0-5.

TABLE 2.0-5: PROPOSED GENERAL PLAN LAND USE DESIGNATIONS V. EXISTING GENERAL PLAN COMPARISON

LAND USE DESIGNATION	*PROPOSED PROJECT GENERAL PLAN (ACRES)*		*EXISTING GENERAL PLAN (ACRES)*		*DIFFERENCE*	
	CITY	*SOI*	*CITY*	*SOI*	*CITY*	*SOI*
Very Low Density Residential	7.4	68.9	7.4	69.0	0.0	(0.1)
Low Density Residential	81.2	22.0	89.9	18.3	(8.7)	3.7
Medium Density Residential	356.4	67.0	369.7	67.0	(13.3)	0.0
High Density Residential	148.6	6.4	134.5	0	14.1	6.4
Downtown Core	50.8	0	44.8	0	6.0	0.0
General Commercial	--	--	66.4	0	(66.4)*	0.0
Commercial Office	101.4	0	--	--	101.4*	0.0
Office / Light Industrial	13.3	0	13.3	0	0.0	0.0
Office	--	--	35.8	0	(35.8)*	0.0
Light Industrial	29.0	44.8	32.7	44.8	(3.7)	0.0
Open Space	115.7	10.4	90.7	0	25.0	10.4
Parkland	19.1	0	34.4	0	(15.3)**	0.0
Community Facilities	93.2	0	96.3	0	(3.1)	0.0
Right of Way	171.4	15.5	172.5	15.5	(1.1)	0.0
No Label	--	--	0	12.6	0.0	(12.6)
TOTAL	**1187.4**	**235.1**	**1,188.4**	**227.2**	**(1.0)**	**7.9**

*Denotes areas where Land Use Classifications have been updated or combined with other designation.

** Denotes areas where parklands have been reduced due to re-classification as open space, or to existing uses.

2.5 PROJECT OBJECTIVES

The General Plan is intended to reflect the desires and vision of Sebastopol's residents, businesses, and decision-makers for the future development and operation of the City of Sebastopol. The following objectives are identified for the proposed update to the General Plan:

- Protect Sebastopol's small-town charm, unique character, and strong sense of community.
- Support and enhance local businesses to sustain a vibrant Downtown core and strong community identity.
- Improve traffic conditions in Downtown through reduced congestion, reduced speeds, and expanded facilities for bicycles and pedestrians.
- Emphasize sustainability and environmental stewardship in future planning decisions.
- Provide opportunities for extensive community input and participation in the General Plan Update process.

2.6 USES OF THE EIR AND REQUIRED AGENCY APPROVALS

This EIR may be used for the following direct and indirect approvals and permits associated with adoption and implementation of the proposed project.

CITY OF SEBASTOPOL

The City of Sebastopol is the lead agency for the proposed project. The General Plan will be presented to the Planning Commission for review and recommendation and to the City Council for comment, review, and consideration for adoption. The City Council has the sole discretionary authority to approve and adopt the General Plan. In order to approve the proposed project, the City Council would consider the following actions:

- Certification of the General Plan EIR;
- Adoption of required CEQA findings for the above action;
- Adoption of a Mitigation Monitoring and Reporting Program; and
- Approval of the General Plan Update.

SUBSEQUENT USE OF THE EIR

This EIR provides a review of environmental effects associated with implementation of the proposed General Plan. When considering approval of subsequent activities under the proposed General Plan, the City of Sebastopol would utilize this EIR as the basis in determining potential environmental effects and the appropriate level of environmental review, if any, of a subsequent activity. Projects or activities successive to this EIR may include, but are not limited to, the following:

- Approval and funding of major projects and capital improvements;
- Future Specific Plan, Planned Unit Development, or Master Plan approvals;
- Revision to the Sebastopol Municipal Code;
- Water, sewer, and other infrastructure master plans;
- Bicycle and Pedestrian Master Plan;
- Development Plan approvals, such as tentative subdivision maps, variances, conditional use permits, and other land use permits;
- Development Agreements;
- Property rezoning consistent with the 2016 General Plan;
- Permit issuances and other approvals necessary for public and private development projects; and
- Issuance of permits and other approvals necessary for implementation of the 2016 General Plan.

OTHER GOVERNMENTAL AGENCY APPROVALS

City approval of the proposed project would not require any actions or approvals by other public agencies. Subsequent projects and other actions to support implementation of the proposed project would require actions, including permits and approvals, by other public agencies that may include, but are not necessarily limited to:

- California Department of Fish and Wildlife (CDFW) approval of any future potential take of state-listed wildlife and plant species covered under the California Endangered Species Act.
- California Department of Transportation (Caltrans) approval of projects and encroachment permits for projects affecting state highway facilities.
- Regional Water Quality Control Board (RWQCB) approval for National Pollution Discharge Elimination System compliance, including permits and Storm Water Pollution Prevention Plan approval and monitoring.
- Sonoma Local Agency Formation Commission (LAFCo) approvals for annexation of any lands into the boundaries of the City of Sebastopol.
- U.S. Army Corps of Engineers (ACOE) approval of any future wetland fill activities, pursuant to the Clean Water Act.
- U.S. Fish and Wildlife Service (USFWS) approvals involving any future potential take of federally listed wildlife and plant species and their habitats, pursuant to the Federal Endangered Species Act.

Sebastopol General Plan Update

Figure 2.0-1: Project Location

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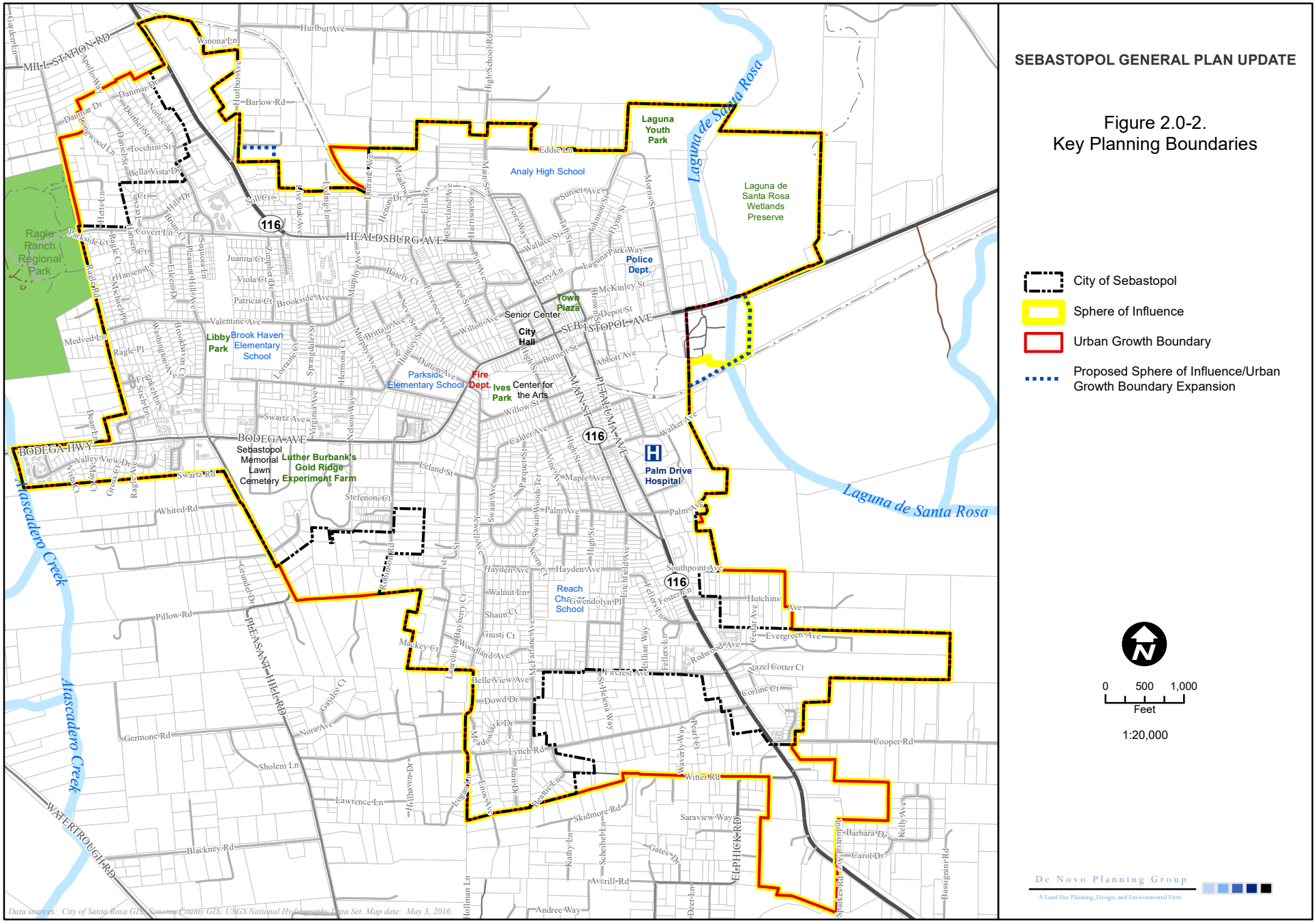
SEBASTOPOL GENERAL PLAN UPDATE
Figure 2.0-2.
Key Planning Boundaries
City of Sebastopol
Sphere of Influence
Urban Growth Boundary
Proposed Sphere of Influence/Urban Growth Boundary Expansion
0 500 1,000
Feet
1:20,000
De Novo Planning Group
A Land Use Planning, Design, and Environmental Firm
Laguna de Santa Rosa
Laguna de Santa Rosa Wetlands Preserve
Laguna Youth Park
Analy High School
Police Dept.
Town Plaza
Senior Center
City Hall
Fire Dept.
Ives Park
Center for the Arts
Palm Drive Hospital
Libby Park
Brook Haven Elementary School
Parkside Elementary School
Luther Burbank's Gold Ridge Experiment Farm
Sebastopol Memorial Lawn Cemetery
Reach Charter School
Ragle Ranch Regional Park
Atascadero Creek
Laguna de Santa Rosa
HEALDSBURG AVE
SEBASTOPOL AVE
BODEGA AVE
BODEGA HWY
MAIN ST
PETALUMA AVE
PLEASANT HILL RD
WATERTROUGH RD
ELEPHICK RD
MILL STATION RD
Data sources: City of Santa Rosa GIS, Sonoma County GIS, USGS National Hydrography Data Set. Map date: May 3, 2016.

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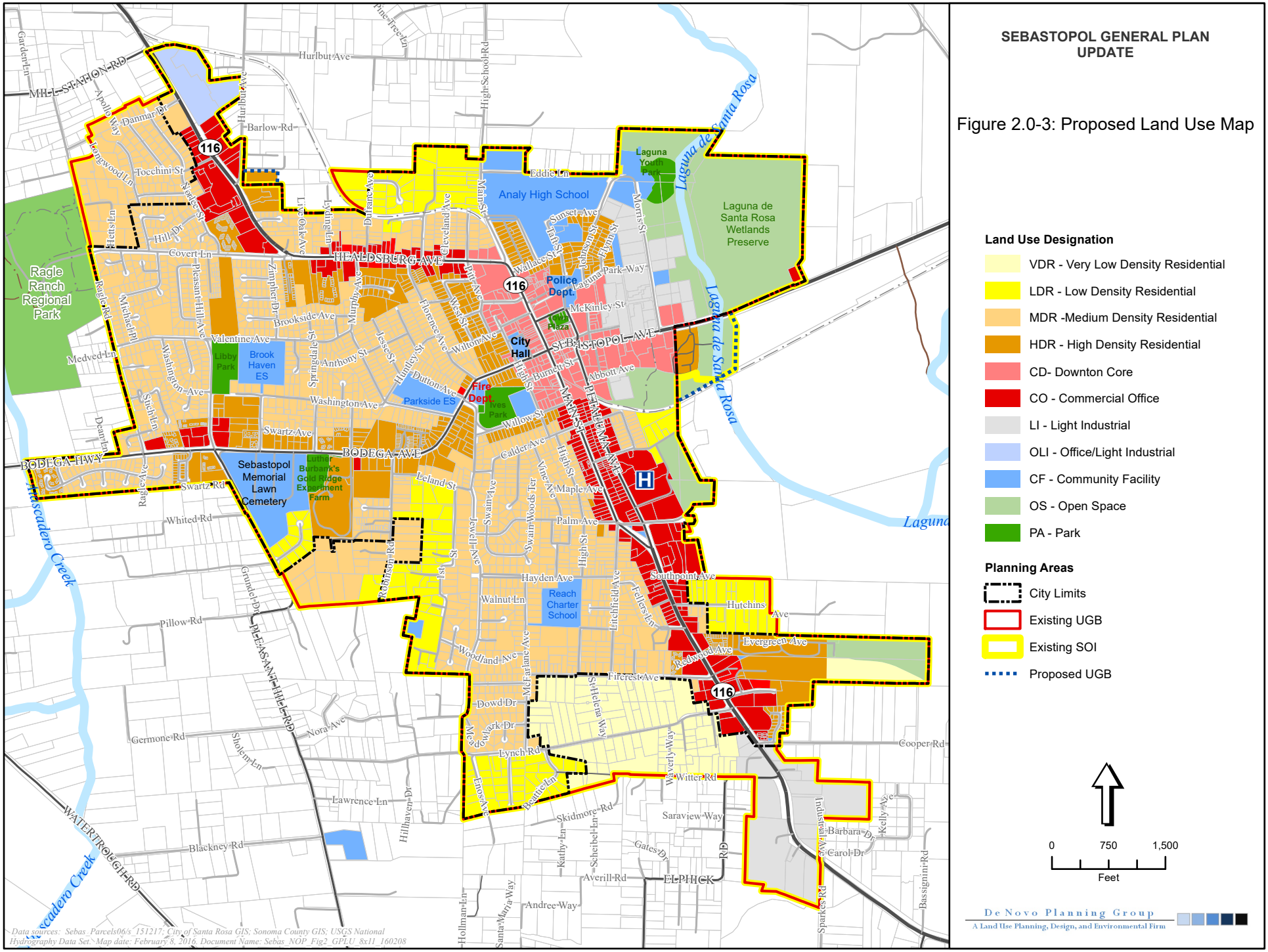
SEBASTOPOL GENERAL PLAN UPDATE
Figure 2.0-3: Proposed Land Use Map
Land Use Designation
VDR - Very Low Density Residential
LDR - Low Density Residential
MDR -Medium Density Residential
HDR - High Density Residential
CD- Downton Core
CO - Commercial Office
LI - Light Industrial
OLI - Office/Light Industrial
CF - Community Facility
OS - Open Space
PA - Park
Planning Areas
City Limits
Existing UGB
Existing SOI
Proposed UGB
0
750
1,500
Feet
De Novo Planning Group
A Land Use Planning, Design, and Environmental Firm
Laguna de Santa Rosa
Laguna de Santa Rosa Wetlands Preserve
Ragle Ranch Regional Park
Analy High School
Police Dept.
City Hall
Fire Dept.
Brook Haven ES
Parkside ES
Reach Charter School
Sebastopol Memorial Lawn Cemetery
Luther Burbank's Gold Ridge Experiment Farm
Laguna Youth Park
Libby Park
Ives Park
Plaza
Pine Tree Ln
Hurlbut Ave
High School Rd
Gardenia Ln
Apollo Way
Danmar Dr
Barlow Rd
Longwood Ln
Tocchini St
Hetts Ln
Hill Dr
Covert Ln
Pleasant Hill Ave
Zimpher Dr
Brookside Ave
Valentine Ave
Medved Ln
Michael Pl
Ragle Rd
Washington Ave
Stichl Ln
Dean Ln
Swartz Ave
Swartz Rd
Whited Rd
Pillow Rd
Grundel Dr
Germone Rd
Sholem Ln
Lawrence Ln
Blackney Rd
Hillhaven Dr
Nora Ave
Eddie Ln
Sunset Ave
Morris St
Laguna Park Way
McKinley St
Wallace St
Johnson St
Tyler St
Main St
Cleveland Ave
Liberty Oak Ave
Durfee Ave
Murphy Ave
Florence Ave
Wilton Ave
Jesse St
Anthony St
Springer Dr
Humley St
Dutton Ave
Willow St
Burnett St
Abbott Ave
Calder Ave
High St
Maple Ave
Palm Ave
Swain Ave
Swain Woods Ter
Leland St
Cowell Ave
1st St
Robinson Rd
Hayden Ave
Walnut Ln
Woodland Ave
McFarlane Ave
Litchfield Ave
Fellers Ln
Southpoint Ave
Hutchins Ave
Evergreen Ave
Redwood Ave
Fircrest Ave
Dowd Dr
Mark Dr
Lynch Rd
Witter Rd
Waverly Way
St Helena Way
Saraview Way
Skidmore Rd
Scheibel Ln
Kathy Ln
Gates Dr
Averill Rd
Andree Way
Santa Maria Way
Hollman Ln
Enos Ave
Beattie Ln
Cooper Rd
Barbara Dr
Carol Dr
Kelly Ave
Industrial Ave
Sparks Rd
Bassignini Rd
Laguna
Atascadero Creek
Atascadero Creek
MILL STATION RD
BODEGA HWY
BODEGA AVE
HEALDSBURG AVE
SEBASTOPOL AVE
MAIN ST
PETALUMA HILL RD
PLEASANT HILL RD
WATERTROUGH RD
ELPHICK RD
116
H
Data sources: Sebas_Parcels06/s_151217; City of Santa Rosa GIS; Sonoma County GIS; USGS National Hydrography Data Set. Map date: February 8, 2016. Document Name: Sebas_NOP_Fig2_GPLU_8x11_160208

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This section was prepared based on existing reports and literature for Sebastopol and the surrounding areas in Sonoma County. Additional sources of information included the California Department of Transportation's (Caltrans) Designated Scenic Route map for Sonoma County.

This section provides a background discussion of the scenic highways and corridors, and natural scenic resources such as rivers, wildlife areas, and prominent visual features found in the Sebastopol Planning Area. This section is organized with an existing setting, regulatory setting, and impact analysis. No comments were received during the public review period or scoping meeting for the Notice of Preparation regarding this topic.

Concepts and Terminology

The aesthetic value of an area is a measure of its visual character and quality, combined with the viewer response to the area (Federal Highway Administration 1983). Scenic quality can best be described as the overall impression that an individual viewer retains after driving through, walking through, or flying over an area (U.S. Bureau of Land Management 1980). Viewer response is a combination of viewer exposure and viewer sensitivity. Viewer exposure is a function of the number of viewers, number of views seen, distance of the viewers, and viewing duration. Viewer sensitivity relates to the extent of the public's concern for a particular viewshed. These terms and criteria are described in detail below.

Visual Character. Natural and artificial landscape features contribute to the visual character of an area or view. Visual character is influenced by geologic, hydrologic, botanical, wildlife, recreational, and urban features. Urban features include those associated with landscape settlements and development, including roads, utilities, structures, earthworks, and the results of other human activities. The perception of visual character can vary significantly seasonally, even hourly, as weather, light, shadow, and elements that compose the viewshed change. The basic components used to describe visual character for most visual assessments are the elements of form, line, color, and texture of the landscape features (U.S. Forest Service 1974; Federal Highway Administration 1983). The appearance of the landscape is described in terms of the dominance of each of these components.

Visual Quality. Visual quality is evaluated using the well-established approach to visual analysis adopted by Federal Highway Administration, employing the concepts of vividness, intactness, and unity (Federal Highway Administration 1983), which are described below.

- Vividness is the visual power or memorability of landscape components as they combine in striking and distinctive visual patterns.
- Intactness is the visual integrity of the natural and human-built landscape and its freedom from encroaching elements; this factor can be present in well-kept urban and rural landscapes, and in natural settings.
- Unity is the visual coherence and compositional harmony of the landscape considered as a whole; it frequently attests to the careful design of individual components in the landscape.

Visual quality is evaluated based on the relative degree of vividness, intactness, and unity, as modified by visual sensitivity. High-quality views are highly vivid, relatively intact, and exhibit a high degree of visual unity. Low-quality views lack vividness, are not visually intact, and possess a low degree of visual unity.

Viewer Exposure and Sensitivity. The measure of the quality of a view must be tempered by the overall sensitivity of the viewer. Viewer sensitivity or concern is based on the visibility of resources in the landscape, proximity of viewers to the visual resource, elevation of viewers relative to the visual resource, frequency and duration of views, number of viewers, and type and expectations of individuals and viewer groups.

The importance of a view is related, in part, to the position of the viewer to the resource; therefore, visibility and visual dominance of landscape elements depend on their placement within the viewshed. A viewshed is defined as all of the surface area visible from a particular location (e.g., an overlook) or sequence of locations (e.g., a roadway or trail) (Federal Highway Administration 1983). To identify the importance of views of a resource, a viewshed must be broken into distance zones of foreground, middle ground, and background. Generally, the closer a resource is to the viewer, the more dominant it is and the greater its importance to the viewer. Although distance zones in a viewshed may vary between different geographic region or types of terrain, the standard foreground zone is 0.25–0.5 mile from the viewer, the middle ground zone is from the foreground zone to 3–5 miles from the viewer, and the background zone is from the middle ground to infinity (U.S. Forest Service 1974).

Visual sensitivity depends on the number and type of viewers and the frequency and duration of views. Visual sensitivity is also modified by viewer activity, awareness, and visual expectations in relation to the number of viewers and viewing duration. For example, visual sensitivity is generally higher for views seen by people who are driving for pleasure, people engaging in recreational activities such as hiking, biking, or camping, and homeowners. Sensitivity tends to be lower for views seen by people driving to and from work or as part of their work (U.S. Forest Service 1974; Federal Highway Administration 1983; U.S. Soil Conservation Service 1978). Commuters and non-recreational travelers have generally fleeting views and tend to focus on commute traffic, not on surrounding scenery; therefore, they are generally considered to have low visual sensitivity. Residential viewers typically have extended viewing periods and are concerned about changes in the views from their homes; therefore, they are generally considered to have high visual sensitivity. Viewers using recreation trails and areas, scenic highways, and scenic overlooks are usually assessed as having high visual sensitivity.

Judgments of visual quality and viewer response must be made based in a regional frame of reference (U.S. Soil Conservation Service 1978). The same landform or visual resource appearing in different geographic areas could have a different degree of visual quality and sensitivity in each setting. For example, a small hill may be a significant visual element on a flat landscape but have very little significance in mountainous terrain.

3.1.1 ENVIRONMENTAL SETTING

The City of Sebastopol is located on the western edge of the Santa Rosa plain, northwest of Petaluma, and west of the City of Santa Rosa. The area is bordered by the Sonoma Mountains to the east, and a series of rolling hills to the west. To the southwest of the City of Sebastopol are the Estero Lowlands (aka Petaluma Gap), which opens to the Pacific Ocean and Bodega Bay.

The City of Sebastopol and the surrounding areas possess numerous visual resources, many of which are found in the natural areas within the unincorporated areas of Sonoma County. These resources enhance the quality of life for Sebastopol residents, and provide for outdoor recreational, agricultural, scenic vistas, and tourist-generating uses. Landscapes can be defined as a combination of four visual elements: landforms, water, vegetation, and man-made structures. Visual resource quality is an assessment of the uniqueness or desirability of a visual element. Scenic resource quality is an assessment of the uniqueness or desirability of a visual element.

COMMUNITY IDENTITY

Every community has an identity. An identity distinguishes a community from its neighbors, and is an important component of the culture and history of each community. It also provides a sense of place and is what causes people to remember the community. The community identity is largely defined by the visual elements that are present, including natural features and the design of man-made amenities.

The City of Sebastopol is largely defined by its unique small town atmosphere that combines a vibrant blend of cultural amenities with the rural openness surrounding the City. Residents and visitors alike, have long appreciated areas around Sebastopol for the scenic beauty of its rolling hillsides and open spaces. In recent years many restaurants, shops, artist galleries, and live music venues have opened, securing the town's position as West County's arts and culture core. The vast open space areas surrounding the City function as a community separator to provide clear distinction between neighboring communities, and add important open space elements and vistas to the community experience.

OPEN SPACE

There are a variety of open space and visual resources around the City of Sebastopol. They include: agricultural land, grassland, woodlands, riverine, wetlands, and public art. Below is a brief description of each of these open space types in and around Sebastopol.

Agricultural land is predominately intended to be used for production of food and fiber. This land can generally be broken into the following categories: cropland, dryland grain crops, irrigated grain crops, irrigated hayfield, irrigated row and field crops, rice, orchard - vineyard, deciduous orchard, evergreen orchard, and vineyard. The number of building complexes in agricultural areas is smaller and the density of the road and highway network is much lower in these areas. Important farmland soils are located throughout Sonoma County, but are concentrated primarily in the Sonoma Valley, and west of Sebastopol. The City of Sebastopol has a long agricultural history. The apple industry brought steady rural prosperity to the town, but as apples struggled to be profitable in the region,

wine grapes and grazing became prominent in the area. Today the visual effects of the agricultural industry are present of many hillsides and pasturelands, with rolling hills of grapevines, and open grasslands are devoid of once prominent oak groves. While the visual effects of agriculture as a resource is up to individual preference, many people find enhanced agricultural landscapes to be a visually pleasing environment, and Sonoma County places a high importance to this specific type of visual resource amenity.

Grassland occurs mostly on flat plains to gently rolling foothills. These areas are often, but not always, used for livestock grazing. Similar to agricultural lands, the number of building complexes in annual grassland areas is smaller and the density of the road and highway network is much lower in these areas. Grasslands found near Sebastopol are open habitats, providing opportunities for expansive views, and wildflower displays.

Woodlands are a low-density forest that forms from trees in open habitats with plenty of sunlight and limited shade. Woodlands often support an understory of shrubs and herbaceous plants including those found in an annual grassland. Much of the Santa Rosa Plain was previously covered by oak woodlands. However, a large majority of these trees have been removed, to make way for agricultural and urban uses. Retention of the existing oak woodland vegetation is considered critical to the scenic value of areas around the City of Sebastopol.

Urban forests are ecosystems of trees and other vegetation in and around communities that may consist of street and yard trees, vegetation within parks and along public rights of way and water systems. Urban forests provide communities with environmental, economic and social benefits, provide habitat for wildlife, create tranquility, and aesthetic value for a community. Sebastopol has acknowledged the importance of trees to the local community and adopted a Tree Protection Ordinance. In March of 1992, the City Council adopted the Tree Ordinance, Chapter 8.12 of the Municipal Code, to ensure that the community's trees would be protected and managed, so as to ensure these multiple civic benefits. The ordinance establishes protection for significant trees on private property, while allowing a process for removal of trees that are diseased, dangerous, or causing property damage. The City's Tree Ordinance states that all trees, other than those species identified on the Escaped Exotic List, with a diameter at breast height (DBH) of 20 inches or more on properties that house a single-family, or duplex land use are protected. For all other properties, species identified on the Protected Native Tree List, with a DBH of 10 inches or greater are protected. In addition, all other trees larger than 20 inch DBH, which are not listed as Escaped Exotics are also protected.

The Sebastopol Public Works Department maintains an extensive inventory of street trees on City streets. Trees can improve air quality, provide shade, assist in 'calming' traffic, and reduce the 'urban heat island' effect, and provide a visual resource that acts to enhance community identity.

Riverine environments can occur in association with many terrestrial habitats. Riparian areas are found adjacent to many rivers and streams. Riverine environments are also found contiguous to lacustrine (lakes) and wetlands. This environment requires intermittent or continually running water generally originating at some sources, such as a spring or lake, and flows downward.

Retention of the riparian vegetation near the Laguna De Santa Rosa is critical to the scenic value of areas around the City of Sebastopol. The Laguna is called the "river that flows both ways." During heavy rains, the Laguna flows south carrying floodwaters away from the Russian River, reducing its flood levels. After rains subside and the tides fall, the Laguna reverses its flow, returning the floodwater north, back into the Russian River and eventually to the Pacific Ocean. Additionally, water enters the Laguna from a collection of creeks, tributaries, springs, seeps and sub-surface flows. Because of this diverse water supply, the Laguna, through primarily a marsh, has characteristics of a stream, creek, seasonal wetland, open water, and other aquatic habitats in various locations, making it a truly unique ecosystem and community resource.

Wetlands occur on virtually all exposures and slopes, provided a basin or depression is saturated or at least periodically flooded. They are most common on level to gently rolling topography. They are found in various depressions or at the edge of rivers or lakes. Sebastopol has developed the unique wetland resource of the Laguna de Santa Rosa Wetlands Preserve, comprising approximately 75 acres of open space and trails. The Laguna de Santa Rosa is the second largest freshwater marsh in Northern California and the largest in Sonoma County. The Laguna is considered a premier wildlife and bird watching area that is home to many species of flora and fauna, including several listed species. Much of the wetland preserve has been reclaimed from a former wastewater treatment plant, a City dump, and an industrial waste (from apple processing) disposal field. The Preserve has served as a model for Laguna Preservation throughout the Laguna watershed, which extends from Rohnert Park to the Russian River. There is a walking trail that adjoins the Laguna channel, looping around the City's former wastewater ponds. From late spring to early fall, a floating pedestrian bridge is in place that crosses the channel and connects to a longer trail that loops around Meadowlark Field.

Public art refers to works of art in any medium, which are outside and accessible to all. Public art usually holds implications of site specificity, community involvement and collaboration. Cities gain value through public art installations through cultural, social, economic, and aesthetic value. Public art is a distinguishing part of a community's history and evolving culture; it adds meaning to cities and uniqueness to communities. Public art humanizes the built environment and can invigorate public spaces. Sebastopol has a rich artistic spirit and appreciation for arts and culture. Public art displays can be viewed in the City at a number of public sites where the work of the 'Sculpture Jam' group of artists is displayed, and along Florence Avenue, which is a residential art enclave displaying public art by local artists. The City of Sebastopol also has a Public Arts Committee that works to keep aesthetically pleasing and locally produced art circulating throughout the community. Sebastopol has one of the most active arts organizations in Sonoma County, in the Sebastopol Center for the Arts, with a variety of arts programs, classes, and exhibits.

SCENIC HIGHWAYS AND CORRIDORS

Scenic Highways

A scenic highway is generally defined by Caltrans as a public highway that traverses an area of outstanding scenic quality, containing striking views, flora, geology, or other unique natural attributes. A highway may be designated scenic depending upon how much of the natural landscape can be seen by travelers, the scenic quality of the landscape, and the extent to which development intrudes upon the traveler's enjoyment of the view.

The status of a proposed state scenic highway changes from eligible to official designation when the local governing body applies to Caltrans for scenic highway approval, adopts a Corridor Protection Program, and receives notification that the highway has been officially designated a Scenic Highway.

The City of Sebastopol offers a variety of scenic views, many of which are visible from roadways. However, there are no officially designated State Scenic Highways within the Sebastopol Planning Area. The State of California has officially designated two Scenic Highways in Sonoma County that have a total length of approximately 40 miles. The criteria for official designation and eligibility includes the scenic quality of the landscape, how much of the natural landscape can be seen by travelers, and the extent to which development intrudes upon the traveler's enjoyment of the view. Below is a brief summary of each designated scenic highway, one of which (Highway 116) stretches 28 miles from Highway 1 to the city limits of Sebastopol.

OFFICIALLY DESIGNATED SCENIC HIGHWAYS IN SONOMA COUNTY

1. SR 12 from Danielli Avenue (east of Santa Rosa) to London Way (near Aqua Caliente) (post mile 22.450 to 34.02). This segment is 11.6 miles long and was designated on December 17, 1974. This highway segment includes travel through the Valley of the Moon, where there are mountains to the north, east, and southwest, and extensive vineyards and oak trees.

2. SR 116 from SR 1 to the north city limit of Sebastopol (post mile 0.0 to 27.817). This segment is 27.8 miles long and was designated on September 20, 1988. This highway segment includes travel along the Russian River, and passes a historic resort area, redwood forests, and eucalyptus groves.

Scenic Corridors

A scenic corridor is the view from the road that may include a distant panorama and/or the immediate roadside area. A scenic corridor encompasses the outstanding natural features and landscapes that are considered scenic. It is the visual quality of the man-made or natural environments within a scenic corridor that are responsible for its scenic value. Commonly, the physical limits of a scenic corridor are broken down into foreground views (zero to one quarter mile) and distant views (over one quarter mile). In addition to distinct foreground and distant views, the visual quality of a scenic corridor is defined by special features, which include:

- Focal points - prominent natural or man-made features which immediately catch the eye.
- Transition areas - locations where the visual environment changes dramatically.

- Gateways - locations which mark the entrance to a community or geographic area.

Sonoma County has also designated various highways and roadways throughout the unincorporated County as Scenic Corridors (see Figure 3.1-1). Below is a list of designated scenic corridors by Sonoma County that are located in the vicinity of Sebastopol.

DESIGNATED SCENIC CORRIDORS IN SONOMA COUNTY

- State Route 116 (Gravenstein Highway)
- Occidental Road
- California State Route 12
- Bodega Highway

NATURAL SCENIC RESOURCES

Natural scenic resources in and around Sebastopol consist primarily of agricultural lands, undeveloped hillsides, undeveloped watershed habitat (open space) and creek corridors.

Sonoma County Designated Scenic Landscape Units

Within the Sebastopol Planning Area, Sonoma County has designated Laguna de Santa Rosa as a scenic landscape unit (a unit of land that is of special importance to Sonoma County). This area consists primarily of the scenic lowlands and floodplain around the Laguna de Santa Rosa marsh, swamp and riparian forest. It also includes hills between Forestville, Sebastopol, and Meacham Hill. The Laguna defines the eastern boundary of Sebastopol and associated rural residential development. Sonoma County has also designated expansive amounts of land as Scenic Landscape Units to the northwest Sebastopol along Occidental Road, and west of the City along Bodega Highway, as shown in Figure 3.3-1.

Sonoma County Agricultural Preservation and Open Space District

The Sonoma County Agricultural Preservation and Open Space District is a Special District formed by a vote of the citizens in 1990. The District was created for the acquisition and preservation of agricultural and open space lands, to ensure future generations are provided with valuable natural environments, scenic areas, and recreational opportunities.

The District protects land through land conservation agreements, (a voluntary legal agreement that a landowner makes to restrict the amount and type of development that may take place on his or her property) and through the direct purchasing of land. Each agreement is tailored to protecting the unique resources of the particular property and remains with the land forever. Conservation Agreements are an important tool used by the District to preserve agricultural land, open space, and recreational land uses. Protected lands in and around the Planning Area include:

Balletto Ranch borders the Laguna de Santa Rosa and contains many scattered valley oaks. This diverse waterfront property acts as a buffer between Sebastopol and Santa Rosa. Rolling hills of lush vineyard cover the upland portion of the site, and creeks feed into the meandering Laguna across its southern face. The ranch also provides a stunning vista from Occidental Road to the north with

its vineyards, valley oaks, winding waterways and wildlife. A portion of land on this property has been donated to the District to provide public access.

Carinalli Ranch is located west of Sebastopol along Highway 12. The Ranch forms an important open space buffer between Santa Rosa and Sebastopol, along the Laguna de Santa Rosa uplands.

Dutton Ranch is well known in the farming community in Sonoma County. The ranch cultivated crops such as Gravenstein apples and varietal grapevines dominate the rolling countryside of this ranch west of Sebastopol. Travelers along Highway 116 will enjoy the scenic views that this productive ranch provides. The ranch is protected with a District easement.

Laguna Farms Spray Fields has an agreement between the City of Santa Rosa and the District, which permanently protects this richly diverse landscape that is visible from the Highway 12 scenic corridor. The broad landscape of water and wetlands is home to hundreds of plants, birds, fish and invertebrates. A master plan is in process to develop trails through the Laguna to allow visitors access to this enjoyable landscape.

Laguna Uplands Preserve is behind Palm Drive Hospital. Students use this site as an outdoor classroom to learn about nature through the District's "In Our Own Back Yard" educational program. Located on the western edge of the Laguna de Santa Rosa, the property is characterized by moderately sloping hillsides, with scenic views across the Laguna looking toward Taylor Mountain and Santa Rosa. Owned by the Laguna de Santa Rosa Foundation, its conservation values are protected permanently by a conservation easement.

Laguna SkateGarden Park is where skateboarders and gardeners enjoy this unique combination skate park and community garden. The City of Sebastopol has built a build a state-of-the-art skate park on this site, surrounded by a community garden with demonstration areas for sustainable gardening practices. This park site was acquired through the Matching Grant Program, and attracts young people throughout western Sonoma County to skateboard, to learn about organic gardening, and to help grow local produce. Artists from the Sebastopol Center for the Arts have participated in the design process, adding to the creative mix and the unique character of this community park.

West County Trail is a path that runs between Sebastopol and Forestville, and provides a walking and biking view corridor along an abandoned railway line east of Highway 116. The relatively flat terrain, and paved trail makes for easy access, and it provides stunning views of the farms, vineyards, and open land in the greater Sebastopol area. Maintained by Sonoma County Regional Parks, the District retains an easement to protect the conservation values along the trail. The area is noted to be especially scenic in fall and spring. For horseback riders, an unpaved equestrian trail runs parallel to the paved trail. The District was able to acquire a trailhead just off First Street in Forestville and most recently assisted Regional Parks, through its Matching Grant Program, in developing an additional trailhead off of Ross Station Road.

Sebastopol Railroad Forest is situated on the east side of Sebastopol on land formerly owned by the Southern Pacific Railroad. The Sebastopol Railroad Forest is characterized by wetlands and significant wildlife. Bicyclists and hikers along the adjacent trail will enjoy the area's natural resources and rural beauty that is protected by a conservation easement.

Tomodachi Park is a small park is full of mature valley oak trees with the Laguna channel flowing through. For many years the forest was used as a seasonal campground until purchased by the city and the Sonoma County Agricultural Preservation and Open Space District. Tomodachi Park is protected by a conservation easement.

Meadowlark Field was acquired by the City of Sebastopol on April 30, 1973. The park is part of the City's Laguna Wetlands Preserve. The Property offers expansive, open views of the Laguna de Santa Rosa floodplain and associated uplands. Meadowlark Field is protected by a conservation easement.

Table 3.1-1 displays open space and conservation land in the vicinity of Sebastopol that is currently under a protection agreement.

TABLE 3.1-1: PROTECTED LANDS NEAR SEBASTOPOL

NAME	LAND CONSERVATION TYPE	DATE PROTECTED	ACRES
Sebastopol Railroad Forrest	Natural Areas/Recreation	July 1993	10.0
Laguna SkateGarden Park	Recreation	April 2008	1.1
Dutton Ranch	Farms/Greenbelts	September 1995	69.0
West County Trail	Recreation	May 1995	16.6
Balletto Ranch	Greenbelts/Recreation/Farms/Natural Areas	April 2002	256.0
Carinalli Ranch	Greenbelts/Farms/Ranches	June 1995	245.0
Laguna Farms	Greenbelts	September 2001	1,400.0
Laguna Uplands Preserve	Natural Areas	May 1996	8.0
		Total	2,002.7

Natural scenic resources in the Planning Area are identified on Figure 3.1-1.

LIGHT AND GLARE

During the day, sunlight reflecting from structures is a primary source of glare, while nighttime light and glare can be divided into both stationary and mobile sources. Stationary sources of nighttime light include structure illumination, interior lighting, decorative landscape lighting, and streetlights. The principal mobile source of nighttime light and glare is vehicle headlamp illumination. This ambient light environment can be accentuated during periods of low clouds or fog.

The varieties of urban land uses in the Planning Area are the main source of daytime and nighttime light and glare. They are typified by single and multi-family residences, commercial structures, industrial areas, and streetlights. These areas and their associated human activities (inclusive of vehicular traffic) characterize the existing light and glare environment present during daytime and nighttime hours in the urbanized portions of the Planning Area. Areas outside of the city limits, near the fringes of the Planning Area, are characterized by less intense residential development and generally have lower levels of ambient nighttime lighting and daytime glare.

Sources of glare in urbanized portions of the Planning Area come from light reflecting off surfaces, including glass, and certain siding and paving materials, as well as metal roofing. The urbanized areas

of Sebastopol contain sidewalks and paved parking areas which reflect street and vehicle lights. The existing light environment found in the project area is considered typical of suburban areas.

Sky glow is the effect created by light reflecting into the night sky. Sky glow is of particular concern in areas surrounding observatories, where darker night sky conditions are necessary, but is also of concern in more rural or natural areas where a darker night sky is either the norm or is important to wildlife. Due to the urban nature of the planning area, a number of existing light sources affect residential areas and illuminate the night sky. Isolating impacts of particular sources of light or glare is therefore not appropriate or feasible for the project.

3.1.2 REGULATORY SETTING

FEDERAL

There are no federal regulations that apply to the proposed project related to visual resources in the study area.

STATE

California Department of Transportation – California Scenic Highway Program

California's Scenic Highway Program was created by the Legislature in 1963 to preserve and protect scenic highway corridors from change, which would diminish the aesthetic value of lands adjacent to highways. The state laws governing the Scenic Highway Program are found in the Streets and Highways Code, Section 260 et seq.

The State Scenic Highway System includes a list of highways that are either eligible for designation as scenic highways or have been so designated. These highways are identified in Section 263 of the Streets and Highways Code. A list of California's scenic highways and map showing their locations may be obtained from the Caltrans Scenic Highway Coordinators.

If a route is not included on a list of highways eligible for scenic highway designation in the Streets and Highways Code Section 263 et seq., it must be added before it can be considered for official designation. A highway may be designated scenic depending on the extent of the natural landscape that can be seen by travelers, the scenic quality of the landscape, and the extent to which development intrudes upon the traveler's enjoyment of the view.

When a local jurisdiction nominates an eligible scenic highway for official designation, it must identify and define the scenic corridor of the highway. A scenic corridor is the land generally adjacent to and visible from the highway. A scenic highway designation protects the scenic values of an area. Jurisdictional boundaries of the nominating agency are also considered, and the agency must also adopt ordinances to preserve the scenic quality of the corridor or document such regulations that already exist in various portions of local codes. These ordinances make up the scenic corridor protection program.

To receive official designation, the local jurisdiction must follow the same process required for official designation of State Scenic Highways. The minimum requirements for scenic corridor protection include:

- Regulation of land use and density of development;
- Detailed land and site planning;
- Control of outdoor advertising (including a ban on billboards);
- Careful attention to and control of earthmoving and landscaping; and
- Careful attention to design and appearance of structures and equipment.

3.1.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed project will have a significant impact on aesthetics if it will:

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

IMPACTS AND MITIGATION MEASURES

Impact 3.1-1: General Plan implementation could result in substantial adverse effects on visual character, including scenic vistas or scenic resources (Significant and Unavoidable)

While the Sebastopol Planning Area contains numerous areas and viewsheds with relatively high scenic value, there are no officially designated scenic vista points in the Planning Area. Additionally, as described above, there are no officially designated scenic highways located in the City of Sebastopol. Significant visual resources in the Planning Area include views of agricultural land, grassland, woodlands, riverine, wetlands, and public art. These resources can be viewed from public vantage points, including highways, roads, open space areas, and private residences throughout the Planning Area.

Buildout of the proposed 2016 General Plan would allow for new development to occur in areas that have historically been used for agricultural operations and areas that have been previously undeveloped. The introduction of new development into previously undisturbed areas or areas that have been historically used for agricultural operations may result in potentially significant impacts to scenic resources or result in the degradation of the Planning Area's visual character.

Buildout under the proposed 2016 General Plan and implementation of the General Plan Land Use Map has the potential to result in new and expanded development along highway corridors with high scenic values, even though these corridors are not officially designated as State Scenic Highways. Highway 12 and State Route 116 are the principal highway corridors through the Sebastopol Planning Area. Development under the General Plan and the land use designations identified on the Land Use Map would allow primarily for infill commercial and industrial land uses along these highway corridors, primarily in areas that are currently urbanized, but also in areas that are currently agricultural or undeveloped, including the State Route 116 corridor. New development along the State Route 116 corridor would occur exclusively as infill development in areas that are already developed and urbanized. New development along the State Route 116 corridor would occur as a combination of infill development, urban revitalization, and new development in previously undeveloped areas. There are a range of existing industrial land uses located along the State Route 116 corridor that are aging and in need of repair and rehabilitation. New development in this area has the potential to improve upon the existing urban aesthetic through the replacement and rehabilitation of existing structures. There are limited areas of undeveloped land along the State Route 116 corridor that may experience new urban development as a result of General Plan implementation.

The General Plan has been developed to preserve expansive areas of open space and to ensure that new development is located in and around existing urbanized areas, thus ensuring that new development is an extension of the existing urban landscape and minimizes interruption of views of agricultural land, grassland, woodlands, riverine, wetlands, and public art.

Future development would be required to be consistent with the General Plan, the Municipal Code, including hillside development limitations and the Zoning Ordinance, as well as other applicable City regulations. A central theme of the 2016 General Plan is to preserve and protect the City's rural and small town character by concentrating new growth in and around existing urbanized areas, and protecting the existing visual character of the Planning Area. This is expressed in Policies LU-2 and LU-3 in the Land Use Element, which avoid urban sprawl by concentrating development within the City limits, and favoring infill development over annexation. The General Plan Community Design Element includes Goal CD 1, which calls on the City to preserve and enhance Sebastopol's unique character, design and sense of place as a small, compact town. Goal CD 1 is supported by Policies CD 1-1 through CD 1-14. Policy CD 1-12 requires the design of new residential development to be consistent with the City's design guidelines, to ensure new development contributes to the small town character of Sebastopol. Future development would be required to be consistent with the 2016 General Plan and the General Plan Land Use Map.

In addition to the Land Use and Community Design Element Goals and Policies identified above, a range of Goals, Policies, and Actions contained in the Conservation and Open Space Element, listed below, are intended to maintain and enhance the overall visual character of the Planning Area, and to avoid the installation of structures or features that conflict with the character of the surrounding area. Goal COS 11 calls for the preservation and enhancement of scenic views of the Laguna de Santa Rosa, Atascadero Creek, the hills to the west of Sebastopol, and other natural resources within the Sebastopol Planning Area. Policies COS 11-1 through COS 11-8 call for the protection of scenic

resources, ridgelines, and view corridors, and regulate development on hillsides. Action COS-11a requires an assessment of public views and ridgelines as part of the project review process to assure that projects protect natural resources through proper site planning, building design, and landscaping.

The implementation of the policies and programs contained in the Land Use, Community Design, and Conservation and Open Space Elements listed below would ensure that new urban residential and commercial development in the Sebastopol Planning Area is located in and around existing urbanized areas and developed to be visually compatible with nearby open space resources, which would limit impacts to scenic resources and limit visual degradation by preserving extensive areas of open space, agricultural lands and undisturbed areas surrounding the Planning Area. This holistic land use approach would reduce impacts to visual resources by concentrating new development around existing development, and maximizing opportunities for open space preservation and continued agricultural use of lands outside of established urban areas. Implementation of the policies and programs items contained in the Land Use, Community Design, and Conservation and Open Space Elements would further ensure that new development is designed in a way that enhances the visual quality of the community, complements the rural character of the city, and that adverse effects on public views are minimized.

However, even with the implementation of the policies and actions in the 2016 General Plan, the potential for new development to interrupt scenic views, particularly new industrial and commercial development on agricultural or undeveloped lands, would remain. Existing scenic views may be diminished or obscured. While the 2016 General Plan policies and programs would ensure that impacts are reduced to the greatest extent feasible, the only method to completely avoid impacts to scenic resources would be to severely limit the development potential on all undeveloped lands, including development of jobs-generating uses along the State Route 116 corridor. This type of mitigation is not consistent with the objective of the 2016 General Plan to support local employment opportunities and expand the local jobs base. Therefore, the impact would be **significant and unavoidable**.

2016 GENERAL PLAN POLICIES AND ACTIONS THAT MITIGATE POTENTIAL IMPACTS

Policies

Policy COS 1-2: *Consider the effects of planning decisions on the overall health and wellbeing of the natural environment and regional ecosystems.*

Policy COS 1-3: *Consider the "Rights of Nature" as a key principal when making planning decisions and reviewing development and infrastructure project applications.*

Policy COS 1-4: *Recognize that all life within all ecosystems on our planet are deeply intertwined, and consider the inherent values of ecological goods and services as key principles when making planning decisions.*

Policy COS 2-2: *Preserve and enhance Sebastopol's and the region's natural habitats and rich biodiversity including, but not limited to, grasslands, freshwater marshes, wetlands, vernal pools, riparian areas, aquatic habitat, oak woodlands, and agricultural lands.*

Policy COS 2-4: *Attempt to resolve conflicts between sensitive habitat areas and adjoining urbanized lands in a manner which recognizes the public interests in both resource protection and the need to provide for residential and job-generating land uses.*

Policy COS 2-5: *Implement a range of measures and tools in order to protect, enhance and restore environmentally sensitive areas.*

Policy COS 2-6: *Maintain Zoning Ordinance provisions to ensure that development proposals for land which is located within, or adjacent to, an environmentally sensitive area include a resources analysis that contains all of the information required in order for the City to determine that impacts to sensitive habitat and natural resources have been reduced, avoided, or mitigated to the greatest extent feasible. The required content for the resources analysis is detailed in Action COS-2a.*

Policy COS 4-1: *Recognize and protect the Laguna as a critical component to the essence of Sebastopol.*

Policy COS 4-2*: Protect, enhance, and restore sensitive habitats in the Laguna, and recognize that the Laguna provides a myriad of environmental benefits to the region's ecosystem.*

Policy COS 4-3: *Preserve and enhance the visual character of the Laguna.*

Policy COS 6-1: *Conserve existing native vegetation where possible and integrate regionally native plant species into development and infrastructure projects where appropriate.*

Policy COS 6-2: *Require the use of primarily locally-sourced native and drought-tolerant plants and trees for landscaping on public projects, if feasible, and strongly encourage their use for landscaping on private projects.*

Policy COS 6-3: *Avoid removal of large, mature trees that provide wildlife habitat or contribute to the visual quality of the environment through appropriate project design and building siting. If full avoidance is not possible, prioritize planting of replacement trees on-site over off-site locations. Replacement trees for high-quality mature trees should generally be of like kind, and provide for comparable habitat functionality, where appropriate site conditions exist.*

Policy COS 6-4: *Facilitate the preservation of existing trees, the planting of additional street trees, and the replanting of trees lost through disease, new construction or by other means.*

Policy COS 6-5: *Require new development to incorporate trees in landscape plans.*

Policy COS 10-5: *Protect important historic resources and use these resources to promote a sense of place and history in Sebastopol.*

Policy COS 10-6: *Encourage the voluntary identification, conservation, and re-use of historical structures, properties, and sites with special and recognized historic, architectural, or aesthetic value.*

Policy COS 11-1: *Consider existing scenic resources, including views of the Laguna de Santa Rosa, local hills, ridgelines, and open space areas surrounding the City, as resources critical to Sebastopol's community identity and character.*

Policy COS 11-2*: Protect Sebastopol's ridgelines (hill tops and hillsides with slopes of 15 percent or greater) from erosion, slope failure, and development.*

Policy COS 11-3*: Preserve the topography of Sebastopol's hills by prohibiting unnecessary leveling/grading activities prior to site-building on hillsides.*

Policy COS 11-4*: Preserve and protect prominent views of scenic resources, including the Laguna de Santa Rosa, local hills, ridgelines, and open space areas surrounding the City, and consider visual access and view corridors when reviewing development proposals.*

Policy COS 11-5*: Regulate development on hillsides with slopes of 15 percent or greater and ridgelines where structures would interrupt the skyline.*

Policy COS 11-6*: Encourage structures within new developments on substantially sloped sites to step with the slope of the site. Absorb site topography through the use of split-level designs.*

Policy COS 11-7*: Restrict outdoor light and glare from development projects to retain the quality of night skies by minimizing light pollution.*

Policy COS 11-8*: All outdoor lighting shall be constructed with full shielding and/or recessed to reduce light trespass to adjoining properties and to reduce illumination of the night sky. Each fixture shall be directed downward and away from adjoining properties and public rights-of-way, so that no light fixture directly illuminates an area outside of the site.*

Policy COS 12-3*: Conversion of open space, as defined under Policy COS 12-1, to developed residential, commercial, industrial, or other similar types of uses, shall be prohibited. Undeveloped land that is designated for urban uses may be developed, if the proposed development is consistent with the General Plan Land Use Map and has undergone environmental review.*

Policy COS 12-6*: Support regional and local natural resource preservation plans of public agencies that retain and protect open space within the city limits and the Planning Area.*

Policy COS 12-9*: Encourage the protection and incorporation of existing, native, mature, non-orchard trees and areas of natural vegetation as part of new development.*

Policy COS 12-10*: Facilitate public access to open space and environmentally sensitive areas in a manner that ensures protection of biotic resources.*

Policy COS 12-11*: Require usable open space for residential and major commercial developments.*

Policy COS 12-12*: Encourage clustered development that preserves a sense of openness, particularly in areas adjacent to open spaces and scenic resources.*

Policy COS 12-13*: Support and encourage the preservation of agricultural lands surrounding the Sebastopol Planning Area to continue the agricultural heritage of Sebastopol and to serve as community separators.*

Policy COS 12-15*: Work with the Local Agency Formation Commission (LAFCO) on issues of mutual concern including the conservation of agricultural land through consistent use of LAFCO policies, particularly those related to conversion of agricultural lands and establishment of adequate buffers between agricultural and non-agricultural uses, and the designation of a reasonable and logical Sphere of Influence (SOI) boundary for the City.*

Policy COS 12-16*: Minimize conflicts between agricultural and urban land uses.*

Policy COS 12-17*: Require new development to have structural setbacks that respect agricultural lands and operations. Setbacks and buffers shall be provided by the development and not encroach upon productive agricultural areas.*

Policy CD 1-1: *Ensure that new development is constructed in a manner consistent with the City's Design Guidelines, and any design guidelines for specific areas or types of development.*

Policy CD 1-2: *Ensure that new residential and commercial development is sensitive to the surrounding architecture, topography, landscaping, character, scale, and ambiance of the surrounding neighborhood.*

Policy CD 1-3: *Discourage repetitive designs in residential and commercial areas, while establishing a cohesive visual relationship between structures and their surroundings.*

Policy CD 1-11: *Encourage and support the inclusion of public and quasi-public spaces in new developments by offering incentives such as increased densities or decreased height/setback restrictions, where feasible and compatible with the surrounding neighborhoods.*

Policy CD 1-12: *Require the design of new residential development to be consistent with the City's design guidelines, to ensure that new development contributes to the small town character of Sebastopol.*

Policy CD 1-13: *Encourage the enhancement and beautification of all areas of the community.*

Policy CD 1-14: *Monitor the placement of unapproved and unpermitted signage throughout the community to reduce visual clutter and nuisance signage, including temporary signs that are not permitted by the Municipal Code.*

Policy CD 2-1: *Promote a safe and active environment through an urban form that provides physical and visual connections throughout the Downtown Core.*

Policy CD 2-4: *Work with CalTrans to implement streetscape improvements that increase the functionality and aesthetic appeal of the Highway 116 and Highway 12 routes through the city and to make the Downtown area more people-oriented and less vehicle-oriented. Promote elements such as:*

- *Street trees and native and drought tolerant landscaping*
- *Benches*
- *Public gathering spaces*
- *Elimination of sidewalk gaps*
- *Decorative street lights that minimize night sky impacts*
- *Low Impact Design*
- *Wider sidewalks*
- *Complete Streets Design*

Policy CD 2-6: *Use cohesive design elements in the Downtown that promote visual connectivity.*

Policy CD 2-7: *Ensure that parking strategies in the Downtown Core enhance the visual landscape, reduce the visibility of parking facilities and the amount of land required for parking purposes.*

Policy CD 2-8: *Provide identification of City and community facilities that facilitates wayfinding and enhances aesthetics.*

Policy LU 1-2*: Avoid urban sprawl by concentrating development within the City limits; favor infill development over annexation.*

Policy LU 1-3*: Require new development to occur in a logical and orderly manner, focusing growth on infill locations and areas designated for urbanization on the Land Use Map (see Figure 2.1), and be subject to the ability to provide urban services, including paying for any needed extension of services.*

Policy LU 5-3: *Commercial, industrial, and other non-residential development that interfaces with residential land use designations and existing residential neighborhoods shall be designed to ensure compatibility between the uses and to reduce any potential negative impacts associated with aesthetics, noise, and safety.*

Policy LU 5-4: *Require the design of new residential development to be consistent with the City's design guidelines, to ensure harmony with Sebastopol's unique, small-town character and compatibility with existing land uses.*

Actions

Action COS-1a: Implement the policies and actions in the Conservation and Open Space Element, and all other relevant and applicable policies and actions throughout the General Plan, to provide for progressive, effective, and forward-thinking strategies to protect the natural environment and promote sustainability to the greatest extent feasible.

Action COS-1b: Consider the establishment and adoption of a Rights of Nature Ordinance. Consideration should include legal, economic, and human implications of such an ordinance, a timeline for implementation, and standards to provide for robust environmental protection measures, while balancing the other social, economic, and community priorities established by the General Plan.

Action COS-2a: Maintain Zoning Ordinance provisions to require development project proposals, infrastructure projects, long-range planning projects, and other projects that may potentially impact special-status species and sensitive resources to submit a resources analysis as part of the project application which determines whether significant adverse impacts will occur. Evaluations shall be carried out by a qualified professional biologist approved by the Sebastopol Planning Department, and shall be funded by the project applicant. Generally, the resources analysis shall identify, describe, and locate, the following:

- *The type and location of all special-status plant and animal species;*
- *Riparian vegetation within at least 50 feet of the subject property;*
- *The location, type, functionality, and offsite connectivity of wetlands, if applicable;*
- *The location of protected native trees onsite (as defined by the Sebastopol Municipal Code);*
- *Potential archaeological, cultural, and historical resources, if applicable;*
- *Flood hazard areas, as defined by FEMA and/or the Department of Water Resources (DWR).*

The resources analysis shall determine, as applicable, the area and location of undeveloped land required to protect and enhance the continued viability of biotic resources, wetlands, and sensitive areas. The resources analysis shall identify land that is functionally a part of the nearby wetlands ecosystem, which should be preserved in a natural state.

Projects shall be designed to avoid impacts to sensitive resources; and in cases where impacts cannot be fully avoided, impacts shall be reduced. Where adverse impacts cannot be feasibly reduced or avoided through project design, projects shall include the implementation of site-specific or project-specific effective mitigation strategies developed by a qualified professional in consultation with state or federal resource agencies with jurisdiction (if applicable) that may include, but are not limited to, the following strategies:

- *Preservation of habitat and connectivity of adequate size, quality, and configuration to support the special-status species. Connectivity shall be determined based on the specifics of the species' needs.*
- *Project design measures, such as clustering of structures or locating project features to avoid known locations of special-status species and/or sensitive habitats.*
- *Provision of supplemental planting and maintenance of grasses, shrubs, and trees of similar quality and quantity to provide adequate vegetation cover to enhance water quality, minimize sedimentation and soil transport, and provide adequate shelter and food for wildlife.*
- *Protection for habitat and the known locations of special-status species through adequate buffering or other means to protect habitat functions.*

- *Provision of replacement habitat of like quantity and quality on- or off-site for special-status species. Preference shall be given to the preservation of habitat on-site or as close to the area of impact as feasible, so long as that habitat is of comparable quality.*
- *Enhancement of existing special-status species habitat values through restoration and replanting of native plant species.*
- *Provision of temporary or permanent buffers of adequate size (based on the specifics of the special-status species) to avoid nest abandonment by nesting migratory birds and raptors associated with construction and site development activities.*
- *Incorporation of the provisions or demonstration of compliance with applicable recovery plans for federally listed species.*
- *Monitoring of construction activities by a qualified biologist to avoid impacts to on-site special status species.*

Action COS-4f: During the development review process, review all development applications for consistency with the Laguna Wetlands Preserve Restoration and Management Plan, and ensure that new development does not adversely impact habitat within the Laguna, or interfere with efforts to implement restoration and preservation efforts within the Laguna.

Action COS-6a: Make available a list of plants and trees native to the region that are suitable for use in landscaping. The plant and tree species should be drought tolerant, available from local sources, and consideration should be given to the suitability of the plant and tree species for use as habitat to native animals, birds, and insects. The list should be provided online in a user-friendly format, and staff should direct project applicants to the list during site design review and approval.

Action COS-6b: Continue to implement the Tree Protection Ordinance, which protects substantial trees, provides for removals in specified circumstances, and which requires a Tree Protection Plan (TPP) prepared by a certified arborist for projects that may affect protected trees.

Action COS-6c: Review and possibly revise the Tree Protection Ordinance in order to strengthen monitoring provisions for re-planting efforts, in order to ensure the long-term health and viability of re-planted trees. Revisions should also address the current fee structure for violations of the TPP to ensure that violations are more costly than compliance with the TPP requirements.

Action COS-6d: Prepare and adopt a Street Tree Planting and Management Program establishing varieties, size and spacing requirements, maintenance standards, and priority planting schedules. This program shall give priority to those streets with heavy vehicular traffic and those which link open space and activity centers. The program shall ensure that trees provide adequate shade and are integrated into parking lots and community spaces in such a manner that tree health is maintained in the long term.

Action COS-6e: Continue requiring the planting of trees in parking lots to provide shade and visual screening.

Action COS-10e: Develop a Historic Sebastopol program to identify and protect historic resources, encourage landowners to voluntarily preserve and rehabilitate historical structures, and to provide a coordinated approach to draw visitors and tourists to these areas. The program may include:

- *Coordinated signage and identifying placards of historic areas, including downtown, specific buildings, and businesses.*
- *Maps available on-line, at the Chamber of Commerce, and key locations of the City that direct visitors and history aficionados to key historic and cultural resources in the City.*
- *Establishment of local historic districts (such as the downtown) with standards to conserve historical resources and promote the highest and best use of such resources.*
- *Property owner incentives for the preservation and restoration of historic buildings and sites. Consider the following incentives: Interest-free or reduced interest loans for rehabilitation work consistent with the original character of the building; tax incentives for the preservation of historic structures, including the use of Mills Act preservation contracts; reduced processing fees for preservation and protection of outstanding buildings; use of the State Historic Building Code where applicable; a brochure that identifies resources to purchase materials and fixtures that are historically accurate in appearance but offer modern benefits (e.g., energy-efficient lighting, windows, building materials that correlate to specific architectural or historic periods that are often seen in the City); and awards and grants for the preservation and protection of outstanding buildings.*

Action COS-10f: Develop guidelines for remodels of potentially historic residential structures to ensure that the character and individuality of such residences is maintained. The guidelines should address:

- *Design styles, age of home, and other criteria to determine applicability of the guidelines;*
- *Exterior features that are important and covered by the guidelines (e.g., siding and exterior finishes, windows, doors, roofs, porches, garages, outbuildings, and streetscapes);*
- *Standards for modifications and renovation, including the extent of changes that can occur; and*
- *Activities that are exempt from the guidelines, such as interior improvements and routine maintenance and repair.*

Action COS-11a: Assess public views and ridgelines as part of the project review process to assure that projects protect natural resources through proper site planning, building design, and landscaping.

Action COS-11b: Utilize the Scenic Resource Areas Map (Figure 5.5-1 in the Existing Conditions Report) as a guide to protecting and enhancing scenic views in the development review process.

Action COS-11c: Analyze proposed structures proximate to the Laguna de Santa Rosa for their effect on the views of and from the Laguna de Santa Rosa.

Action COS-11d: Analyze proposed structures proximate to the Laguna de Santa Rosa for their potential effect on the Laguna skyline. Do not permit massive, uninterrupted penetrations of the tree line by roofs or other building structures.

Action COS-11e: Continue to require developers to underground utility lines.

Action COS-11f: Continue to implement the Hillside Development standards contained in the Municipal Code, which prohibits development of any lot with an average cross-slope greater than 10% for any use other than single family detached residences without first obtaining a Hillside Development Use Permit.

Action COS-11g: Review, and consider strengthening, the exterior lighting standards contained in the Design Review Guidelines. The lighting standards in the Design Review Guidelines should incorporate principals and best practices endorsed by the International Dark Sky Association. The updated standards should address:

- *Nuisance prevention*
- *Shielding requirements*
- *Level of illumination*
- *Energy efficiency requirements*
- *Accent lighting*

Action COS-12b: Continue to implement relevant sections of the Zoning Ordinance to require that on-site open space be provided in multi-family and mixed-use developments.

Action COS-12c: Review all development proposals involving unincorporated land within the jurisdiction of Sonoma County, and within or adjacent to the Sphere of Influence or Planning Area, to ensure adequate preservation of community separators and open space resources.

Action COS-12d: Adopt an ordinance that specifies standards and responsibilities for the maintenance of private open space lands within the city limits. The standards should include provisions for public access, habitat management, water quality protection, safety, and aesthetics.

Action COS-12k: Review all development proposals, planning projects, and infrastructure projects to ensure that open space and scenic resource impacts are reduced by maximizing design features that preserve a sense of open space and by minimizing off-site and night sky impacts of outdoor lighting consistent, with the requirements of the Municipal Code.

Action COS-12l: Revise the Design Review Guidelines to require clustering or other measures to preserve a sense of openness in new developments that are adjacent to open space or scenic resource areas.

Action COS-12m: Work with Sonoma County and the City of Santa Rosa to protect and enhance the Laguna de Santa Rosa Wetlands and Laguna Uplands Preserves as open space resources in and around Sebastopol and to explore opportunities to expand open space areas along the Laguna de Santa Rosa.

Action CD 1a: Continue to maintain the Design Review Board.

Action CD 1b: Develop and update urban design guidelines to include design standards and goals for key districts, areas, or types of development throughout the community, including, but not limited to, the Downtown, Gravenstein Highway (north and south), as well as single family and multifamily types of development. Design guidelines should include provisions that enhance and support the unique qualities of areas, as well as supporting the character of residential neighborhoods. The design guidelines should allow for creative design solutions and architectural diversity.

Action CD 1c: Provide design and development guidelines for gateways to the city to encourage special features and to discourage the establishment of new fast-food establishments, auto-dependent businesses, and similar uses.

Action CD 1e: Implement the policies and actions in the Conservation and Open Space Element to promote and expand key linkages between the natural and built environment, including the protection of viewsheds, and natural resources that enhance Sebastopol's community identity.

Action CD 1f: Provide guidance to developers in the application of Best Management Practices for grading, vegetation retention and similar practices which may affect aesthetic quality and sensitive landscapes.

Action CD 1k: Periodically review, and update as necessary, the City's Sign Ordinance to enhance community character and prohibit signage that detracts from the visual quality of Sebastopol.

Action CD 2a: Maintain and update the Downtown Plan as necessary to reflect the urban design goals. Updates to the Downtown Plan should:

- *Include provisions for quality publicly-accessible open spaces at appropriate locations that enhance the pedestrian experience and attract people to the Downtown;*
- *Provide standards for the appropriate design, scale, and edge treatment to define, and create publicly-accessible spaces that positively contribute to the character of the area and provide public access to community gathering, recreational, artistic, cultural, or natural amenities;*
- *Recognize Downtown's unique character as the oldest part of the City, and leverage historic resources to create a unique urban environment for Downtown; and*
- *Respect and respond to on-site and surrounding historic character in proposals for development.*

Action CD-2e: Develop a streetscape improvement plan that prioritizes upgrades to physical connections and aesthetic continuity throughout the Downtown Core. Establish incentives for businesses in the Downtown Core to participate in beautification and public space enhancement efforts.

Action CD-2g: Support streetscape and other improvement measures to achieve a walkable, pedestrian-oriented atmosphere in the Downtown. Encourage the use of traffic calming measures, and other streetscape improvements including: gathering points, street furniture, street trees,

parklettes, landscaping, and lighting that provide for a vibrant pedestrian-oriented environment that encourages public gathering near commercial uses.

Action LU 5a: Through the design review process, screen development proposals for land use compatibility and ensure that development proposals are designed to be compatible with existing residential and other land uses, are designed to reduce aesthetic, noise, and safety impacts to residential areas, and are consistent with Sebastopol's unique, small-town character.

Impact 3.1-2: General Plan implementation could result in the creation of new sources of nighttime lighting and daytime glare (Less than Significant)

The primary sources of daytime glare are generally sunlight reflecting from structures and other reflective surfaces and windows. Implementation of the proposed General Plan would introduce new sources of daytime glare into previously undeveloped areas of the Planning Area and increase the amount of daytime glare in existing urbanized areas. The General Plan Land Use Map identifies areas for the future development of residential, commercial, industrial, recreational, and public uses. Such uses may utilize materials that produce glare. Daytime glare impacts would be most severe in areas that have been previously undisturbed, and in areas that receive a high level of daily viewership, such as the State Route 116 corridor and areas around existing residential development.

The primary sources of nighttime lighting are generally from exterior building lights, street lights and vehicle headlights. Exterior lighting around commercial and industrial areas may be present throughout the night to facilitate extended employee work hours, ensure worker safety, and to provide security lighting around structures and facilities. Nighttime lighting impacts would be most severe in areas that do not currently experience high levels of nighttime lighting. Increased nighttime lighting can reduce visibility of the night sky, resulting in fewer stars being visible and generally detracting from the rural quality of life in Sebastopol.

Future development would be required to be consistent with the General Plan, as well as lighting requirements in the Municipal Code. The proposed 2016 General Plan contains policies and action items related to the regulation and reduction of daytime glare and nighttime lighting. Implementation of Action COS-12k would continue to require the review of all development proposals, planning projects, and infrastructure projects in order to reduce lighting impacts on adjacent properties and to reduce lighting impacts to the night sky.

Additionally, Policy COS 11-8 (identified above under Impact 3.1-1) continues to require full shielding of outdoor lighting to reduce light trespass to adjoining properties and to reduce illumination of the night sky.

Through the implementation of these policies and action items during the development review process, the City can ensure that adverse impacts associated with daytime glare and nighttime lighting are reduced to a **less than significant** level.

2016 GENERAL PLAN POLICIES AND ACTIONS THAT MITIGATE POTENTIAL IMPACTS

Policies

***Policy COS 11-7**: Restrict outdoor light and glare from development projects to retain the quality of night skies by minimizing light pollution.*

***Policy COS 11-8**: All outdoor lighting shall be constructed with full shielding and/or recessed to reduce light trespass to adjoining properties and to reduce illumination of the night sky. Each fixture shall be directed downward and away from adjoining properties and public rights-of-way, so that no light fixture directly illuminates an area outside of the site.*

***Policy CD 2-4:** Work with CalTrans to implement streetscape improvements that increase the functionality and aesthetic appeal of the Highway 116 and Highway 12 routes through the city and to make the Downtown area more people-oriented and less vehicle-oriented. Promote elements such as:*

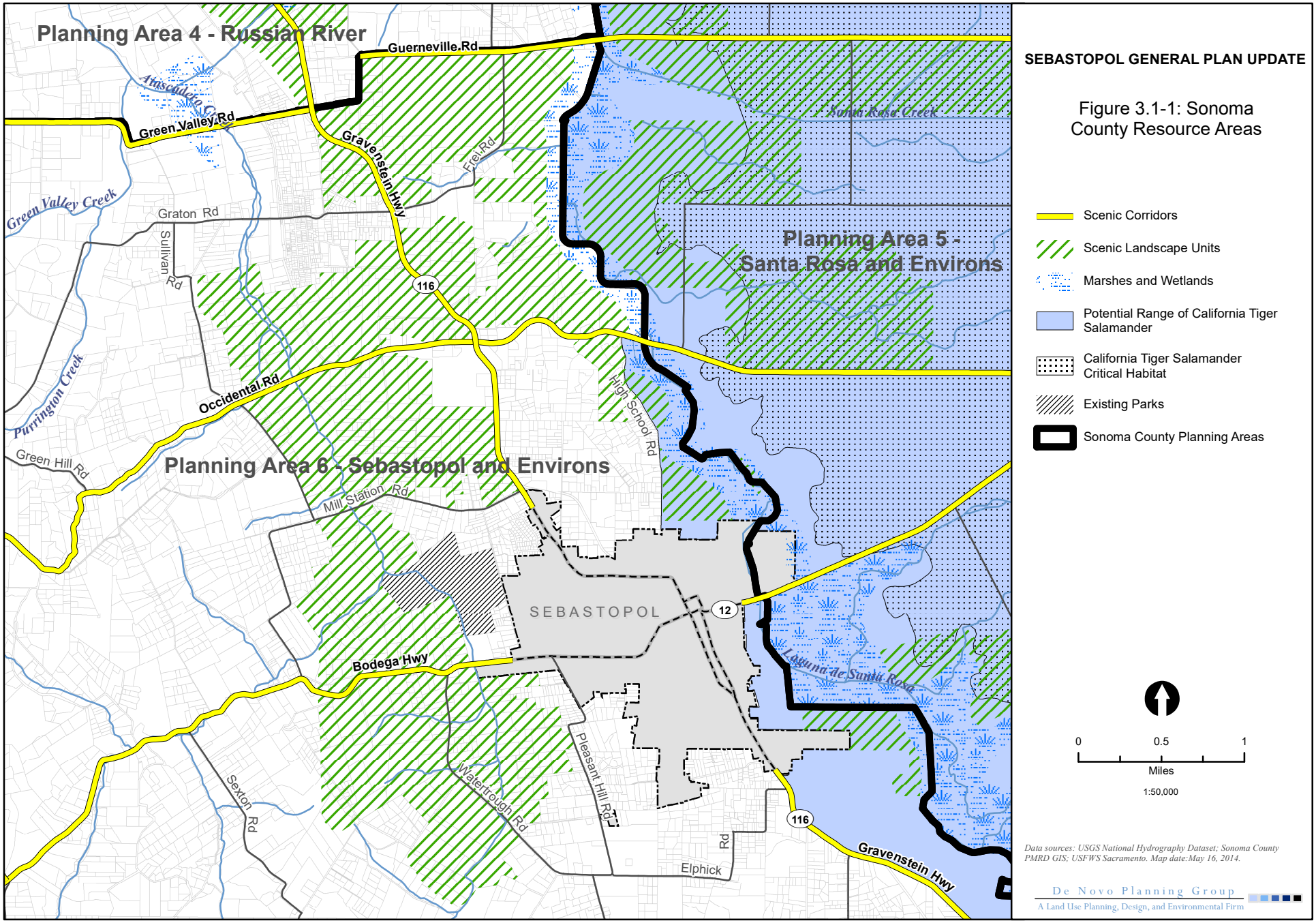
- *Street trees and native and drought tolerant landscaping*
- *Benches*
- *Public gathering spaces*
- *Elimination of sidewalk gaps*
- *Decorative street lights that minimize night sky impacts*
- *Low Impact Design*
- *Wider sidewalks*
- *Complete Streets Design*

Actions

Action COS-11g: Review, and consider strengthening, the exterior lighting standards contained in the Design Review Guidelines. The lighting standards in the Design Review Guidelines should incorporate principals and best practices endorsed by the International Dark Sky Association. The updated standards should address:

- *Nuisance prevention*
- *Shielding requirements*
- *Level of illumination*
- *Energy efficiency requirements*
- *Accent lighting*

Action COS-12k: Review all development proposals, planning projects, and infrastructure projects to ensure that open space and scenic resource impacts are reduced by maximizing design features that preserve a sense of open space and by minimizing off-site and night sky impacts of outdoor lighting consistent, with the requirements of the Municipal Code.


Planning Area 4 - Russian River
Planning Area 5 - Santa Rosa and Environs
Planning Area 6 - Sebastopol and Environs
SEBASTOPOL
Guerneville Rd
Green Valley Rd
Gravenstein Hwy
Frei Rd
Graton Rd
Sullivan Rd
116
Occidental Rd
Green Hill Rd
Mill Station Rd
High School Rd
12
Bodega Hwy
Pleasant Hill Rd
Meterrough Rd
Sexton Rd
Elphick Rd
Laguna de Santa Rosa
Santa Rosa Creek
Green Valley Creek
Purrington Creek
Atascadero Creek
SEBASTOPOL GENERAL PLAN UPDATE
Figure 3.1-1: Sonoma County Resource Areas
Scenic Corridors
Scenic Landscape Units
Marshes and Wetlands
Potential Range of California Tiger Salamander
California Tiger Salamander Critical Habitat
Existing Parks
Sonoma County Planning Areas
0
0.5
1
Miles
1:50,000
Data sources: USGS National Hydrography Dataset; Sonoma County PMRD GIS; USFWS Sacramento. Map date:May 16, 2014.
De Novo Planning Group
A Land Use Planning, Design, and Environmental Firm

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This section provides a background discussion of agricultural lands, agricultural resources, and forest/timber resources found in the Sebastopol Planning Area. This section is organized with an existing setting, regulatory setting, and impact analysis. No comments were received during the public review period or scoping meeting for the Notice of Preparation regarding this topic.

3.2.1 ENVIRONMENTAL SETTING

AGRICULTURAL RESOURCES

Important Farmlands

The California Department of Conservation, as part of its Farmland Mapping and Monitoring Program (FMMP), prepares Important Farmland Maps indicating the potential value of land for agricultural production. The Important Farmland Map identifies five agriculture-related categories and three non-agricultural categories:

Prime Farmland: Prime farmland is land with the best combination of physical and chemical features able to sustain long term agricultural production. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. The land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.

Farmland of Statewide Importance: Farmland of statewide importance is farmland similar to Prime Farmland but with minor shortcomings, such as greater slopes or less ability to store soil moisture. The land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.

Unique Farmland: Unique farmland is farmland of lesser quality soils used for the production of the state's leading agricultural crops. This land is usually irrigated, but may include nonirrigated orchards or vineyards as found in some climatic zones in California. Land must have been cropped at some time during the four years prior to the mapping date.

Farmland of Local Importance: Farmland of local importance is considered land important to the local agricultural economy but does not meet the criteria of Prime Farmland, Farmland of Statewide Importance, or Unique Farmland.

Grazing Land: Grazing land is land on which the existing vegetation is suitable for the grazing of livestock. This category was developed in cooperation with the California Cattlemen's Association, University of California Cooperative Extension, and other groups interested in the extent of grazing activities.

Urban and Built-up Land: This category consists of non-agricultural land occupied by structures with a building density of at least 1 unit to 1.5 acres, or approximately 6 structures to a 10-acre parcel. This land is used for residential, industrial, commercial, construction, institutional, public administration, railroad and other transportation yards, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, water control structures, and other developed purposes.

Other Land: Other land is non-agricultural land not included in any other mapping category. Common examples include low density rural developments; brush, timber, wetland, and riparian

areas not suitable for livestock grazing; confined livestock, poultry, or aquaculture facilities; strip mines and borrow pits; and water bodies smaller than 40 acres. Vacant and non-agricultural land surrounded on all sides by urban development and greater than 40 acres is mapped as Other Land.

Water Area: This category consists of bodies of water.

Table 3.2-1 summarizes the farmland and other classifications by the FMMP for the city and the Planning Area. Figure 3.2-1 identifies Important Farmlands and other lands in the city and the Planning Area based on FMMP classifications. As shown in Table 3.2-1, there are 222.37 acres of Farmland of Local Importance within the city limits, and an additional 17.83 acres of Farmland of Local Importance within the Planning Area.

TABLE 3.2-1: FMMP FARMLAND CLASSIFICATION AND LAND USE CATEGORIES

FARMLAND CLASSIFICATION AND LAND USE CATEGORIES	*CITY (ACRES)*	*PLANNING AREA (ACRES)*	*TOTAL (ACRES)*
Prime Farmland	0	0	0
Farmland of Statewide Importance	0	0	0
Unique Farmland	0	0	0
Farmland of Local Importance	222.37	17.83	240.2
Important Farmland Subtotal	222.37	17.83	240.2
Grazing Land	0	0	0
Urban and Built-Up Land	965.03	217.27	1,182.3
Water	0	0	0
Other Land	0	0	0
Total Area Inventoried	**1,187.4**	**235.1**	**1,422.5**

SOURCE: CALIFORNIA DEPARTMENT OF CONSERVATION, 2012; AND DE NOVO PLANNING GIS MAPPING

Farmland Preservation

The California Land Conservation Act, also known as the Williamson Act, was adopted in 1965 to encourage the preservation of the state's agricultural lands and to prevent their premature conversion to urban uses. The Williamson Act is described in greater detail under the Regulatory Setting section of this chapter.

There are no parcels within the Sebastopol Planning Area that are currently under Williamson Act contract. The nearest lands under Williamson Act contracts are located just north of the northeast portion of the city. Figure 3.2-2 depicts the distribution of Williamson Act Contract lands in the vicinity of the Planning Area.

FOREST RESOURCES

Forest land is defined by Public Resources Code Section 12220(g), and includes *"land that can support 10-percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits."*

Timber land is defined by Public Resources Code Section 4526, and means *"land, other than land owned by the federal government and land designated by the board as experimental forest land, which is available for, and capable of, growing a crop of trees of a commercial species used to produce lumber and other forest products, including Christmas trees. Commercial species shall be determined by the board on a district basis."*

There are no forest lands or timber lands located within the Sebastopol Planning Area.

3.2.2 REGULATORY SETTING

FEDERAL

Farmland Protection Policy Act

The Natural Resources Conservation Service (NRCS), an agency within the U.S. Department of Agriculture, is responsible for implementation of the Farmland Protection Policy Act (FPPA). The purpose of the FPPA is to minimize Federal programs' contribution to the conversion of farmland to non-agricultural uses by ensuring that Federal programs are administered in a manner that is compatible to state, local, and private programs designed to protect farmland. The NRCS provides technical assistance to Federal agencies, state and local governments, tribes, or nonprofit organizations that desire to develop farmland protection programs and policies. The NRCS summarizes FPPA implementation in an annual report to Congress.

Farm and Ranch Lands Protection Program

The NRCS administers the Farm and Ranch Lands Protection Program (FRPP), a voluntary program aimed at keeping productive farmland in agricultural uses. Under the FRPP, the NRCS provides matching funds to state, local, or tribal government entities and nonprofit organizations with existing farmland protection programs to purchase conservation easements. According to the 1996 Farm Bill, the goal of the program is to protect between 170,000 and 340,000 acres of farmland per year. Participating landowners agree not to convert the land to non-agricultural use and retain all rights to use the property for agriculture. A conservation plan must be developed for all lands enrolled based upon the standards contained in the NRCS Field Office Technical Guide. A minimum of 30 years is required for conservation easements and priority is given to applications with perpetual easements. The NRCS provides up to 50 percent of the fair market value of the easement being conserved (NRCS, 2004). To qualify for a conservation easement, farm or ranch land must meet several criteria. The land must be:

- Prime, Unique, or other productive soil, as defined by NRCS based on factors such as water moisture regimes, available water capacity, developed irrigation water supply, soil temperature range, acid-alkali balance, water table, soil sodium content, potential for flooding, erodibility, permeability rate, rock fragment content, and soil rooting depth;
- Included in a pending offer to be managed by a nonprofit organization, state, tribal, or local farmland protection program;
- Privately owned;

- Placed under a conservation plan;
- Large enough to sustain agricultural production;
- Accessible to markets for the crop that the land produces; and
- Surrounded by parcels of land that can support long-term agricultural production.

STATE

California Department of Conservation

The Department of Conservation (DOC) administers and supports a number of programs, including the Williamson Act, the California Farmland Conservancy Program (CFCP), the Williamson Act Easement Exchange Program (WAEEP), and the Farmland Mapping and Monitoring Program (FMMP). These programs are designed to preserve agricultural land and provide data on conversion of agricultural land to urban use. The DOC has authority for the approval of agreements entered into under the WAEEP. Key DOC tools available for land conservation planning are conservation grants, tax incentives to keep land in agriculture or open space, and farmland mapping and monitoring.

Williamson Act

The California Land Conservation Act, also known as the Williamson Act, was adopted in 1965 to encourage the preservation of the state's agricultural lands and to prevent their premature conversion to urban uses. In order to preserve these uses, the Act established an agricultural preserve contract procedure by which any county or city taxes landowners at a lower rate, using a scale based on the actual use of the land for agricultural purposes, as opposed to its unrestricted market value. In return, the owners guarantee that these properties remain under agricultural production for a 10-year period. The contract is self-renewing; however, the landowner may notify the county or city at any time of the intent to withdraw the land from its preserve status. There are two means by which the landowner may withdraw the land from its contract preserve status. First, the landowner may seek to cancel the contract. This takes the land out of the contract quickly with a minimal waiting period but the landowner pays a statutory penalty to the State. Second, the landowner may notice a non-renewal or seek a partial non-renewal of the contract. Land withdrawal through the non-renewal process involves a 9 or 10-year period (depending on the timing of the notice) of tax adjustment to full market value before protected open space can be converted to urban uses.

Williamson Act subvention payments to local governments have been suspended since the fiscal year 2009-10 due to the State's fiscal constraints. The Williamson Act contracts between landowners and local governments remain in force, regardless of the availability of subvention payments.

Farmland Security Zones

A Farmland Security Zone is an area created within an agricultural preserve by a board of supervisors (board) or city council (council) upon request by a landowner or group of landowners. An agricultural preserve defines the boundary of an area within which a city or county will enter into contracts with landowners. The boundary is designated by resolution of the board or council having jurisdiction.

Agricultural preserves must generally be at least 100 acres in size. Farmland Security Zone contracts offer landowners greater property tax reduction. Land restricted by a Farmland Security Zone contract is valued for property assessment purposes at 65% of its Williamson Act valuation or 65% of its Proposition 13 valuation, whichever is lower.

Forest Practices Rules

The California Department of Forestry and Fire Protection (CalFire) implements the laws that regulate timber harvesting on privately-owned lands. These laws are contained in the Z'berg-Nejedly Forest Practice Act of 1973 which established a set of rules known as the Forest Practice Rules (FPRs) to be applied to forest management related activities (i.e., timber harvests, timberland conversions, fire hazard removal, etc.). They are intended to ensure that timber harvesting is conducted in a manner that will preserve and protect fish, wildlife, forests, and streams. Under the Forest Practice Act, a Timber Harvesting Plan (THP) is submitted to CalFire by the landowner outlining what timber is proposed to be harvested, harvesting method, and the steps that will be taken to prevent damage to the environment. If the landowner intends to convert timberland to non-timberland uses, such as a winery or vineyard, a Timberland Conversion Permit (TCP) is required in addition to the THP. It is CalFire's intent that a THP will not be approved which fails to adopt feasible mitigation measures or alternatives from the range of measures set out or provided for in the Forest Practice Rules, which would substantially lessen or avoid significant adverse environmental impacts resulting from timber harvest activities. THPs are required to be prepared by Registered Professional Foresters (RPFs) who are licensed to prepare these plans (CalFire, 2007). For projects involving TCPs, CalFire acts as lead agency under CEQA, and the county or city acts as a responsible agency.

LOCAL

Sonoma County Agricultural Preservation and Open Space District

The Sonoma County Agricultural Preservation and Open Space District (SCAPOSD) was initiated by the passage of two measures that established the SCAPOSD and a one-quarter percent sales tax for its funding. The SCAPOSD, a special district covering the entire county, works with willing landowners to protect agricultural, open space, natural resource, and recreational lands.

Sonoma County's Right to Farm Ordinance

Sonoma County's Right to Farm ordinance was originally adopted in 1988 and revised in 1999 to include stronger disclosure requirements. The basic intention of the ordinance is to provide public policy support for maintaining the viability of agriculture in Sonoma County. Two of the major features of the Right to Farm ordinance are the farmers' right to conduct agricultural operations, and that legal, properly conducted agricultural operations will not be considered a nuisance.

3.2.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed project will have a significant impact on land use and planning if it will:

- Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Important Farmlands), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use;
- Conflict with existing zoning for agricultural use, or a Williamson Act contract;
- Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g));
- Result in the loss of forest land or conversion of forest land to non-forest use; or
- Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use;

There are no lands within or adjacent to the city or the Planning Area that are Forest Land as defined by Public Resources Code Section 12220(g), or Timber Land as defined by Public Resources Code Section 4526. There are also no parcels that are currently zoned as forest land, timber, or timber production. Therefore, implementation of the proposed General Plan would have no impact on forest land, timber, or timber production and this impact will not be discussed further.

IMPACTS AND MITIGATION MEASURES

Impact 3.2-1: General Plan implementation would result in the conversion of farmlands, including Prime Farmland, Unique Farmland, and Farmland of Statewide Importance (Less than Significant)

As shown previously in Table 3.2-1, Sebastopol does not have any prime farmlands, unique farmlands, or farmlands of statewide importance within the City's Planning area, as designated by the department of Conservation Farmland Mapping and Monitoring Program. Within the city limits and SOI 222.37 acres, and 17.83 acres of farmland of local importance are found respectively within the Planning Area. Portions of these locally important farmlands would be converted to accommodate additional residential and industrial uses through buildout of the General Plan.

The Sebastopol General Plan includes a wide range of policies and actions aimed at protecting and preserving agricultural lands. Policy COS 12-13 supports and encourages the preservation of agricultural lands surrounding the Sebastopol Planning Area to continue the agricultural heritage of Sebastopol and to serve as community separators. Policy COS 12-14 ensures the City participates in regional planning efforts with agencies and organizations such as Sonoma County, land trusts, and other regional partners to establish and maintain permanent agricultural areas surrounding

Sebastopol. Policy COS 12-16 aims to minimize conflicts between agricultural and urban land uses. Policy COS 12-17 requires new development to have structural setbacks that respect agricultural lands and operations. Setbacks and buffers shall be provided by the development and not encroach upon productive agricultural areas. Policy COS 12-18 assists agricultural landowners and farmers, with a variety of programs aimed at preserving agricultural lands, increasing opportunities for local sales of agricultural products, and increasing access to local commodities markets. Action COS-12f considers impacts to agricultural lands and agricultural productivity when reviewing new development projects, amendments to the General Plan, and rezoning applications. Action COS-12g ensures the City works with Sonoma County to establish and implement consistent policies for agricultural lands surrounding Sebastopol that prioritize the preservation of agricultural lands, support ongoing agricultural activities, and maintain community separators. Action COS-12h ensures the City works with the Sonoma County Permit and Resource Management Department to ensure that Open Space/Parks, Agricultural, and Rural Residential lands surrounding the City are zoned appropriately as rural residential, agricultural, parks, and other limited development or recreational uses in order to limit growth-inducement and development beyond the urbanized areas within the city.

Although Sebastopol does not have any prime farmlands, unique farmlands, or farmlands of statewide importance within the City's Planning area, the Sebastopol General Plan has taken a proactive approach towards focusing new growth and development towards infill locations, and protecting open space areas and agricultural lands throughout the Planning Area to the greatest extent feasible through the applicable policies and actions that provide protection and preservation of agricultural lands are identified below.

As described above, implementation of the Sebastopol General Plan will not lead to the conversion of any prime farmlands, unique farmlands, or farmlands of statewide importance within the City's Planning area. Portions of locally important farmlands may be converted to accommodate additional residential and industrial opportunities. However, this is considered a **less than significant** impact.

2016 GENERAL PLAN POLICIES AND ACTIONS THAT MITIGATE POTENTIAL IMPACTS

Policies

Policy COS 12-2: Preserve open space for conservation, recreation, and agricultural uses in order to enhance the quality of life and the quality of the environment in Sebastopol.

Policy COS 12-13: Support and encourage the preservation of agricultural lands surrounding the Sebastopol Planning Area to continue the agricultural heritage of Sebastopol and to serve as community separators.

Policy COS 12-14: Participate in regional planning efforts with agencies and organizations such as Sonoma County, land trusts, and other regional partners to establish and maintain permanent agricultural areas surrounding Sebastopol.

Policy COS 12-15: Work with the Local Agency Formation Commission (LAFCO) on issues of mutual concern including the conservation of agricultural land through consistent use of LAFCO policies, particularly those related to conversion of agricultural lands and establishment of adequate buffers

between agricultural and non-agricultural uses, and the designation of a reasonable and logical Sphere of Influence (SOI) boundary for the City.

Policy COS 12-16: Minimize conflicts between agricultural and urban land uses.

Policy COS 12-17: Require new development to have structural setbacks that respect agricultural lands and operations. Setbacks and buffers shall be provided by the development and not encroach upon productive agricultural areas

Policy COS 12-18: Assist agricultural landowners and farmers, as feasible, with a variety of programs aimed at preserving agricultural lands, increasing opportunities for local sales of agricultural products, and increasing access to local commodities markets.

Actions

Action COS-12f: Consider impacts to agricultural lands and agricultural productivity when reviewing new development projects, amendments to the General Plan, and rezoning applications.

Action COS-12g: Work with Sonoma County to establish and implement consistent policies for agricultural lands surrounding Sebastopol that prioritize the preservation of agricultural lands, support ongoing agricultural activities, and maintain community separators.

Action COS-12h: Work with the Sonoma County Permit and Resource Management Department to ensure that Open Space/Parks, Agricultural, and Rural Residential lands surrounding the City are zoned appropriately as rural residential, agricultural, parks, and other limited development or recreational uses in order to limit growth-inducement and development.

Impact 3.2-2: General Plan implementation may result in conflicts with existing Williamson Act Contracts, or Conflict with existing zoning for agricultural use (Less than Significant)

No parcels within the Planning Area are under a Williamson Act Contract. Figure 3.2-2 depicts the distribution of Williamson Act Contract lands in the vicinity of the Planning Area.

Several parcels within the City are zoned for Residential Agricultural (RA) uses under Title 17 of the Sebastopol Municipal Code (Zoning). The majority of the RA zoned parcels within the City are designated Low Density Residential (LDR) by the proposed Land Use Map. Section 17.20.010 of the Sebastopol Zoning Code states that the purpose of the RA District is to implement the "Low Density Residential" land use category of the General Plan, and the General Plan goal of preserving the community's rural-agricultural setting and residential character. Adoption of the proposed General Plan would not directly result in the construction of any development projects or directly lead to a change of use on any parcel zoned for agricultural uses within the City. Parcels within the city limits that are currently zoned for agricultural uses, may continue to be used for agricultural purposes following adoption of the General Plan, even if the General Plan Land Use Map assigns an urban land use designation to the parcel. However, parcels within the city that are currently zoned for agricultural uses, which have been assigned an urban land use designation by the General Plan Land Use Map, may lead to the urbanization of these parcels, and the cessation of agricultural operations, during the life of the General Plan.

Additionally, one parcel within the City's northern SOI (APN 060-250-064), and two parcels within the eastern SOI (APN 060-060-001 and 060-120-015) are currently designated by the Sonoma County Zoning Map for agricultural purposes (AR-Agriculture and Residential District in the northern portion, and DA-Diverse Agriculture District in the eastern parcels). The proposed General Plan Land Use Map includes a designation of Open Space for parcel 060-120-015, and the majority of parcel 060-060-001. However, portions of parcel 060-060-001 (approximately 4 acres of the 12.55 acre parcel), and the 2 acre northern parcel (060-250-064) are designated by the proposed General Plan Land Use Map for High Density Residential Uses. Because these areas are within the SOI and maintained by Sonoma County, the City of Sebastopol does not have zoning authority over these lands. Any future annexation of these lands would require LAFCo approval, and would be required to be prezoned by the City of Sebastopol. Additionally, any development proposed within the City's SOI would be required to be developed under Sonoma County Jurisdiction, therefore, conflicts related to the zoning of these parcels is not anticipated.

As described in greater detail under Impact 3.2-1 above, the Sebastopol General Plan includes a comprehensive set of policies and actions aimed at protecting, enhancing, and preserving agricultural lands and agricultural resources throughout the Planning Area, and lands in the vicinity of Sebastopol. Implementation of the General Plan would assign urban land uses to approximately 6 acres of land under within the SOI that are Zoned by Sonoma County for agricultural purposes, however, any development within these parcels would be required to be developed under the County's land use authority, or be approved for annexation by Sonoma County LAFCo and prezoned by the City of Sebastopol prior to development under the General Plan. As described previously, no parcels within the Planning Area are under a Williamson Act Contract. Therefore, implementation of the Project would have a **less than significant** impact relative to this topic and no mitigation is required.

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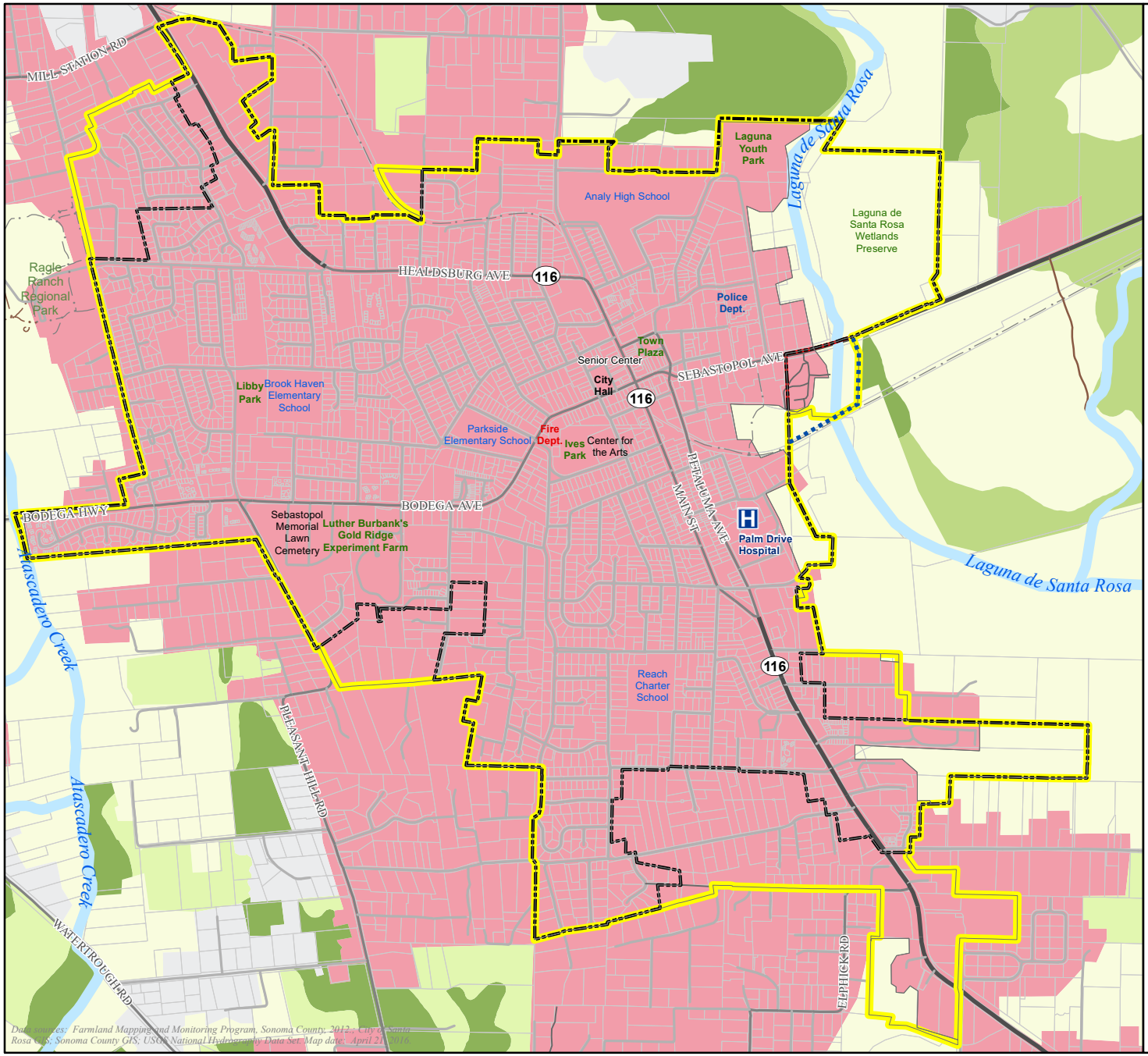

Data sources: Farmland Mapping and Monitoring Program, Sonoma County, 2012.; City of Santa Rosa GIS; Sonoma County GIS; USGS National Hydrography Data Set. Map date: April 21, 2016.

SEBASTOPOL GENERAL PLAN UPDATE

Figure 3.2-1.
Important Farmlands

Farmland Categories

- Prime Farmland
- Farmland of Statewide Importance
- Unique Farmland
- Farmland of Local Importance
- Other Land
- Urban and Built-Up Land

Planning Boundaries

- City of Sebastopol
- Sphere of Influence
- Urban Growth Boundary
- Proposed Sphere of Influence/Urban Growth Boundary Expansion

N

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Feet

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De Novo Planning Group
A Land Use Planning, Design, and Environmental Firm

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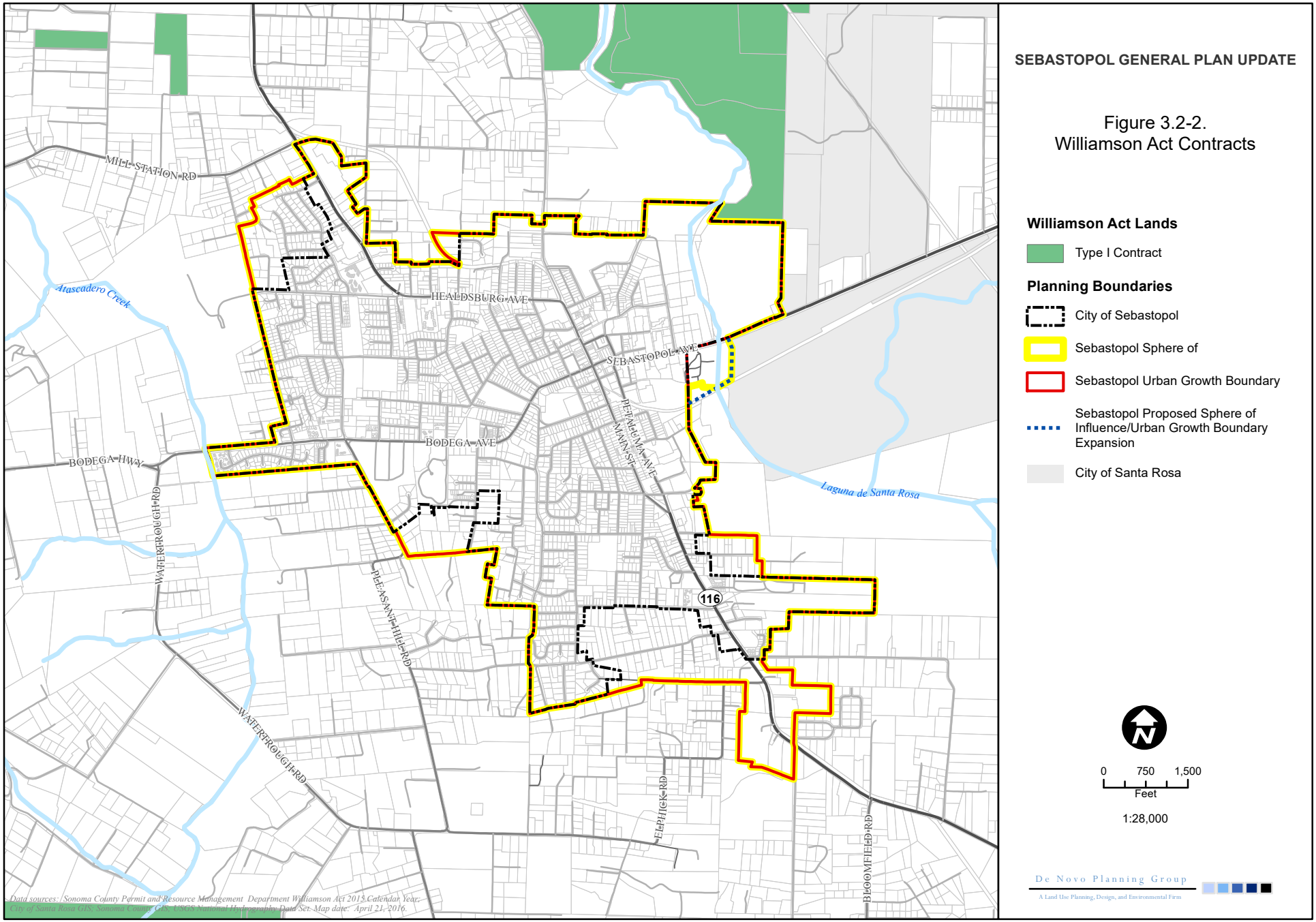
SEBASTOPOL GENERAL PLAN UPDATE
Figure 3.2-2.
Williamson Act Contracts
Williamson Act Lands
Type I Contract
Planning Boundaries
City of Sebastopol
Sebastopol Sphere of
Sebastopol Urban Growth Boundary
Sebastopol Proposed Sphere of Influence/Urban Growth Boundary Expansion
City of Santa Rosa
MILL STATION RD
Atascadero Creek
HEALDSBURG AVE
SEBASTOPOL AVE
PETALUMA AVE
MAIN ST
BODEGA AVE
BODEGA HWY
WATERROUGH RD
Laguna de Santa Rosa
PLEASANT HILL RD
116
WATERROUGH RD
ELPHICK RD
BLOOMFIELD RD
0 750 1,500
Feet
1:28,000
De Novo Planning Group
A Land Use Planning, Design, and Environmental Firm
Data sources: Sonoma County Permit and Resource Management Department Williamson Act 2015 Calendar Year; City of Santa Rosa GIS; Sonoma County GIS; USGS National Hydrography Data Set. Map date: April 21, 2016.

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This section describes the regional air quality, current attainment status of the air basin, local sensitive receptors, emission sources, and impacts that are likely to result from project implementation. No comments were received during the public review period or scoping meeting for the Notice of Preparation regarding this topic. Issues related to greenhouse gases (GHGs) and climate change are addressed in Section 3.7 of this EIR.

3.3.1 EXISTING SETTING

SAN FRANCISCO BAY AREA AIR BASIN

Sebastopol is located within the San Francisco Bay Area Air Basin (SFBAAB), which comprises all of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, and Santa Clara counties, the southern portion of Sonoma County, and the southwestern portion of Solano County. Air quality in this area is determined by such natural factors as topography, meteorology, and climate, in addition to the presence of existing air pollution sources and ambient conditions. These factors along with applicable regulations are discussed below.

Climate, Topography, and Air Pollution Potential

The SFBAAB is characterized by complex terrain, consisting of coastal mountain ranges, inland valleys, and bays, which distort normal wind flow patterns.

The climate is dominated by the strength and location of a semi-permanent, subtropical high-pressure cell. During the summer, the Pacific high pressure cell is centered over the northeastern portion of the Pacific Ocean, resulting in stable meteorological conditions and a steady northwesterly wind flow. Upwelling of cold ocean water from below to the surface because of the northwesterly flow produces a band of cold water off the California coast. The cool and moisture-laden air approaching the coast from the Pacific Ocean is further cooled by the presence of the cold water band resulting in condensation and the presence of fog and stratus clouds along the Northern California coast.

In the winter, the Pacific high-pressure cell weakens and shifts southward resulting in wind flow offshore, the absence of upwelling, and the occurrence of storms. Weak inversions coupled with moderate winds result in a low air pollution potential.

HIGH PRESSURE CELL

During the summer, the large-scale meteorological condition that dominates the West Coast is a semi-permanent high pressure cell centered over the northeastern portion of the Pacific Ocean. This high pressure cell keeps storms from affecting the California coast. Hence, the SFBAAB experiences little precipitation in the summer months. Winds tend to blow on shore out of the north/northwest.

The steady northwesterly flow induces upwelling of cold water from below. This upwelling produces a band of cold water off the California coast. When air approaches the California coast, already cool and moisture-laden from its long journey over the Pacific, it is further cooled as it crosses this bank

of cold water. This cooling often produces condensation resulting in a high incidence of fog and stratus clouds along the Northern California coast in the summer.

Generally in the winter, the Pacific high pressure cell weakens and shifts southward, winds tend to flow offshore, upwelling ceases, and storms occur. During the winter rainy periods, inversions (layers of warmer air over colder air; see below) are weak or nonexistent, winds are usually moderate, and air pollution potential is low. The Pacific high pressure cell does periodically become dominant, bringing strong inversions, light winds, and high pollution potential.

TOPOGRAPHY

The topography of the SFBAAB is characterized by complex terrain, consisting of coastal mountain ranges, inland valleys, and bays. This complex terrain, especially the higher elevations, distorts the normal wind flow patterns in the SFBAAB. The greatest distortion occurs when low-level inversions are present and the air beneath the inversion flows independently of air above the inversion, a condition that is common in the summer time.

The only major break in California's Coast Range occurs in the SFBAAB. Here the Coast Range splits into western and eastern ranges. Between the two ranges lies San Francisco Bay. The gap in the western coast range is known as the Golden Gate, and the gap in the eastern coast range is the Carquinez Strait. These gaps allow air to pass into and out of the SFBAAB and the Central Valley.

WIND PATTERNS

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

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

The air flowing in from the coast to the Central Valley, called the sea breeze, begins developing at or near ground level along the coast in late morning or early afternoon. As the day progresses, the sea breeze layer deepens and increases in velocity while spreading inland. The depth of the sea breeze depends in large part upon the height and strength of the inversion. If the inversion is low and strong, and hence stable, the flow of the sea breeze will be inhibited and stagnant conditions are likely to result.

In the winter, the SFBAAB frequently experiences stormy conditions with moderate to strong winds, as well as periods of stagnation with very light winds. Winter stagnation episodes are characterized by nighttime drainage flows in coastal valleys. Drainage is a reversal of the usual daytime air-flow

patterns; air moves from the Central Valley toward the coast and back down toward the Bay from the smaller valleys within the SFBAAB.

TEMPERATURE

Summertime temperatures in the SFBAAB are determined in large part by the effect of differential heating between land and water surfaces. Because land tends to heat up and cool off more quickly than water, a large-scale gradient (differential) in temperature is often created between the coast and the Central Valley, and small-scale local gradients are often produced along the shorelines of the ocean and bays. The temperature gradient near the ocean is also exaggerated, especially in summer, because of the upwelling of cold ocean bottom water along the coast. On summer afternoons the temperatures at the coast can be 35ºF cooler than temperatures 15 to 20 miles inland. At night this contrast usually decreases to less than 10º.

In the winter, the relationship of minimum and maximum temperatures is reversed. During the daytime the temperature contrast between the coast and inland areas is small, whereas at night the variation in temperature is large.

PRECIPITATION

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

During rainy periods, ventilation (rapid horizontal movement of air and injection of cleaner air) and vertical mixing are usually high, and thus pollution levels tend to be low. However, frequent dry periods do occur during the winter where mixing and ventilation are low and pollutant levels build up.

AIR POLLUTION POTENTIAL

The potential for high pollutant concentrations developing at a given location depends upon the quantity of pollutants emitted into the atmosphere in the surrounding area or upwind, and the ability of the atmosphere to disperse the contaminated air. The topographic and climatological factors discussed above influence the atmospheric pollution potential of an area. Atmospheric pollution potential, as the term is used here, is independent of the location of emission sources and is instead a function of factors described below.

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

Inversions. An inversion is a layer of warmer air over a layer of cooler air. Inversions affect air quality conditions significantly because they influence the mixing depth (i.e., the vertical depth in the atmosphere available for diluting air contaminants near the ground). The highest air pollutant concentrations in the SFBAAB generally occur during inversions.

There are two types of inversions that occur regularly in the SFBAAB. One is more common in the summer and fall, while the other is most common during the winter. The frequent occurrence of elevated temperature inversions in summer and fall months acts to cap the mixing depth, limiting the depth of air available for dilution. Elevated inversions are caused by subsiding air from the subtropical high pressure zone, and from the cool marine air layer that is drawn into the SFBAAB by the heated low pressure region in the Central Valley.

The inversions typical of winter, called radiation inversions, are formed as heat quickly radiates from the earth's surface after sunset, causing the air in contact with it to rapidly cool. Radiation inversions are strongest on clear, low-wind, cold winter nights, allowing the build-up of such pollutants as carbon monoxide and particulate matter. When wind speeds are low, there is little mechanical turbulence to mix the air, resulting in a layer of warm air over a layer of cooler air next to the ground. Mixing depths under these conditions can be as shallow as 50 to 100 meters, particularly in rural areas. Urban areas usually have deeper minimum mixing layers because of heat island effects and increased surface roughness. During radiation inversions downwind transport is slow, the mixing depths are shallow, and turbulence is minimal, all factors which contribute to ozone formation.

Although each type of inversion is most common during a specific season, either inversion mechanism can occur at any time of the year. Sometimes both occur simultaneously. Moreover, the characteristics of an inversion often change throughout the course of a day. The terrain of the SFBAAB also induces significant variations among subregions.

Solar Radiation. The frequency of hot, sunny days during the summer months in the SFBAAB is another important factor that affects air pollution potential. It is at the higher temperatures that ozone is formed. In the presence of ultraviolet sunlight and warm temperatures, reactive organic gases and oxides of nitrogen react to form secondary photochemical pollutants, including ozone. Because temperatures in many of the SFBAAB inland valleys are so much higher than near the coast, the inland areas are especially prone to photochemical air pollution.

In late fall and winter, solar angles are low, resulting in insufficient ultraviolet light and warming of the atmosphere to drive the photochemical reactions. Ozone concentrations do not reach significant levels in the SFBAAB during these seasons.

Sheltered Terrain. The hills and mountains in the SFBAAB contribute to the high pollution potential of some areas. During the day, or at night during windy conditions, areas in the lee sides of mountains are sheltered from the prevailing winds, thereby reducing turbulence and downwind transport. At night, when wind speeds are low, the upper atmospheric layers are often decoupled from the surface layers during radiation conditions. If elevated terrain is present, it will tend to block pollutant transport in that direction. Elevated terrain also can create a recirculation pattern by

inducing upvalley air flows during the day and reverse downvalley flows during the night, allowing little inflow of fresh air.

The areas having the highest air pollution potential tend to be those that experience the highest temperatures in the summer and the lowest temperatures in the winter. The coastal areas are exposed to the prevailing marine air, creating cooler temperatures in the summer, warmer temperatures in winter, and stratus clouds all year. The inland valleys are sheltered from the marine air and experience hotter summers and colder winters. Thus, the topography of the inland valleys creates conditions conducive to high air pollution potential.

Pollution Potential Related to Emissions. Although air pollution potential is strongly influenced by climate and topography, the air pollution that occurs in a location also depends upon the amount of air pollutant emissions in the surrounding area or transported from more distant places. Air pollutant emissions generally are highest in areas that have high population densities, high motor vehicle use, and/or industrialization. These contaminants created by photochemical processes in the atmosphere, such as ozone, may result in high concentrations many miles downwind from the sources of their precursor chemicals.

Cotati and Petaluma Valleys Climatological Subregion

There are 11 climatological subregions within the SFBAAB. Sebastopol is located within the Cotati and Petaluma Valleys subregion. This subregion stretches from Santa Rosa to the San Pablo Bay and is often considered as two different valleys: the Cotati Valley in the north and the Petaluma Valley in the south. To the east, the valley is bordered by the Sonoma Mountains, while to the west is a series of low hills, followed by the Estero Lowlands, which open to the Pacific Ocean. The region from the Estero Lowlands to the San Pablo Bay is known as the Petaluma Gap. This low-terrain area allows marine air to travel into the SFBAAB.

Wind patterns in the Petaluma and Cotati Valleys are strongly influenced by the Petaluma Gap, with winds flowing predominantly from the west. As marine air travels through the Petaluma Gap, it splits into northward and southward paths moving into the Cotati and Petaluma valleys. The southward path crosses San Pablo Bay and moves eastward through the Carquinez Strait. The northward path contributes to Santa Rosa's and Sebastopol's prevailing winds from the south and southeast. Petaluma's prevailing winds are from the northwest.

When the ocean breeze is weak, strong winds from the east can predominate, carrying pollutants from the Central Valley and the Carquinez Strait. During these periods, upvalley flows can carry the polluted air as far north as Santa Rosa and Sebastopol.

Winds are usually stronger in the Petaluma Valley than the Cotati Valley because the former is directly in line with the Petaluma Gap. Petaluma's climate is similar to areas closer to the coast even though Petaluma is 28 miles from the ocean. Average annual wind speed at the Petaluma Airport is seven mph. The Cotati Valley, being slightly north of the Petaluma Gap, experiences lower wind speeds. The annual average wind speed in Santa Rosa and Sebastopol is five mph.

Air temperatures are very similar in the two valleys. Summer maximum temperatures for this subregion are in the low-to-mid-80's, while winter maximum temperatures are in the high-50's to low-60's. Summer minimum temperatures are around 50 degrees, and winter minimum temperatures are in the high 30's.

Generally, air pollution potential is low in the Petaluma Valley because of its link to the Petaluma Gap and because of its low population density. There are two scenarios that could produce elevated pollutant levels: 1) stagnant conditions in the morning hours created when a weak ocean breeze meets a weak bay breeze, and 2) an eastern or southeastern wind pattern in the afternoon brings in pollution from the Carquinez Strait Region and the Central Valley.

The Cotati Valley has a higher pollution potential than does the Petaluma Valley. The Cotati Valley lacks a gap to the sea, contains a larger population and has natural barriers at its northern and eastern ends. There are also industrial facilities in and around Santa Rosa. Both valleys of this subregion are also threatened by increased motor vehicle traffic and the associated air contaminants. Population and motor vehicle use are increasing significantly, and housing costs and the suburbanization of employment are leading to more and longer commutes traversing the subregion.

CRITERIA POLLUTANTS

The California Air Resources Board (CARB) and the U.S. Environmental Protection Agency (EPA) currently focus on the following air pollutants as indicators of ambient air quality: ozone (O_3), particulate matter (PM), nitrogen dioxide (NO_2), carbon monoxide (CO), sulfur dioxide (SO_2), and lead (Pb). Because these are the most prevalent air pollutants known to be deleterious to human health, they are commonly referred to as "criteria air pollutants." Sources and health effects of the criteria air pollutants are summarized in Table 3.3-1.

TABLE 3.3-1 COMMON SOURCES OF HEALTH EFFECTS FOR CRITERIA AIR POLLUTANTS

POLLUTANTS	SOURCES	HEALTH EFFECTS
Ozone (O_3)	Atmospheric reaction of organic gases with nitrogen oxides in sunlight	Aggravation of respiratory and cardiovascular diseases; reduced lung function; increased cough and chest discomfort
Fine Particulate Matter (PM_{10} and $PM_{2.5}$)	Stationary combustion of solid fuels; construction activities; industrial processes; atmospheric chemical reactions	Reduced lung function; aggravation of respiratory and cardiovascular diseases; increases in mortality rate; reduced lung function growth in children
Nitrogen Dioxide (NO_2)	Motor vehicle exhaust; high temperature stationary combustion; atmospheric reactions	Aggravation of respiratory illness
Carbon Monoxide (CO)	Incomplete combustion of fuels and other carbon-containing substances, such as motor vehicle exhaust; natural events, such as decomposition of organic matter	Aggravation of some heart diseases; reduced tolerance for exercise; impairment of mental function; birth defects; death at high levels of exposure

POLLUTANTS	SOURCES	HEALTH EFFECTS
Sulfur Dioxide (SO_2)	Combination of sulfur-containing fossil fuels; smelting of sulfur-bearing metal ore; industrial processes	Aggravation of respiratory diseases; reduced lung function
Lead (Pb)	Contaminated soil	Behavioral and hearing disabilities in children; nervous system impairment

SOURCE: BAY AREA AIR QUALITY MANAGEMENT DISTRICT (2012).

Ozone (O_3) is a photochemical oxidant and the major component of smog. While O_3 in the upper atmosphere is beneficial to life by shielding the earth from harmful ultraviolet radiation from the sun, high concentrations of O_3 at ground level are a major health and environmental concern. O_3 is not emitted directly into the air but is formed through complex chemical reactions between precursor emissions of volatile organic compounds (VOC) and oxides of nitrogen (NOx) in the presence of sunlight. These reactions are stimulated by sunlight and temperature so that peak O_3 levels occur typically during the warmer times of the year. Both VOCs and NOx are emitted by transportation and industrial sources. VOCs are emitted from sources as diverse as autos, chemical manufacturing, dry cleaners, paint shops and other sources using solvents.

The reactivity of O_3 causes health problems because it damages lung tissue, reduces lung function and sensitizes the lungs to other irritants. Scientific evidence indicates that ambient levels of O_3 not only affect people with impaired respiratory systems, such as asthmatics, but healthy adults and children as well. Exposure to O_3 for several hours at relatively low concentrations has been found to significantly reduce lung function and induce respiratory inflammation in normal, healthy people during exercise. This decrease in lung function generally is accompanied by symptoms including chest pain, coughing, sneezing and pulmonary congestion.

Carbon monoxide (CO) is a colorless, odorless and poisonous gas produced by incomplete burning of carbon in fuels. When CO enters the bloodstream, it reduces the delivery of oxygen to the body's organs and tissues. Health threats are most serious for those who suffer from cardiovascular disease, particularly those with angina or peripheral vascular disease. Exposure to elevated CO levels can cause impairment of visual perception, manual dexterity, learning ability and performance of complex tasks.

Nitrogen dioxide (NO_2) is a brownish, highly reactive gas that is present in all urban atmospheres. NO_2 can irritate the lungs, cause bronchitis and pneumonia, and lower resistance to respiratory infections. Nitrogen oxides are an important precursor both to ozone (O_3) and acid rain, and may affect both terrestrial and aquatic ecosystems. The major mechanism for the formation of NO_2 in the atmosphere is the oxidation of the primary air pollutant nitric oxide (NOx). NOx plays a major role, together with VOCs, in the atmospheric reactions that produce O_3. NOx forms when fuel is burned at high temperatures. The two major emission sources are transportation and stationary fuel combustion sources such as electric utility and industrial boilers.

Sulfur dioxide (SO_2) affects breathing and may aggravate existing respiratory and cardiovascular disease in high doses. Sensitive populations include asthmatics, individuals with bronchitis or emphysema, children and the elderly. SO_2 is also a primary contributor to acid deposition, or acid

rain, which causes acidification of lakes and streams and can damage trees, crops, historic buildings and statues. In addition, sulfur compounds in the air contribute to visibility impairment in large parts of the country. This is especially noticeable in national parks. Ambient SO_2 results largely from stationary sources such as coal and oil combustion, steel mills, refineries, pulp and paper mills and from nonferrous smelters.

Particulate matter (PM) includes dust, dirt, soot, smoke and liquid droplets directly emitted into the air by sources such as factories, power plants, cars, construction activity, fires and natural windblown dust. Particles formed in the atmosphere by condensation or the transformation of emitted gases such as SO_2 and VOCs are also considered particulate matter.

Based on studies of human populations exposed to high concentrations of particles (sometimes in the presence of SO_2) and laboratory studies of animals and humans, there are major effects of concern for human health. These include effects on breathing and respiratory symptoms, aggravation of existing respiratory and cardiovascular disease, alterations in the body's defense systems against foreign materials, damage to lung tissue, carcinogenesis and premature death.

Respirable particulate matter (PM_{10}) consists of small particles, less than 10 microns in diameter, of dust, smoke, or droplets of liquid which penetrate the human respiratory system and cause irritation by themselves, or in combination with other gases. Particulate matter in Colusa County is caused primarily by dust from grading and excavation activities, from agricultural uses (as created by soil preparation activities, fertilizer and pesticide spraying, weed burning and animal husbandry), and from motor vehicles, particularly diesel-powered vehicles. PM_{10} causes a greater health risk than larger particles, since these fine particles can more easily penetrate the defenses of the human respiratory system.

Fine particulate matter ($PM_{2.5}$) consists of small particles, which are less than 2.5 microns in size. Similar to PM_{10}, these particles are primarily the result of combustion in motor vehicles, particularly diesel engines, as well as from industrial sources and residential/agricultural activities such as burning. It is also formed through the reaction of other pollutants. As with PM_{10}, these particulates can increase the chance of respiratory disease, and cause lung damage and cancer. In 1997, the EPA created new Federal air quality standards for $PM_{2.5}$.

The major subgroups of the population that appear to be most sensitive to the effects of particulate matter include individuals with chronic obstructive pulmonary or cardiovascular disease or influenza, asthmatics, the elderly and children. Particulate matter also soils and damages materials, and is a major cause of visibility impairment.

Lead (Pb) exposure can occur through multiple pathways, including inhalation of air and ingestion of Pb in food, water, soil or dust. Excessive Pb exposure can cause seizures, mental retardation and/or behavioral disorders. Low doses of Pb can lead to central nervous system damage. Recent studies have also shown that Pb may be a factor in high blood pressure and subsequent heart disease.

ODORS

Typically, odors are regarded as an annoyance rather than a health hazard. However, manifestations of a person's reaction to foul odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache).

With respect to odors, the human nose is the sole sensing device. The ability to detect odors varies considerably among the population and overall is quite subjective. Some individuals have the ability to smell minute quantities of specific substances; others may not have the same sensitivity but may have sensitivities to odors of other substances. In addition, people may have different reactions to the same odor; in fact, an odor that is offensive to one person (e.g., from a fast-food restaurant) may be perfectly acceptable to another.

It is also important to note that an unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. This is because of the phenomenon known as odor fatigue, in which a person can become desensitized to almost any odor and recognition only occurs with an alteration in the intensity.

Quality and intensity are two properties present in any odor. The quality of an odor indicates the nature of the smell experience. For instance, if a person describes an odor as flowery or sweet, then the person is describing the quality of the odor. Intensity refers to the strength of the odor. For example, a person may use the word "strong" to describe the intensity of an odor. Odor intensity depends on the odorant concentration in the air.

When an odorous sample is progressively diluted, the odorant concentration decreases. As this occurs, the odor intensity weakens and eventually becomes so low that the detection or recognition of the odor is quite difficult. At some point during dilution, the concentration of the odorant reaches a detection threshold. An odorant concentration below the detection threshold means that the concentration in the air is not detectable by the average human.

NATURALLY OCCURRING ASBESTOS

The EPA Region 9 office is working in areas of California to address concerns about potential effects of naturally occurring asbestos. Naturally occurring asbestos can take the form of long, thin, separable fibers. Natural weathering or human disturbance can break naturally occurring asbestos down to microscopic fibers, easily suspended in air. There is no health threat if asbestos fibers in soil remain undisturbed and do not become airborne. When inhaled, these thin fibers irritate tissues and resist the body's natural defenses. Asbestos, a known carcinogen, causes cancers of the lung and the lining of internal organs, as well as asbestosis and other diseases that inhibit lung function.

Asbestiform minerals occur naturally in rock and soil as the result of natural geologic processes, often in veins near earthquake faults in the coastal ranges and the foothills of the Sierra Nevada mountains. Sometimes the metamorphic conditions are right for the formation of chrysotile asbestos or tremolite-actinolite asbestos in bodies of ultramafic rock or along their boundaries. Asbestos is much less likely to be associated with non-ultramafic rock types.

Ultramafic rocks are igneous rocks that form in high temperature environments well below the surface of the earth. By the time they are exposed at the surface by uplift and erosion, ultramafic rocks may be partially to completely altered to serpentinite, a type of metamorphic rock. Asbestos is the generic term for the naturally occurring fibrous (asbestiform) varieties of six silicate minerals, including chrysotile which is found in serpentinite and is the most common in California.

Serpentinite is an ultramafic rock that has a greasy or waxy appearance and may be dark to light green, brown, yellow or white. Small amounts of chrysotile asbestos are common in serpentinite. Other forms of asbestos such amphibole asbestos also occur with serpentinite, but such occurrences are less common than chrysotile asbestos.

Because of the correlation of asbestos and ultramafic rocks, the location of ultramafic rocks provides insight to the potential for naturally occurring asbestos in each county. The California Department of Conservation, Division of Mines and Geology mapped the location of ultramafic rocks within California, which is limited to the foothill regions of the Sierra Nevada, Coastal Range, and Cascade Range. Naturally occurring asbestos is mapped in Sonoma County, although it is all located in mountainous areas. There is no naturally occurring asbestos mapped within the City of Sebastopol.

SENSITIVE RECEPTORS

A sensitive receptor is a location where human populations, especially children, seniors, and sick persons, are present and where there is a reasonable expectation of continuous human exposure to pollutants. Examples of sensitive receptors include residences, hospitals and schools.

AMBIENT AIR QUALITY

Both the EPA and the CARB have established ambient air quality standards for common pollutants. These ambient air quality standards represent safe levels of contaminants that avoid specific adverse health effects associated with each pollutant.

The federal and state ambient air quality standards are summarized in Table 3.3-2 for important pollutants. The federal and state ambient standards were developed independently, although both processes attempted to avoid health-related effects. As a result, the federal and state standards differ in some cases. In general, the state standards are more stringent. This is particularly true for ozone and particulate matter between 2.5 and 10 microns in diameter.

The State of California regularly reviews scientific literature regarding the health effects and exposure to PM and other pollutants. On May 3, 2002, CARB staff recommended lowering the level of the annual standard for PM_{10} and establishing a new annual standard for $PM_{2.5}$. The new standards became effective on July 5, 2003, with another revision on November 29, 2005.

TABLE 3.3-2: FEDERAL AND STATE AMBIENT AIR QUALITY STANDARDS

POLLUTANT	AVERAGING TIME	FEDERAL PRIMARY STANDARD	STATE STANDARD
Ozone	1-Hour 8-Hour	-- 0.075 ppm	0.09 ppm 0.070 ppm
Carbon Monoxide	8-Hour 1-Hour	9.0 ppm 35.0 ppm	9.0 ppm 20.0 ppm
Nitrogen Dioxide	Annual 1-Hour	-- 0.53 ppm	0.03 ppm 0.18 ppm
Sulfur Dioxide	Annual 24-Hour 1-Hour	0.03 ppm 0.14 ppm --	-- 0.04 ppm 0.25 ppm
PM_{10}	Annual 24-Hour	-- 150 µg/m^3	20 µg/m^3 50 µg/m^3
$PM_{2.5}$	Annual 24-Hour	35 µg/m^3 15 µg/m^3	12 µg/m^3 --
Lead	30-Day Avg. 3-Month Avg.	-- 1.5 µg/m^3	1.5 µg/m^3 --

NOTES: PPM = PARTS PER MILLION, µG/M^3 = MICROGRAMS PER CUBIC METER.
SOURCE: CALIFORNIA AIR RESOURCES BOARD, 2011.

In addition to the criteria pollutants discussed above, Toxic Air Contaminants (TACs) are another group of pollutants of concern. TACs are injurious in small quantities and are regulated despite the absence of criteria documents. The identification, regulation and monitoring of TACs is relatively recent compared to that for criteria pollutants. Unlike criteria pollutants, TACs are regulated on the basis of risk rather than specification of safe levels of contamination.

Existing air quality concerns within Sonoma County and the entire BAAQMD are related to increases of regional criteria air pollutants (e.g., ozone and particulate matter), exposure to toxic air contaminants, odors, and increases in greenhouse gas emissions contributing to climate change. The primary source of ozone (smog) pollution is motor vehicles which account for 70 percent of the ozone in the region. Particulate matter is caused by dust, primarily dust generated from construction and grading activities, and smoke which is emitted from fireplaces, wood-burning stoves, and agricultural burning.

Attainment Status

In accordance with the California Clean Air Act (CCAA), the CARB is required to designate areas of the state as attainment, nonattainment, or unclassified with respect to applicable standards. An "attainment" designation for an area signifies that pollutant concentrations did not violate the applicable standard in that area. A "nonattainment" designation indicates that a pollutant concentration violated the applicable standard at least once, excluding those occasions when a violation was caused by an exceptional event, as defined in the criteria.

Depending on the frequency and severity of pollutants exceeding applicable standards, the nonattainment designation can be further classified as serious nonattainment, severe nonattainment, or extreme nonattainment, with extreme nonattainment being the most severe of the classifications. An "unclassified" designation signifies that the data do not support either an

attainment or nonattainment status. The CCAA divides districts into moderate, serious, and severe air pollution categories, with increasingly stringent control requirements mandated for each category.

The EPA designates areas for ozone (O_3), carbon monoxide (CO), and nitrogen dioxide (NO_2) as "does not meet the primary standards," "cannot be classified," or "better than national standards." For sulfur dioxide (SO_2), areas are designated as "does not meet the primary standards," "does not meet the secondary standards," "cannot be classified," or "better than national standards." However, the CARB terminology of attainment, nonattainment, and unclassified is more frequently used. Table 3.3-3 summarizes the federal and state attainment status for each criteria pollutant.

TABLE 3.3-3: STATE AND NATIONAL ATTAINMENT STATUS

CRITERIA POLLUTANTS	STATE DESIGNATIONS	NATIONAL DESIGNATIONS
8-Hour Ozone	**Nonattainment**	**Nonattainment**
PM_{10}	**Nonattainment**	Unclassified
$PM_{2.5}$	**Nonattainment**	**Nonattainment**
Carbon Monoxide	Attainment	Unclassified/Attainment
Nitrogen Dioxide	Attainment	Unclassified/Attainment
Sulfur Dioxide	Attainment	Attainment
Sulfates	Attainment	No Federal Standard
Lead	Attainment	No Federal Standard
Hydrogen Sulfide	Unclassified	No Federal Standard
Visibility Reducing Particles	Unclassified	No Federal Standard

SOURCES: CALIFORNIA AIR RESOURCES BOARD (2011). WWW.ARB.CA.GOV/DESIG/ADM/ADM.HTM.

Air Quality Monitoring

The Bay Area Air Quality Management District and CARB maintain two air quality monitoring site in Sonoma County. The first is located on Fifth Street in the City of Santa Rosa. This monitoring station monitors Ozone (1-hr and 8-hr), PM_{10}, and $PM_{2.5}$. The second is located at the Healdsburg Airport. This monitoring station monitors Ozone (1-hr and 8-hr) only. It is important to note that the federal ozone 1-hour standard was revoked by the EPA and is no longer applicable for federal standards. Data obtained from the 5th Street and Healdsburg Airport monitoring sites over the last 3-year period is shown in Tables 3.3-4 and 3.3-5.

TABLE 3.3-4: AMBIENT AIR QUALITY MONITORING DATA (SANTA ROSA - 5TH STREET)

POLLUTANT	CAL. PRIMARY STANDARD	FED. PRIMARY STANDARD	YEAR	MAX CONCENTRATION	DAYS (SAMPLES) STATE/FED STANDARD EXCEEDED
Ozone (O_3) (1-hour)	0.09 ppm for 1 hour	NA	2015	*	*/*
			2014	*	*/*
			2013	0.074	0/0
Ozone (O_3) (8-hour)	0.07 ppm for 8 hour	0.075 ppm for 8 hour	2015	*	*/*
			2014	*	*/*
			2013	0.065	0/0
Particulate Matter (PM_{10})	50 µg/m^3 for 24 hours	150 µg/m^3 for 24 hours	2015	*	*/*
			2014	*	*/*
			2013	49.9	0/0
Particulate Matter ($PM_{2.5}$)	NA	35 µg/m^3 for 24 hours	2015	*	*/*
			2014	*	*/*
			2013	28.1	0/0

*NOTES: PPM = PARTS PER MILLION. µG/M^3 = MICRONS PER CUBIC METER. NA= NOT APPLICABLE. * = THERE WAS INSUFFICIENT (OR NO) DATA AVAILABLE TO DETERMINE THE VALUE*

SOURCES: CALIFORNIA AIR RESOURCES BOARD (ADAM) AIR POLLUTION SUMMARIES, 2013, 2014, 2015.

TABLE 3.3-5: AMBIENT AIR QUALITY MONITORING DATA (HEALDSBURG AIRPORT)

POLLUTANT	CAL. PRIMARY STANDARD	FED. PRIMARY STANDARD	YEAR	MAX CONCENTRATION	DAYS (SAMPLES) STATE/FED STANDARD EXCEEDED
Ozone (O_3) (1-hour)	0.09 ppm for 1 hour	NA	2015	0.072	0/0
			2014	0.070	0/0
			2013	0.069	0/0
Ozone (O_3) (8-hour)	0.07 ppm for 8 hour	0.075 ppm for 8 hour	2015	0.064	0/0
			2014	0.064	0/0
			2013	0.065	0/0
Particulate Matter (PM_{10})	50 µg/m^3 for 24 hours	150 µg/m^3 for 24 hours	2015	50.2	*/*
			2014	42.9	0/0
			2013	54.0	0/*

NOTES: PPM = PARTS PER MILLION. NA= NOT APPLICABLE. INFORMATION FOR PM_{10} IS DERIVED FROM THE HEALDSBURG – 133 MATHESON STREET MONITORING SITE.

SOURCES: CALIFORNIA AIR RESOURCES BOARD (ADAM) AIR POLLUTION SUMMARIES, 2013, 2014, 2015.

EXISTING EMISSIONS (SUMMER AND WINTER)

The California Emission Estimator Model (CalEEMod)™ (v.2013.2.2) was used to estimate total existing operational emissions in Sebastopol. Table 3.3-6 shows the total existing emissions, which include mobile source, area source, and energy emissions of criteria pollutants. The full calculations, inputs, and assumptions are provided in Appendix B.

TABLE 3.3-6: OPERATIONAL EMISSIONS (EXISTING CONDITIONS)

Category	*ROG*		*NOx*		*PM_{10}*		*$PM_{2.5}$*	
	Unmitigated	Mitigated	Unmitigated	Mitigated	Unmitigated	Mitigated	Unmitigated	Mitigated
Summer (maximum daily lbs/day)								
Area	4,810.5470	194.8555	83.0606	3.4229	967.2524	6.4734	967.2208	6.4219
Energy	3.9723	3.9723	34.6670	34.6670	2.7445	2.7445	2.7445	2.7445
Mobile	352.7896	352.7896	643.0812	643.0812	384.9967	8.5245	108.5391	108.5391
Total	5,167.3088	551.6174	760.8089	681.1712	1,354.9936	17.7424	1,078.5044	117.7055
Winter (maximum lbs/day)								
Area	4,810.5470	194.8555	83.0606	3.4229	967.2524	6.4734	967.2208	6.4219
Energy	3.9723	3.9723	34.6670	34.6670	2.7445	2.7445	2.7445	2.7445
Mobile	375.4921	375.4921	713.7025	713.7025	385.0604	8.5881	108.5977	108.5977
Total	5,190.0113	574.3199	831.4301	751.7924	1,355.0573	17.8060	1,078.5630	117.7641

SOURCE: CALEEMOD (V.2013.2.2).

BUILDOUT EMISSIONS (SUMMER AND WINTER)

CalEEMod™ (v.2013.2.2) was used to estimate total operational emissions from General Plan build out. Table 3.3-7 shows the emissions, which include mobile source, area source, and energy emissions of criteria pollutants that would result from operations of development under the General Plan build out. Table 3.3-8 shows the emissions, which include mobile source, area source, and energy emissions of criteria pollutants that would result from operations of development that may occur within the existing City Limits and the SOI/UGB under General Plan buildout conditions, without taking into account development constraints identified in the proposed General Plan. The full calculations, inputs, and assumptions are provided in Appendix B. The project-level threshold of significance is not applicable to this plan-level analysis. The total emissions are presented below for informational purposes.

TABLE 3.3-7: OPERATIONAL EMISSIONS (GENERAL PLAN BUILDOUT)

Category	*ROG*		*NOx*		*PM_{10}*		*$PM_{2.5}$*	
	Unmitigated	Mitigated	Unmitigated	Mitigated	Unmitigated	Mitigated	Unmitigated	Mitigated
Summer (maximum daily lbs/day)								
Area	886.8653	50.0694	17.0827	0.7121	194.3385	1.3379	194.3317	1.3274
Energy	1.1744	1.1744	10.4166	10.4166	0.8114	0.8114	0.8114	0.8114
Mobile	113.2957	113.2957	158.6619	158.6619	196.2723	196.2723	54.9975	54.9975
Total	1,001.3354	164.5395	186.1611	169.7906	391.4222	198.4216	250.1406	57.1363
% Reduction	--	83.6	--	8.8	--	49.3	--	77.2
Winter (maximum lbs/day)								
Area	886.8653	50.0694	17.0827	0.7121	194.3385	1.3379	194.3317	1.3274
Energy	1.1744	1.1744	10.4166	10.4166	0.8114	0.8114	0.8114	0.8114
Mobile	118.7690	118.7690	173.3938	173.3938	196.2977	196.2977	55.0208	55.0208
Total	1,006.8087	170.0128	200.8930	184.5225	391.4476	198.4470	250.1639	57.1596
% Reduction	--	83.1	--	8.2	--	49.3	--	77.1

SOURCE: CALEEMOD (V.2013.2.2).

TABLE 3.3-8: OPERATIONAL EMISSIONS (GENERAL PLAN CUMULATIVE)

Category	*ROG*		*NOx*		*PM_{10}*		*$PM_{2.5}$*	
	Unmitigated	Mitigated	Unmitigated	Mitigated	Unmitigated	Mitigated	Unmitigated	Mitigated
Summer (maximum daily lbs/day)								
Area	1,398.6744	83.2259	26.9601	1.1253	306.4909	2.1116	306.4802	2.0950
Energy	1.9537	1.9537	11.9211	17.3523	1.3499	1.3499	1.3499	1.3499
Mobile	128.7318	128.7318	991.1614	188.1686	241.4355	241.4355	67.5934	67.5934
Total	1,529.3599	213.9114	232.4811	206.6462	549.2763	244.8969	375.4234	71.0382
% Reduction	--	86.0	--	11.1	--	55.4	--	81.1
Winter (maximum lbs/day)								
Area	1,398.6744	83.2259	26.9601	1.1253	306.4909	2.1116	306.4802	2.0950
Energy	1.9537	1.9537	17.3523	17.3523	1.3499	1.3499	1.3499	1.3499
Mobile	134.8181	134.8181	205.9150	205.9150	241.4638	241.4638	67.6193	67.6193
Total	1,535.4462	219.9977	250.2274	224.3925	549.3045	244.9252	375.4493	71.0642
% Reduction	--	85.7	--	10.3	--	55.4	--	81.1

SOURCE: CALEEMOD (V.2013.2.2).

As shown in the tables above, operational ROG, PM_{10}, and $PM_{2.5}$ emissions can be significantly reduced through the implementation of basic mitigation measures such as the following:

Area Source:

- Natural gas fireplaces/stoves.
- Low Volatile Organic Compound architectural coatings (150 g/L).

Indoor Water Use

- Install low-flow faucets, toilets, showers
- Use water-efficient irrigation systems

Each individual project would require an individual air quality analysis to determine if the project exceeds the BAAQMD thresholds of significance.

3.3.2 REGULATORY SETTING

FEDERAL

Clean Air Act

The Federal Clean Air Act (FCAA) was first signed into law in 1970. In 1977, and again in 1990, the law was substantially amended. The FCAA is the foundation for a national air pollution control effort, and it is composed of the following basic elements: NAAQS for criteria air pollutants, hazardous air pollutant standards, state attainment plans, motor vehicle emissions standards, stationary source emissions standards and permits, acid rain control measures, stratospheric ozone protection, and enforcement provisions.

The EPA is responsible for administering the FCAA. The FCAA requires the EPA to set NAAQS for several problem air pollutants based on human health and welfare criteria. Two types of NAAQS

were established: primary standards, which protect public health, and secondary standards, which protect the public welfare from non-health-related adverse effects such as visibility reduction.

Energy Policy and Conservation Act

The Energy Policy and Conservation Act of 1975 sought to ensure that all vehicles sold in the U.S. would meet certain fuel economy goals. Through this Act, Congress established the first fuel economy standards for on-road motor vehicles in the United States. Pursuant to the Act, the National Highway Traffic and Safety Administration, which is part of the U.S. Department of Transportation (USDOT), is responsible for establishing additional vehicle standards and for revising existing standards.

Since 1990, the fuel economy standard for new passenger cars has been 27.5 mpg. Since 1996, the fuel economy standard for new light trucks (gross vehicle weight of 8,500 pounds or less) has been 20.7 mpg. Heavy-duty vehicles (i.e., vehicles and trucks over 8,500 pounds gross vehicle weight) are not currently subject to fuel economy standards. Compliance with federal fuel economy standards is determined on the basis of each manufacturer's average fuel economy for the portion of its vehicles produced for sale in the U.S. The Corporate Average Fuel Economy (CAFE) program, which is administered by the EPA, was created to determine vehicle manufacturers' compliance with the fuel economy standards. The EPA calculates a CAFE value for each manufacturer based on city and highway fuel economy test results and vehicle sales. Based on the information generated under the CAFE program, the USDOT is authorized to assess penalties for noncompliance.

Energy Policy Act of 1992 (EPAct)

The Energy Policy Act of 1992 (EPAct) was passed to reduce the country's dependence on foreign petroleum and improve air quality. EPAct includes several parts intended to build an inventory of alternative fuel vehicles (AFVs) in large, centrally fueled fleets in metropolitan areas. EPAct requires certain federal, state, and local government and private fleets to purchase a percentage of light duty AFVs capable of running on alternative fuels each year. In addition, financial incentives are included in EPAct. Federal tax deductions will be allowed for businesses and individuals to cover the incremental cost of AFVs. States are also required by the act to consider a variety of incentive programs to help promote AFVs.

Energy Policy Act of 2005

The Energy Policy Act of 2005 was signed into law on August 8, 2005. Generally, the act provides for renewed and expanded tax credits for electricity generated by qualified energy sources, such as landfill gas; provides bond financing, tax incentives, grants, and loan guarantees for a clean renewable energy and rural community electrification; and establishes a federal purchase requirement for renewable energy.

Federal Climate Change Policy

According to the EPA, "the United States government has established a comprehensive policy to address climate change" that includes slowing the growth of emissions; strengthening science, technology, and institutions; and enhancing international cooperation. To implement this policy,

"the Federal government is using voluntary and incentive-based programs to reduce emissions and has established programs to promote climate technology and science." The federal government's goal is to reduce the greenhouse gas (GHG) intensity (a measurement of GHG emissions per unit of economic activity) of the American economy by 18 percent over the 10-year period from 2002 to 2012. In addition, the EPA administers multiple programs that encourage voluntary GHG reductions, including "ENERGY STAR", "Climate Leaders", and Methane Voluntary Programs. However, as of this writing, there are no adopted federal plans, policies, regulations, or laws directly regulating GHG emissions.

STATE

California Clean Air Act

The California Clean Air Act (CCAA) was first signed into law in 1988. The CCAA provides a comprehensive framework for air quality planning and regulation, and spells out, in statute, the state's air quality goals, planning and regulatory strategies, and performance. CARB is the agency responsible for administering the CCAA. CARB established ambient air quality standards pursuant to the California Health and Safety Code [§39606(b)], which are similar to the federal standards.

Air Quality Standards

NAAQS are determined by the EPA. The standards include both primary and secondary ambient air quality standards. Primary standards are established with a safety margin. Secondary standards are more stringent than primary standards and are intended to protect public health and welfare. States have the ability to set standards that are more stringent than the federal standards. As such, California established more stringent ambient air quality standards.

Federal and state ambient air quality standards have been established for ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, suspended particulates (PM_{10}) and lead. In addition, California has created standards for pollutants that are not covered by federal standards. The state and federal primary standards for major pollutants are shown in Table 3.3-2.

Like the EPA, CARB also designates areas within California as either attainment or nonattainment for each criteria pollutant based on whether the CAAQS have been achieved. Under the CCAA, areas are designated as nonattainment for a pollutant in air quality data shows that a State standard for the pollutant was violated at least once during the previous three calendar years. Exceedances that are affected by highly irregular or infrequent events are not considered violations of a State standard, and are not used as a basis for designating areas as nonattainment.

CARB Mobile-Source Regulation

The State of California is responsible for controlling emissions from the operation of motor vehicles in the state. Rather than mandating the use of specific technology or the reliance on a specific fuel, the CARB's motor vehicle standards specify the allowable grams of pollution per mile driven. In other words, the regulations focus on the reductions needed rather than on the manner in which they are

achieved. Towards this end, the CARB has adopted regulations which required auto manufacturers to phase in less polluting vehicles.

Tanner Air Toxics Act

California regulates Toxic Air Containments (TACs) primarily through the Tanner Air Toxics Act (AB 1807) and the Air Toxics Hot Spots Information and Assessment Act of 1987 (AB 2588). The Tanner Act sets forth a formal procedure for CARB to designate substances as TACs. This includes research, public participation, and scientific peer review before CARB can designate a substance as a TAC. To date, CARB has identified more than 21 TACs and has adopted EPA's list of HAPs as TACs. Most recently, diesel PM was added to the CARB list of TACs. Once a TAC is identified, CARB then adopts an Airborne Toxics Control Measure (ATCM) for sources that emit that particular TAC. If there is a safe threshold for a substance at which there is no toxic effect, the control measure must reduce exposure below that threshold. If there is no safe threshold, the measure must incorporate Best Available Control Technology (BACT) to minimize emissions.

The AB 2588 requires that existing facilities that emit toxic substances above a specified level prepare a toxic-emission inventory, prepare a risk assessment if emissions are significant, notify the public of significant risk levels, and prepare and implement risk reduction measures. CARB has adopted diesel exhaust control measures and more stringent emission standards for various on-road mobile sources of emissions, including transit buses and off-road diesel equipment (e.g., tractors, generators). In February 2000, CARB adopted a new public-transit bus-fleet rule and emission standards for new urban buses. These rules and standards provide for (1) more stringent emission standards for some new urban bus engines, beginning with 2002 model year engines; (2) zero-emission bus demonstration and purchase requirements applicable to transit agencies; and (3) reporting requirements under which transit agencies must demonstrate compliance with the urban transit bus fleet rule. Other recent milestones include the low-sulfur diesel-fuel requirement, and tighter emission standards for heavy-duty diesel trucks (2015) and off-road diesel equipment (2014) nationwide.

California Strategy to Reduce Petroleum Dependence (AB 2076)

In response to the requirements of AB 2076 (Chapter 936, Statutes of 2000), the CEC and the CARB developed a strategy to reduce petroleum dependence in California. The strategy, *Reducing California's Petroleum Dependence*, was adopted by the CEC and CARB in 2003. The strategy recommends that California reduce on-road gasoline and diesel fuel demand to 15 percent below 2003 demand levels by 2020 and maintain that level for the foreseeable future; the Governor and Legislature work to establish national fuel economy standards that double the fuel efficiency of new cars, light trucks, and sport utility vehicles (SUVs); and increase the use of non- petroleum fuels to 20 percent of on-road fuel consumption by 2020 and 30 percent by 2030.

Assembly Bill 1493

In response to AB 1493, CARB approved amendments to the California Code of Regulations (CCR) adding GHG emission standards to California's existing motor vehicle emission standards. Amendments to CCR Title 13 Sections 1900 (CCR 13 1900) and 1961 (CCR 13 1961), and adoption of

Section 1961.1 (CCR 13 1961.1) require automobile manufacturers to meet fleet average GHG emission limits for all passenger cars, light-duty trucks within various weight criteria, and medium-duty passenger vehicle weight classes beginning with the 2009 model year. Emission limits are further reduced each model year through 2016. For passenger cars and light-duty trucks 3,750 pounds or less loaded vehicle weight (LVW), the 2016 GHG emission limits are approximately 37 percent lower than during the first year of the regulations in 2009. For medium-duty passenger vehicles and light-duty trucks 3,751 LVW to 8,500 pounds gross vehicle weight (GVW), GHG emissions are reduced approximately 24 percent between 2009 and 2016.

CARB requested a waiver of federal preemption of California's Greenhouse Gas Emissions Standards. The intent of the waiver is to allow California to enact emissions standards to reduce carbon dioxide and other greenhouse gas emissions from automobiles in accordance with the regulation amendments to the CCRs that fulfill the requirements of AB 1493. The EPA granted a waiver to California to implement its greenhouse gas emissions standards for cars.

California Executive Orders S-3-05 and S-20-06, and Assembly Bill 32

On June 1, 2005, Governor Arnold Schwarzenegger signed Executive Order S-3-05. The goal of this Executive Order is to reduce California's GHG emissions to: 1) 2000 levels by 2010, 2) 1990 levels by the 2020 and 3) 80% below the 1990 levels by the year 2050.

In 2006, this goal was further reinforced with the passage of Assembly Bill 32 (AB 32), the Global Warming Solutions Act of 2006. AB 32 sets the same overall GHG emissions reduction goals while further mandating that CARB create a plan, which includes market mechanisms, and implement rules to achieve "real, quantifiable, cost-effective reductions of greenhouse gases." Executive Order S-20-06 further directs state agencies to begin implementing AB 32, including the recommendations made by the state's Climate Action Team.

Assembly Bill 1007

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

Bioenergy Action Plan – Executive Order #S-06-06

Executive Order #S-06-06 establishes targets for the use and production of biofuels and biopower and directs state agencies to work together to advance biomass programs in California while providing environmental protection and mitigation. The executive order establishes the following target to increase the production and use of bioenergy, including ethanol and biodiesel fuels made

from renewable resources: produce a minimum of 20 percent of its biofuels within California by 2010, 40 percent by 2020, and 75 percent by 2050. The executive order also calls for the state to meet a target for use of biomass electricity.

Governor's Low Carbon Fuel Standard (Executive Order #S-01-07)

Executive Order #S-01-07 establishes a statewide goal to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020 through establishment of a Low Carbon Fuel Standard. The Low Carbon Fuel Standard is incorporated into the State Alternative Fuels Plan and is one of the proposed discrete early action GHG reduction measures identified by CARB pursuant to AB 32.

Climate Action Program at Caltrans

The California Department of Transportation, Business, Transportation, and Housing Agency, prepared a Climate Action Program in response to new regulatory directives. The goal of the Climate Action Program is to promote clean and energy efficient transportation, and provide guidance for mainstreaming energy and climate change issues into business operations. The overall approach to lower fuel consumption and CO2 from transportation is twofold: (1) reduce congestion and improve efficiency of transportation systems through smart land use, operational improvements, and Intelligent Transportation Systems; and (2) institutionalize energy efficiency and GHG emission reduction measures and technology into planning, project development, operations, and maintenance of transportation facilities, fleets, buildings, and equipment.

The reasoning underlying the Climate Action Program is the conclusion that "the most effective approach to addressing GHG reduction, in the short-to-medium term, is strong technology policy and market mechanisms to encourage innovations. Rapid development and availability of alternative fuels and vehicles, increased efficiency in new cars and trucks (light and heavy duty), and super clean fuels are the most direct approach to reducing GHG emissions from motor vehicles (emission performance standards and fuel or carbon performance standards)."

Senate Bill 97

Senate Bill 97 (Chapter 185, 2007) required the Governor's Office of Planning and Research (OPR) to develop recommended amendments to the State CEQA Guidelines for addressing greenhouse gas emissions. OPR prepared its recommended amendments to the State CEQA Guidelines to provide guidance to public agencies regarding the analysis and mitigation of greenhouse gas emissions and the effects of greenhouse gas emissions in draft CEQA documents. The Amendments became effective on March 18, 2010.

Senate Bill 375

SB 375 requires the CARB to develop regional greenhouse gas emission reduction targets to be achieved from the automobile and light truck sectors for 2020 and 2035. The 18 MPOs in California will prepare a "sustainable communities strategy" to reduce the amount of greenhouse gas emission in their respective regions and demonstrate the ability for the region to attain CARB's reduction targets. CARB would later determine if each region is on track to meet their reduction targets. In

addition, cities would get extra time -- eight years instead of five -- to update housing plans required by the state.

LOCAL

Bay Area Air Quality Management District

The Bay Area Air Quality Management District (BAAQMD) is the primary agency responsible for assuring that the National and California Ambient Air Quality Standards (NAAQS and CAAQS, respectively) are attained and maintained in the San Francisco Bay Area. The BAAQMD's jurisdiction includes all of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo and Santa Clara counties, and the southern portions of Solano and Sonoma counties. The BAAQMD 's responsibilities in improving air quality in the region include: preparing plans for attaining and maintaining air quality standards; adopting and enforcing rules and regulations; issuing permits for stationary sources of air pollutants; inspecting stationary sources and responding to citizen complaints; monitoring air quality and meteorological conditions; awarding grants to reduce mobile emissions; implementing public outreach campaigns; and assisting local governments in addressing climate change.

BAAQMD takes on various roles in the CEQA process, depending on the nature of the proposed project. For projects in the City of Sebastopol they generally serve as a Responsible or Commenting Agency as described below:

- Responsible Agency – BAAQMD acts as a Responsible Agency when it has limited discretionary authority over a portion of a project, but does not have the primary discretionary authority of a lead agency. As a Responsible Agency, BAAQMD may coordinate the environmental review process with the lead agency regarding BAAQMD's permitting process, provide comments to the lead agency regarding potential impacts, and recommend mitigation measures.

- Commenting Agency – BAAQMD may act as a Commenting Agency when it is not a Lead or Responsible Agency (i.e., it does not have discretionary authority over a project), but when it may have concerns about the air quality impacts of a proposed project or plan. As a Commenting Agency, BAAQMD may review environmental documents prepared for development proposals and plans in the region, such as local general plans, and provide comments to the lead agency regarding the adequacy of the air quality impact analysis, determination of significance, and mitigation measures proposed.

BAAQMD CEQA Guidelines

The Bay Area Air Quality Management District (BAAQMD) has adopted California Environmental Quality Act (CEQA) Guidelines to assist lead agencies in evaluating air quality impacts of projects and plans proposed in the San Francisco Bay Area Air Basin (SFBAAB). The Guidelines contain instructions on how to evaluate, measure, and mitigate air quality impacts generated for project-level and plan-level activities. The Guidelines focus on criteria air pollutant, greenhouse gas (GHG), toxic air contaminant, and odor emissions generated from plans or projects. The Guidelines are intended to

help lead agencies navigate through the CEQA process. The Guidelines offer step-by-step procedures for a thorough environmental impact analysis of adverse air emissions in the Bay Area.

This assessment is based on BAAQMD's 2010 CEQA Guidelines. BAAQMD's adoption of its 2010 Guidelines was overturned by an order issued March 5, 2012, in California Building Industry Association v. BAAQMD (Alameda Superior Court Case No. RGI0548693). The order requires BAAQMD to set aside its approval of the Guidelines until it has conducted environmental review under CEQA. The claims made in the case concerned the environmental impacts of adopting the Guidelines, that is, how the Guidelines would indirectly affect land use development patterns. Those issues are not relevant to the scientific basis of BAAQMD's analysis of what levels of pollutants should be deemed significant. This assessment considers the science informing the Guidelines as being supported by substantial evidence. Scientific information supporting the thresholds was documented in BAAQMD's proposed thresholds of significance analysis. Accordingly, this assessment uses the 2010 Guidelines and methodologies from BAAQMD's May 2011 CEQA Air Quality Guidelines to determine the potential impacts of the project on the existing environment.

Bay Area 2010 Clean Air Plan

The Bay Area 2010 Clean Air Plan (CAP) provides a comprehensive plan to improve Bay Area air quality and protect public health. The 2010 CAP was prepared in close collaboration with the Air District's regional agency partners, and was informed by extensive outreach to the public and interested stakeholders.

The CAP defines a control strategy that the Air District and its partners will implement to: (1) reduce emissions and decrease ambient concentrations of harmful pollutants; (2) safeguard public health by reducing exposure to air pollutants that pose the greatest health risk, with an emphasis on protecting the communities most heavily impacted by air pollution; and (3) reduce greenhouse gas (GHG) emissions to protect the climate.

The legal impetus for the CAP is to update the most recent ozone plan, the Bay Area 2005 Ozone Strategy, to comply with state air quality planning requirements as codified in the California Health & Safety Code. Although steady progress in reducing ozone levels in the Bay Area was made, the region is designated as non-attainment for both the one-hour and eight-hour state ozone standards. In addition, emissions of ozone precursors in the Bay Area contribute to air quality problems in neighboring air basins. Under these circumstances, state law requires the CAP to include all feasible measures to reduce emissions of ozone precursors and to reduce transport of ozone precursors to neighboring air basins.

The Bay Area was recently designated as non-attainment for the national 24-hour fine particulate matter ($PM_{2.5}$) standard, and was required to prepare a $PM_{2.5}$ State Implementation Plan (SIP) pursuant to federal air quality guidelines by December 2012. The 2010 CAP is not a SIP document and does not respond to federal requirements for $PM_{2.5}$ or ozone planning. However, in anticipation of future $PM_{2.5}$ planning requirements, the CAP control strategy also aims to reduce PM emissions and concentrations. In addition, U.S. EPA is currently reevaluating national ozone standards, and is

likely to tighten those standards in the near future. The control measures in the CAP will also help in the Bay Area's continuing effort to attain national ozone standards.

Sonoma County Climate Action Plan 2020

In 2005, the ten local governments within Sonoma County pledged to reduce GHG emissions to 25 percent below 1990 levels by 2015. The Regional Climate Protection Authority (RCPA) was created in 2009 to help each jurisdiction reach its goal. The RCPA includes representatives from each of the nine cities in Sonoma County and the Board of Supervisors.

Climate Action 2020 is a collaborative effort led by the RCPA and including all nine cities and the County of Sonoma and several partner entities to take further actions to reduce GHG emissions community-wide and respond to the threats of climate change. RCPA will work with each jurisdiction to develop a Community Climate Action Plan that will provide a comprehensive assessment of GHGs emission sources as well possible measures that jurisdictions can take to reduce GHG emissions and/or adapt to climate change to ensure their communities remain vibrant and resilient.

The Draft Climate Action Plan and associated Draft EIR were released for public review on April 10, 2016. Section 5.7 of the Draft Climate Action Plan presents Sebastopol's GHG emissions profile and the measures that the City will implement, with the support of the RCPA and other regional entities, as part of the regional approach to reducing GHG emissions.

According to Section 5.7 of the Draft Climate Action Plan, the City of Sebastopol joins other Sonoma County communities to support the regional GHG emissions reduction target of 25% below 1990 countywide emissions by 2020 through adoption of 27 local GHG reduction measures. The City's GHG emissions under 2020 BAU conditions (in absence of state, regional, and local reduction measures) would be approximately 92,990 $MTCO_2e$. The City's local GHG reduction measures, in combination with state and regional measures, would reduce the City's GHG emissions in 2020 to 62,770 $MTCO_2e$, which would be a reduction of approximately 32% compared to 2020 BAU conditions. The City will achieve these reductions through reduction measures that are technologically feasible and cost-effective per AB 32 through a combination of state (62%), regional (25%), and local (12%) efforts. With the reduction measures in the Draft Climate Action Plan, per-capita emissions in Sebastopol will be 8.2 $MTCO_2e$ per person, a 22% reduction in per capita emissions compared to 1990.

Cities for Climate Protection Program

The City of Sebastopol passed Resolution 5229 in January 2002 endorsing the Cities for Climate Protection Campaign which includes a five milestone program to reduce greenhouse gas and air pollution emissions. The five milestones are as follows:

1. Conduct a baseline greenhouse gas emissions inventory and forecast to determine the sources and quantity of greenhouse gas emissions in the jurisdiction;
2. Establish a greenhouse gas emissions reduction target;
3. Develop a climate action plan consisting of both existing and future actions which, when implemented, will meet the local greenhouse gas reduction target;
4. Implement the action plan; and

5. Monitor and report progress.

In September 2003 the City reported their municipal baseline emissions in *Standing Together for the Future: Greenhouse Gas Emission Inventories for Eight Cities in Sonoma County, California*.

CALGreen

CALGreen is a set of mandatory green building standards for new construction that went into effect throughout California on January 1, 2011 and continued with the triennial update of the Uniform Building Code in 2013, which the City Council adopted as Section 15.04.140 of their Municipal Code. These building standards apply to all new public and significantly altered privately-constructed commercial and residential buildings. CALGreen is referred to officially as the California Green Building Standards Code and includes a matrix of mandatory requirements tailored to residential and non-residential building classifications, as well as two sets of voluntary measures (CALGreen Tier 1 and Tier 2) that provide a host of more stringent sustainable building practices and features. Among the key mandatory provisions are requirements that new buildings:

- reduce indoor potable water use by at least 20% below current standards;
- recycle or salvage at least 50% of construction waste;
- utilize low VOC-emitting finish materials and flooring systems;
- install separate water meters tracking non-residential buildings' indoor and outdoor water use;
- utilize moisture-sensing irrigation systems for larger landscape areas;
- receive mandatory inspections by local officials of building energy systems, such as HVAC and mechanical equipment, to verify performance in accordance with specifications in non-residential buildings exceeding 10,000 square feet; and
- earmark parking for fuel-efficient and carpool vehicles.

Sebastopol Mandatory Photovoltaic System Requirements

As of July 21, 2013 the City of Sebastopol established a Mandatory Solar Photovoltaic Requirements Ordinance to promote the reduction of Green House Gas Emissions.

Municipal Code section 15.72 requires a photovoltaic system on all new commercial or residential buildings, and alterations, additions and remodels to existing buildings. Any addition to an existing commercial building that increases the square footage by 1800 square feet or greater and all commercial remodels, alterations or repairs that are made involving demolition, remodel or repair of more than 50% of the structure.

Any addition to an existing residential building that increases the square footage by 75% or greater and all residential remodels, alterations or repairs that are made involving demolition, remodel or repair of more than 75% of the structure.

Minimum system size may be calculated by either of two methods, prescriptive or performance.

Prescriptive Method. The minimum system size utilizing the prescriptive method is two watts per square foot of building size. Watts are calculated by using the nameplate rating of the photovoltaic system. There are no considerations for performance such as tilt, orientation shading or tariffs.

Performance Method. The system sizing requirement for the performance model shall be calculated using modeling software or other methods approved by the official. The total building load is calculated in kilowatt hours. The photovoltaic system annual output is calculated by factoring in system orientation, tilt, shading, local weather conditions and equipment efficiency. On an annual basis the photovoltaic system must offset 75% of the building's total load.

Solar Sebastopol

Solar Sebastopol was the City of Sebastopol's pioneering effort to encourage Sebastopol residences and businesses to switch to solar energy, a much more environmentally sustainable, renewable source of electricity. The program was designed to make solar a simple, affordable, and compelling choice for Sebastopol property owners, while demonstrating to other municipalities how to take their local energy future into their own hands. The program has grown to what is now called Solar Sonoma County, which is led by the Solar Action Alliance.

The Solar Action Alliance is an organization that supports solar and energy efficiency-related policy issues, educates and trains community members in the field, advocates for a rapidly growing industry, and acts as a clearinghouse for clean energy activity in Sonoma County.

3.3.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with the 2010 Bay Area Air Quality Management District CEQA Guidelines, the proposed project will have a significant impact on the environment associated with air quality if it will:

- Conflict with or obstruct implementation of the applicable air quality plan;
- Cause health risks associated with toxic air contaminants;
- Create objectionable odors;
- Conflict with regional plans.

(Note: Greenhouse gas emissions are addressed in a separate chapter of this EIR.)

IMPACTS AND MITIGATION MEASURES

Impact 3.3-1: General Plan implementation would not conflict with or obstruct implementation of the applicable air quality plan (Less than Significant)

CEQA requires lead agencies to determine whether a project is consistent with all applicable air quality plans. The Bay Area Air Quality District's most current plan is the 2010 Clean Air Plan. The BAAQMD CEQA Guidelines recommends that lead agencies consider the following questions relative to this consistency determination:

1. Does the project support the primary goals of the 2010 Clean Air Plan?
2. Does the project include applicable control measures from the 2010 Clean Air Plan?
3. Does the project disrupt or hinder implementation of any 2010 Clean Air Plan control measures?

The primary goals of the 2010 Clean Air Plan are to:

- Attain air quality standards;
- Reduce population exposure and protect public health in the Bay Area; and
- Reduce greenhouse gas emissions and protect the climate.

The 2010 Clean Air Plan's first primary goal is to protect air quality. The 2010 Clean Air Plan contains 55 control measures aimed at reducing air pollution in the Bay Area. Along with the traditional stationary, area, mobile source and transportation control measures, the 2010 Clean Air Plan contains a number of new control measures designed to protect the climate and promote mixed use, compact development to reduce vehicle emissions and exposure to pollutants from stationary and mobile sources. The BAAQMD encourages lead agencies to incorporate these Land Use and Local Impact (LUM) measures and Energy and Climate measures (ECM) into proposed project designs and plan elements.

The 2016 Sebastopol General Plan Conservation and Open Space Element includes an extensive list of policies and action measures that are specifically aimed at improving air quality. These policies and action measures, which are presented below, are consistent with the intent of the BAAQMD's control measures. Additionally, the General Plan Land Use Element and Land Use Map provides further implementation of the BAAQMD's control measures by promoting a compact urban development form, emphasizing infill development, and ensuring that land use patterns to not expose sensitive receptors to pollutant concentrations.

Additionally, the Circulation Element includes a wide range of policies and action items that would effectively reduce vehicle miles travelled throughout the Planning Area, through the use of complete streets and multi-modal transportation systems. These applicable policies and actions items are described in greater detail in Section 3.13, Transportation and Circulation.

The policies and action items included throughout the 2016 Sebastopol General Plan, most specifically within the Conservation and Open Space, Land Use, and Circulation Elements, cover the full breadth of air quality issues as recommended in the 2010 Clean Air Plan. The 2010 Clean Air Plan's second primary goal is to address public health. The 2010 Clean Air Plan addresses public health through identifying control measures to maximize the reduction in population exposure to air pollutants and by including a category titled Land Use and Local Impacts Measures that is intended to address localized impacts of air pollution and to help local jurisdictions to pursue transit-oriented infill development in priority areas.

The 2010 Clean Air Plan's final primary goal of protecting the climate is to reduce greenhouse gases to protect the climate. The General Plan Conservation and Natural Resources Element includes an extensive list of policies and action measures that are specifically aimed at reducing greenhouse gas

emissions/climate change. These policies and action measures are presented below and discussed in more detail in Section 3.8, Greenhouse Gas Emissions.

If approval of the General Plan would not cause the disruption, delay or otherwise hinder the implementation of any air quality plan control measure, it may be considered consistent with the 2010 CAP. The General Plan does not cause the disruption, delay or otherwise hinder the implementation of any air quality plan control measure; therefore, it is consistent with the 2010 CAP. Implementation of the General Plan, with the following policies and action items, would have a **less than significant** impact relative to this topic.

2016 GENERAL PLAN POLICIES AND ACTIONS THAT MITIGATE POTENTIAL IMPACTS

Policies

Policy CIR 1-2: *Ensure that the City's circulation network is a well-connected system of streets, roads, sidewalks, and paths that effectively accommodates vehicular and non-vehicular traffic in a manner that considers the context of surrounding land uses and the needs of all roadway users.*

Policy CIR 1-8: *Establish multi-modal level of service objectives that would facilitate review of transit, bicycle and pedestrian impacts, in addition to motor vehicles when these methods are more available and useful.*

Policy CIR 1-9: *Through the development review process, CEQA process, and through long-range infrastructure planning efforts, identify circulation network improvements and mitigation measures necessary to maintain the City's vehicle, transit, bicycle and pedestrian objectives.*

Policy LU 6-2: *Promote compact urban form that provides residential opportunities in close proximity to jobs, services, and transit.*

Policy COS 5-7: *Implement greenhouse gas reduction measures and participate in regional efforts to study the effects of climate change on precipitation levels as a key strategy in sustainably managing local groundwater supplies.*

Policy COS 7-1: *Improve air quality through continuing to require a compact development pattern that focuses growth in and around existing urbanized areas, locating new housing near places of employment, encouraging non-vehicular modes of transportation, and requiring projects to mitigate significant air quality impacts.*

Policy COS 7-2: *Minimize exposure of sensitive receptors to concentrations of air pollutant emissions and toxic air contaminants.*

Policy COS 7-3: *Implement the portfolio of policies and programs contained in the Circulation Element to reduce vehicle trips, vehicle miles travelled, and increase the use of non-vehicular modes of transportation such as bicycling, walking, and the use of shared transit.*

Policy COS 7-4: *Continue to cooperate with the Bay Area Air Quality Management District (BAAQMD) in implementing the regional Clean Air Plan.*

Policy COS 7-5: *Continue to enforce air quality standards in collaboration with the BAAQMD.*

Policy COS 7-6: *Require new development or significant remodels to install fireplaces, stoves, and/or heaters which meet current BAAQMD standards and the standards established in Section 15.70 of the Sebastopol Municipal Code.*

Policy COS 7-7: *Continue to require all construction projects and ground disturbing activities to implement BAAQMD dust control and abatement measures.*

Policy COS 7-8: *Dust-generating activities, such as street sweeping and the use of leaf blowers should be avoided during periods of moderate to high wind, and should be conducted in such a manner as to reduce the generation of dust to the greatest extent feasible.*

Policy COS 8-1: *Recognize that successful climate action planning efforts are dependent upon a wide range of factors and strategies detailed throughout this General Plan, including:*

- *a compact development pattern that promotes and encourages a mix of land uses and densities,*
- *circulation policies that reduce vehicle trips and increase the use of non-vehicular modes of transportation,*
- *programs that promote energy conservation and the use of renewable energy sources,*
- *programs that preserve the natural environment, including native trees and vegetation.*

Policy COS 8-2: *Coordinate with Sonoma County and nearby cities to implement regional greenhouse gas (GHG) reduction plans and consolidate efforts to reduce GHGs throughout the County.*

Policy COS 8-3: *Encourage local businesses and industries to engage in voluntary efforts to reduce GHG emissions and energy consumption.*

Policy COS 8-4: *Preserve, protect and enhance, as appropriate, the City's carbon sequestration resources, also referred to as "carbon sinks," to improve air quality and reduce net carbon emissions.*

Policy COS 8-5: *Encourage public transit, ridesharing and van pooling, shortened and combined motor vehicle trips to work and services, use of bicycles, and walking. Minimize single passenger motor vehicle use.*

Policy COS 8-6: *Demonstrate leadership in local and regional climate planning efforts through a range of tangible actions and policies.*

Policy COS 9-1: *Require all new public and privately constructed buildings to meet and comply with CALGreen Tier 1 standards.*

Policy COS 9-2: *Make energy conservation an important criterion in the development review process.*

Policy COS 9-3: *Support innovative and green building best management practices including, but not limited to, LEED certification for new development, and encourage project applicants to exceed the most current "green" development standards in the California Code of Regulations (CCR), Title 24, if feasible.*

Policy COS 9-4: *Encourage publicly-constructed projects to exceed CalGreen Tier 1 standards.*

Policy COS 9-5: *Promote the use of sustainable and carbon-neutral energy sources in new development.*

Policy COS 9-6: *Promote regional efforts and partnerships, such as Sonoma Clean Power, to increase opportunities for residential and business customers across the county to access environmentally*

friendly power generated by renewable sources (like solar, wind, and geothermal) at competitive rates.

Policy COS 9-7: *Incorporate innovative green building techniques and best management practices in the site design, construction, and renovation of all public projects.*

Policy COS 9-16: *Integrate the values and practices of environmental sustainability in government operations.*

Actions

Action CIR 1f: As part of the development review process, the Planning Department and the Public Works Department shall review development projects to ensure that developers:

- *Construct transportation improvements along property frontages when appropriate*
- *Address the project's proportional-share of impacts to the City's circulation network through payment of traffic mitigation fees*
- *Provide for complete streets to the extent feasible; facilitating walking, biking, and transit modes*
- *Provide appropriate on-site pedestrian and bicycle features*
- *Fund traffic impact studies that identify on-site and off-site project effects and mitigation measures*
- *Provide adequate emergency vehicle access*
- *Minimize driveway cuts consistent with access and site planning considerations.*

Action LU 6a: Encourage new housing projects to develop in the upper range of allowed densities.

Action COS-7a: Review all new industrial and commercial development projects for potential air quality impacts to residences and other sensitive receptors. Staff shall ensure that mitigation measures and best management practices are implemented to reduce significant emissions of criteria pollutants to the greatest extent feasible.

Action COS-7b: Refer development, infrastructure, and planning projects to the Bay Area Air Quality Management District (BAAQMD) for review. Require project applicants to prepare air quality analyses to address BAAQMD and General Plan requirements, which include analysis and identification of:

I. Air pollutant emissions associated with the project during construction, project operation, and cumulative conditions.

II. Potential exposure of sensitive receptors to toxic air contaminants.

III. Significant air quality impacts associated with the project for construction, project operation, and cumulative conditions.

IV. Mitigation measures to reduce significant impacts to less than significant or the maximum extent feasible where impacts cannot be mitigated to less than significant.

Action COS-7c: Adequate buffers between new industrial uses and sensitive receptors shall be required to avoid potential air quality and nuisance impacts.

Action COS-7d: Continue to implement a Trip Reduction Ordinance in order to reduce vehicle trips generated by large employers.

Action COS-7e: Consider carbon monoxide levels at intersections when evaluating the need for intersection improvements.

Action COS-7f: Include the Fire Department in the review of proposed land uses which would handle, store or transport any potential air pollutant sources such as, but not limited to: lead; mercury; vinyl chloride; benzene; asbestos; beryllium; and all fuels.

Action COS-7g: Continue to require and enforce a dust emissions control plan for construction that includes regular watering during earthmoving operations or excavations, covering stockpiles or exposed earth and soil, spraying water or palliatives, pave or otherwise seal disturbances as soon as possible, and other measures to limit dust and reduce evaporative hydrocarbon emissions.

Action COS-7h: Work with Sonoma County and the Bay Area Air Quality Management District to implement programs aimed at improving regional air quality.

Action COS-7i: During preparation of the City's long-range capital expenditure plans, explore the feasibility of replacing and improving the efficiency of the City's existing vehicle fleet.

Action COS-8a: Continue to participate in regional climate action planning efforts led by the Regional Climate Protection Authority (RCPA) towards development and implementation of the Climate Action Plan 2020.

Action COS-8b: Review new development, significant remodels, and infrastructure projects for consistency with the RCPA Climate Action Plan.

Action COS-8c: Periodically review and update the City's greenhouse gas reduction goals for municipal operations, and establish aggressive goals that demonstrate the City's firm and ongoing commitment to climate action planning.

Action COS-8d: Continue to provide information and resources to the public and businesses regarding steps the City is taking to address the issue of climate change, and provide the public and businesses with information that will assist in private efforts to reduce GHG emissions and assist the City in meeting established greenhouse gas reduction targets.

Action COS-8e: Consider adopting GHG reduction goals that meet or exceed the RCPA Climate Action Plan goals.

Action COS-9a: Revise the Municipal Code to adopt the most current version of the Title 24 CALGreen Tier 1 standards for energy efficiency in new construction and significant remodels.

Action COS-9b: Explore the feasibility of providing incentives for projects that implement CALGreen Tier 2 standards into new construction and significant remodels.

Action COS-9c: Encourage retrofitting of energy-saving features in existing dwellings as a part of the City's Housing Rehabilitation Program by providing information, technical assistance, and other incentives.

Action COS-9d: Continue to implement the requirements of the Mandatory Solar Photovoltaic Requirements Ordinance, as detailed in the Municipal Code.

Action COS-9e: Provide educational materials and resources to the public and local businesses that emphasize the benefits of energy efficiency construction measures and how such measures can offset increased construction costs and building operational costs.

Action COS-9f: Connect residents and businesses with programs that provide free or low-cost energy efficiency audits and retrofits to existing buildings.

Impact 3.3-2: General Plan implementation would not cause health risks associated with toxic air contaminants (Less than Significant)

Controlling TACs became a national priority with the passage of the Clean Air Act Amendments (CAAA) of 1990, whereby Congress mandated that the U.S. Environmental Protection Agency (EPA) regulate 188 air toxics, also known as hazardous air pollutants. The EPA has assessed this expansive list in their latest rule on the Control of Hazardous Air Pollutants from Mobile Sources (Federal Register, Vol. 72, No. 37, page 8,430, February 26, 2007) and identified a group of 93 compounds emitted from mobile sources. In addition, EPA identified seven compounds with significant contributions from mobile sources that are among the national and regional-scale cancer risk drivers from their 1999 National Air Toxics Assessment. These are acrolein, benzene, 1,3-butidiene, diesel particulate matter plus diesel exhaust organic gases (diesel PM), formaldehyde, naphthalene, and polycyclic organic matter.

The 2007 EPA rule requires controls that will dramatically decrease Mobile Source Air Toxics (MSAT) emissions through cleaner fuels and cleaner engines. According to an FHWA analysis using EPA's MOBILE6.2 model, even if vehicle activity (VMT) increases by 145 percent, a combined reduction of 72 percent in the total annual emission rate for the priority MSAT is projected from 1999 to 2050. California maintains stricter standards for clean fuels and emissions compared to the national standards, therefore it is expected that MSAT trends in California will decrease consistent with or more than the U.S. EPA's national projections.

Currently, the ARB monitors toxics throughout California from 15 monitoring sites; however, there are no toxic air monitoring sites located in the City of Sebastopol. The closest toxic air monitoring site to Sebastopol is in Santa Rosa. As air toxics research continues, new tools and techniques will be developed for assessing health outcomes as a result of lifetime air toxics exposure.

Health risks associated with TACs are most pronounced in the areas adjacent to the freeway segments (i.e. U.S. 101 and S.R. 92). Under the Community Air Risk Evaluation (CARE) program, the BAAQMD has designated certain areas as "Impacted Communities" if the following occur: the areas (1) are close to or within areas of high TAC emissions, (2) have sensitive populations, defined as youth and seniors, with significant TAC exposures, and (3) have significant poverty.

The City of Sebastopol is not mapped by the BAAQMD as an Impacted Community under the CARE program.

Regardless of the existing health risks associated with TACs, the BAAQMD CEQA Guidelines provide recommendations for all communities to ensure reduced health risks associated with TACs. The General Plan includes policies that are intended to minimize exposure of TACs to sensitive receptors (listed below). These policies and actions are consistent with the BAAQMD recommendations that are intended to reduce health risks associated with TACs. Implementation of the General Plan, including the policies and actions that are intended to mitigate TACs impacts, would ensure that this impact is reduced to a **less than significant** level.

2016 General Plan Policies and Actions that Mitigate Potential Impacts

Policies

Policy COS 7-2: *Minimize exposure of sensitive receptors to concentrations of air pollutant emissions and toxic air contaminants.*

Policy COS 7-7: *Continue to require all construction projects and ground disturbing activities to implement BAAQMD dust control and abatement measures.*

Policy COS 7-8: *Dust-generating activities, such as street sweeping and the use of leaf blowers should be avoided during periods of moderate to high wind, and should be conducted in such a manner as to reduce the generation of dust to the greatest extent feasible.*

Actions

Action COS-7a: Review all new industrial and commercial development projects for potential air quality impacts to residences and other sensitive receptors. Staff shall ensure that mitigation measures and best management practices are implemented to reduce significant emissions of criteria pollutants to the greatest extent feasible.

Action COS-7b: Refer development, infrastructure, and planning projects to the Bay Area Air Quality Management District (BAAQMD) for review. Require project applicants to prepare air quality analyses to address BAAQMD and General Plan requirements, which include analysis and identification of:

- *Air pollutant emissions associated with the project during construction, project operation, and cumulative conditions.*
- *Potential exposure of sensitive receptors to toxic air contaminants.*
- *Significant air quality impacts associated with the project for construction, project operation, and cumulative conditions.*
- *Mitigation measures to reduce significant impacts to less than significant or the maximum extent feasible where impacts cannot be mitigated to less than significant.*

Action COS-7c: Adequate buffers between new industrial uses and sensitive receptors shall be required to avoid potential air quality and nuisance impacts.

Action COS-7g: Continue to require and enforce a dust emissions control plan for construction that includes regular watering during earthmoving operations or excavations, covering stockpiles or exposed earth and soil, spraying water or palliatives, pave or otherwise seal disturbances as soon as possible, and other measures to limit dust and reduce evaporative hydrocarbon emissions.

Impact 3.3-3: General Plan implementation would not create objectionable odors (Less than Significant)

Objectionable odors can be generated from certain types of commercial and/or industrial land uses. Common sources of odors include wastewater treatment plants, landfills, composting facilities, refineries, and chemical plants. In general, residential land uses are not associated with odor generation, but they do serve as sensitive receptors. Odors rarely have direct health impacts, but they can be very unpleasant and can lead to anger and concern over possible health effects among the public. Each year the BAAQMD receives thousands of citizen complaints about objectionable odors.

The BAAQMD CEQA Guidelines recommendation for assessing plan level odor impacts is to "identify the location of existing and planned odor sources in the plan area and policies to reduce potential odor impacts in the plan area." Common odor sources in the Planning Area may include: skunks, livestock and their waste, decomposing dead animals along roadways, stagnant water, etc. Wastewater from Sebastopol travels to Santa Rosa for treatment so wastewater odor issues are not expected. There are not any industrial or commercial users in the Planning Area that are expected to cause nuisance odors, although to some people certain foods/restaurants can cause nuisance odors. Lastly, fresh asphalt can be a temporary odor nuisance for people. Dust emissions can contribute to increased ambient concentrations of PM_{10}, and can also contribute to reduced visibility and soiling of exposed surfaces. There are no other existing or planned sources of odors within Sebastopol.

Implementation of the General Plan would have a **less than significant** impact relative to this topic.

Impact 3.3-4: General Plan implementation would not conflict with regional plans (Less than Significant)

The *Transportation 2035 Plan* (MTC 2009) is the most recently adopted Regional Transportation Plan prepared by the Metropolitan Transportation Commission (MTC) for the San Francisco Bay Area region. One of the visions for *Transportation 2035* is to support a prosperous and globally competitive Bay Area economy, provide for a healthy and safe environment, and promote equitable mobility opportunities for all residents. Among the cornerstones of the plan are a joint regional planning initiative known as FOCUS, which provides incentives for cities and counties to promote future growth near transit in already urbanized portions of the Bay Area. The plan also launches a Transportation Climate Action Campaign to reduce transportation-related greenhouse gas emissions. The *Transportation 2035 Plan* is a component of a regional effort between MTC and the BAAQMD to reduce mobile source air emissions throughout the greater Bay Area.

The *Transportation Air Quality Conformity Analysis for the Transportation 2035 Plan* (MTC 2009) was prepared using population forecasts for each local jurisdiction as inputs into the regional travel demand model.

As described in Section 2.0, buildout of the General Plan could yield up to 750 new residential units, 341,159 square feet of new commercial space, 59,959 square feet of new industrial space, and 137,375 square feet of new office space within the City Limits. This new growth would increase the City's population by approximately 1,658 residents.[1] Additionally, cumulative buildout of the General Plan within the City Limits and the SOI/UGB could yield up to 1,185 new residential units, 341,159 square feet of new commercial space, 684,889 square feet of new industrial space, and 137,375 square feet of new office space within the City Limits and the Sphere of Influence. This reflects the maximum level of additional new development (beyond the General Plan Buildout Scenario) that may occur within the existing City Limits and the SOI/UGB under General Plan buildout conditions, without taking into account development constraints identified in the proposed General Plan. This new cumulative growth would increase the City's population by approximately 2,619 residents.[2]

The new population growth that would occur under the Sebastopol General Plan Update would not exceed the growth anticipated by the MTC in the *Transportation 2035 Plan*. The General Plan, including its anticipated population growth, does not conflict with the latest adopted and conforming Regional Transportation Plan, and adoption of the General Plan would not conflict with the Regional Transportation Plan or impede efforts to reduce air quality emissions at the regional level. This is a **less than significant** impact.

[1] Based on the 2015 California Department of Finance estimate of 2.21 persons per household in Sebastopol.

[2] Based on the 2013 California Department of Finance estimate of 2.21 persons per household in Sebastopol.

This section describes biological resources in the Planning Area from both a qualitative and quantitative perspective. This section provides a background discussion of the geomorphic provinces, bioregions, natural and agricultural communities, regionally important habitat and wildlife, watersheds, and special status species found in the vicinity of Sebastopol. This section is organized with an existing setting, regulatory setting, and impact analysis.

KEY TERMS

The following key terms are used throughout this section to describe biological resources and the framework that regulates them:

Hydric Soils. One of the three wetland identification parameters, according to the federal definition of a wetland, hydric soils have characteristics that indicate they were developed in conditions where soil oxygen is limited by the presence of saturated soil for long periods during the growing season. There are approximately 2,000 named soils in the United States that may occur in wetlands.

Hydrophytic Vegetation. Plant types that typically occur in wetland areas. Nearly 5,000 plant types in the United States may occur in wetlands. Plants are listed in regional publications of the U.S. Fish and Wildlife Service (USFWS) and include such species as cattails, bulrushes, cordgrass, sphagnum moss, bald cypress, willows, mangroves, sedges, rushes, arrowheads, and water plantains.

Sensitive Natural Community. A sensitive natural community is a biological community that is regionally rare, provides important habitat opportunities for wildlife, are structurally complex, or are in other ways of special concern to local, state, or federal agencies. CEQA identifies the elimination or substantial degradation of such communities as a significant impact. The California Department of Fish and Game (CDFG) tracks sensitive natural communities in the California Natural Diversity Database (CNDDB).

Special-Status Species. Special-status species are those plants and animals that, because of their recognized rarity or vulnerability to various causes of habitat loss or population decline, are recognized by federal, state, or other agencies. Some of these species receive specific protection that is defined by federal or state endangered species legislation. Others have been designated as "sensitive" on the basis of adopted policies and expertise of state resource agencies or organizations with acknowledged expertise, or policies adopted by local governmental agencies such as counties, cities, and special districts to meet local conservation objectives. These species are referred to collectively as "special status species" in this report, following a convention that has developed in practice but has no official sanction. For the purposes of this assessment, the term “special status” includes those species that are:

- Federally listed or proposed for listing under the Federal Endangered Species Act (50 CFR 17.11-17.12);
- Candidates for listing under the Federal Endangered Species Act (61 FR 7596-7613);

- State listed or proposed for listing under the California Endangered Species Act (14 CCR 670.5);
- Species listed by the U.S. Fish and Wildlife Service (USFWS) or the CDFG as a species of concern (USFWS), rare (CDFG), or of special concern (CDFG);
- Fully protected animals, as defined by the State of California (California Fish and Game Code Section 3511, 4700, and 5050);
- Species that meet the definition of threatened, endangered, or rare under CEQA (CEQA Guidelines Section 15380);
- Plants listed as rare or endangered under the California Native Plant Protection Act (California Fish and Game Code Section 1900 et seq.); and
- Plants listed by the California Native Plant Society (CNPS) as rare, threatened, or endangered (List 1A and List 2 status plants in Skinner and Pavlik 1994).

Waters of the U.S. The federal government defines waters of the U.S. as "lakes, rivers, streams, intermittent drainages, mudflats, sandflats, wetlands, sloughs, and wet meadows" [33 C.F.R. §328.3(a)]. Waters of the U.S. exhibit a defined bed and bank and ordinary high water mark (OHWM). The OHWM is defined by the USACE as “that line on shore established by the fluctuations of water and indicated by physical character of the soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas” [33 C.F.R. §328.3(e)].

Wetlands. Wetlands are ecologically complex habitats that support a variety of both plant and animal life. The federal government defines wetlands as “those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions” [33 C.F.R. §328.3(b)]. Wetlands require wetland hydrology, hydric soils, and hydrophytic vegetation. Examples of wetlands include freshwater marsh, seasonal wetlands, and vernal pool complexes that have a hydrologic link to waters of the U.S.

3.4.1 ENVIRONMENTAL SETTING

The City of Sebastopol is located in Sonoma County, California approximately 15 miles east of the Pacific Ocean, and 52 miles north of the San Francisco Bay. The climate is mild with average high temperatures ranging from 58-83 degrees Fahrenheit (F), and average lows ranging from 38-52. The average annual precipitation is 25 inches, most of which comes in the form of winter rain. Summer coastal fog often reaches Sebastopol through the coastal valleys to the west.

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GEOMORPHIC PROVINCES

California's geomorphic provinces are naturally defined geologic regions that display a distinct landscape or landform. Earth scientists recognize eleven provinces in California. Each region displays unique, defining features based on geology, faults, topographic relief and climate. These geomorphic provinces are remarkably diverse. They provide spectacular vistas and unique opportunities to learn about earth's geologic processes and history. (California Department of Conservation, 2002). The City of Sebastopol is located in the Coast Range geomorphic province of California.

Coast Ranges: The Coast Ranges are northwest-trending mountain ranges (2,000 to 4,000, occasionally 6,000 feet elevation above sea level), and valleys. The ranges and valleys trend northwest, subparallel to the San Andreas Fault. Strata dip beneath alluvium of the Great Valley. To the west is the Pacific Ocean. The coastline is uplifted, terraced and wave-cut. The Coast Ranges are composed of thick Mesozoic and Cenozoic sedimentary strata. The northern and southern ranges are separated by a depression containing the San Francisco Bay. The northern Coast Ranges are dominated by irregular, knobby, landslide-topography of the Franciscan Complex. The eastern border is characterized by strike-ridges and valleys in Upper Mesozoic strata. In several areas, Franciscan rocks are overlain by volcanic cones and flows of the Quien Sabe, Sonoma and Clear Lake volcanic fields. The Coast Ranges are subparallel to the active San Andreas Fault. The San Andreas is more than 600 miles long, extending from Pt. Arena to the Gulf of California. West of the San Andreas is the Salinian Block, a granitic core extending from the southern extremity of the Coast Ranges to the north of the Farallon Islands. (California Department of Conservation, 2002).

BIOREGIONS

The City of Sebastopol is located within the Bay Area/Delta bioregion. A brief description of the Bay Area/Delta bioregion is presented below.

Bay Area/Delta Bioregion: The Bay Area/Delta Bioregion extends from the Pacific Ocean to the Sacramento Valley and San Joaquin Valley bioregions to the northeast and southeast, and a short stretch of the eastern boundary joins the Sierra Bioregion at Amador and Calaveras counties. The bioregion is bounded by the Klamath/North Coast on the north and the Central Coast Bioregion to the south. The Bay Area/Delta Bioregion is one of the most populous areas of the state, encompassing the San Francisco Bay Area and the Sacramento-San Joaquin River Delta. The water that flows through the Delta supplies two-thirds of California's drinking water, irrigating farmland, and sustaining fish and wildlife and their habitat. The bioregion fans out from San Francisco Bay in a jagged semi-circle that takes in all or part of 12 counties: Alameda, Contra Costa, Marin, Napa, San Francisco, San Joaquin, San Mateo, Santa Clara, Solano, Sonoma, and parts of Sacramento, and Yolo. The habitats and vegetation of the Bay Area/Delta Bioregion are as varied as the geography.

CALIFORNIA WILDLIFE HABITAT RELATIONSHIP SYSTEM

The California Wildlife Habitat Relationship (CWHR) habitat classification scheme has been developed to support the CWHR System, a wildlife information system and predictive model for California's regularly-occurring birds, mammals, reptiles and amphibians. When first published in

1988, the classification scheme had 53 habitats. At present, there are 59 wildlife habitats in the CWHR System: 27 tree, 12 shrub, 6 herbaceous, 4 aquatic, 8 agricultural, 1 developed, and 1 non-vegetated.

According to the California Wildlife Habitat Relationship System there are ten cover types (wildlife habitat classifications) in regional vicinity of the Planning Area out of 59 found in the State. These include: Agriculture, Annual Grassland, Eucalyptus, Fresh Emergent Wetland, Montane Hardwood, Montane Riparian, Urban, Valley Foothill Riparian, Water, and Wet Meadow. The majority of the land within the city limits is Urban, with minimal Agriculture, Annual Grassland, Eucalyptus, and Wet Meadow in a few locations along the city limits. Figure 3.4-1 illustrates the location of each cover type (wildlife habitat classification) within Sebastopol and in the regional vicinity. A brief description of each cover type follows.

Developed Cover Types

Agricultural land may be defined broadly as land used primarily for production of food and fiber. This habitat can generally be broken into the following categories: cropland, dryland grain crops, irrigated grain crops, irrigated hayfield, irrigated row and field crops, rice, orchard - vineyard, deciduous orchard, evergreen orchard, and vineyard. On satellite imagery, the chief indications of agricultural activity are distinctive geometric field and road patterns on the landscape and the traces produced by livestock or mechanized equipment. However, pasture and other lands where such equipment is used infrequently may not show as well-defined shapes as other areas. The number of building complexes is smaller and the density of the road and highway network is much lower in Agricultural land than in Urban land.

Urban habitats are not limited to any particular physical setting. Three urban categories relevant to wildlife are distinguished: downtown, urban residential, and suburbia. The heavily-developed downtown is usually at the center, followed by concentric zones of urban residential and suburbs. There is a progression outward of decreasing development and increasing vegetative cover. Species richness and diversity is extremely low in the inner cover. The structure of urban vegetation varies, with five types of vegetative structure defined: tree grove, street strip, shade tree/lawn, lawn, and shrub cover. A distinguishing feature of the urban wildlife habitat is the mixture of native and exotic species.

Herbaceous Cover Types

Annual Grassland habitat occurs mostly on flat plains to gently rolling foothills. Climatic conditions are typically Mediterranean, with cool, wet winters and dry, hot summers. The length of the frost-free season averages 250 to 300 days. Annual precipitation is highest in northern California.

Fresh emergent wetland habitats occur on virtually all exposures and slopes, provided a basin or depression is saturated or at least periodically flooded. They are most common on level to gently rolling topography. They are found in various depressions or at the edge of rivers or lakes. Soils are predominantly silt and clay, although coarser sediments and organic material may be intermixed. In some areas organic soils (peat) may constitute the primary growth medium. Climatic conditions are highly variable and range from the extreme summer heat to winter temperatures well below freezing.

Wet meadows occur where water is at or near the surface most of the growing season, following spring runoff. Hydrologically, they occupy lotic, sunken concave, and hanging sites. Lotic sites are those with main input flow (other than precipitation) from upstream sources; at least early in the growing season, water flows across them at depths of 4-8 inches. Downstream runoff is the principal output flow. Lotic sites are topographic basins but have a slight slope, which permits drainage of surface water. Percolation is nil due to the saturated or slowly permeable nature of underlying materials. Sunken concave sites also receive water input from upstream sources, but evapotranspiration is the main output flow. Percolation is slowed by heavy-textured soils and/or shallow bedrock; however, in contrast to lotic and hanging sites, soil of sunken concave sites may dry to considerable depth by fall. Hanging sites are watered by hydrostatic flows as springs or seeps. They frequently occur on rather steep slopes, and downstream runoff is the main output flow. Surface flows, although constant, are usually no more than 0.4 inches deep.

Hardwood Woodland Cover Types

Valley-foothill riparian habitats are found in valleys bordered by sloping alluvial fans, slightly dissected terraces, lower foothills, and coastal plains. They are generally associated with low velocity flows, flood plains, and gentle topography. Valleys provide deep alluvial soils and a high water table. The substrate is coarse, gravelly, or rocky soils more or less permanently moist, but probably well aerated. Frost and short periods of freezing occur in winter (200 to 350 frost-free days). This habitat is characterized by hot, dry summers and mild and wet winters. Temperatures range from 75 to 102 F in the summer to 29 to 44 F in the winter. Average precipitation ranges from 6-30 inches, with little or no snow. The growing season is 7 to 11 months.

Hardwood Forest

Montane hardwood habitat is found on a wide range of slopes, especially those that are moderate to steep. Soils are for the most part rocky, alluvial, coarse textured, poorly developed, and well drained. Soil depth ranges from shallow to deep. Summer temperatures vary between 68 and 77 F and winter vary from 37 to 45 F. Frost-free days range from 160 to 230. Annual precipitation varies from 110 inches in the northern Coast Range to 36 inches in the mountains of southern California.

Montane Riparian areas are found associated with montane lakes, ponds, seeps, bogs and meadows as well as rivers, streams and springs. Water may be permanent or ephemeral. The growing season extends from spring until late fall, becoming shorter at higher elevations. Most tree species flower in early spring before leafing out.

Other Habitats

Eucalyptus habitats have been extensively planted throughout the state since their introduction in 1856. They are found in highly variable site characteristics, but generally on relatively flat or gently rolling terrain, occasionally in the foothills. Climatic conditions are typically Mediterranean, characterized by hot, dry summers and cool, mild winters. Precipitation ranges from approximately 12 to 24 inches. Temperature regimes range from a 43 F to 73 F.

Aquatic Habitats

Water is a general classification that typically includes riverine and lacustrine, both of which are described below:

Riverine habitats can occur in association with many terrestrial habitats. Riverine habitats are found adjacent to many rivers and streams. Riverine habitats are also found contiguous to lacustrine and fresh emergent wetland habitats. This habitat requires intermittent or continually running water generally originating at some elevated source, such as a spring or lake, and flows downward at a rate relative to slope or gradient and the volume of surface runoff or discharge. Velocity generally declines at progressively lower altitudes, and the volume of water increases until the enlarged stream finally becomes sluggish. Over this transition from a rapid, surging stream to a slow, sluggish river, water temperature and turbidity will tend to increase, dissolved oxygen will decrease, and the bottom will change from rocky to muddy.

Lacustrine habitats are inland depressions or dammed riverine channels containing standing water. These habitats may occur in association with any terrestrial habitats, Riverine, or Fresh Emergent Wetlands. They may vary from small ponds less than one acre to large areas covering several square miles. Depth can vary from a few inches to hundreds of feet. Typical lacustrine habitats include permanently flooded lakes and reservoirs, and intermittent lakes and ponds (including vernal pools) so shallow that rooted plants can grow over the bottom. Most permanent lacustrine systems support fish life; intermittent types usually do not.

SPECIAL-STATUS SPECIES

The following discussion is based on a background search of special-status species that are documented in the California Natural Diversity Database (CNDDB), the California Native Plant Survey (CNPS) Inventory of Rare and Endangered Plants, and the USFWS endangered and threatened species lists. The background search was regional in scope and focused on the documented occurrences within 10 miles of Sebastopol.

Special Status Plants

The search revealed documented occurrences of the 57 special status plant species (including one non-vascular plant) within 10 miles of the City of Sebastopol. Table 3.4-1 provides a list of special-status plant species that are documented within 10 miles of the City of Sebastopol, their habitat, and current protective status. Figure 3.4-2 illustrates the special status species located within one mile of the City of Sebastopol. Figure 3.4-3 illustrates the special status species located within 10 miles of the City of Sebastopol.

TABLE 3.4-1: SPECIAL STATUS PLANTS PRESENT OR POTENTIALLY PRESENT IN SEBASTOPOL

SPECIES	STATUS	HABITAT
PLANTS		
Alopecurus aequalis var. sonomensis Sonoma alopecurus	FE;--;1B	Freshwater marshes and swamps, riparian scrub. Wet areas, marshes, and riparian banks with other wetland species. 5-360M.

TABLE 3.4-1: SPECIAL STATUS PLANTS PRESENT OR POTENTIALLY PRESENT IN SEBASTOPOL

SPECIES	STATUS	HABITAT
Amorpha californica var. napensis Napa false indigo	--;--;1B	Broadleaved upland forest, chaparral, cismontane woodland. Openings in forest or woodland or in chaparral. 150-2000M
Amsinckia lunaris bent-flowered fiddleneck	--;--;1B	Cismontane woodland, valley and foothill grassland. 50-500M.
Arctostaphylos bakeri ssp. bakeri Baker's manzanita	--;CR;1B	Broad-leafed upland forest, chaparral. Entire species state-listed rare. Often on serpentine. This is the state-listed rare taxon, also known as A. bakeri in Title 14. 75-230M.
Arctostaphylos canescens ssp. *sonomensis* Sonoma canescent manzanita	--;--;1B	Chaparral, lower montane coniferous forest. Sometimes found on serpentine. 180-1700M.
Arctostaphylos densiflora Vine Hill manzanita	--;CE;1B	Chaparral. Acid marine sand. 50-100M.
Arctostaphylos stanfordiana ssp. decumbens Rincon Ridge manzanita	--;--;1B	Chaparral. Highly restricted endemic to red rhyolites in Sonoma County. 75-310M.
Balsamorhiza macrolepis var. macrolepis Big-scale balsamroot	--; --;1B	Chaparral, cismontane woodland, and valley and foothill grassland (Open, grassy slopes, and valleys, sometimes on serpentine soils)
Blennosperma bakeri Sonoma sunshine	FE;CE;1B	Vernal pools, valley and foothill grassland. Vernal pools and swales. 10-100M.
Brodiaea californica var. leptandra narrow-anthered California brodiaea	--;--;1B	Broadleaved upland forest, chaparral, lower montane coniferous forest. 110-915M.
Calamagrostis crassiglumis Thurber's reed grass	--;--;2B	Coastal scrub, freshwater marsh. Usually in marshy swales surrounded by grassland or coastal scrub. 10-45 M.
Campanula californica swamp harebell	--;--;1B	Bogs and fens, closed-cone coniferous forest, coastal prairie, meadows, freshwater marsh, N. Coast coniferous forest. Bogs and marshes in a variety of habitats; uncommon where it occurs. 1-405M.
Carex comosa Bristly sedge	--;--;2B	Marshes and swamps. Lake margins, wet places; site below sea level is on a delta island. -5-1005M.

TABLE 3.4-1: SPECIAL STATUS PLANTS PRESENT OR POTENTIALLY PRESENT IN SEBASTOPOL

SPECIES	STATUS	HABITAT
Castilleja uliginosa Pitkin Marsh paintbrush	--;CE;1A	Freshwater marsh. Last known remaining plant died in 1987; was known from overgrown freshwater marsh. 60M.
Ceanothus confusus Rincon Ridge ceanothus	--;--;1B	Closed-cone coniferous forest, chaparral, cismontane woodland. Known from volcanic or serpentine soils, dry shrubby slopes. 75-1065M.
Ceanothus divergens Calistoga ceanothus	--;--;1B	Chaparral, cismontane woodland. Rocky, serpentine or volcanic sites. 165-950M.
Ceanothus foliosus var. vineatus Vine Hill ceanothus	--;--;1B	Chaparral. Sandy, acidic soil in chaparral. 45-85M.
Ceanothus purpureus holly-leaved ceanothus	--;--;1B	Chaparral. Rocky, volcanic slopes. 120-640M.
Ceanothus sonomensis Sonoma ceanothus	--;--;1B	Chaparral. Sandy, serpentine or volcanic soils. 210-800M.
Centromadia parryi ssp. parryi pappose tarplant	--;--;1B	Coastal prairie, meadows and seeps, coastal salt marsh, valley and foothill grassland. Vernally mesic, often alkaline sites. 2-420M.
Chorizanthe valida Sonoma spineflower	FE;CE;1B	Coastal prairie. Sandy soil. 10-50M.
Clarkia imbricate Vine Hill clarkia	FE;CE;1B	Chaparral, valley and foothill grassland. Acidic, sandy soil. 50-75 M.
Cordylanthus tenuis ssp. capillaris Pennell's bird's-beak	FE;CR;1B	Closed-cone coniferous forest, chaparral. In open or disturbed areas on serpentine within forest or chaparral. 45-305 M.
Cuscuta obtusiflora var. glandulosa Peruvian dodder	--;--;2B	Marshes and swamps (freshwater). Freshwater marsh. 15-280M.
Delphinium bakeri Baker's larkspur	FE;CE;1B	Coastal scrub, grasslands. Only occurs on NW-facing slope, on decomposed shale. Historically known form grassy areas along fence lines too. 90-205M.
Delphinium luteum golden larkspur	FE;CR;1B	Chaparral, coastal prairie, coastal scrub. North-facing rocky slopes. 0-100M.
Dirca occidentalis	--;--;1B	Broad-leafed upland forest, chaparral, closed-cone conifer, cismontane woodland, North Coast conifer forest, riparian

TABLE 3.4-1: SPECIAL STATUS PLANTS PRESENT OR POTENTIALLY PRESENT IN SEBASTOPOL

SPECIES	STATUS	HABITAT
western leatherwood		forest, riparian woodland, on brushy slopes, mesic sites; mostly in mixed evergreen and foothill woodland communities. 30-550M.
Downingia pusilla dwarf downingia	--;--;2	Valley and foothills grasslands (mesic sites), vernal pools. Erna Lake and pool margins with a variety of associates. In several types of vernal pools. 1-485M.
Erigeron greenei Greene's narrow-leaved daisy	--;--;1B	Chaparral. Serpentine and volcanic substrates, generally in shrubby vegetation. 75-1060M.
Erigeron serpentinus serpentine daisy	--;--;1B	Chaparral. Serpentine seeps. 60-670M.
Fritillaria liliacea fragrant fritillary	--;--;1B	Coastal scrub, valley and foothill grassland, coastal prairie. Often on serpentine; various soils reported though usually clay, in grassland. 3-410M.
Gilia capitata ssp. tomentosa woolly-headed gilia	--;--;1B	Coastal bluff scrub. Rocky outcrops on the coast. 15-155M.
Hemizonia congesta ssp. congesta white seaside tarplant	--;--;1B	Coastal scrub, valley and foothill grassland. Grassy valleys and hills, often in fallow fields. 25-200M.
Horkelia tenuiloba thin-lobed horkelia	--;--;1B	Coastal scrub, chaparral. Sandy soils; mesic openings. 45-500M.
Lasthenia burkei Burke's goldfields	FE;CE;1B	Vernal pools, meadows and seeps. Most often in vernal pools and swales. 15-580M.
Lasthenia californica ssp. bakeri Baker's goldfields	--;--;1B	Closed-cone coniferous forest, coastal scrub. Openings. 60-520M.
Lasthenia californica ssp. Macrantha perennial goldfields	--;--;1B	Coastal bluff scrub, coastal dunes, coastal scrub. 5-520 M.
Lasthenia conjugens Contra Costa goldfields	FE;--;1B	Valley and foothill grassland, vernal pools, cismontane woodland. Extirpated from most of its range; Extremely endangered. Vernal pools, swales, low depressions, in open grassy areas. 1-445M.
Legenere limosa legenere	--; --;1B	Vernal pools. Many historical occurrences are extirpated. In beds of vernal pools. 1-880M.

TABLE 3.4-1: SPECIAL STATUS PLANTS PRESENT OR POTENTIALLY PRESENT IN SEBASTOPOL

SPECIES	STATUS	HABITAT
Leptosiphon jepsonii Jepson's leptosiphon	--;--;1B	Chaparral, cismontane woodland. Open to partially shaded grassy slopes. On volcanic or the periphery of serpentine substrates. 100-500M.
Lessingia arachnoidea Crystal Springs lessingia	--;--;1B	Coastal sage scrub, valley and foothill grassland, cismontane woodland. Grassy slopes on serpentine; sometimes on roadsides. 60-200M.
Limnanthes vinculans Sebastopol meadowfoam	FE;CE;1B	Mesic meadows, vernal pools, valley and foothill grassland. Swales, wet meadows and marshy areas in valley oak savanna; on poorly drained soils of clay and sandy loam. 15-115M.
Microseris paludosa marsh microseris	--;--;2	Closed-cone coniferous forest cismontane woodland, coastal scrub, valley and foothill grassland. 5-300M.
Navarretia leucocephala ssp. *bakeri* Baker's navarretia	--;--;1B	Cismontane woodland, meadows and seeps, vernal pools, valley and foothill grassland, lower montane coniferous forest. Vernal pools and swales, adobe or alkaline soils. 5-950M.
Navarretia leucocephala ssp. plieantha many-flowered navarretia	FE;CE;1B	Vernal pools, volcanic ash flow vernal pools. 30-950 M.
Pleuropogon hooverianus North Coast semaphore grass	--;CT;1B	Broadleaved upland forest, meadows and seeps, north-coast coniferous forest. Wet grassy, usually shady areas, sometimes freshwater marsh; associated with forest environments. 10-1150M.
Potentilla uliginosa Cunningham Marsh cinquefoil	--;--;1A	Presumed extinct. Freshwater marshes and swamps. Found in oligotrophic wetlands.30-40 M.
Rhynchospora alba white beaked-rush	--;--;2B	Bogs and fens, meadows and seeps, marshes and swamps. Freshwater marshes and sphagnum bogs. 60-2040M.
Rhynchospora californica California beaked-rush	--;--;1B	Bogs and fens, marshes and swamps, lower montane coniferous forest, meadows and seeps. Freshwater seeps and open marshy areas. 45-1000M.
Rhynchospora capitellata brownish beaked-rush	--;--;2	Lower montane coniferous forest, meadows and seeps, marshes and swaps, upper montane coniferous forest. Mesic sites. 455-2000M.
Rhynchospora globularis var. globularis round-headed beaked-rush	--;--;2	Marshes and swamps, freshwater marsh. 45-60M.
Sidalcea calycosa ssp. rhizomata Point Reyes checkerbloom	--;--;1B	Marshes and swamps. Freshwater marshes near the coast. 5-75(245)M.

TABLE 3.4-1: SPECIAL STATUS PLANTS PRESENT OR POTENTIALLY PRESENT IN SEBASTOPOL

SPECIES	STATUS	HABITAT
Triquetrella californica coastal triquetrella	--;--;1B	Coastal bluff scrub, coastal scrub, valley and foothill grasslands. Grows within 30 M from the coast in coastal scrub, grasslands and in open gravels on roadsides, hillsides, and rocky slopes.
Trifolium amoenum showy rancheria clover	FE;--;1B	Valley and foothill grassland, coastal bluff scrub. Sometimes on serpentine soil, open sunny sites, swales. Most recently sited on roadside and eroding cliff face. 5-560M.
Trifolium hydrophilum saline clover	--;--;1B	Marshes and swamps, valley and foothill grassland, vernal pools. Mesic, alkaline sites. 0-300M.
Usnea longissima Methuselah's beard lichen	--;--;4B	North coast coniferous forest, broad-leafed upland forest. Grows in the "redwood zone" on a variety of trees including big leaf maple, oaks, ash, Douglas-fir, and bay. 50-1460M.
Viburnum ellipticum oval-leaved viburnum	--;--;2	Chaparral, cismontane woodland, lower montane coniferous forest. 215-1400M.

SOURCE: DFW CNDDB 2016

ABBREVIATIONS:

FE FEDERAL ENDANGERED
FT FEDERAL THREATENED
CE CALIFORNIA ENDANGERED SPECIES
CT CALIFORNIA THREATENED
CR CALIFORNIA RARE (PROTECTED BY NATIVE PLANT PROTECTION ACT)
1B CNPS - RARE, THREATENED, OR ENDANGERED
2 CNPS - RARE, THREATENED, OR ENDANGERED IN CALIFORNIA, BUT MORE COMMON ELSEWHERE
4 CNPS - PLANTS OF LIMITED DISTRIBUTION - A WATCH LIST

Special Status Animals

The search revealed documented occurrences of the 22 special status animal species within 10 miles of the City of Sebastopol. This includes: four amphibians, five birds, three fish, five invertebrates, four mammals, and one reptile. Table 3.4-2 provides a list of the special-status animal species that are documented within 10 miles of the City of Sebastopol, their habitat, and current protective status; these species are considered present or potentially present in Sebastopol. Figure 3.4-3 illustrates the location of each occurrence documented by the CNDDB.

TABLE 3.4-2: SPECIAL STATUS ANIMALS PRESENT OR POTENTIALLY PRESENT IN SEBASTOPOL

SPECIES	STATUS	HABITAT
AMPHIBIANS/REPTILES		
Ambystoma californiense California tiger salamander	FT/CT	Need underground refuges, especially ground squirrel burrows and vernal pools or other seasonal water sources for breeding.
Emys marmorata western pond turtle	--/CSC	A thoroughly aquatic turtle of ponds, marshes, rivers, streams, and irrigation ditches, usually with aquatic vegetation. Need basking sites and suitable (sandy banks or grassy open fields)

TABLE 3.4-2: SPECIAL STATUS ANIMALS PRESENT OR POTENTIALLY PRESENT IN SEBASTOPOL

SPECIES	STATUS	HABITAT
		upland habitat up to 0.5 km from water for egg-laying.
Rana aurora draytoni California red-legged frog	FT/CSC	Permanent and semi-permanent aquatic habitats, such as creeks and cold-water ponds, with emergent and submergent vegetation. May estivate in rodent burrows or cracks during dry periods.
Rana boylii foothill yellow-legged frog	FSC;CSC	Partly-shaded, shallow streams and riffles with a rocky substrate in a variety of habitats. Need at least some cobble-sized substrate for egg-laying. Need at least 15 weeks to attain metamorphosis.
BIRDS		
Agelaius tricolor tricolored blackbird	FSC;CSC	Highly colonial species, most numerous in central valley and vicinity. Largely endemic to California. Requires open water, protected nesting substrate, and foraging area with insect prey within a few km of the colony.
Athene cuniculari Burrowing owl	FSC; CSC	Open, dry annual or perennial grasslands, deserts and scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel.
Coccyzus americanus occidentalis Western yellow-billed cuckoo	FSC/FC; CE	Nesting restricted to river bottoms and other mesic habitats where humidity is high.
Elanus leucurus white-tailed kite	MBTA; CP	Rolling foothills and valley margins with scattered oaks & river bottomlands or marshes next to deciduous woodland. Open grasslands, meadows, or marshes for foraging close to isolated dense-topped trees for nesting and perching.
Pandion haliaetus osprey	MBTA; CP	Ocean shore, bays, fresh-water lakes, and larger streams. Large nests built in tree-tops within 15 miles of a good fish-producing body of water.
FISH		
Eucyclogobius newberryi tidewater goby	FE/CSC	Brackish water habitats along the California coast from Agua Hedionda Lagoon, San Diego Co. to the mouth of the Smith River. Found in shallow lagoons and lower stream reaches, they need fairly still but not stagnant water and high oxygen levels.
Hysterocarpus traski pomo Russian River tule perch	--;CSC	Low elevation streams of the Russian River system. Requires clear, flowing water with abundant cover. They also require deep (>1M) pool habitat.
Oncorhynchus mykiss irideus	FT/--	From Russian River, south to Soquel Creek and to, but not including, Pajaro River. Also San Francisco and San Pablo Bay

TABLE 3.4-2: SPECIAL STATUS ANIMALS PRESENT OR POTENTIALLY PRESENT IN SEBASTOPOL

SPECIES	STATUS	HABITAT
steelhead - central California coast DPS		basins.
INVERTEBRATES		
Andrena blennospermatis Blennosperma vernal pool andrenid bee	--;--	This bee is oligolectic on vernal pool blennosperma. Bees nest in the uplands around vernal pools.
Lavinia symmetricus navarroensis Navarro roach	--;CSC	Habitat generalists. Found in warm intermittent streams as well as cold, well-aerated streams.
Linderiella occidentalis California linderiella	--;--	Seasonal pools in unplowed grasslands with old alluvial soils underlain by hardpan or in sandstone depressions. Water in the pools has very low alkalinity, conductivity, and TDS.
Syncaris pacifica California freshwater shrimp	FE;FE	Shallow Pools away from main streamflow. Winter: undercut banks w/exposed roots. Summer: leafy branches touching water. Endemic to Marin, Napa, and Sonoma Counties. Found in low elevation, low gradient streams where riparian cover is moderate to heavy.
Speyeria zerene myrtleae Myrtle's silverspot	FE;--	Restricted to the foggy, coastal dunes/hills of the Point Reyes Peninsula; extirpated from coastal San Mateo County. Larval foodplant thought to be Viola adunca.
MAMMALS		
Arborimus pomo Sonoma tree vole	--;CSC	North coast fog belt from Oregon border to Sonoma Co. in Douglas-fir, redwood and montane hardwood-conifer forests. Feeds almost exclusively on Douglas-fir needles. Will occasionally take needles or grand-fir, hemlock or spruce.
Antrozous pallidus Pallid bat	--;CSC	Occurs in a variety of habitats from desert to coniferous forest. Most closely associated with oak, yellow pine, redwood, and giant sequoia habitats in northern California and oak woodland, grassland, and desert scrub in southern California. Relies heavily on trees for roosts.
Lasiurus cinereus hoary bat	--;CSC	Prefers open habitats or habitats with mosaics, with access to trees for cover and open areas or habitat edges for feeding. Roosts in dense foliage of medium to large trees. Feeds primarily on moths. Requires water.
Taxidea taxus American badger	--;CSC	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Need sufficient food, friable soils and open, uncultivated ground. Prey on burrowing rodents. Dig burrows.

TABLE 3.4-2: SPECIAL STATUS ANIMALS PRESENT OR POTENTIALLY PRESENT IN SEBASTOPOL

SPECIES	STATUS	HABITAT
REPTILES		
Actinemys marmorata *western pond turtle*	--;CSC	A thoroughly aquatic turtle of ponds, marshes, rivers, streams, and irrigation ditches with aquatic vegetation. Need basking sites and suitable (sandy banks or grassy open fields) upland habitat for egg-laying.

SOURCE: DFW CNDDB 2016

ABBREVIATIONS:

FE FEDERAL ENDANGERED
FT FEDERAL THREATENED
FC FEDERAL CANDIDATE
FSC FEDERAL SPECIES OF CONCERN
FD FEDERAL DELISTED
MBTA PROTECTED BY MIGRATORY BIRD TREATY ACT
CE CALIFORNIA ENDANGERED SPECIES
CT CALIFORNIA THREATENED
CP CALIFORNIA FULLY PROTECTED UNDER §3511, 4700, 5050 AND 5515 FG CODE
CSC CDFW SPECIES OF SPECIAL CONCERN

Sensitive Natural Communities

The search revealed five sensitive natural communities within 10 miles of the City of Sebastopol. This includes Coastal and Valley Freshwater Marsh, Coastal Brackish Marsh, Northern Hardpan Vernal Pool, Northern Vernal Pool, and Valley Needlegrass Grassland. Of these five sensitive natural communities, none are located within the City of Sebastopol, but three are located just east of the city limits along the Laguna de Santa Rosa. A brief description of each sensitive natural community follows. Figure 3.4-3 illustrates the location of each sensitive natural community.

Coastal and Valley Freshwater Marsh. Coastal and Valley Freshwater Marsh is found along the coast and in coastal valleys near river mouths and around the margins of lakes and springs, and they are the most extensive in the upper portion of the Sacramento-San Joaquin River Delta. This natural community is common in the river oxbows and other areas of a flood plain. This natural community is found in areas that lack significant stream/river current and are permanently flooded by fresh water (rather than brackish, alkaline, or variable). Prolonged saturation permits accumulation of deep, peaty soils. Perennial, emergent monocots up to 4-5m tall dominate this habitat. They often form completely closed canopies. (Holland, 1986).

There are no documented occurrences of Coastal and Valley Freshwater Marsh within the City of Sebastopol. This sensitive natural community is documented along the Laguna de Santa Rosa just east of the city limits. While this sensitive natural community is not documented within the city limits, it occurs throughout the region along the margins of creeks sometimes as small isolated marshes, and sometimes as a more expansive marsh. The more expansive marshes are generally well documented, while the smaller isolated marshes can be discovered in areas that have not been previously surveyed, which may include parcels within the Planning Area.

Coastal Brackish Marsh. Coastal brackish marsh is usually at the interior edges of coastal bays and estuaries or in coastal lagoons, and adjacent to salt marshes. They are most extensive around Suisun Bay at the mouth of the Sacramento-San Joaquin Delta. This natural community is dominated by perennial, emergent, herbaceous monocots to 2m tall. Cover is often complete and dense with some plants characteristic of freshwater marsh and salt marsh. Water salinity may vary considerably, and may increase at high tide or during seasons of low freshwater runoff. (Holland, 1986).

There are no documented occurrences of Coastal Brackish Marsh within the City of Sebastopol. The absence of saltwater in Sebastopol precludes this sensitive natural community from occurring in the City of Sebastopol.

Northern Hardpan Vernal Pool. Northern hardpan vernal pool is typically found on old, very acidic, Fe-Si cemented hardpan soils. The microrelief on these soils typically is hummocky, with mounds intervening between localized depressions. Winter rainfall perches on the hardpan, forming pools in the depressions and evaporation empties the pools in spring. Vegetation is a low, amphibious, herbaceous plant community that is dominated by annual herbs and grasses. Germination and growth begin with winter rains, often continuing even when inundated. Rising spring temperatures evaporate the pools, leaving concentric bands of vegetation that colorfully encircle the drying pool. (Holland, 1986).

There are no documented occurrences of Northern Hardpan Vernal Pool within the City of Sebastopol. This sensitive natural community is documented along the Laguna de Santa Rosa just east of the city limits. While this sensitive natural community is not documented within the city limits, it occurs throughout the region and can vary in size (small isolated vernal pools to large vernal pool complexes). The larger complexes are generally well documented, while the smaller isolated vernal pools can be discovered in areas that have not been previously surveyed, which may include parcels within the Planning Area.

Northern Vernal Pool. Northern vernal pool is a general classification of vernal pools that may occur on a variety of soil types and in a variety of plant communities. Northern vernal pool can occur singly or in complexes, but requires an impervious substrate that varies from hardpan or claypan to basalt or other materials that prevent percolation of water. Winter rainfall perches on the impervious substrate, forming pools in the depressions and evaporation empties the pools in spring. Vegetation varies, but is typically low, amphibious, herbaceous plant community that is dominated by annual herbs. Germination and growth begin with winter rains, often continuing even when inundated. Rising spring temperatures evaporate the pools, leaving concentric bands of vegetation that encircle the drying pool. (Holland, 1986).

There are no documented occurrences of Northern Vernal Pool within the City of Sebastopol. Similar to the Northern Hardpan Vernal Pool, the Northern Vernal Pool occurs throughout the region and can vary in size (small isolated vernal pools to large vernal pool complexes). The larger complexes are generally well documented, while the smaller isolated vernal pools can be discovered in areas that have not been previously surveyed, which may include parcels within the Planning Area.

Valley Needlegrass Grassland. Valley Needlegrass Grassland is a mid-height (to 2 feet) grassland dominated by perennial, tussock-forming purple needlegrass (*Nassella pulchra*). Native and introduced annuals occur between the perennials, often exceeding the bunchgrasses in cover. They are usually found on fine-textured (often clay) soils, moist or even waterlogged during the winter, but very dry in the summer. Often associated with Oak Woodlands on moister, better drained sites. (Holland, 1986).

There are no documented occurrences of Valley Needle Grassland within the City of Sebastopol. While Valley Needle Grassland is not documented within the CNDDB, there is annual grassland documented within the Planning Area, and it is not uncommon to find small patches of Valley Needle Grassland in areas that are documented as annual grassland. This sensitive natural community may be present in the Planning Area where the ground is relatively undisturbed and has not been surveyed on foot.

Other Special Habitat

Laguna de Santa Rosa. The Laguna de Santa Rosa is the largest freshwater wetlands complex on the northern California coast. The Laguna's fourteen-mile channel forms the largest tributary to the Russian River, draining a 254-square-mile watershed which encompasses nearly the entire Santa Rosa Plain. This includes parts of the communities of Windsor, Santa Rosa, Rohnert Park, Cotati, Forestville, and Sebastopol.

Laguna de Santa Rosa is important in maintaining water quality and flood control for the region. It provides an important overflow area for the Russian River during periods of heavy winter rain, serving as a natural holding basin which captures and slows floodwaters, easing their impact on lower Russian River communities. Additionally, Laguna de Santa Rosa provides a unique ecological system for the region. With over 30,000 acres, the Laguna provides a mosaic of creeks, open water, perennial marshes, seasonal wetlands, riparian forests, oak woodland and grassland. It is home to hundreds of species of birds, mammals, fish, amphibians, reptiles, and invertebrates. The Laguna de Santa Rosa provides habitat for a range of species, including several rare and endangered species. (Laguna de Santa Rosa Foundation, 2011).

3.4.2 REGULATORY SETTING

There are a number of regulatory agencies whose responsibility includes the oversight of the natural resources of the State and nation including the California Department of Fish and Wildlife (CDFW), the U.S. Fish and Wildlife Service (USFWS), the U.S. Army Corps of Engineers (USACE), and the National Marine Fisheries Service (NMFS). These agencies often respond to declines in the quantity of a particular habitat or plant or animal species by developing protective measures for those species or habitat type. The following is an overview of the Federal, State, and local regulations that are applicable to implementing the General Plan.

FEDERAL REGULATIONS

Federal Endangered Species Act

The Federal Endangered Species Act, passed in 1973, defines an endangered species as any species or subspecies that is in danger of extinction throughout all or a significant portion of its range. A threatened species is defined as any species or subspecies that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

Once a species is listed it is fully protected from a "take" unless a take permit is issued by the United States Fish and Wildlife Service. A take is defined as the harassing, harming, pursuing, hunting, shooting, wounding, killing, trapping, capturing, or collecting wildlife species or any attempt to engage in such conduct, including modification of its habitat (16 USC 1532, 50 CFR 17.3). Proposed endangered or threatened species are those species for which a proposed regulation, but not a final rule, has been published in the Federal Register.

Migratory Bird Treaty Act

To kill, posses, or trade a migratory bird, bird part, nest, or egg is a violation of the Federal Migratory Bird Treaty Act (FMBTA: 16 U.S.C., §703, Supp. I, 1989), unless it is in accordance with the regulations that have been set forth by the Secretary of the Interior.

Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act (16 USC Section 668) protect these birds from direct take and prohibits the take or commerce of any part of these species. The USFWS administers the act, and reviews federal agency actions that may affect these species.

Clean Water Act – Section 404

Section 404 of the CWA regulates all discharges of dredged or fill material into waters of the U.S. Discharges of fill material includes the placement of fill that is necessary for the construction of any structure, or impoundment requiring rock, sand, dirt, or other material for its construction; site-development fills for recreational, industrial, commercial, residential, and other uses; causeways or road fills; and fill for intake and outfall pipes and subaqueous utility lines [33 C.F.R. §323.2(f)].

Waters of the U.S. include lakes, rivers, streams, intermittent drainages, mudflats, sandflats, wetlands, sloughs, and wet meadows [33 C.F.R. §328.3(a)]. Wetlands are defined as "those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" [33 C.F.R. §328.3(b)]. Waters of the U.S. exhibit a defined bed and bank and ordinary high water mark (OHWM). The OHWM is defined by the USACE as "that line on shore established by the fluctuations of water and indicated by physical character of the soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas" [33 C.F.R. §328.3(e)].

The USACE is the agency responsible for administering the permit process for activities that affect waters of the U.S. Executive Order 11990 is a federal implementation policy, which is intended to result in no net loss of wetlands.

Clean Water Act – Section 401

Section 401 of the CWA (33 U.S.C. 1341) requires an applicant who is seeking a 404 permit to first obtain a water quality certification from the Regional Water Quality Control Board. To obtain the water quality certification, the Regional Water Quality Control Board must indicate that the proposed fill would be consistent with the standards set forth by the state.

Department of Transportation Act - Section 4(f)

Section 4(f) has been part of Federal law since 1966. It was enacted as Section 4(f) of the Department of Transportation (DOT) Act of 1966 and set forth in Title 49 United States Code (U.S.C.), Section 1653(f). In January 1983, as part of an overall recodification of the DOT Act, Section 4(f) was amended and codified in 49 U.S.C. Section 303. This law established policy on Lands, Wildlife and Waterfowl Refuges, and Historic Sites as follows:

> *It is the policy of the United States Government that special effort should be made to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites. The Secretary of Transportation shall cooperate and consult with the Secretaries of the Interior, Housing and Urban Development, and Agriculture, and with the States, in developing transportation plans and programs that include measures to maintain or enhance the natural beauty of lands crossed by transportation activities or facilities. The Secretary of Transportation may approve a transportation program or project (other than any project for a park road or parkway under section 204 of title 23) requiring the use of publicly owned land of a public park, recreation area, or wildlife and waterfowl refuge of national, state, or local significance, or land of a historic site of national, state, or local significance (as determined by the Federal, state, or local officials having jurisdiction over the park, area, refuge, or site) only if: a) There is no prudent and feasible alternative to using that land; and b) The program or project includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuge, or historic site resulting from the use.*

STATE REGULATIONS

Fish and Game Code §2050-2097 - California Endangered Species Act

The California Endangered Species Act (CESA) protects certain plant and animal species when they are of special ecological, educational, historical, recreational, aesthetic, economic, and scientific value to the people of the State. CESA established that it is State policy to conserve, protect, restore, and enhance endangered species and their habitats.

CESA was expanded upon the original Native Plant Protection Act and enhanced legal protection for plants. To be consistent with Federal regulations, CESA created the categories of "threatened" and "endangered" species. It converted all "rare" animals into the Act as threatened species, but

did not do so for rare plants. Thus, there are three listing categories for plants in California: rare, threatened, and endangered. Under State law, plant and animal species may be formally designated by official listing by the California Fish and Game Commission.

Fish and Game Code §1900-1913 California Native Plant Protection Act

In 1977 the State Legislature passed the Native Plant Protection Act (NPPA) in recognition of rare and endangered plants of the state. The intent of the law was to preserve, protect, and enhance endangered plants. The NPPA gave the California Fish and Game Commission the power to designate native plants as endangered or rare, and to require permits for collecting, transporting, or selling such plants. The NPPA includes provisions that prohibit the taking of plants designated as "rare" from the wild, and a salvage mandate for landowners, which requires notification of the CDFG 10 days in advance of approving a building site.

Fish and Game Code §3503, 3503.5, 3800 - Predatory Birds

Under the California Fish and Game Code, all predatory birds in the order Falconiformes or Strigiformes in California, generally called “raptors,” are protected. The law indicates that it is unlawful to take, posses, or destroy the nest or eggs of any such bird unless it is in accordance with the code. Any activity that would cause a nest to be abandoned or cause a reduction or loss in a reproductive effort is considered a take. This generally includes construction activities.

Fish and Game Code §1601-1603 – Streambed Alteration

Under the California Fish and Game Code, CDFG has jurisdiction over any proposed activities that would divert or obstruct the natural flow or change the bed, channel, or bank of any lake or stream. Private landowners or project proponents must obtain a “Streambed Alteration Agreement” from CDFG prior to any alteration of a lake bed, stream channel, or their banks. Through this agreement, the CDFG may impose conditions to limit and fully mitigate impacts on fish and wildlife resources. These agreements are usually initiated through the local CDFG warden and will specify timing and construction conditions, including any mitigation necessary to protect fish and wildlife from impacts of the work.

Public Resources Code § 21000 - California Environmental Quality Act

The California Environmental Quality Act (CEQA) identifies that a species that is not listed on the federal or state endangered species list may be considered rare or endangered if the species meets certain criteria. Under CEQA public agencies must determine if a project would adversely affect a species that is not protected by FESA or CESA. Species that are not listed under FESA or CESA, but are otherwise eligible for listing (i.e. candidate, or proposed) may be protected by the local government until the opportunity to list the species arises for the responsible agency.

Species that may be considered for review are included on a list of “Species of Special Concern,” developed by the CDFG. Additionally, the California Native Plant Society (CNPS) maintains a list of plant species native to California that have low numbers, limited distribution, or are otherwise threatened with extinction. This information is published in the Inventory of Rare and Endangered Vascular Plants of California. List 1A contains plants that are believed to be extinct. List 1B contains

plants that are rare, threatened, or endangered in California and elsewhere. List 2 contains plants that are rare, threatened, or endangered in California, but more numerous elsewhere. List 3 contains plants where additional information is needed. List 4 contains plants with a limited distribution.

Public Resources Code § 21083.4 - Oak woodlands conservation

In 2004, the California legislature enacted SB 1334, which added oak woodland conservation regulations to the Public Resources Code. This new law requires a County to determine whether a project, within its jurisdiction, may result in a conversion of oak woodlands that will have a significant effect on the environment. If a County determines that there may be a significant effect to oak woodlands, the County must require oak woodland mitigation alternatives to mitigate the significant effect of the conversion of oak woodlands. Such mitigation alternatives include: conservation through the use of conservation easements; planting and maintaining an appropriate number of replacement trees; contribution of funds to the Oak Woodlands Conservation Fund for the purpose of purchasing oak woodlands conservation easements; and/or other mitigation measures developed by the County.

California Oak Woodland Conservation Act

The California Legislature passed Assembly Bill 242, known as the California Oak Woodland Conservation Act, in 2001 as a result of widespread changes in land use patterns across the landscape that were fragmenting oak woodland character over extensive areas. The Act created the California Oak Woodland Conservation Program within the Wildlife Conservation Board. The legislation provides funding and incentives to ensure the future viability of California's oak woodland resources by maintaining large scale land holdings or smaller multiple holdings that are not divided into fragmented, nonfunctioning biological units. The Act acknowledged that the conservation of oak woodlands enhances the natural scenic beauty for residents and visitors, increases real property values, promotes ecological balance, provides habitat for over 300 wildlife species, moderates temperature extremes, reduces soil erosion, sustains water quality, and aids with nutrient cycling, all of which affect and improve the health, safety, and general welfare of the residents of the state.

California Wetlands Conservation Policy

In August 1993, the Governor announced the "California Wetlands Conservation Policy." The goals of the policy are to establish a framework and strategy that will:

- Ensure no overall net loss and to achieve a long-term net gain in the quantity, quality, and permanence of wetland acreage and values in California in a manner that fosters creativity, stewardship, and respect for private property.
- Reduce procedural complexity in the administration of State and federal wetland conservation programs.
- Encourage partnerships to make landowner incentive programs and cooperative planning efforts the primary focus of wetland conservation and restoration.

The Governor also signed Executive Order W-59-93, which incorporates the goals and objectives contained in the new policy and directs the Resources Agency to establish an Interagency Task Force to direct and coordinate administration and implementation of the policy.

3.4.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed project will have a significant impact on biological resources if it will:

- 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;
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service;
- 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;
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance;
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

IMPACTS AND MITIGATION

Impact 3.4-1: General Plan implementation could have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service (Less than Significant)

Approval of the proposed project would not directly approve or entitle any development or infrastructure projects. However, implementation of the General Plan and Land Use Map would allow and facilitate future development in Sebastopol, which could result in adverse impacts to

special-status plant and wildlife species, as well as sensitive natural habitat or wildlife movement corridors.

Special-Status Plant Species

The search of the California Natural Diversity Data Base revealed documented occurrences of the 57 special status plant species (including one non-vascular plant) within 10 miles of the City of Sebastopol. Table 3.4-1 provides a list of special-status plant species that are documented within 10 miles of the City of Sebastopol, their habitat, and current protective status. Figure 3.4-2 illustrates the special status species located within one mile of the City of Sebastopol. Figure 3.4-3 illustrates the special status species located within 10 miles of the City of Sebastopol.

Subsequent development under the proposed General Plan could result in the direct loss of habitat areas associated with these special-status plant species, since suitable habitat for these species does occur in the region. Additionally, indirect impacts to special-status plant species could occur with implementation of the General Plan. Indirect impacts could include habitat degradation as a result of impacts to water quality.

Special-status plant species receive protection from various federal and state laws and regulations, including FESA and CESA. These regulations generally prohibit the taking of the plant species without a special permit. Additionally, the proposed General Plan includes numerous policies and action measures intended to reduce or avoid impacts to special-status plant species. These policies and action measures are listed below.

Special-Status Wildlife Species

The search revealed documented occurrences of the 22 special status animal species within 10 miles of the City of Sebastopol. This includes: four amphibians, five birds, three fish, five invertebrates, four mammals, and one reptile. Table 3.4-2 provides a list of the special-status animal species that are documented within 10 miles of the City of Sebastopol, their habitat, and current protective status; these species are considered present or potentially present in Sebastopol. Figure 3.4-3 illustrates the location of each occurrence documented by the CNDDB.

Subsequent development under the proposed General Plan could result in the direct loss of habitat areas associated with these special-status animal species, since suitable habitat for these species does occur in the region. Additionally, indirect impacts to special-status animal species could occur with implementation of the General Plan. Indirect impacts could include habitat degradation as a result of impacts to water quality, increased human presence, and the loss of foraging habitat.

Special-status animal species receive protection from various federal and state laws and regulations, including FESA and CESA. These regulations generally prohibit the taking of a species or direct impact to foraging and breeding habitat without a special permit. Additionally, the proposed General Plan includes numerous policies and action measures intended to reduce or avoid impacts to special-status animal species. These policies and action measures are listed below.

Conclusion

Construction and maintenance activities associated with future development projects under the proposed General Plan could result in the direct and indirect loss or indirect disturbance of special-status wildlife or plant species or their habitats that are known to occur, or have potential to occur, in the region. Impacts to special-status species or their habitat could result in a substantial reduction in local population size, lowered reproductive success, or habitat fragmentation. Significant impacts on special-status species associated with individual subsequent projects could include:

- increased mortality caused by higher numbers of automobiles in new areas of development;
- direct mortality from the collapse of underground burrows, resulting from soil compaction;
- direct mortality resulting from the movement of equipment and vehicles through construction areas;
- direct mortality resulting from removal of trees with active nests;
- direct mortality or loss of suitable habitat resulting from the trimming or removal of obligate host plants;
- direct mortality resulting from fill of wetlands features;
- loss of breeding and foraging habitat resulting from the filling of seasonal or perennial wetlands;
- loss of breeding, foraging, and refuge habitat resulting from the permanent removal of riparian vegetation;
- loss of suitable habitat for vernal pool invertebrates resulting from the destruction or degradation of vernal pools or seasonal wetlands;
- abandoned eggs or young and subsequent nest failure for special-status nesting birds, including raptors, and other non-special status migratory birds resulting from construction-related noises;
- loss or disturbance of rookeries and other colonial nests;
- loss of suitable foraging habitat for special-status raptor species;
- loss of migration corridors resulting from the construction of permanent structures or features; and
- impacts to fisheries/species associated with waterways.

Subsequent development projects will be required to comply with the General Plan and adopted state, federal, and local regulations for the protection of special-status species. Policy COS 2-1 defines sensitive habitats to include, wetlands, vernal pools, riparian areas, wildlife and fish migration corridors, native plant nursery sites, waters of the U.S., sensitive natural communities,

and other habitats designated by state and federal agencies and laws. Policy COS 2-2, requires preservation and enhancement of those biological communities that contribute to the City's and the region's rich biodiversity including, but not limited to, annual grasslands, freshwater marshes, wetlands, vernal pools, riparian areas, aquatic habitat, and agricultural lands.

Policy CON 2-4 directs the City to attempt to resolve conflicts between sensitive habitat areas and adjoining urbanized lands in a manner which recognizes the public interests in both resource protection and the need to provide for residential and job-generating land uses. Policy COS 1-2 Considers the effects of planning decisions on the overall health and wellbeing of the natural environment and regional ecosystems.

Policy COS 3-1 requires the protection and enhancement of streams, channels, seasonal and permanent marshland, wetlands, sloughs, riparian habitat, and vernal pools through sound land use planning, community design, and site planning.

Action COS 2a requires the city maintain its Zoning Ordinance provisions to require development project proposals, infrastructure projects, long-range planning projects, and other projects that may potentially impact special-status species and sensitive resources to submit a resources analysis as part of the project application, and requires projects to be designed to avoid impacts to sensitive resources, and directs the City to consult with all resource agencies during the review process for proposed developments.

Policy COS 3-1 requires the conservation of riparian habitat along local creeks, including but not limited to the Laguna de Santa Rosa. Policy COS 3-3, and 3-4 requires the City to support restoration of existing channelized waterways to a more natural condition. Restoration efforts should provide for naturalized hydraulic functioning. Restoration should also promote the growth of riparian vegetation to effectively stabilize banks, screen pollutants from runoff entering the channel, enhance fisheries, and provide other opportunities for natural habitat restoration.

Policy COS 3-6 requires the use and site design integration of natural features such as bioswales, vegetation, retention ponds, and other measures to remove surface water pollutants prior to discharge into surface waters. Policy COS 3-5 requires discretionary projects, as well as new flood control and stormwater conveyance projects, to integrate best management practices (BMPs) and natural features to the greatest extent feasible, while ensuring that these features adequately convey and control stormwater to protect human health, safety, and welfare. New flood control projects should utilize the natural benefits of slowing and spreading surface water runoff through natural features in order to promote groundwater infiltration, natural removal of contaminants, and enhancing riparian habitat health. Policy COS 3-8 requires new development to include maintained and managed setbacks and buffers along creeks, wetlands, riparian corridors, and adjacent to sensitive habitat.

Subsequent development projects will be required to comply with the General Plan and adopted state, federal, and local regulations for the protection of special status plants and wildlife, including habitat. While future development has the potential to result in significant impacts to special status plants and wildlife, including habitat, the implementation of the policies and action

measures listed below, as well as federal and state regulations, would reduce impacts to these resources to a **less than significant** level.

2016 GENERAL PLAN POLICIES AND ACTIONS THAT MITIGATE POTENTIAL IMPACTS

Policies

Policy COS 1-1: Strive to establish Sebastopol as a leader in environmental protection, environmental stewardship, and sustainability.

Policy COS 1-2: Consider the effects of planning decisions on the overall health and wellbeing of the natural environment and regional ecosystems.

Policy COS 1-3: Consider the "Rights of Nature" as a key principal when making planning decisions and reviewing development and infrastructure project applications.

Policy COS 1-4: Recognize that all life within all ecosystems on our planet are deeply intertwined, and consider the inherent values of ecological goods and services as key principles when making planning decisions.

Policy COS 2-1: Protect and enhance sensitive habitats, which include creek corridors, wetlands, vernal pools, riparian areas, wildlife and fish migration corridors, native plant nursery sites, waters of the United States, sensitive natural communities, and other habitats designated by State and Federal agencies.

Policy COS 2-2: Preserve and enhance Sebastopol's and the region's natural habitats and rich biodiversity including, but not limited to, grasslands, freshwater marshes, wetlands, vernal pools, riparian areas, aquatic habitat, oak woodlands, and agricultural lands.

Policy COS 2-3: Focus conservation efforts on high priority conservation areas that contain suitable habitat for native, endangered, threatened, migratory, or special-status species and that can be managed with minimal interference from nearby urban land uses and are in proximity to other habitat corridors.

Policy COS 2-4: Attempt to resolve conflicts between sensitive habitat areas and adjoining urbanized lands in a manner which recognizes the public interests in both resource protection and the need to provide for residential and job-generating land uses.

Policy COS 2-5: Implement a range of measures and tools in order to protect, enhance and restore environmentally sensitive areas.

Policy COS 2-6: Maintain Zoning Ordinance provisions to ensure that development proposals for land which is located within, or adjacent to, an environmentally sensitive area include a resources analysis that contains all of the information required in order for the City to determine that impacts to sensitive habitat and natural resources have been reduced, avoided, or mitigated to the greatest extent feasible. The required content for the resources analysis is detailed in Action COS-2a.

Policy COS 2-7: Support efforts to eradicate invasive and noxious weeds and vegetation on public and private property.

Policy COS 3-1: Protect and enhance streams, channels, seasonal and permanent marshland, wetlands, sloughs, riparian habitat, and vernal pools through sound land use planning, community design, and site planning.

Policy COS 3-2: Aggressively pursue a wide range of opportunities to protect water quality and manage local surface water resources.

Policy COS 3-3: Support rehabilitation of any culverted or open existing channelized waterways, as feasible, to remove concrete linings and allow for a connection between the stream channel and the natural water table. Avoid creating additional culverted or open channelized waterways, unless no other alternative is available to protect human health, safety, and welfare.

Policy COS 3-4 Where feasible, support restoration of any existing culverted or channelized waterways to a more natural condition. Restoration efforts should provide for naturalized hydraulic functioning. Restoration should also promote the growth of riparian vegetation to effectively stabilize banks, screen pollutants from runoff entering the channel, enhance fisheries, and provide other opportunities for natural habitat restoration.

Policy COS 3-5: Require discretionary projects, as well as new flood control and stormwater conveyance projects, to integrate best management practices (BMPs) and natural features to the greatest extent feasible, while ensuring that these features adequately convey and control stormwater to protect human health, safety, and welfare. New flood control projects should utilize the natural benefits of slowing and spreading surface water runoff through natural features in order to promote groundwater infiltration, natural removal of contaminants, and enhancing riparian habitat health.

Policy COS 3-6: Require the use and site design integration of natural features such as bioswales, vegetation, retention ponds, and other measures to remove surface water pollutants prior to discharge into surface waters.

Policy COS 3-7: Preserve the existing and future floodwater carrying capacity of creeks and channels during creek restoration.

Policy COS 3-8: Require new development to include maintained and managed setbacks and buffers along creeks, wetlands, riparian corridors, and adjacent to sensitive habitat.

Policy COS 3-9: New development adjacent to creeks and streams should include opportunities for beneficial uses, such as flood control, ecological restoration activities, public access trails, and walkways.

Policy COS 3-10: As appropriate, consult with State and Federal agencies during the development review process to help identify wetland and riparian habitat that has candidacy for restoration, conservation, and/or mitigation. Focus restoration and/or conservation efforts on areas that would maximize multiple beneficial uses for such habitat.

Policy COS 3-11: Where feasible, for major development or substantial public works projects, encourage and support multipurpose detention basins that provide water quality protection, storm water detention, open space amenities, and recreational amenities.

Policy COS 3-12: Support non-regulatory programs for protection of streams and riparian habitat, including education, technical assistance, tax incentives, and voluntary efforts to protect riparian resources.

Policy COS 3-13: Require setbacks from channelized and culverted creeks that could be candidates for future daylighting and restoration improvements.

Policy COS 3-14: Monitor wastewater discharge into the Laguna de Santa Rosa in order to protect water quality. Ensure that any wastewater discharged into the Laguna does not exacerbate water quality deterioration.

Policy COS 4-1: Recognize and protect the Laguna as a critical component to the essence of Sebastopol.

Policy COS 4-2: Protect, enhance, and restore sensitive habitats in the Laguna, and recognize that the Laguna provides a myriad of environmental benefits to the region's ecosystem.

Policy COS 4-3: Preserve and enhance the visual character of the Laguna.

Policy COS 4-4: Seek opportunities to expand public access and low-impact recreational opportunities within the Laguna, without compromising environmental protection and restoration efforts.

Policy COS 4-5: Continuously seek opportunities to expand Laguna protection and preservation efforts through the acquisition of land within and adjacent to the Laguna.

Actions

Action COS-1a: Implement the policies and actions in the Conservation and Open Space Element, and all other relevant and applicable policies and actions throughout the General Plan, to provide for progressive, effective, and forward-thinking strategies to protect the natural environment and promote sustainability to the greatest extent feasible.

Action COS-1b: Consider the establishment and adoption of a Rights of Nature Ordinance. Consideration should include legal, economic, and human implications of such an ordinance, a timeline for implementation, and standards to provide for robust environmental protection measures, while balancing the other social, economic, and community priorities established by the General Plan.

Action COS-2a: Maintain Zoning Ordinance provisions to require development project proposals, infrastructure projects, long-range planning projects, and other projects that may potentially impact special-status species and sensitive resources to submit a resources analysis as part of the project application which determines whether significant adverse impacts will occur. Evaluations shall be carried out by a qualified professional biologist approved by the Sebastopol Planning Department, and shall be funded by the project applicant. Generally, the resources analysis shall identify, describe, and locate, the following:

The type and location of all special-status plant and animal species;

Riparian vegetation within at least 50 feet of the subject property;

The location, type, functionality, and offsite connectivity of wetlands, if applicable;

The location of protected native trees onsite (as defined by the Sebastopol Municipal Code);

Potential archaeological, cultural, and historical resources, if applicable;

Flood hazard areas, as defined by FEMA and/or the Department of Water Resources (DWR).

The resources analysis shall determine, as applicable, the area and location of undeveloped land required to protect and enhance the continued viability of biotic resources, wetlands, and sensitive areas. The resources analysis shall identify land that is functionally a part of the nearby wetlands ecosystem, which should be preserved in a natural state.

Projects shall be designed to avoid impacts to sensitive resources; and in cases where impacts cannot be fully avoided, impacts shall be reduced. Where adverse impacts cannot be feasibly reduced or avoided through project design, projects shall include the implementation of site-specific or project-specific effective mitigation strategies developed by a qualified professional in consultation with state or federal resource agencies with jurisdiction (if applicable) that may include, but are not limited to, the following strategies:

- *Preservation of habitat and connectivity of adequate size, quality, and configuration to support the special-status species. Connectivity shall be determined based on the specifics of the species' needs.*
- *Project design measures, such as clustering of structures or locating project features to avoid known locations of special-status species and/or sensitive habitats.*
- *Provision of supplemental planting and maintenance of grasses, shrubs, and trees of similar quality and quantity to provide adequate vegetation cover to enhance water quality, minimize sedimentation and soil transport, and provide adequate shelter and food for wildlife.*
- *Protection for habitat and the known locations of special-status species through adequate buffering or other means to protect habitat functions.*
- *Provision of replacement habitat of like quantity and quality on- or off-site for special-status species. Preference shall be given to the preservation of habitat on-site or as close to the area of impact as feasible, so long as that habitat is of comparable quality.*
- *Enhancement of existing special-status species habitat values through restoration and replanting of native plant species.*
- *Provision of temporary or permanent buffers of adequate size (based on the specifics of the special-status species) to avoid nest abandonment by nesting migratory birds and raptors associated with construction and site development activities.*
- *Incorporation of the provisions or demonstration of compliance with applicable recovery plans for federally listed species.*

- *Monitoring of construction activities by a qualified biologist to avoid impacts to on-site special status species.*

Action COS-2b: Where sensitive biological habitats have been identified on or immediately adjacent to a project site, the project shall include appropriate mitigation measures identified by a qualified biologist, which may include, but are not limited to the following:

- *Pre-construction surveys for species listed under the State or Federal Endangered Species Acts, or species identified as special-status by the resource agencies, shall be conducted by a qualified biologist;*
- *Construction barrier fencing shall be installed around sensitive resources and areas identified for avoidance or protection, and to reduce potential soil compaction in sensitive areas; and*
- *Employees shall be trained by a qualified biologist to identify and avoid protected species and habitat.*

Action COS-2c: During the development review process, require project applicants to incorporate specific measures into project plans and specifications that are intended to prevent invasive and noxious weeds and vegetation from establishing on the project site.

Action COS-2d: Through coordination with the U.S. Fish and Wildlife Service, California Department of Fish and Wildlife, and Sonoma County, continue to maintain and periodically update, a map of sensitive biological communities and habitat within the Sebastopol Planning Area. Ensure that this map and associated information is readily available to potential developers and the public.

Action COS-3a: Continue to implement the Storm Water mitigation requirements in the Sebastopol Municipal Code in order to protect and enhance the water quality of watercourses and water bodies by reducing pollutants in storm water discharges to the maximum extent practicable, by prohibiting non-storm water discharges to the storm drain system, and by improving water quality in "first flush" storm water flows.

Action COS-3b: Continue to implement the Wetlands District protection requirements in the Sebastopol Municipal Code in order to preserve and protect environmentally sensitive waterways and/or wetland areas. Review all development applications for consistency with the requirements of this Chapter, including use restrictions and development criteria established to protect surface water quality.

Action COS-3c: Continue to implement Creek Setback requirements of the Sebastopol Municipal Code in order to protect water quality, riparian habitat, and bank stability for all projects adjacent to creeks within the City.

Action COS-3d: Continue to require new development projects to construct and implement all applicable storm water retention and water quality requirement standards and improvements contained in the Santa Rosa LID Manual, or equivalent document that implements the City's storm water permit.

Action COS-3e: During updates to the City's Storm Drain System Utility Master Plan, identify opportunities to restore any channelized and culverted drainage systems to a naturalized condition, without compromising the conveyance effectiveness of the system, and identify standards and opportunities to construct new storm water drainage infrastructure utilizing natural drainage features and effective best management practices to remove pollutants from storm water runoff, while maintaining a system that effectively protects residents and businesses from flooding.

Action COS-3f: Utilize existing regulations and procedures, including but not limited to, the Zoning Ordinance, the design review process, and the environmental review process, in order to conserve wetlands and riparian habitat within the city limits and the Planning Area.

Action COS-3g: Coordinate with the California Department of Fish and Wildlife, Sonoma County, and local watershed protection groups to identify potentially impacted aquatic habitat within Sebastopol's Planning Area and to develop riparian management guidelines to be implemented by development, recreation, and other projects adjacent to creeks, streams, and other waterways. Efforts should be coordinated with the Laguna Wetlands Preserve Restoration and Management Plan.

Action COS-3h: Encourage volunteer-based programs that organize community creek restoration and/or clean-up events and provide public education regarding the benefits of city and regional water resources.

Action COS-3i: Provide a conservation page (or similar page) on the City's website that provides links to resource agencies (i.e., CDFW, USFWS, USACE, RWQCB, etc.) and provides information regarding local and regional conservation and environmental groups and programs, including the Atascadero Watershed Council and the Laguna de Santa Rosa Foundation, to the extent that the City has readily available information. Information that identifies creeks and tributaries affecting the Sebastopol area and the Laguna de Santa Rosa watershed should also be included.

Action COS-3j: Continue to identify which stormwater and drainage facilities are in need of repair and address these needs through the CIP process.

Action COS-3k: As part of the CIP process, identify channelized and buried creeks that may be suitable for naturalization and rehabilitation.

Action COS-3l: Preclude development that would adversely affect the natural vegetation, wildlife habitat, or rare or endangered species in designated wetland and riparian areas.

Action COS-3m: Periodically provide the Planning Commission and City Council with information regarding actions of the North Coast Regional Water Quality Control Board, the City of Santa Rosa, the Sonoma County Water Agency and other agencies within the Referral Area related to water quality protection efforts and activities.

Action COS-3n: Coordinate and collaborate with outside agencies, including but not limited to the North Coast Regional Water Quality Control Board, the City of Santa Rosa, and the Sonoma County Water Agency to implement regional water quality protection and improvement programs.

Action COS-3o: Develop maintenance guidelines for creeks and wetlands areas to reduce flooding, sedimentation and erosion while maintaining and/or enhancing the riparian vegetation and wildlife.

Action COS-3p: Label each stormwater inlet in the City to identify receiving waters. Signs should indicate the receiving watercourse and state that no dumping is permitted.

Action COS-4a: Implement the Laguna Wetlands Preserve Restoration and Management Plan as the primary tool to achieve the community's objectives for habitat protection, restoration, and public access in the Laguna.

Action COS-4b: Continue to work collaboratively with the Sonoma County Agricultural Preservation and Open Space District to secure funding for the protection and restoration of the Laguna, consistent with the guidance provided by the Laguna Wetlands Preserve Restoration and Management Plan.

Action COS-4c: Maintain and expand partnerships with federal, state, and local agencies to expand efforts to implement restoration and preservation goals in the Laguna.

Action COS-4d: Work with local non-profit and community groups to further the goals for the Laguna through community-based efforts.

Action COS-4e: Explore opportunities to expand the City's regulatory control over the management and preservation of the Laguna.

Action COS-4f: During the development review process, review all development applications for consistency with the Laguna Wetlands Preserve Restoration and Management Plan, and ensure that new development does not adversely impact habitat within the Laguna, or interfere with efforts to implement restoration and preservation efforts within the Laguna.

Action COS-4g: Seek expanded opportunities to utilize the storage ponds adjacent to the Laguna for groundwater recharge and surface water storage.

Action COS-4h: Establish and prioritize a list of parcels and areas around the Laguna for future acquisition and preservation.

Impact 3.4-2: General Plan implementation could have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service (Less than Significant)

A CNDDB search revealed five sensitive natural communities within 10 miles of the City of Sebastopol. This includes Coastal and Valley Freshwater Marsh, Coastal Brackish Marsh, Northern Hardpan Vernal Pool, Northern Vernal Pool, and Valley Needlegrass Grassland. Of these five sensitive natural communities, none are located within the City of Sebastopol, but three are located just east of the city limits along the Laguna de Santa Rosa. Descriptions of these sensitive natural communities are provided previously in this section.

While not always documented as a sensitive natural community in the CNDDB, streams, rivers, wet meadows, and vernal pools are of high concern because they provide unique aquatic habitat for many endemic species, including special-status plants, birds, invertebrates, and amphibians. For instance, the Laguna de Santa Rosa is the largest freshwater wetlands complex on the northern California coast. The Laguna's fourteen-mile channel forms the largest tributary to the Russian River, draining a 254-square-mile watershed which encompasses nearly the entire Santa Rosa Plain. This includes parts of the communities of Windsor, Santa Rosa, Rohnert Park, Cotati, Forestville, and Sebastopol.

The Laguna de Santa Rosa is important in maintaining water quality and flood control for the region. It provides an important overflow area for the Russian River during periods of heavy winter rain, serving as a natural holding basin which captures and slows floodwaters, easing their impact on lower Russian River communities. Additionally, the Laguna de Santa Rosa provides a unique ecological system for the region. With over 30,000 acres, the Laguna provides a mosaic of creeks, open water, perennial marshes, seasonal wetlands, riparian forests, oak woodland and grassland. It is home to hundreds of species of birds, mammals, fish, amphibians, reptiles, and invertebrates. The Laguna de Santa Rosa provides habitat for a range of species, including several rare and endangered species.

The General Plan Conservation Element includes numerous policies designed to address sensitive natural communities, including the Laguna de Santa Rosa and other local waterways. Policy COS 2-5 requires the City to implement a range of measures and tools in order to protect, enhance and restore environmentally sensitive areas. Policy COS 2-6 maintains the Zoning Ordinance provisions to ensure that development proposals for land located within, or adjacent to, an environmentally sensitive areas include a resources analysis that contains all of the information required in order for the City to determine that impacts to sensitive habitat and natural resources have been reduced, avoided, or mitigated to the greatest extent feasible. Policy COS 3-1 protects and enhances streams, channels, seasonal and permanent marshland, wetlands, sloughs, riparian habitat, and vernal pools through sound land use planning, community design, and site planning. Policy COS 3-8 requires new development to include maintained and managed setbacks and buffers along creeks, wetlands, riparian corridors, and adjacent to sensitive habitat. Policy COS 3-10 required the city, consult with State and Federal agencies during the development review process to help identify wetland and riparian habitat that has candidacy for restoration, conservation, and/or mitigation, and focuses restoration and/or conservation efforts on areas that would maximize multiple beneficial uses for such habitat.

Subsequent development projects will be required to comply with the General Plan and adopted state, federal, and local regulations for the protection of sensitive natural communities, including riparian habitat. While future development has the potential to result in significant impacts to sensitive natural communities, the implementation of the policies and action measures listed below, as well as federal and state regulations, would reduce impacts to these resources to a **less than significant** level.

2016 GENERAL PLAN POLICIES AND ACTIONS THAT MITIGATE POTENTIAL IMPACTS

Policies

Policy COS 1-2: Consider the effects of planning decisions on the overall health and wellbeing of the natural environment and regional ecosystems.

Policy COS 2-1: Protect and enhance sensitive habitats, which include creek corridors, wetlands, vernal pools, riparian areas, wildlife and fish migration corridors, native plant nursery sites, waters of the United States, sensitive natural communities, and other habitats designated by State and Federal agencies.

Policy COS 2-2: Preserve and enhance Sebastopol's and the region's natural habitats and rich biodiversity including, but not limited to, grasslands, freshwater marshes, wetlands, vernal pools, riparian areas, aquatic habitat, oak woodlands, and agricultural lands.

Policy COS 2-3: Focus conservation efforts on high priority conservation areas that contain suitable habitat for native, endangered, threatened, migratory, or special-status species and that can be managed with minimal interference from nearby urban land uses and are in proximity to other habitat corridors.

Policy COS 2-5: Implement a range of measures and tools in order to protect, enhance and restore environmentally sensitive areas.

Policy COS 2-6: Maintain Zoning Ordinance provisions to ensure that development proposals for land which is located within, or adjacent to, an environmentally sensitive area include a resources analysis that contains all of the information required in order for the City to determine that impacts to sensitive habitat and natural resources have been reduced, avoided, or mitigated to the greatest extent feasible. The required content for the resources analysis is detailed in Action COS-2a.

Policy COS 3-1: Protect and enhance streams, channels, seasonal and permanent marshland, wetlands, sloughs, riparian habitat, and vernal pools through sound land use planning, community design, and site planning.

Policy COS 3-2: Aggressively pursue a wide range of opportunities to protect water quality and manage local surface water resources.

Policy COS 3-3: Support rehabilitation of any culverted or open existing channelized waterways, as feasible, to remove concrete linings and allow for a connection between the stream channel and the natural water table. Avoid creating additional culverted or open channelized waterways, unless no other alternative is available to protect human health, safety, and welfare.

Policy COS 3-4 Where feasible, support restoration of any existing culverted or channelized waterways to a more natural condition. Restoration efforts should provide for naturalized hydraulic functioning. Restoration should also promote the growth of riparian vegetation to effectively stabilize banks, screen pollutants from runoff entering the channel, enhance fisheries, and provide other opportunities for natural habitat restoration.

Policy COS 3-5: Require discretionary projects, as well as new flood control and stormwater conveyance projects, to integrate best management practices (BMPs) and natural features to the greatest extent feasible, while ensuring that these features adequately convey and control stormwater to protect human health, safety, and welfare. New flood control projects should utilize the natural benefits of slowing and spreading surface water runoff through natural features in order to promote groundwater infiltration, natural removal of contaminants, and enhancing riparian habitat health.

Policy COS 3-6: Require the use and site design integration of natural features such as bioswales, vegetation, retention ponds, and other measures to remove surface water pollutants prior to discharge into surface waters.

Policy COS 3-8: Require new development to include maintained and managed setbacks and buffers along creeks, wetlands, riparian corridors, and adjacent to sensitive habitat.

Policy COS 3-9: New development adjacent to creeks and streams should include opportunities for beneficial uses, such as flood control, ecological restoration activities, public access trails, and walkways.

Policy COS 3-10: As appropriate, consult with State and Federal agencies during the development review process to help identify wetland and riparian habitat that has candidacy for restoration, conservation, and/or mitigation. Focus restoration and/or conservation efforts on areas that would maximize multiple beneficial uses for such habitat.

Policy COS 3-11: Where feasible, for major development or substantial public works projects, encourage and support multipurpose detention basins that provide water quality protection, storm water detention, open space amenities, and recreational amenities.

Policy COS 3-12: Support non-regulatory programs for protection of streams and riparian habitat, including education, technical assistance, tax incentives, and voluntary efforts to protect riparian resources.

Policy COS 3-13: Require setbacks from channelized and culverted creeks that could be candidates for future daylighting and restoration improvements.

Policy COS 3-14: Monitor wastewater discharge into the Laguna de Santa Rosa in order to protect water quality. Ensure that any wastewater discharged into the Laguna does not exacerbate water quality deterioration.

Policy COS 4-1: Recognize and protect the Laguna as a critical component to the essence of Sebastopol.

Policy COS 4-2: Protect, enhance, and restore sensitive habitats in the Laguna, and recognize that the Laguna provides a myriad of environmental benefits to the region's ecosystem.

Policy COS 4-5: Continuously seek opportunities to expand Laguna protection and preservation efforts through the acquisition of land within and adjacent to the Laguna.

Actions

Action COS-1a: Implement the policies and actions in the Conservation and Open Space Element, and all other relevant and applicable policies and actions throughout the General Plan, to provide for progressive, effective, and forward-thinking strategies to protect the natural environment and promote sustainability to the greatest extent feasible.

Action COS-2a: Maintain Zoning Ordinance provisions to require development project proposals, infrastructure projects, long-range planning projects, and other projects that may potentially impact special-status species and sensitive resources to submit a resources analysis as part of the project application which determines whether significant adverse impacts will occur. Evaluations shall be carried out by a qualified professional biologist approved by the Sebastopol Planning Department, and shall be funded by the project applicant. Generally, the resources analysis shall identify, describe, and locate, the following:

- *The type and location of all special-status plant and animal species;*
- *Riparian vegetation within at least 50 feet of the subject property;*
- *The location, type, functionality, and offsite connectivity of wetlands, if applicable;*
- *The location of protected native trees onsite (as defined by the Sebastopol Municipal Code);*
- *Potential archaeological, cultural, and historical resources, if applicable;*
- *Flood hazard areas, as defined by FEMA and/or the Department of Water Resources (DWR).*

The resources analysis shall determine, as applicable, the area and location of undeveloped land required to protect and enhance the continued viability of biotic resources, wetlands, and sensitive areas. The resources analysis shall identify land that is functionally a part of the nearby wetlands ecosystem, which should be preserved in a natural state.

Projects shall be designed to avoid impacts to sensitive resources; and in cases where impacts cannot be fully avoided, impacts shall be reduced. Where adverse impacts cannot be feasibly reduced or avoided through project design, projects shall include the implementation of site-specific or project-specific effective mitigation strategies developed by a qualified professional in consultation with state or federal resource agencies with jurisdiction (if applicable) that may include, but are not limited to, the following strategies:

- *Preservation of habitat and connectivity of adequate size, quality, and configuration to support the special-status species. Connectivity shall be determined based on the specifics of the species' needs.*
- *Project design measures, such as clustering of structures or locating project features to avoid known locations of special-status species and/or sensitive habitats.*
- *Provision of supplemental planting and maintenance of grasses, shrubs, and trees of similar quality and quantity to provide adequate vegetation cover to enhance water quality, minimize sedimentation and soil transport, and provide adequate shelter and food for wildlife.*
- *Protection for habitat and the known locations of special-status species through adequate buffering or other means to protect habitat functions.*
- *Provision of replacement habitat of like quantity and quality on- or off-site for special-status species. Preference shall be given to the preservation of habitat on-site or as close to the area of impact as feasible, so long as that habitat is of comparable quality.*
- *Enhancement of existing special-status species habitat values through restoration and replanting of native plant species.*

- *Provision of temporary or permanent buffers of adequate size (based on the specifics of the special-status species) to avoid nest abandonment by nesting migratory birds and raptors associated with construction and site development activities.*

- *Incorporation of the provisions or demonstration of compliance with applicable recovery plans for federally listed species.*

- *Monitoring of construction activities by a qualified biologist to avoid impacts to on-site special status species.*

Action COS-2b: Where sensitive biological habitats have been identified on or immediately adjacent to a project site, the project shall include appropriate mitigation measures identified by a qualified biologist, which may include, but are not limited to the following:

- *Pre-construction surveys for species listed under the State or Federal Endangered Species Acts, or species identified as special-status by the resource agencies, shall be conducted by a qualified biologist;*

- *Construction barrier fencing shall be installed around sensitive resources and areas identified for avoidance or protection, and to reduce potential soil compaction in sensitive areas; and*

- *Employees shall be trained by a qualified biologist to identify and avoid protected species and habitat.*

Action COS-2d: Through coordination with the U.S. Fish and Wildlife Service, California Department of Fish and Wildlife, and Sonoma County, continue to maintain and periodically update, a map of sensitive biological communities and habitat within the Sebastopol Planning Area. Ensure that this map and associated information is readily available to potential developers and the public.

Action COS-3a: Continue to implement the Storm Water mitigation requirements in the Sebastopol Municipal Code in order to protect and enhance the water quality of watercourses and water bodies by reducing pollutants in storm water discharges to the maximum extent practicable, by prohibiting non-storm water discharges to the storm drain system, and by improving water quality in "first flush" storm water flows.

Action COS-3b: Continue to implement the Wetlands District protection requirements in the Sebastopol Municipal Code in order to preserve and protect environmentally sensitive waterways and/or wetland areas. Review all development applications for consistency with the requirements of this Chapter, including use restrictions and development criteria established to protect surface water quality.

Action COS-3c: Continue to implement Creek Setback requirements of the Sebastopol Municipal Code in order to protect water quality, riparian habitat, and bank stability for all projects adjacent to creeks within the City.

Action COS-3d: Continue to require new development projects to construct and implement all applicable storm water retention and water quality requirement standards and improvements

contained in the Santa Rosa LID Manual, or equivalent document that implements the City's storm water permit.

Action COS-3f: Utilize existing regulations and procedures, including but not limited to, the Zoning Ordinance, the design review process, and the environmental review process, in order to conserve wetlands and riparian habitat within the city limits and the Planning Area.

Action COS-3g: Coordinate with the California Department of Fish and Wildlife, Sonoma County, and local watershed protection groups to identify potentially impacted aquatic habitat within Sebastopol's Planning Area and to develop riparian management guidelines to be implemented by development, recreation, and other projects adjacent to creeks, streams, and other waterways. Efforts should be coordinated with the Laguna Wetlands Preserve Restoration and Management Plan.

Action COS-3h: Encourage volunteer-based programs that organize community creek restoration and/or clean-up events and provide public education regarding the benefits of city and regional water resources.

Action COS-3i: Provide a conservation page (or similar page) on the City's website that provides links to resource agencies (i.e., CDFW, USFWS, USACE, RWQCB, etc.) and provides information regarding local and regional conservation and environmental groups and programs, including the Atascadero Watershed Council and the Laguna de Santa Rosa Foundation, to the extent that the City has readily available information. Information that identifies creeks and tributaries affecting the Sebastopol area and the Laguna de Santa Rosa watershed should also be included.

Action COS-3k: As part of the CIP process, identify channelized and buried creeks that may be suitable for naturalization and rehabilitation.

Action COS-3l: Preclude development that would adversely affect the natural vegetation, wildlife habitat, or rare or endangered species in designated wetland and riparian areas.

Action COS-3m: Periodically provide the Planning Commission and City Council with information regarding actions of the North Coast Regional Water Quality Control Board, the City of Santa Rosa, the Sonoma County Water Agency and other agencies within the Referral Area related to water quality protection efforts and activities.

Action COS-3n: Coordinate and collaborate with outside agencies, including but not limited to the North Coast Regional Water Quality Control Board, the City of Santa Rosa, and the Sonoma County Water Agency to implement regional water quality protection and improvement programs.

Action COS-3o: Develop maintenance guidelines for creeks and wetlands areas to reduce flooding, sedimentation and erosion while maintaining and/or enhancing the riparian vegetation and wildlife.

Action COS-3p: Label each stormwater inlet in the City to identify receiving waters. Signs should indicate the receiving watercourse and state that no dumping is permitted.

Action COS-4a: Implement the Laguna Wetlands Preserve Restoration and Management Plan as the primary tool to achieve the community's objectives for habitat protection, restoration, and public access in the Laguna.

Action COS-4b: Continue to work collaboratively with the Sonoma County Agricultural Preservation and Open Space District to secure funding for the protection and restoration of the Laguna,

consistent with the guidance provided by the Laguna Wetlands Preserve Restoration and Management Plan.

Action COS-4c: Maintain and expand partnerships with federal, state, and local agencies to expand efforts to implement restoration and preservation goals in the Laguna.

Action COS-4e: Explore opportunities to expand the City's regulatory control over the management and preservation of the Laguna.

Action COS-4f: During the development review process, review all development applications for consistency with the Laguna Wetlands Preserve Restoration and Management Plan, and ensure that new development does not adversely impact habitat within the Laguna, or interfere with efforts to implement restoration and preservation efforts within the Laguna.

Action COS-4h: Establish and prioritize a list of parcels and areas around the Laguna for future acquisition and preservation.

Impact 3.4-3: The General Plan could 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 (Less than Significant)

Streams, rivers, wet meadows, and vernal pools (wetlands and jurisdictional waters) are of high concern because they provide unique aquatic habitat (perennial and ephemeral) for many endemic species, including special-status plants, birds, invertebrates, and amphibians. These aquatic habitats oftentimes qualify as protected wetlands or jurisdictional waters and are protected from disturbance through the CWA.

The City of Sebastopol contains numerous aquatic habitats that qualify as federally protected wetlands and jurisdictional waters. The most prominent aquatic habitat in Sebastopol is the Laguna de Santa Rosa. There are also various tributaries and drainages to the Laguna de Santa Rosa within the planning area.

Section 404 of the CWA requires any project that involves disturbance to a wetland or water of the U.S. to obtain a permit that authorizes the disturbance. If a wetland or jurisdictional water is determined to be present, then a permit must be obtained from the USACE to authorize a disturbance to the wetland. Although subsequent projects may disturb protected wetlands and/or jurisdictional waters, the regulatory process that is established through Section 404 of the CWA ensures that there is "no net loss" of wetlands or jurisdictional waters. If, through the design process, it is determined that a future development project cannot avoid a wetland or jurisdictional water, then the USACE would require that there be an equal amount of wetland created elsewhere to mitigate any loss of wetland.

Construction activities associated with individual future projects could result in the disturbance or loss of waters of the United States. This includes perennial and intermittent drainages; unnamed drainages; vernal pools; freshwater marshes; and other types of seasonal and perennial wetland communities. Wetlands and other waters of the United States could be affected through direct

removal, filling, hydrological interruption (including dewatering), alteration of bed and bank, and other construction-related activities.

Because the proposed project is a planning document and thus, no physical changes will occur to the environment, adoption of the proposed project would not directly impact the environment. There is a reasonable chance that water features could be impacted throughout the buildout of the individual projects. The implementation of an individual project would require a detailed and site-specific review of the site to determine the presence or absence of water features. If water features are present and disturbance is required, federal and state laws require measures to reduce, avoid, or compensate for impacts to these resources. The requirements of these federal and state laws are implemented through the permit process.

Subsequent development projects will be required to comply with the General Plan and adopted state, federal, and local regulations for the protection of sensitive natural communities, including riparian habitat. The City of Sebastopol has prepared the General Plan to include numerous policies and action measures intended to protect wetlands and waters of the U.S. from adverse effects associated with future development and improvement projects.

The General Plan Conservation Element includes numerous policies specifically designed to address wetland features within the Planning Area. Policy COS 2-1 calls for the Protection and enhancement of sensitive habitats, which include creek corridors, wetlands, vernal pools, riparian areas, fish migration corridors, waters of the United States, sensitive natural communities, and other habitats designated by State and Federal agencies. Policy COS 3-1 requires the protection of streams, channels, seasonal and permanent marshland, wetlands, sloughs, riparian habitat, and vernal pools through sound land use planning, community design, and site planning.

Additionally, The General Plan Conservation Element includes numerous policies specifically designed to address other water features within the Planning Area. Policy COS 3-2 pursues a wide range of opportunities to protect water quality and manage local surface water resources. Policy COS 3-3 supports rehabilitation of any culverted or open existing channelized waterways, as feasible, to remove concrete linings and allow for a connection between the stream channel and the natural water table. Avoid creating additional culverted or open channelized waterways, unless no other alternative is available to protect human health, safety, and welfare. Policy COS 3-4 requires where feasible, the restoration of any existing culverted or channelized waterways to a more natural condition. Restoration efforts should provide for naturalized hydraulic functioning. Restoration should also promote the growth of riparian vegetation to effectively stabilize banks, screen pollutants from runoff entering the channel, enhance fisheries, and provide other opportunities for natural habitat restoration. Policy COS 3-6 requires the use and site design integration of natural features such as bioswales, vegetation, retention ponds, and other measures to remove surface water pollutants prior to discharge into surface waters. Policy COS 3-8 requires new development to include maintained and managed setbacks and buffers along creeks, wetlands, riparian corridors, and adjacent to sensitive habitat. Policy COS 3-10: requires the city to consult with State and Federal agencies during the development review process to help identify wetland and riparian habitat that has candidacy for restoration, conservation, and/or mitigation.

Policy COS 3-12 supports non-regulatory programs for protection of streams and riparian habitat, including education, technical assistance, tax incentives, and voluntary efforts to protect riparian resources.

While future development has the potential to result in impacts to protected water features, the implementation of the policies and action measures listed below, as well as compliance with federal and state regulations, would reduce impacts to these resources to a **less than significant** level.

2016 GENERAL PLAN POLICIES AND ACTIONS THAT MITIGATE POTENTIAL IMPACTS

Policies

Policy COS 2-1: Protect and enhance sensitive habitats, which include creek corridors, wetlands, vernal pools, riparian areas, wildlife and fish migration corridors, native plant nursery sites, waters of the United States, sensitive natural communities, and other habitats designated by State and Federal agencies.

Policy COS 2-2: Preserve and enhance Sebastopol's and the region's natural habitats and rich biodiversity including, but not limited to, grasslands, freshwater marshes, wetlands, vernal pools, riparian areas, aquatic habitat, oak woodlands, and agricultural lands.

Policy COS 2-5: Implement a range of measures and tools in order to protect, enhance and restore environmentally sensitive areas.

Policy COS 2-6: Maintain Zoning Ordinance provisions to ensure that development proposals for land which is located within, or adjacent to, an environmentally sensitive area include a resources analysis that contains all of the information required in order for the City to determine that impacts to sensitive habitat and natural resources have been reduced, avoided, or mitigated to the greatest extent feasible. The required content for the resources analysis is detailed in Action COS-2a.

Policy COS 3-1: Protect and enhance streams, channels, seasonal and permanent marshland, wetlands, sloughs, riparian habitat, and vernal pools through sound land use planning, community design, and site planning.

Policy COS 3-2: Aggressively pursue a wide range of opportunities to protect water quality and manage local surface water resources.

Policy COS 3-3: Support rehabilitation of any culverted or open existing channelized waterways, as feasible, to remove concrete linings and allow for a connection between the stream channel and the natural water table. Avoid creating additional culverted or open channelized waterways, unless no other alternative is available to protect human health, safety, and welfare.

Policy COS 3-4 Where feasible, support restoration of any existing culverted or channelized waterways to a more natural condition. Restoration efforts should provide for naturalized hydraulic functioning. Restoration should also promote the growth of riparian vegetation to effectively stabilize banks, screen pollutants from runoff entering the channel, enhance fisheries, and provide other opportunities for natural habitat restoration.

Policy COS 3-5: Require discretionary projects, as well as new flood control and stormwater conveyance projects, to integrate best management practices (BMPs) and natural features to the greatest extent feasible, while ensuring that these features adequately convey and control stormwater to protect human health, safety, and welfare. New flood control projects should utilize the natural benefits of slowing and spreading surface water runoff through natural features in order to promote groundwater infiltration, natural removal of contaminants, and enhancing riparian habitat health.

Policy COS 3-6: Require the use and site design integration of natural features such as bioswales, vegetation, retention ponds, and other measures to remove surface water pollutants prior to discharge into surface waters.

Policy COS 3-8: Require new development to include maintained and managed setbacks and buffers along creeks, wetlands, riparian corridors, and adjacent to sensitive habitat.

Policy COS 3-10: As appropriate, consult with State and Federal agencies during the development review process to help identify wetland and riparian habitat that has candidacy for restoration, conservation, and/or mitigation. Focus restoration and/or conservation efforts on areas that would maximize multiple beneficial uses for such habitat.

Policy COS 3-11: Where feasible, for major development or substantial public works projects, encourage and support multipurpose detention basins that provide water quality protection, storm water detention, open space amenities, and recreational amenities.

Policy COS 3-12: Support non-regulatory programs for protection of streams and riparian habitat, including education, technical assistance, tax incentives, and voluntary efforts to protect riparian resources.

Policy COS 3-13: Require setbacks from channelized and culverted creeks that could be candidates for future daylighting and restoration improvements.

Policy COS 3-14: Monitor wastewater discharge into the Laguna de Santa Rosa in order to protect water quality. Ensure that any wastewater discharged into the Laguna does not exacerbate water quality deterioration.

Policy COS 4-1: Recognize and protect the Laguna as a critical component to the essence of Sebastopol.

Policy COS 4-2: Protect, enhance, and restore sensitive habitats in the Laguna, and recognize that the Laguna provides a myriad of environmental benefits to the region's ecosystem.

Policy COS 4-5: Continuously seek opportunities to expand Laguna protection and preservation efforts through the acquisition of land within and adjacent to the Laguna.

Actions

Action COS-2a: Maintain Zoning Ordinance provisions to require development project proposals, infrastructure projects, long-range planning projects, and other projects that may potentially impact special-status species and sensitive resources to submit a resources analysis as part of the

project application which determines whether significant adverse impacts will occur. Evaluations shall be carried out by a qualified professional biologist approved by the Sebastopol Planning Department, and shall be funded by the project applicant. Generally, the resources analysis shall identify, describe, and locate, the following:

- *The type and location of all special-status plant and animal species;*
- *Riparian vegetation within at least 50 feet of the subject property;*
- *The location, type, functionality, and offsite connectivity of wetlands, if applicable;*
- *The location of protected native trees onsite (as defined by the Sebastopol Municipal Code);*
- *Potential archaeological, cultural, and historical resources, if applicable;*
- *Flood hazard areas, as defined by FEMA and/or the Department of Water Resources (DWR).*

The resources analysis shall determine, as applicable, the area and location of undeveloped land required to protect and enhance the continued viability of biotic resources, wetlands, and sensitive areas. The resources analysis shall identify land that is functionally a part of the nearby wetlands ecosystem, which should be preserved in a natural state.

Projects shall be designed to avoid impacts to sensitive resources; and in cases where impacts cannot be fully avoided, impacts shall be reduced. Where adverse impacts cannot be feasibly reduced or avoided through project design, projects shall include the implementation of site-specific or project-specific effective mitigation strategies developed by a qualified professional in consultation with state or federal resource agencies with jurisdiction (if applicable) that may include, but are not limited to, the following strategies:

- *Preservation of habitat and connectivity of adequate size, quality, and configuration to support the special-status species. Connectivity shall be determined based on the specifics of the species' needs.*
- *Project design measures, such as clustering of structures or locating project features to avoid known locations of special-status species and/or sensitive habitats.*
- *Provision of supplemental planting and maintenance of grasses, shrubs, and trees of similar quality and quantity to provide adequate vegetation cover to enhance water quality, minimize sedimentation and soil transport, and provide adequate shelter and food for wildlife.*
- *Protection for habitat and the known locations of special-status species through adequate buffering or other means to protect habitat functions.*
- *Provision of replacement habitat of like quantity and quality on- or off-site for special-status species. Preference shall be given to the preservation of habitat on-site or as close to the area of impact as feasible, so long as that habitat is of comparable quality.*

- *Enhancement of existing special-status species habitat values through restoration and replanting of native plant species.*

- *Provision of temporary or permanent buffers of adequate size (based on the specifics of the special-status species) to avoid nest abandonment by nesting migratory birds and raptors associated with construction and site development activities.*

- *Incorporation of the provisions or demonstration of compliance with applicable recovery plans for federally listed species.*

- *Monitoring of construction activities by a qualified biologist to avoid impacts to on-site special status species.*

Action COS-2b: Where sensitive biological habitats have been identified on or immediately adjacent to a project site, the project shall include appropriate mitigation measures identified by a qualified biologist, which may include, but are not limited to the following:

- *Pre-construction surveys for species listed under the State or Federal Endangered Species Acts, or species identified as special-status by the resource agencies, shall be conducted by a qualified biologist;*

- *Construction barrier fencing shall be installed around sensitive resources and areas identified for avoidance or protection, and to reduce potential soil compaction in sensitive areas; and*

- *Employees shall be trained by a qualified biologist to identify and avoid protected species and habitat.*

Action COS-2d: Through coordination with the U.S. Fish and Wildlife Service, California Department of Fish and Wildlife, and Sonoma County, continue to maintain and periodically update, a map of sensitive biological communities and habitat within the Sebastopol Planning Area. Ensure that this map and associated information is readily available to potential developers and the public.

Action COS-3a: Continue to implement the Storm Water mitigation requirements in the Sebastopol Municipal Code in order to protect and enhance the water quality of watercourses and water bodies by reducing pollutants in storm water discharges to the maximum extent practicable, by prohibiting non-storm water discharges to the storm drain system, and by improving water quality in "first flush" storm water flows.

Action COS-3b: Continue to implement the Wetlands District protection requirements in the Sebastopol Municipal Code in order to preserve and protect environmentally sensitive waterways and/or wetland areas. Review all development applications for consistency with the requirements of this Chapter, including use restrictions and development criteria established to protect surface water quality.

Action COS-3c: Continue to implement Creek Setback requirements of the Sebastopol Municipal Code in order to protect water quality, riparian habitat, and bank stability for all projects adjacent to creeks within the City.

Action COS-3d: Continue to require new development projects to construct and implement all applicable storm water retention and water quality requirement standards and improvements contained in the Santa Rosa LID Manual, or equivalent document that implements the City's storm water permit.

Action COS-3e: During updates to the City's Storm Drain System Utility Master Plan, identify opportunities to restore any channelized and culverted drainage systems to a naturalized condition, without compromising the conveyance effectiveness of the system, and identify standards and opportunities to construct new storm water drainage infrastructure utilizing natural drainage features and effective best management practices to remove pollutants from storm water runoff, while maintaining a system that effectively protects residents and businesses from flooding.

Action COS-3f: Utilize existing regulations and procedures, including but not limited to, the Zoning Ordinance, the design review process, and the environmental review process, in order to conserve wetlands and riparian habitat within the city limits and the Planning Area.

Action COS-3g: Coordinate with the California Department of Fish and Wildlife, Sonoma County, and local watershed protection groups to identify potentially impacted aquatic habitat within Sebastopol's Planning Area and to develop riparian management guidelines to be implemented by development, recreation, and other projects adjacent to creeks, streams, and other waterways. Efforts should be coordinated with the Laguna Wetlands Preserve Restoration and Management Plan.

Action COS-3h: Encourage volunteer-based programs that organize community creek restoration and/or clean-up events and provide public education regarding the benefits of city and regional water resources.

Action COS-3i: Provide a conservation page (or similar page) on the City's website that provides links to resource agencies (i.e., CDFW, USFWS, USACE, RWQCB, etc.) and provides information regarding local and regional conservation and environmental groups and programs, including the Atascadero Watershed Council and the Laguna de Santa Rosa Foundation, to the extent that the City has readily available information. Information that identifies creeks and tributaries affecting the Sebastopol area and the Laguna de Santa Rosa watershed should also be included.

Action COS-3j: Continue to identify which stormwater and drainage facilities are in need of repair and address these needs through the CIP process.

Action COS-3k: As part of the CIP process, identify channelized and buried creeks that may be suitable for naturalization and rehabilitation.

Action COS-3l: Preclude development that would adversely affect the natural vegetation, wildlife habitat, or rare or endangered species in designated wetland and riparian areas.

Action COS-3m: Periodically provide the Planning Commission and City Council with information regarding actions of the North Coast Regional Water Quality Control Board, the City of Santa Rosa, the Sonoma County Water Agency and other agencies within the Referral Area related to water quality protection efforts and activities.

Action COS-3n: Coordinate and collaborate with outside agencies, including but not limited to the North Coast Regional Water Quality Control Board, the City of Santa Rosa, and the Sonoma County Water Agency to implement regional water quality protection and improvement programs.

Action COS-3o: Develop maintenance guidelines for creeks and wetlands areas to reduce flooding, sedimentation and erosion while maintaining and/or enhancing the riparian vegetation and wildlife.

Action COS-3p: Label each stormwater inlet in the City to identify receiving waters. Signs should indicate the receiving watercourse and state that no dumping is permitted.

Action COS-4a: Implement the Laguna Wetlands Preserve Restoration and Management Plan as the primary tool to achieve the community's objectives for habitat protection, restoration, and public access in the Laguna.

Action COS-4b: Continue to work collaboratively with the Sonoma County Agricultural Preservation and Open Space District to secure funding for the protection and restoration of the Laguna, consistent with the guidance provided by the Laguna Wetlands Preserve Restoration and Management Plan.

Action COS-4c: Maintain and expand partnerships with federal, state, and local agencies to expand efforts to implement restoration and preservation goals in the Laguna.

Action COS-4d: Work with local non-profit and community groups to further the goals for the Laguna through community-based efforts.

Action COS-4e: Explore opportunities to expand the City's regulatory control over the management and preservation of the Laguna.

Action COS-4f: During the development review process, review all development applications for consistency with the Laguna Wetlands Preserve Restoration and Management Plan, and ensure that new development does not adversely impact habitat within the Laguna, or interfere with efforts to implement restoration and preservation efforts within the Laguna.

Action COS-4h: Establish and prioritize a list of parcels and areas around the Laguna for future acquisition and preservation.

Impact 3.4-4: General Plan implementation would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites (Less than Significant)

Habitat loss, fragmentation, and degradation resulting from land use changes or habitat conversion can alter the use and viability of wildlife movement corridors (i.e. linear habitats that naturally connect and provide passage between two or more otherwise disjunctive larger habitats or habitat fragments). Wildlife habitat corridors maintain connectivity for daily movement, travel, mate-seeking, and migration; plant propagation; genetic interchange; population movement in response to environmental change or natural disaster; and re-colonization of habitats subject to local extirpation or removal. The suitability of a habitat as a wildlife movement corridor is related

to, among other factors, the habitat corridor's dimensions (length and width), topography, vegetation, exposure to human influence, and the species in question.

Species utilize movement corridors in several ways. "Passage species" are those species that use corridors as thru-ways between outlying habitats. The habitat requirements for passage species are generally less than those for corridor dwellers. Passage species use corridors for brief durations, such as for seasonal migrations or movement within a home range. As such, movement corridors do not necessarily have to meet any of the habitat requirements necessary for a passage species' everyday survival. "Corridor dwellers" are those species that have limited dispersal capabilities – a category that includes most plants, insects, reptiles, amphibians, small mammals, and birds – and use corridors for a greater length of time.

Movement corridors for wildlife through Sebastopol include creeks, drainages, open space, as well as various low density or rural developed areas. Species using these areas include aquatic, terrestrial, and avian species. Many of the policies already presented have ancillary benefits of protecting movement habitat for wildlife. Additionally, Policy COS 2-1 ensures the protection of sensitive habitats, which include creek corridors, wetlands, vernal pools, riparian areas, wildlife and fish migration corridors, native plant nursery sites, waters of the United States, sensitive natural communities, and other habitats designated by State and Federal agencies. Policy COS 2-3 focuses conservation efforts on high priority conservation areas that contain suitable habitat for native, endangered, threatened, migratory, or special-status species and that can be managed with minimal interference from nearby urban land uses and are in proximity to other habitat corridors. Policy COS 3-8: requires new development to include maintained and managed setbacks and buffers along creeks, wetlands, riparian corridors, and adjacent to sensitive habitat.

Implementation of the policies and action measures listed below would ensure that all future projects are designed to facilitate the movement of wildlife to the greatest extent feasible. Where full design mitigation is not feasible, compliance with state and federal permit requirements would offset any potential impacts associated with project implementation through requirements to provide habitat connectivity and compensatory mitigation required by any applicable state or federal regulations. Adherence to the requirements of these policies would reduce this impact to a **less than significant** level.

2016 GENERAL PLAN POLICIES AND ACTIONS THAT MITIGATE POTENTIAL IMPACTS

Policies

Policy COS 1-2: Consider the effects of planning decisions on the overall health and wellbeing of the natural environment and regional ecosystems.

Policy COS 1-4: Recognize that all life within all ecosystems on our planet are deeply intertwined, and consider the inherent values of ecological goods and services as key principles when making planning decisions.

Policy COS 2-1: Protect and enhance sensitive habitats, which include creek corridors, wetlands, vernal pools, riparian areas, wildlife and fish migration corridors, native plant nursery sites, waters of

the United States, sensitive natural communities, and other habitats designated by State and Federal agencies.

Policy COS 2-2: Preserve and enhance Sebastopol's and the region's natural habitats and rich biodiversity including, but not limited to, grasslands, freshwater marshes, wetlands, vernal pools, riparian areas, aquatic habitat, oak woodlands, and agricultural lands.

Policy COS 2-3: Focus conservation efforts on high priority conservation areas that contain suitable habitat for native, endangered, threatened, migratory, or special-status species and that can be managed with minimal interference from nearby urban land uses and are in proximity to other habitat corridors.

Policy COS 2-4: Attempt to resolve conflicts between sensitive habitat areas and adjoining urbanized lands in a manner which recognizes the public interests in both resource protection and the need to provide for residential and job-generating land uses.

Policy COS 2-5: Implement a range of measures and tools in order to protect, enhance and restore environmentally sensitive areas.

Policy COS 2-6: Maintain Zoning Ordinance provisions to ensure that development proposals for land which is located within, or adjacent to, an environmentally sensitive area include a resources analysis that contains all of the information required in order for the City to determine that impacts to sensitive habitat and natural resources have been reduced, avoided, or mitigated to the greatest extent feasible. The required content for the resources analysis is detailed in Action COS-2a.

Policy COS 3-1: Protect and enhance streams, channels, seasonal and permanent marshland, wetlands, sloughs, riparian habitat, and vernal pools through sound land use planning, community design, and site planning.

Policy COS 3-2: Aggressively pursue a wide range of opportunities to protect water quality and manage local surface water resources.

Policy COS 3-3: Support rehabilitation of any culverted or open existing channelized waterways, as feasible, to remove concrete linings and allow for a connection between the stream channel and the natural water table. Avoid creating additional culverted or open channelized waterways, unless no other alternative is available to protect human health, safety, and welfare.

Policy COS 3-4 Where feasible, support restoration of any existing culverted or channelized waterways to a more natural condition. Restoration efforts should provide for naturalized hydraulic functioning. Restoration should also promote the growth of riparian vegetation to effectively stabilize banks, screen pollutants from runoff entering the channel, enhance fisheries, and provide other opportunities for natural habitat restoration.

Policy COS 3-8: Require new development to include maintained and managed setbacks and buffers along creeks, wetlands, riparian corridors, and adjacent to sensitive habitat.

Policy COS 3-10: As appropriate, consult with State and Federal agencies during the development review process to help identify wetland and riparian habitat that has candidacy for restoration,

conservation, and/or mitigation. Focus restoration and/or conservation efforts on areas that would maximize multiple beneficial uses for such habitat.

Policy COS 3-11: Where feasible, for major development or substantial public works projects, encourage and support multipurpose detention basins that provide water quality protection, storm water detention, open space amenities, and recreational amenities.

Policy COS 3-13: Require setbacks from channelized and culverted creeks that could be candidates for future daylighting and restoration improvements.

Policy COS 4-1: Recognize and protect the Laguna as a critical component to the essence of Sebastopol.

Policy COS 4-2: Protect, enhance, and restore sensitive habitats in the Laguna, and recognize that the Laguna provides a myriad of environmental benefits to the region's ecosystem.

Policy COS 4-5: Continuously seek opportunities to expand Laguna protection and preservation efforts through the acquisition of land within and adjacent to the Laguna.

Actions

Action COS-1a: Implement the policies and actions in the Conservation and Open Space Element, and all other relevant and applicable policies and actions throughout the General Plan, to provide for progressive, effective, and forward-thinking strategies to protect the natural environment and promote sustainability to the greatest extent feasible.

Action COS-2a: Maintain Zoning Ordinance provisions to require development project proposals, infrastructure projects, long-range planning projects, and other projects that may potentially impact special-status species and sensitive resources to submit a resources analysis as part of the project application which determines whether significant adverse impacts will occur. Evaluations shall be carried out by a qualified professional biologist approved by the Sebastopol Planning Department, and shall be funded by the project applicant. Generally, the resources analysis shall identify, describe, and locate, the following:

- *The type and location of all special-status plant and animal species;*
- *Riparian vegetation within at least 50 feet of the subject property;*
- *The location, type, functionality, and offsite connectivity of wetlands, if applicable;*
- *The location of protected native trees onsite (as defined by the Sebastopol Municipal Code);*
- *Potential archaeological, cultural, and historical resources, if applicable;*
- *Flood hazard areas, as defined by FEMA and/or the Department of Water Resources (DWR).*

The resources analysis shall determine, as applicable, the area and location of undeveloped land required to protect and enhance the continued viability of biotic resources, wetlands, and sensitive

areas. The resources analysis shall identify land that is functionally a part of the nearby wetlands ecosystem, which should be preserved in a natural state.

Projects shall be designed to avoid impacts to sensitive resources; and in cases where impacts cannot be fully avoided, impacts shall be reduced. Where adverse impacts cannot be feasibly reduced or avoided through project design, projects shall include the implementation of site-specific or project-specific effective mitigation strategies developed by a qualified professional in consultation with state or federal resource agencies with jurisdiction (if applicable) that may include, but are not limited to, the following strategies:

- *Preservation of habitat and connectivity of adequate size, quality, and configuration to support the special-status species. Connectivity shall be determined based on the specifics of the species' needs.*
- *Project design measures, such as clustering of structures or locating project features to avoid known locations of special-status species and/or sensitive habitats.*
- *Provision of supplemental planting and maintenance of grasses, shrubs, and trees of similar quality and quantity to provide adequate vegetation cover to enhance water quality, minimize sedimentation and soil transport, and provide adequate shelter and food for wildlife.*
- *Protection for habitat and the known locations of special-status species through adequate buffering or other means to protect habitat functions.*
- *Provision of replacement habitat of like quantity and quality on- or off-site for special-status species. Preference shall be given to the preservation of habitat on-site or as close to the area of impact as feasible, so long as that habitat is of comparable quality.*
- *Enhancement of existing special-status species habitat values through restoration and replanting of native plant species.*
- *Provision of temporary or permanent buffers of adequate size (based on the specifics of the special-status species) to avoid nest abandonment by nesting migratory birds and raptors associated with construction and site development activities.*
- *Incorporation of the provisions or demonstration of compliance with applicable recovery plans for federally listed species.*
- *Monitoring of construction activities by a qualified biologist to avoid impacts to on-site special status species.*

<u>Action COS-2b:</u> Where sensitive biological habitats have been identified on or immediately adjacent to a project site, the project shall include appropriate mitigation measures identified by a qualified biologist, which may include, but are not limited to the following:

- *Pre-construction surveys for species listed under the State or Federal Endangered Species Acts, or species identified as special-status by the resource agencies, shall be conducted by a qualified biologist;*

- *Construction barrier fencing shall be installed around sensitive resources and areas identified for avoidance or protection, and to reduce potential soil compaction in sensitive areas; and*

- *Employees shall be trained by a qualified biologist to identify and avoid protected species and habitat.*

Action COS-2d: Through coordination with the U.S. Fish and Wildlife Service, California Department of Fish and Wildlife, and Sonoma County, continue to maintain and periodically update, a map of sensitive biological communities and habitat within the Sebastopol Planning Area. Ensure that this map and associated information is readily available to potential developers and the public.

Action COS-3b: Continue to implement the Wetlands District protection requirements in the Sebastopol Municipal Code in order to preserve and protect environmentally sensitive waterways and/or wetland areas. Review all development applications for consistency with the requirements of this Chapter, including use restrictions and development criteria established to protect surface water quality.

Action COS-3c: Continue to implement Creek Setback requirements of the Sebastopol Municipal Code in order to protect water quality, riparian habitat, and bank stability for all projects adjacent to creeks within the City.

Action COS-3d: Continue to require new development projects to construct and implement all applicable storm water retention and water quality requirement standards and improvements contained in the Santa Rosa LID Manual, or equivalent document that implements the City's storm water permit.

Action COS-3e: During updates to the City's Storm Drain System Utility Master Plan, identify opportunities to restore any channelized and culverted drainage systems to a naturalized condition, without compromising the conveyance effectiveness of the system, and identify standards and opportunities to construct new storm water drainage infrastructure utilizing natural drainage features and effective best management practices to remove pollutants from storm water runoff, while maintaining a system that effectively protects residents and businesses from flooding.

Action COS-3f: Utilize existing regulations and procedures, including but not limited to, the Zoning Ordinance, the design review process, and the environmental review process, in order to conserve wetlands and riparian habitat within the city limits and the Planning Area.

Action COS-3g: Coordinate with the California Department of Fish and Wildlife, Sonoma County, and local watershed protection groups to identify potentially impacted aquatic habitat within Sebastopol's Planning Area and to develop riparian management guidelines to be implemented by development, recreation, and other projects adjacent to creeks, streams, and other waterways. Efforts should be coordinated with the Laguna Wetlands Preserve Restoration and Management Plan.

Action COS-3h: Encourage volunteer-based programs that organize community creek restoration and/or clean-up events and provide public education regarding the benefits of city and regional water resources.

Action COS-3i: Provide a conservation page (or similar page) on the City's website that provides links to resource agencies (i.e., CDFW, USFWS, USACE, RWQCB, etc.) and provides information regarding local and regional conservation and environmental groups and programs, including the Atascadero Watershed Council and the Laguna de Santa Rosa Foundation, to the extent that the City has readily available information. Information that identifies creeks and tributaries affecting the Sebastopol area and the Laguna de Santa Rosa watershed should also be included.

Action COS-3k: As part of the CIP process, identify channelized and buried creeks that may be suitable for naturalization and rehabilitation.

Action COS-3l: Preclude development that would adversely affect the natural vegetation, wildlife habitat, or rare or endangered species in designated wetland and riparian areas.

Action COS-3n: Coordinate and collaborate with outside agencies, including but not limited to the North Coast Regional Water Quality Control Board, the City of Santa Rosa, and the Sonoma County Water Agency to implement regional water quality protection and improvement programs.

Action COS-3o: Develop maintenance guidelines for creeks and wetlands areas to reduce flooding, sedimentation and erosion while maintaining and/or enhancing the riparian vegetation and wildlife.

Action COS-4a: Implement the Laguna Wetlands Preserve Restoration and Management Plan as the primary tool to achieve the community's objectives for habitat protection, restoration, and public access in the Laguna.

Action COS-4b: Continue to work collaboratively with the Sonoma County Agricultural Preservation and Open Space District to secure funding for the protection and restoration of the Laguna, consistent with the guidance provided by the Laguna Wetlands Preserve Restoration and Management Plan.

Action COS-4c: Maintain and expand partnerships with federal, state, and local agencies to expand efforts to implement restoration and preservation goals in the Laguna.

Action COS-4d: Work with local non-profit and community groups to further the goals for the Laguna through community-based efforts.

Action COS-4e: Explore opportunities to expand the City's regulatory control over the management and preservation of the Laguna.

Action COS-4f: During the development review process, review all development applications for consistency with the Laguna Wetlands Preserve Restoration and Management Plan, and ensure that new development does not adversely impact habitat within the Laguna, or interfere with efforts to implement restoration and preservation efforts within the Laguna.

Action COS-4h: Establish and prioritize a list of parcels and areas around the Laguna for future acquisition and preservation.

Impact 3.4-5: The General Plan would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance (Less than Significant)

The proposed project is a policy document, in which local policies are established. This EIR presents the numerous policies of the General Plan, many of which are intended to protect biological resources, including special status species, habitat, creeks, wetlands, and trees. The General Plan itself does not conflict with its policies. In addition, the General Plan supports the existing Tree Protection Ordinance. Action COS-6b required the City to continue to implement the Tree Protection Ordinance, which protects substantial trees, provides for removals in specified circumstances, and which requires a Tree Protection Plan (TPP) prepared by a certified arborist for projects that may affect protected trees. Action COS-6c calls for the review and possibly a revised the Tree Protection Ordinance in order to strengthen monitoring provisions for re-planting efforts, in order to ensure the long-term health and viability of re-planted trees.

Subsequent development projects will be required to comply with the General Plan policies, as well as the Municipal Code. Implementation of the policies and action measures listed below would ensure consistency with already established ordinances. This is a **less than significant** impact.

2016 GENERAL PLAN POLICIES AND ACTIONS THAT MITIGATE POTENTIAL IMPACTS

Policies

Policy COS 6-1: Conserve existing native vegetation where possible and integrate regionally native plant species into development and infrastructure projects where appropriate.

Policy COS 6-3: Avoid removal of large, mature trees that provide wildlife habitat or contribute to the visual quality of the environment through appropriate project design and building siting. If full avoidance is not possible, prioritize planting of replacement trees on-site over off-site locations. Replacement trees for high-quality mature trees should generally be of like kind, and provide for comparable habitat functionality, where appropriate site conditions exist.

Policy COS 6-4: Facilitate the preservation of existing trees, the planting of additional street trees, and the replanting of trees lost through disease, new construction or by other means.

Actions

Action COS-6a: Make available a list of plants and trees native to the region that are suitable for use in landscaping. The plant and tree species should be drought tolerant, available from local sources, and consideration should be given to the suitability of the plant and tree species for use as habitat to native animals, birds, and insects. The list should be provided online in a user-friendly format, and staff should direct project applicants to the list during site design review and approval.

Action COS-6b: Continue to implement the Tree Protection Ordinance, which protects substantial trees, provides for removals in specified circumstances, and which requires a Tree Protection Plan (TPP) prepared by a certified arborist for projects that may affect protected trees.

Action COS-6c: Review and possibly revise the Tree Protection Ordinance in order to strengthen monitoring provisions for re-planting efforts, in order to ensure the long-term health and viability of re-planted trees. Revisions should also address the current fee structure for violations of the TPP to ensure that violations are more costly than compliance with the TPP requirements.

Action COS-6d: Prepare and adopt a Street Tree Planting and Management Program establishing varieties, size and spacing requirements, maintenance standards, and priority planting schedules. This program shall give priority to those streets with heavy vehicular traffic and those which link open space and activity centers. The program shall ensure that trees provide adequate shade and are integrated into parking lots and community spaces in such a manner that tree health is maintained in the long term.

Impact 3.4-6: The General Plan would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan (Less than Significant)

There are no adopted habitat conservation plans or natural community conservation plans that are applicable to the proposed project. As such, implementation of the General Plan would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. The General Plan would have a **less than significant** impact relative to this topic.

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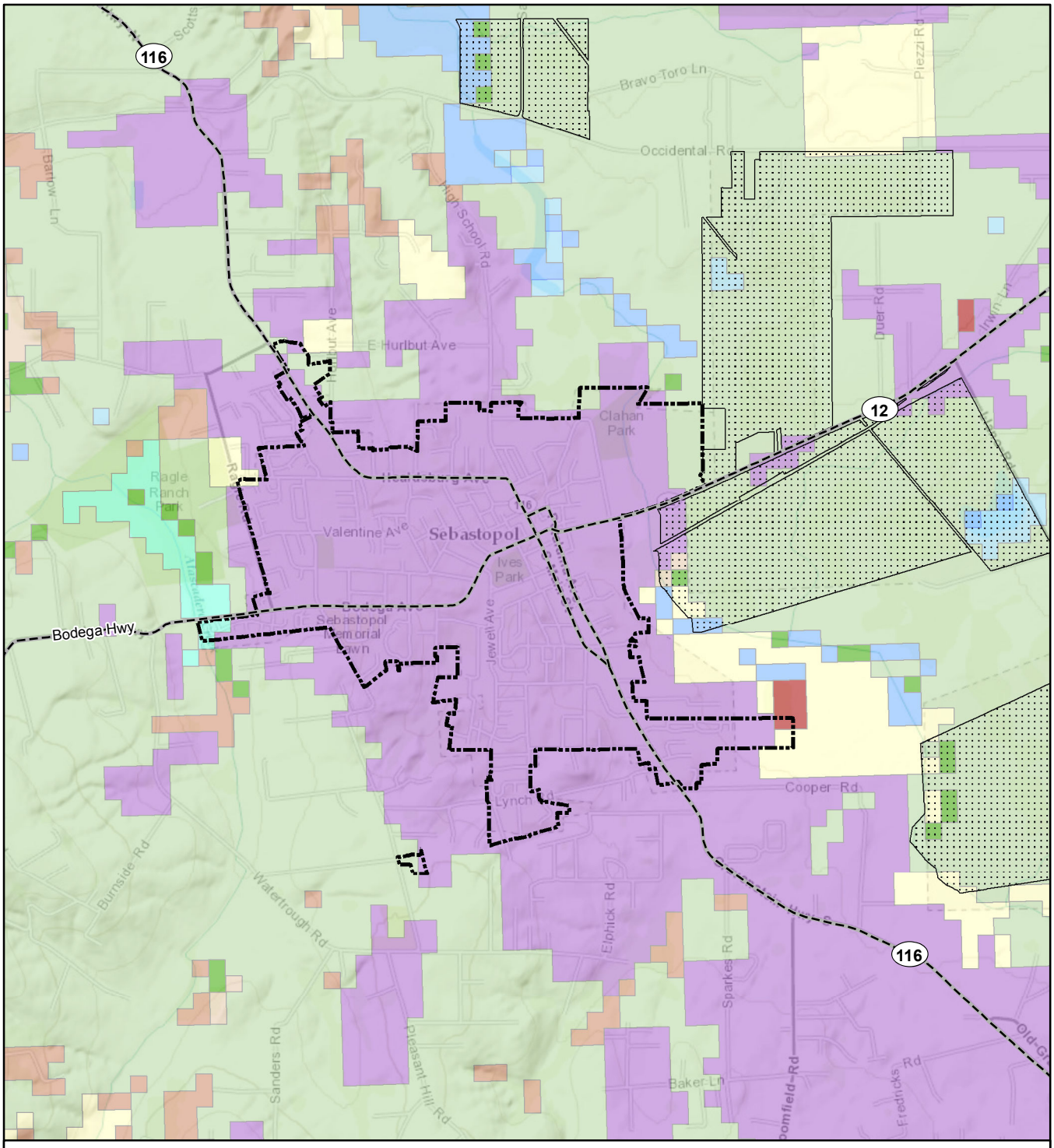

Wildlife-Habitat Relationship

- Agriculture
- Annual Grassland
- Eucalyptus
- Freshwater Emergent Wetland
- Montane Hardwood
- Montane Riparian
- Urban
- Valley Foothill Riparian
- Water
- Wet Meadow

City Boundaries

- Sebastopol
- Santa Rosa

Sebastopol General Plan Update

Figure 3.4-1: Land Cover Types

N

0 1,500 3,000
Feet

1:36,000

Data sources: Data sources: USGS National Hydrography Dataset; CalWater 2.1.1, National Resources Conservation Service, IWMC; Sonoma County GIS. Map date: June 26, 2014. (Sebas_Landcover_140626)

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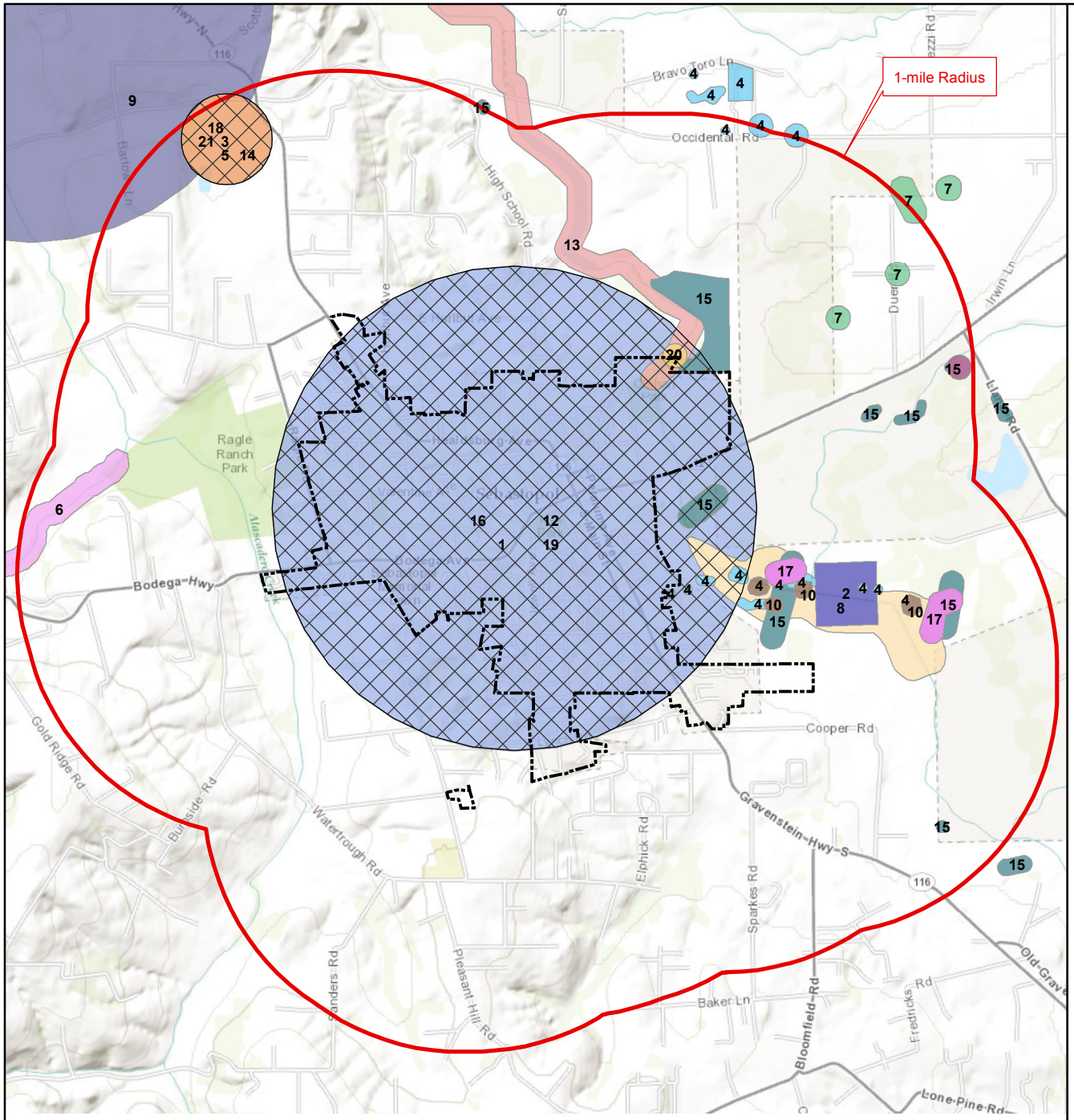

Data sources: Data sources: CDFG California Natural Diversity Database, June 3, 2014;
ArcGIS Online World Topo Map Basemap. Map date: June 26, 2014. (Sebas_CNDDB_01mi_140626_lscp)

SEBASTOPOL GENERAL PLAN UPDATE

Figure 3.4-2: CNDDB

1-Mile Radius Search

Map Label: Common Name: Occurrence Count

- 1: Baker's goldfields: 1
- 2: Baker's navarretia: 1
- 3: brownish beaked-rush: 1
- 4: Burke's goldfields: 2
- 5: California beaked-rush: 1
- 6: California freshwater shrimp: 1
- 7: California tiger salamander: 3
- 8: Coastal and Valley Freshwater Marsh: 1
- 9: golden larkspur: 1
- 10: Northern Hardpan Vernal Pool: 1
- 11: Northern Vernal Pool: 1
- 12: oval-leaved viburnum: 1
- 13: Peruvian dodder: 1
- 14: round-headed beaked-rush: 1
- 15: Sebastopol meadowfoam: 7
- 16: Sonoma spineflower: 1
- 17: Sonoma sunshine: 2
- 18: swamp harebell: 1
- 19: thin-lobed horkelia: 1
- 20: western pond turtle: 1
- 21: white seaside tarplant: 1

Area of Multiple Species Occurrence

N

0 0.25 0.5
Miles

1:40,000

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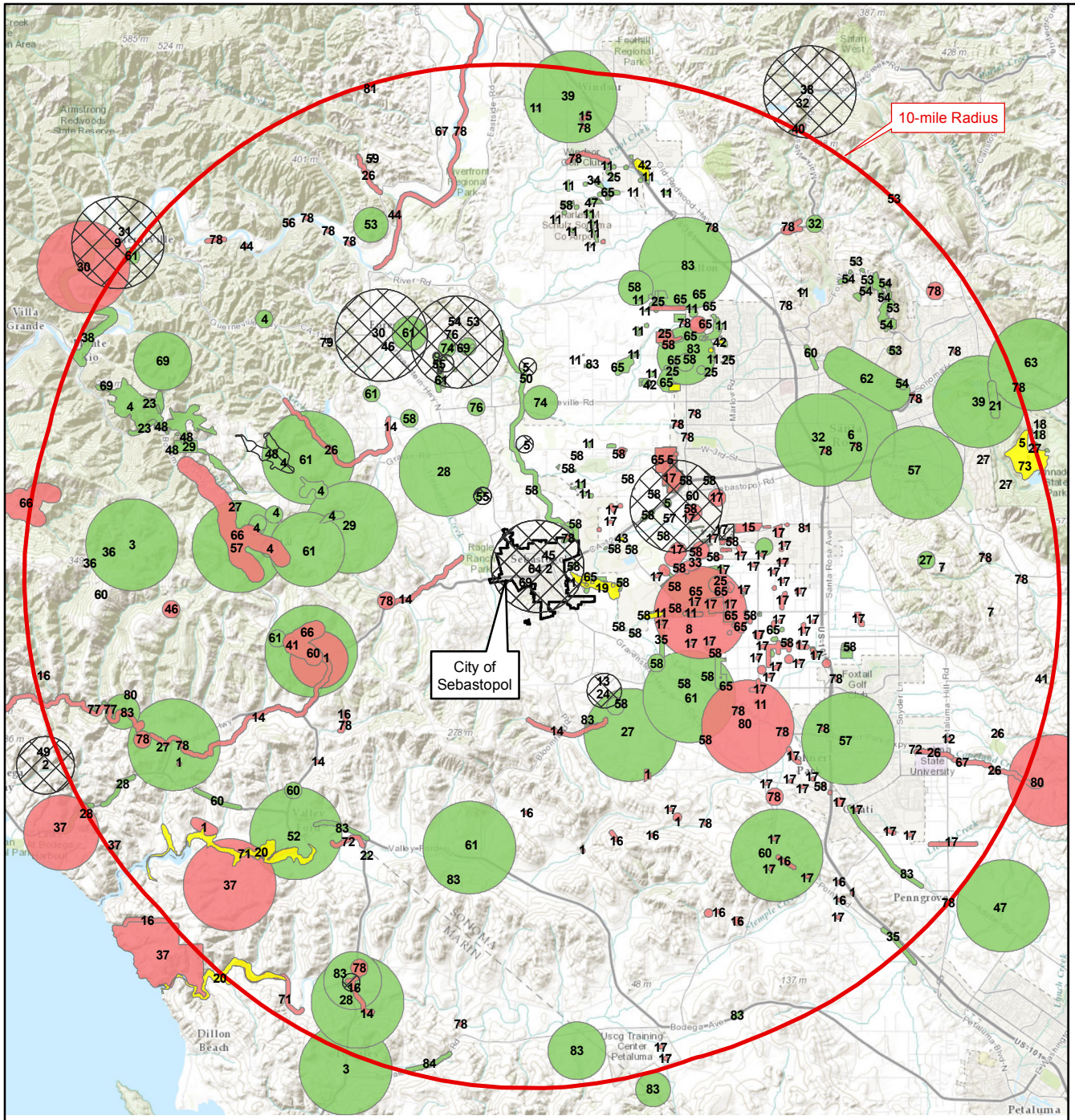
SEBASTOPOL GENERAL PLAN UPDATE

Figure 3.4-3: CNDDB 10-Mile Radius Search



Label	Common Name	Count
1	American badger	9
2	Baker's goldfields	2
3	Baker's larkspur	2
4	Baker's manzanita	8
5	Baker's navarretia	12
6	bent-flowered fiddleneck	1
7	big-scale balsamroot	2
8	Blennosperma vernal pool andrenid bee	2
9	bristly sedge	1
10	brownish beaked-rush	2
11	Burke's goldfields	23
12	burrowing owl	1
13	California beaked-rush	3
14	California freshwater shrimp	6
15	California linderiella	5
16	California red-legged frog	12
17	California tiger salamander	77
18	Calistoga ceanothus	1
19	Coastal and Valley Freshwater Marsh	1
20	Coastal Brackish Marsh	2
21	coastal triquetrella	1
22	Contra Costa goldfields	1
23	Crystal Springs lessingia	2
24	Cunningham Marsh cinquefoil	1
25	dwarf downingia	9
26	foothill yellow-legged frog	5
27	fragrant fritillary	9
28	golden larkspur	4
29	Greene's narrow-leaved daisy	2
30	hoary bat	2
31	holly-leaved ceanothus	1
32	Jepson's leptosiphon	3
33	legenere	1
34	many-flowered navarretia	1
35	marsh microseris	2
36	Methuselah's beard lichen	2
37	Myrtle's silverspot butterfly	4
38	Napa false indigo	2
39	narrow-anthered brodiaea	2
40	Navarro roach	1
41	North Coast semaphore grass	2
42	Northern Hardpan Vernal Pool	6

Label	Common Name	Count
43	Northern Vernal Pool	2
44	osprey	2
45	oval-leaved viburnum	1
46	pallid bat	3
47	pappose tarplant	2
48	Pennell's bird's-beak	4
49	perennial goldfields	1
50	Peruvian dodder	1
51	Pitkin Marsh paintbrush	2
52	Point Reyes checkerbloom	1
53	Rincon Ridge ceanothus	5
54	Rincon Ridge manzanita	5
55	round-headed beaked-rush	2
56	Russian River tule perch	1
57	saline clover	5
58	Sebastopol meadowfoam	39
59	serpentine daisy	1
60	showy rancheria clover	8
61	Sonoma alopecurus	11
62	Sonoma canescent manzanita	3
63	Sonoma ceanothus	1
64	Sonoma spineflower	1
65	Sonoma sunshine	16
66	Sonoma tree vole	3
67	steelhead - central California coast DPS	2
68	swamp harebell	2
69	thin-lobed horkelia	5
70	Thurber's reed grass	1
71	tidewater goby	2
72	tricolored blackbird	2
73	Valley Needlegrass Grassland	1
74	Vine Hill ceanothus	3
75	Vine Hill clarkia	3
76	Vine Hill manzanita	2
77	western leatherwood	1
78	western pond turtle	40
79	western red bat	1
80	western yellow-billed cuckoo	3
81	white-tailed kite	2
82	white beaked-rush	1
83	white seaside tarplant	18
84	wolly-headed gilia	2

Data sources: Data sources: CDFG California Natural Diversity Database, June 3, 2014; ArcGIS Online World Topo Map Basemap. Map date: June 30, 2014. (Sebas_CNDDB_10mi_140630_lscp)

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Cultural Resources are defined as buildings, sites, structures, or objects that may have historical, architectural, archaeological, cultural, or scientific importance. Preservation of the City's cultural heritage should be considered when planning for the future.

This section provides a background discussion of the prehistory, ethnology, historical period background, and cultural resources found in Sebastopol. This section is organized with an existing setting, regulatory setting, and impact analysis. One comment regarding cultural resources was received during the Notice of Preparation scoping period for the EIR. The Native American Heritage Commission provided comments relating to regulatory and consultation requirements, potential mitigation measures, and assessment of cultural resources.

Key Terms

Archaeology. The study of historic or prehistoric peoples and their cultures by analysis of their artifacts and monuments.

Paleontology. The science of the forms of life existing in former geologic periods, as represented by their fossils.

Ethnography. The study of contemporary human cultures.

Complex. A patterned grouping of similar artifact assemblages from two or more sites, presumed to represent an archaeological culture.

Midden. A deposit marking a former habitation site and containing such materials as discarded artifacts, bone and shell fragments, food refuse, charcoal, ash, rock, human remains, structural remnants, and other cultural leavings.

3.5.1 ENVIRONMENTAL SETTING

PREHISTORY

Harrington's (1948) investigation at CA-Lak-36--the Borax Lake Site--is the first major archeological project undertaken in the North Coast ranges. He found temporally diagnostic artifact forms that are now believed to span some 6,000 to 7,000 years duration. Meighan and Haynes (1970) returned to the Borax Lake Site in an attempt to differentiate temporally discrete archeological components. They were only partially successful in this endeavor, since radiometric dating was not possible. They used obsidian hydration analysis to sort the artifacts into temporal units. They tentatively established a hydration rate for the Borax Lake obsidian source and, thus, projected ages for the three components they recognized. These three basic components were an early fluted point tradition, a Borax Lake Complex occupation, and a later occupation characterized by Concave Based points.

The first regional synthesis of North Coast Ranges prehistory was formulated by Meighan (1955). He drew upon his own work at CA-Men-500 and data from as far north as Shasta County. Six complexes were defined: The Borax Lake, Mendocino, McClure, Wooden Valley, Clear Lake, and

Shasta. He did not distinguish a fluted point component preceding the Borax Lake component, and he assigned the Borax Lake Complex to an age range considerably earlier than is believed correct today. The succeeding Mendocino Complex was believed to be as broadly distributed as the Borax Lake Complex. It is characterized by Concave Base, Side Notched, and other comparatively large projectile point forms as well as the mano/metate and some use of the pestle/mortar.

The other complexes Meighan defined are regionally distinct, Late (i.e. Emergent) Period complexes, and only the Clear Lake Complex is applicable to the Sebastopol area. This complex apparently corresponds to the ethnographic Pomo. Its definition has been generally accepted by later investigators (Fredrickson 1973).

Fredrickson (1973) recognized four patterns in the North Coast Ranges. The earliest pattern is the Borax Lake Pattern, which he originally divided into two aspects: The Borax Lake aspect and the Thomes Creek Aspect. The early phase of the Borax Lake Pattern -- the Borax Lake Aspect -- is assigned by Fredrickson (1973) to the Early Archaic Period (6000 B.C. to 3000 B.C.). The millingstone (i.e. metate) and mano are common in this period, and Fredrickson believed that the people of these times were adapted primarily to grass seed collection and hunting, with a decided emphasis on the latter. The population units were small and highly mobile, and the entire social groups systematically moved to targeted, key resources. There was little occupation specialization in this adaptive strategy. Sites are often located above 5,000 feet in elevation.

The Mendocino Aspect was characterized by Concave Base and Willits Side Notch projectile points, manos and metates, and also the mortar and pestle. Sites generally occur in low elevation. This aspect existed in the area south and west of Clear Lake, and began no earlier than 3,000 B. C. on the north shores of the lake. The late Borax Lake Aspect, which continued to occupy the northern end of the lake, was characterized by Wide Stem and Concave Base points and manos and metates, with no mortar and pestle. Around 1 B.C., on the east side of the lake basin, the Mendocino- Aspect is replaced or assimilated by the Houx Aspect of the Berkeley Pattern, which emanated from the shores of San Francisco Bay to the south.

The Houx Aspect completely replaced the Mendocino Aspect in southern Sonoma County. However, within northern Sonoma County there is a mixture of Houx Aspect and Mendocino Aspect traits. The characteristic artifacts of the Houx Aspect of the Berkeley Pattern are the Excelsior point series, Houx Wide Stems, “burinated flakes,” and the heavy use of the bowl mortar and pestle. The processing of acorns is obviously of considerable importance to the Houx economy. Hunting is also inferred to be of importance because of the large number of projectile points found in many sites. The Houx Aspect endured until the beginning of the Emergent Period -- circa A.D. 500.

Hildebrandt and Hayes (1983) suggest that the Emergent Period was characterized by changes consisting of relative, if not absolute, population increase due to influxes of new peoples and a reduced resource base The adaptational strategy changed from “foraging” to “collecting.” The Emergent Period is characterized by the appearance of small comer-notched, side-notched, and triangular projectile points; the hopper mortar and pestles; clam shell disc beads; and smoking pipes -- all traits of the Augustine Pattern.

ETHNOLOGY

Southern Pomo

The inhabitants of Sebastopol at the time of Euro-American contact were members of the Southern Pomo (McLendon and Oswalt 1978). It is common to refer to the Pomo as if they were a tribe in the normal since of the word, but in fact, the term Pomo covers groups speaking seven mutually unintelligible, though related, languages. Therefore, the Southern Pomo had as much difficulty communicating with their Pomoan neighbors (the Central Pomo to the north and Kashaya to the west) as they did with the completely unrelated Wappo to the east and Coast Miwok to the south. The word Pomo is derived from two northern Pomo words, one the name of a village and the other a suffix indicating "those who live at ..." (McLendon and Oswalt 1978:277).

Pomo society was based on residential kin groups, with an emphasis on patrilineal ties. A village was comprised of one or more kin groups and had a chief or headman whose position was inherited patrilineally, although group approval was essential (Gifford and Kroeber 1939). The chief had little authority and acted in an advisory capacity to his people. The chief was aided by others who held leadership positions.

Residences were often multi-family and could house two to five nuclear families. Each family had their own entrance and fire hearth. Single-family dwellings were used. Menstrual huts were small and attached to the main house. A major village contained a semi-subterranean dancehouse that was owned by the headman. This was the largest structure in the village and had a tunnel entrance. The roof was heavily covered by earth (Peri et al. 1985:25, Figure 3b). Religious ceremonies and dances were conducted in the large structure. Many villages also had at least one semi-subterranean sweathouse similar to the dancehouse but smaller. The sweathouse was also owned by the chief. The sweathouse was used by the men of the village and served as a clubhouse.

Socially, there was considerable interaction between tribelets, and many groups assembled together for the annual "Big Time." These assemblages served several purposes, including ceremonies, arrangement of new marriages, and visiting by kin. Renewal of ceremonial and political relationships was a direct result of these “Big Times.” Trade was also conducted during these gatherings.

Trade was extensive, and exchange systems extended to the coast and also beyond the Central Valley. The Southern Pomo exchanged food, obsidian, wealth items, and other commodities. Their local food resources were augmented by import of seafoods from the west (Davis 1961). The production of clam shell disc beads was practiced by the Southern Pomo, who procured the shells from the Bodega Bay area. Magnesite occurs naturally near Clear Lake, and both finished and partially finished pieces were obtained.

The religious system of the Southern Pomo was complex, but much of the mythology has been lost. Rituals were performed during and individual's life cycle to insure his well-being (Peri et al. 1985: 149-154). Herbal treatment for minor illnesses was a common practice, but major illnesses required a special doctor. Both singing and sucking doctors were known.

The Southern Pomo held Ghost Society and Kuksu ceremonies. While the Ghost Society ceremonies were secret and attended only by initiated men, the Kuksu ceremonies were open to all and other villages were often asked to participate in the four-day-long happening that included dances, feasting, and speeches.

The Southern Pomo occupied permanent villages during the winter months, utilizing the stored foods collected during the preceding seasons. As spring commenced and vegetables began to ripen, the population dispersed into smaller camps away from the main villages. This was a strategy designed to better exploit the various food resources as they seasonally ripened.

Bulbs, seeds, berries, and nuts (particularly acorns) were gathered. Some were used raw while others were prepared for storage against the winter months. The acorns, the dietary staple, were harvested and dried for storage. The acorn contains tannin, and this bitter material required special treatment to remove it. The acorns were hulled and pounded with a pestle until a fine meal was obtained. The meal was then subjected to a leaching process that extracted the bitter tannin. Soup or bread could then be made of the processed meal. The men's activities were centered on fishing and hunting to provide the necessary protein for the diet. large game animals as well as a variety of small mammals were taken. Quail, pigeons, doves, and wild fowl were also hunted (Peri et al. 1985:86-95). Most game was consumed immediately, although venison was dried for winter use.

The Euro-American intrusions into California caused a disruption of Native lifeways that was catastrophic in scope. Shortly after the establishment of San Francisco Solano de Sonoma in 1823, the pressures of the zealous missionaries were brought to bear on the Southern Pomo. The Sonoma mission converted 996 Indians in the year of 1823 (Barrett 1908:44). To the west, the Russians were also causing disruption through their farming and fur trapping on the Russian River. Introduced diseases were perhaps the most serious problem the Indians then faced as they had no immunity to combat the contagious diseases.

After 1822, when Mexico declared itself independent of Spain, the expansion of land grants and encouragement of settlement intensified the problems of the Native populations. Enslavement of the Indians was a common practice as the rancheros needed a large labor force.

However deleterious the Spanish and Mexican intrusions were to the Pomo and other tribes, the American invasion of the 1840s was the most crushing. Certainly, the ravages of diseases and enforced labor were extensive, but the deliberate depopulation of the area by the Americans was nearly overwhelming. The Pomo were forced to march with little food to one of the several reservations (Theodoratus et al. 1975:50-52). Collecting his data long after these disruptions, Barrett was able to identify only one major village in Sebastopol: lá?lahqha meaning “wild goose spring” (McLendon and Oswalt 1978:280, Figure 3).

HISTORIC PERIOD BACKGROUND

The City lies at the near juncture of two Mexican land grants: Cañada de Jonive and Llano de Santa Rosa.

Cañada de Jonive, to the west, a 10,787 acre Mexican land grant, acquired by James Black from Governor Pío Pico in 1845. In 1849, Black traded this rancho to Jasper O'Farrell for his land grant Ranch Nicasio. O'Farrell married in 1849, and he and his wife settled on the Jonive Rancho, which they renamed the "Annaly Ranch." The spelling of the ranch name was later corrupted to "Analy." The O'Farrells' home was an adobe at the foot of Jonive Hill near the community of Freestone, which was later a store, and fell in 1906. The patent for the Rancho lands was issued in 1858 to Jasper O'Farrell (Hoover, Rensch and Rensch 1970).

The Llano de Santa Rosa land grant of 13,361 acres was made to Joaquín Carrillo, a brother-in-law of General Vallejo in 1845 by Governor Manuel Micheltorena. Carrillo built an adobe house near the western edge of the grant in 1846 on what is now Petaluma Avenue. Carrillo became the owner of two hotels in Sebastopol (the Analy and the Pioneer) as well as a saloon and boarding house. In 1871, the patent for the lands was issued to Carrillo. Carrillo lived in Sebastopol until his death in 1899 (Hoover, Rensch and Rensch 1970; Western Sonoma County Historical Society 2003).

The town of Sebastopol was started on the lands between the two ranchos by Joseph H.P. Morris. It was first named "Pine Grove" in 1853. At one point, there were five Sebastopols in California, all named soon after 1854 and the siege of the Russian seaport of that name by British and French forces.

This is the only town with this name to survive—Napa's Sebastopol is now Yountville and the Sebastopols in Tulare, Sacramento, and Nevada counties no longer exist. Local tradition places the renaming of the town as a result of a war of words between two parties at the general store, with one party waiting all day for the other to exit the store. When the post office was set to be established in the town, it was found there was already a Pine Grove in California so the name Sebastopol was selected (Gudde 1969; Western Sonoma County Historical Society 2003).

The early settlers of the region soon discovered the agricultural value of the land. Early crops included fruit, especially grapes and apples. Hops, cherries and berries later became important crops.

Another individual to recognize the importance of the agricultural value of the area was famed horticulturalist Luther Burbank. He started his work in Santa Rosa in 1878, but rapidly needed more space, and purchased 18 acres near Sebastopol on which he established the Gold Ridge Experimental Farm. He could plant large fields and was able to carry on even more extensive experiments with improvements to various crops through plant breeding, election and hybridization (Hoover, Rensch and Rensch 1970; Western Sonoma County Historical Society 2003). The cottage and three acres of the Gold Ridge Farm are now maintained by volunteers and is associated with the Western Sonoma County Historical Society.

An early connection was established with the completion of the Santa Rosa, Sebastopol & Green Valley Railroad, organized in 1887, and built as a standard gauge line from Santa Rosa to Sebastopol. The rail line was leased to the California Northwestern Railway in 1898, and sold to the Northwestern Railway Company in 1907 (Fickewirth 1992).

The City of Sebastopol was incorporated in 1902, reportedly with the main purpose of taking care of sewage problems. The City acquired land to build a sewage farm along the Laguna de Santa Rosa (Western Sonoma County Historical Society 2003).

In 1903, the Petaluma and Santa Rosa Railway Company was incorporated. The electric railway line was started in April of the following year, and completed by October 1904. The route provided transportation for Sebastopol residents to Santa Rosa, connecting to points beyond, especially with overnight freight service to San Francisco. The railroad line provided a means of quickly getting produce, lumber and dairy products to a wider market, as well as a means for more efficiently getting goods to Sebastopol.

As with the electric railway systems in other areas, the automobile brought about the end of the system in the 1920s and 1930s. People preferred personal automobiles, eliminating the passenger carrying needs, and trucking allowed the economical shipment and delivery of goods and products.

The original wooden depot built in Sebastopol for the railway in 1904, was replaced in 1917 by a stucco and stone building. This building is currently the site of the West County Museum, preserving and interpreting the history of the region (Western Sonoma County Historical Society 2003).

CULTURAL RESOURCES IN SEBASTOPOL GENERAL PLAN STUDY AREA

One hundred and eleven cultural resources have been identified within the Sebastopol area, according to files maintained by the Northwest Information Center (NWIC) of the California Historical Resources Information System (CHRIS). Please note that a number of these site are not in the City limits. The 111 recorded cultural resources span both the prehistoric and historic periods and range from Native American village sites to historic period farms and ranches. 101 of the 111 recorded resources are public and privately-owned buildings within the City of Sebastopol General Plan Area as identified on the Sonoma County Historic Property Data File Directory (see Tables 3.5-1 and 3.5-2).

TABLE 3.5-1: SEBASTOPOL AREA BUILDINGS LISTED ON THE SONOMA COUNTY HISTORIC PROPERTY DATA FILE DIRECTORY

PROPERTY #	ADDRESS	YEAR BUILT	NAME
004010	10145 Cherry Ridge Road, Sebastopol	1890	Not Listed
004011	1466 Cooper Road, Sebastopol	1890	Not Listed
003890	8008 Covert Lane, Sebastopol	1895	Mary Drake Sinclair House
004012	1301 Cunningham Road, Sebastopol	1890	Not Listed
004013	1420 Cunningham Road, Sebastopol	1880	Not Listed
003779	6794 Depot Street, Sebastopol	1935	Sebastopol Lumber Company
003780	6828 Depot Street, Sebastopol	1935	Diamond Lumber Company
003816	686 Du Franc Avenue, Sebastopol	1915	Not Listed
003817	695 Du Franc Avenue, Sebastopol	1915	Not Listed
003818	775 Du Franc Avenue, Sebastopol	1915	Not Listed
004014	Dupont Road, Sebastopol	1888	Old Morelli House

PROPERTY #	ADDRESS	YEAR BUILT	NAME
003902	746 Eastside Avenue, Sebastopol	1895	Not Listed
003947	Eleanor Avenue, Sebastopol	1905	Multiple Resource F
003945	460 Eleanor Avenue, Sebastopol	1905	Not Listed
003946	470 Eleanor Avenue, Sebastopol	1905	Not Listed
163277	483 Eleanor Avenue, Sebastopol	1936	Not Listed
003903	490 Eleanor Avenue, Sebastopol	1895	Not Listed
171224	7063 Elphick Road, Sebastopol	1930	Olson Ranch
003904	6851 Fannen Avenue, Sebastopol	1904	Not Listed
003905	6869 Fannen Avenue, Sebastopol	1900	Not Listed
163246	136 Florence Avenue, Sebastopol	1956	Not Listed
161670	136 Florence Avenue, Sebastopol	1956	Not Listed
003819	218 Florence Avenue, Sebastopol	1890	Borba House
003820	231 Florence Avenue, Sebastopol	1905	Not Listed
003821	241 Florence Avenue, Sebastopol	1905	Not Listed
003822	253 Florence Avenue, Sebastopol	1903	George Strout House/Strout Kimball
003823	331 Florence Avenue, Sebastopol	1905	Not Listed
003824	348 Florence Avenue, Sebastopol	1890	Not Listed
003825	382 Florence Avenue, Sebastopol	1905	Not Listed
003826	470 Florence Avenue, Sebastopol	1905	Not Listed
004015	5800 Fredericks Road, Sebastopol	1900	Not Listed
136842	655 Gold Ridge Road, Sebastopol	1905	Nicolas W. Meyer Fruit Ranch
003896	Golden Ridge Avenue	1900	Multiple Resource G
004016	11062 Graton Road, Sebastopol	1910	Not Listed
004018	Gravenstein Highway, Sebastopol	1880	Not Listed
004019	1200 Gravenstein Highway, Sebastopol	1932	Enmanji Temple
004017	4353 Gravenstein Highway, Sebastopol	1850	Llano Roadhouse
171300	Gravenstein Highway S, Sebastopol	1960	Apartment #3
171242	Gravenstein Highway S, Sebastopol	1913	Davis Farm / Craftsman House
171223	1235 Gravenstein Highway S, Sebastopol	1930	Not Listed
171226	1382 Gravenstein Highway S, Sebastopol	1949	Sequoia Mini-Mart and Drive-In
171225	1382 Gravenstein Highway S, Sebastopol	1885	Italianate House
171228	1382 Gravenstein Highway S, Sebastopol	1915	Antique Store
171227	1382 Gravenstein Highway S, Sebastopol	Not Listed	Discount Store
171233	1550 Gravenstein Highway S, Sebastopol	1958	Ranch House
171232	1550 Gravenstein Highway S, Sebastopol	1940	Craftsman House
171235	1610 Gravenstein Highway S, Sebastopol	1920	Craftsman House

PROPERTY #	ADDRESS	YEAR BUILT	NAME
171236	1610 Gravenstein Highway S, Sebastopol	1950	Chicken Coop House
003871	7215 Bodega Avenue, Sebastopol	1920	Not Listed
003811	7220 Bodega Avenue, Sebastopol	1910	Not Listed
003872	7224 Bodega Avenue, Sebastopol	1920	Not Listed
003873	7238 Bodega Avenue, Sebastopol	1920	Not Listed
003874	7246 Bodega Avenue, Sebastopol	1920	Not Listed
003875	7249 Bodega Avenue, Sebastopol	1920	Not Listed
003876	7308 Bodega Avenue, Sebastopol	1920	Not Listed
003877	7311 Bodega Avenue, Sebastopol	1920	Not Listed
003878	7320 Bodega Avenue, Sebastopol	1920	Not Listed
003879	7330 Bodega Avenue, Sebastopol	1920	Not Listed
003880	7340 Bodega Avenue, Sebastopol	1920	Not Listed
003812	7402 Bodega Avenue, Sebastopol	1890	Not Listed
003813	7410 Bodega Avenue, Sebastopol	1906	Joseph Frates House, Frates House
003814	7450 Bodega Avenue, Sebastopol	1930	Sebastopol Union Elementary School
003887	7691 Bodega Avenue, Sebastopol	1900	Not Listed
003888	8124 Bodega Avenue, Sebastopol	1905	Not Listed
004002	Bodega Highway, Sebastopol	1860	Not Listed
003889	7777 Bodega Highway, Sebastopol	1890	Gold Ridge Farm
004003	Bohemian Highway, Sebastopol	1860	Freestone, Freestone Historic District
003999	160 Bohemian Highway, Sebastopol	1900	Not Listed
004004	201 Bohemian Highway, Sebastopol	1887	Freestone School
003996	215 Bohemian Highway, Sebastopol	1910	Not Listed
003995	281 Bohemian Highway, Sebastopol	1900	Not Listed
004005	306 Bohemian Highway, Sebastopol	1873	Hends Hotel, Freestone Hotel
003997	475 Bohemian Highway, Sebastopol	1880	Not Listed
004001	480 Bohemian Highway, Sebastopol	1900	Not Listed
003998	489 Bohemian Highway, Sebastopol	1890	Not Listed
004006	500 Bohemian Highway, Sebastopol	1872	Wards General Merchandise
004000	500 Bohemian Highway, Sebastopol	1872	Not Listed
004007	520 Bohemian Highway, Sebastopol	1880	Not Listed
003886	Bonnardel Avenue, Sebastopol	1920	Multiple Resource B
003815	422 Bonnardel Avenue, Sebastopol	1900	Not Listed
003882	428 Bonnardel Avenue, Sebastopol	1920	Not Listed
003883	442 Bonnardel Avenue, Sebastopol	1920	Not Listed
003884	452 Bonnardel Avenue, Sebastopol	1920	Not Listed
003885	462 Bonnardel Avenue, Sebastopol	1920	Not Listed
003807	Burnett Street, Sebastopol	1905	Multiple Resource C
003778	7136 Burnett Street, Sebastopol	1895	Not Listed

PROPERTY #	ADDRESS	YEAR BUILT	NAME
003804	7147 Burnett Street, Sebastopol	1905	Not Listed
003805	7159 Burnett Street, Sebastopol	1905	Not Listed
003806	7169 Burnett Street, Sebastopol	1905	Not Listed
004008	4300 Burnside Road, Sebastopol	1870	Not Listed
003944	Calder Avenue, Sebastopol	1895	Multiple Resource D
003938	7127 Calder Avenue, Sebastopol	1905	Not Listed
003939	7137 Calder Avenue, Sebastopol	1905	Not Listed
003940	7138 Calder Avenue, Sebastopol	1905	Not Listed
003941	7148 Calder Avenue, Sebastopol	1895	Not Listed
003942	7149 Calder Avenue, Sebastopol	1905	Not Listed
003943	7158 Calder Avenue, Sebastopol	1895	Not Listed
003898	7224 Calder Avenue, Sebastopol	1895	Van Loghem House
003899	7231 Calder Avenue, Sebastopol	1910	Duer House
003900	7301 Calder Avenue, Sebastopol	1915	B D Lindermann House, Vina Mylan House
003901	7304 Calder Avenue, Sebastopol	1915	Not Listed
004009	4200 Canfield Road, Sebastopol	1860	John Taber House

SOURCE: SONOMA COUNTY HISTORIC PROPERTY DATA FILE DIRECTORY.

TABLE 3.5-2: ADDITIONAL BUILDINGS LISTED ON THE CALIFORNIA INVENTORY OF HISTORIC RESOURCES

LOCATION	NAME
Sebastopol	Petaluma and Santa Rosa Railway Powerhouse (N1707)
Sebastopol	Sebastopol Depot of the Petaluma and Santa Rosa Railway (N1937)

SOURCE: SONOMA COUNTY HISTORIC PROPERTY DATA FILE DIRECTORY.

CONSULTATION

As part of the outreach efforts associated with the General Plan Update, letters were sent to the following tribes and tribal contacts, in compliance with SB 18, to request information regarding the General Plan Area:

- The Native American Heritage Commission;
- Ms. Patricia Hermosillo, Chairperson, Cloverdale Rancheria of Pomo Indians;
- Mr. Mario Hermosillo, Jr., Tribal Environmental Planner, Cloverdale Rancheria of Pomo Indians; Mr. Harvey Hopkins, Chairperson, Dry Creek Rancheria of Pomo Indians;
- Ms. Marjorie Mejia, Chairperson, Lytton Rancheria of California;
- Ms. Lisa Miller, Tribal Administrator, Lytton Rancheria of California;
- Mr. Emilio Valencia, Chairperson, Stewarts Point Rancheria;
- Ms. Nina Hapner, Environmental Planning Department, Stewarts Point Rancheria;
- Mr. Otis Parish, Tribal Historic Preservation Office, Stewarts Point Rancheria;

- Mr. Greg Sarris, Chairperson, The Federated Indians of Graton Rancheria; Mr. Gene Buvelot, The Federated Indians of Graton Rancheria;
- Ya-Ka-Ama; and
- Western Sonoma County Historical Society

The Native American Heritage Commission responded with a letter dated February 21, 2014. On June 3, 2014, Mr. Otis Parish, Tribal Historic Preservation Office, Stewarts Point Rancheria, responded via email stating: *"This letter constitutes our answer to your letter regarding The City of Sebastopol General Plan Study Area consultation. The City of Sebastopol is out of The Kashia Band of Pomo Indians of the Stewarts Point Rancheria's aboriginal cultural area of concern. Thus, we have no interest."*

A response dated June 16, 2014 was also received from Nick Tipon of the Sacred Sites Protection Committee of the Federated Indians of the Graton Rancheria. The Committee requested a meeting with the City to discuss existing policies and potential changes to policies. On January 12, 2016, the Sebastopol Planning Director and representatives from the General Plan Update consultant team met with representatives from the Federated Indians of the Graton Rancheria to discuss General Plan policies and local approaches towards the projection of cultural and historical resources within the Planning Area. No specific resources or previously unknown cultural or historical resources within the Planning Area were identified during the consultation meeting. As discussed in greater detail below, under the impact assessment section of this chapter, the Sebastopol General Plan has been developed to include extensive policies and actions aimed at reducing potential impacts to cultural and historical resources, and the policies included in the Draft General Plan were developed to be responsive and respectful of the concerns and priorities raised by the Federated Indians of the Graton Rancheria during consultation with the City.

PALEONTOLOGICAL RESOURCES

Among the natural resources deserving conservation and preservation, and potentially existing within the Planning Area, are the often unseen records of past life buried in the sediments and rocks below the pavement, buildings, soils, and vegetation which now cover most of the area. These records – fossils and their geologic context – undoubtedly exist in large quantities below the surface in many areas in and near the City of Sebastopol, and span millions of years in age of origin. Fossils constitute a non-renewable resource: Once lost or destroyed, the exact information they contained can never be reproduced.

Paleontology is the science that attempts to unravel the meaning of these fossils in terms of the organisms they represent, the ages and geographic distribution of those organisms, how they interacted in ancient ecosystems and responded to past climatic changes, and the changes through time of all of these aspects.

The sensitivity of a given area or body of sediment with respect to paleontologic resources is a function of both the potential for the existence of fossils and the predicted significance of any fossils which may be found there. The primary consideration in the determination of paleontologic sensitivity of a given area, body of sediment, or rock formation is its potential to include fossils.

Information that can contribute to assessment of this potential includes: 1) direct observation of fossils within the project area; 2) the existence of known fossil localities or documented absence of fossils in the same geologic unit (e.g., "Formation" or one of its subunits); 3) descriptive nature of sedimentary deposits (such as size of included particles or clasts, color, and bedding type) in the area of interest compared with those of similar deposits known elsewhere to favor or disfavor inclusion of fossils; and 4) interpretation of sediment details and known geologic history of the sedimentary body of interest in terms of the ancient environments in which they were deposited, followed by assessment of the favorability of those environments for the preservation of fossils.

The most general paleontological information can be obtained from geologic maps, but geologic cross sections (slices of the layer cake to view the third dimension) must be reviewed for each area in question. These usually accompany geologic maps or technical reports. Once it can be determined which formations may be present in the subsurface, the question of paleontological resources must be addressed. Even though a formation is known to contain fossils, they are not usually distributed uniformly throughout the many square miles the formation may cover. If the fossils were part of a bay environment when they died, perhaps a scattered layer of shells will be preserved over large areas. If on the other hand, a whale died in this bay, you might expect to find fossil whalebone only in one small area of less than a few hundred square feet. Other resources to be considered in the determination of paleontological potential are regional geologic reports, site records on file with paleontological repositories and site-specific field surveys.

Paleontologists consider all vertebrate fossils to be of significance. Fossils of other types are considered significant if they represent a new record, new species, an oldest occurring species, the most complete specimen of its kind, a rare species worldwide, or a species helpful in the dating of formations. However, even a previously designated low potential site may yield significant fossils.

3.5.2 REGULATORY SETTING

FEDERAL REGULATIONS

National Historic Preservation Act

Most regulations at the federal level stem from the National Environmental Policy Act (NEPA) and historic preservation legislation such as the National Historic Preservation Act (NHPA) of 1966, as amended. NHPA established guidelines to "preserve important historic, cultural, and natural aspects of our national heritage, and to maintain, wherever possible, an environment that supports diversity and a variety of individual choice." The NHPA includes regulations specifically for federal land-holding agencies, but also includes regulations (Section 106) which pertain to all projects that are funded, permitted, or approved by any federal agency and which have the potential to affect cultural resources. All projects that are subject to NEPA are also subject to compliance with Section 106 of the NHPA and NEPA requirements concerning cultural resources. Provisions of NHPA establish a National Register of Historic Places (The National Register) maintained by the National Park Service, the Advisory Councils on Historic Preservation, State Historic Preservation Offices, and grants-in-aid programs.

American Indian Religious Freedom Act and Native American Graves and Repatriation Act

The American Indian Religious Freedom Act recognizes that Native American religious practices, sacred sites, and sacred objects have not been properly protected under other statutes. It establishes as national policy that traditional practices and beliefs, sites (including right of access), and the use of sacred objects shall be protected and preserved. Additionally, Native American remains are protected by the Native American Graves and Repatriation Act of 1990.

Department of Transportation Act - Section 4(f)

The Department of Transportation (DOT) Act of 1966, is set forth in Title 49 United States Code (U.S.C.). This law established that it is the policy of the United States Government to make a special effort to preserve historic sites. The Secretary of Transportation may approve a transportation program or project that requires the use of a historic site of national, state, or local significance only if: a) There is no prudent and feasible alternative to using that land; and b) The program or project includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuge, or historic site resulting from the use.

Other Federal Legislation

Historic preservation legislation was initiated by the Antiquities Act of 1966, which aimed to protect important historic and archaeological sites. It established a system of permits for conducting archaeological studies on federal land, as well as setting penalties for noncompliance. This permit process controls the disturbance of archaeological sites on federal land. New permits are currently issued under the Archaeological Resources Protection Act (ARPA) of 1979. The purpose of ARPA is to enhance preservation and protection of archaeological resources on public and Native American lands. The Historic Sites Act of 1935 declared that it is national policy to "Preserve for public use historic sites, buildings, and objects of national significance."

STATE REGULATIONS

California Register of Historic Resources (CRHR)

California State law also provides for the protection of cultural resources by requiring evaluations of the significance of prehistoric and historic resources identified in documents prepared pursuant to the California Environmental Quality Act (CEQA). Under CEQA, a cultural resource is considered an important historical resource if it meets any of the criteria found in Section 15064.5(a) of the CEQA Guidelines. Criteria identified in the CEQA Guidelines are similar to those described under the NHPA. The State Historic Preservation Office (SHPO) maintains the CRHR. Historic properties listed, or formally designated for eligibility to be listed, on The National Register are automatically listed on the CRHR. State Landmarks and Points of Interest are also automatically listed. The CRHR can also include properties designated under local preservation ordinances or identified through local historical resource surveys.

California Environmental Quality Act (CEQA)

CEQA requires that lead agencies determine whether projects may have a significant effect on archaeological and historical resources. This determination applies to those resources which meet significance criteria qualifying them as "unique," "important," listed on the California Register of Historical Resources (CRHR), or eligible for listing on the CRHR. If the agency determines that a project may have a significant effect on a significant resource, the project is determined to have a significant effect on the environment, and these effects must be addressed. If a cultural resource is found not to be significant under the qualifying criteria, it need not be considered further in the planning process.

CEQA emphasizes avoidance of archaeological and historical resources as the preferred means of reducing potential significant environmental effects resulting from projects. If avoidance is not feasible, an excavation program or some other form of mitigation must be developed to mitigate the impacts. In order to adequately address the level of potential impacts, and thereby design appropriate mitigation measures, the significance and nature of the cultural resources must be determined. The following are steps typically taken to assess and mitigate potential impacts to cultural resources for the purposes of CEQA:

- identify cultural resources,
- evaluate the significance of the cultural resources found,
- evaluate the effects of the project on cultural resources, and
- develop and implement measures to mitigate the effects of the project on cultural resources that would be significantly affected.

California Public Resources Code

Section 5097 of the Public Resources Code specifies the procedures to be followed in the event of the unexpected discovery of historic, archaeological, and paleontological resources, including human remains, historic or prehistoric resources, paleontological resources on nonfederal land. The disposition of Native American burial falls within the jurisdiction of the California Native American Heritage Commission (NAHC). Section 5097.5 of the Code states the following:

> *No person shall knowingly and willfully excavate upon, or remove, destroy, injure or deface any historic or prehistoric ruins, burial grounds, archaeological or vertebrate paleontological site, including fossilized footprints, inscriptions made by human agency, or any other archaeological, paleontological or historical feature, situated on public lands, except with the express permission of the public agency having jurisdiction over such lands. Violation of this section is a misdemeanor.*

California Health and Safety Code

Section 7050.5 of the California Health and Safety Code requires that construction or excavation be stopped in the vicinity of discovered human remains until the county coroner can determine whether the remains are those of a Native American. If the remains are determined to be Native American, the coroner must contact the California Native American Heritage Commission. CEQA

Guidelines (Section 15064.5) specify the procedures to be followed in case of the discovery of human remains on non-federal land. The disposition of Native American burials falls within the jurisdiction of the Native American Heritage Commission.

Senate Bill 18 (Burton, Chapter 905, Statutes 2004)

SB 18, authored by Senator John Burton and signed into law by Governor Arnold Schwarzenegger in September 2004, requires local (city and county) governments to consult with California Native American tribes to aid in the protection of traditional tribal cultural places ("cultural places") through local land use planning. This legislation, which amended §65040.2, §65092, §65351, §65352, and §65560, and added §65352.3, §653524, and §65562.5 to the Government Code; also requires the Governor's Office of Planning and Research (OPR) to include in the General Plan Guidelines advice to local governments for how to conduct these consultations. The intent of SB 18 is to provide California Native American tribes an opportunity to participate in local land use decisions at an early planning stage, for the purpose of protecting, or mitigating impacts to, cultural places. These consultation and notice requirements apply to adoption and amendment of both general plans (defined in Government Code §65300 et seq.) and specific plans (defined in Government Code §65450 et seq.).

Assembly Bill 978

In 2001, Assembly Bill (AB) 978 expanded the reach of Native American Graves Protection and Repatriation Act of 1990 and established a state commission with statutory powers to assure that federal and state laws regarding the repatriation of Native American human remains and items of patrimony are fully complied with. In addition, AB 978 also included non-federally recognized tribes for repatriation.

3.5.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed project is considered to have a significant impact on cultural resources if it will:

- Cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines §15064.5;
- Cause a substantial adverse change in the significance of archaeological resource pursuant to CEQA Guidelines §15064.5;
- Directly or indirectly destroy a unique paleontological resource; or
- Disturb any human remains, including those interred outside of formal cemeteries.

IMPACTS AND MITIGATION MEASURES

Impact 3.5-1: General Plan implementation has the potential to result in a substantial adverse change in the significance of a historical or archaeological resource (Less than Significant)

A substantial adverse change in the significance of an historic resource is defined at Section 15064.5 (b)(1) of the CEQA Guidelines as the "physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired." Known historic and prehistoric resource sites are located throughout Sebastopol and the Planning Area, and it is expected that additional undiscovered sites may be located in various areas of the city as well. While the 2016 General Plan does not directly propose any adverse changes to any historic or archaeological resources, future development allowed under the General Plan could affect known historical and archaeological resources or unknown historical and archaeological resources which have not yet been identified. One-hundred-eleven cultural resources have been recorded within the Planning Area. The 111 recorded cultural resources span both the prehistoric and historic periods and range from Native American village sites to historic period farms and ranches.

It has been generally held that prehistoric Native American sites are most likely to occur where several environmental factors combine to provide readily available resources, such as at the interface between valley and hills. As future development and infrastructure projects are considered by the City, each project will be evaluated for conformance with the City's General Plan, Municipal Code, and other applicable state and local regulations. Subsequent development and infrastructure projects would also be analyzed for potential environmental impacts, consistent with the requirements of CEQA. The 2016 General Plan includes policies and actions that would reduce impacts to cultural, historic, and archaeological resources, as well as policies and actions for the conservation of cultural, historic, and archaeological resources.

Policies COS 10-5, COS 10-6, CD 3-1, and CD 3-2 encourage the protection and preservation of cultural and historic resources. Action COS-10c requires all development projects to consult with Native American representatives in the event of an inadvertent discovery of cultural resources or human remains. Additionally, Action COS-10c addresses the discovery of significant archaeological and historic resources during construction and grading activities, requiring that development work be stopped in the event of a discovery and that appropriate measures be implemented to protect the resource. Policies COS 10-5, COS 10-6, CD 3-1, and CD 3-2 encourage the preservation and reuse of historic buildings and structures to maintain their historical significance. Action COS-10e aims to develop a Historic Sebastopol program to identify and protect historic resources, encourage landowners to voluntarily preserve and rehabilitate historical structures, and to provide a coordinated approach to draw visitors and tourists to these areas. Additionally, Action COS-10f aims to develop guidelines for remodels of potentially historic residential structures to ensure that the character and individuality of such residences is maintained.

Adoption and implementation of the policies and actions listed below would ensure that adverse effects on significant historic and archaeological resources are reduced to a **less than significant** level.

2016 GENERAL PLAN POLICIES AND ACTIONS THAT MITIGATE POTENTIAL IMPACTS

Policies

Policy COS 10-1: *Review proposed developments and work in conjunction with the California Historical Resources Information System, Northwest Information Center at Sonoma State University, to determine whether project areas contain known archaeological resources, either prehistoric and/or historic-era, or have the potential for such resources.*

Policy COS 10-2: *If found during construction, ensure that human remains are treated with sensitivity and dignity, and ensure compliance with the provisions of California Health and Safety Code and California Public Resources Code.*

Policy COS 10-3: *Work with Native American representatives to identify and appropriately address, through avoidance or mitigation, impacts to Native American cultural resources and sacred sites during the development review process.*

Policy COS 10-5: *Protect important historic resources and use these resources to promote a sense of place and history in Sebastopol.*

Policy COS 10-6: *Encourage the voluntary identification, conservation, and re-use of historical structures, properties, and sites with special and recognized historic, architectural, or aesthetic value.*

Policy COS 10-8: *Leverage the City's strong cultural and historic heritage to support and encourage historically-oriented visitor programs and heritage tourism through cooperation with local, regional, and state marketing efforts.*

Policy CD 3-1: *Ensure historic buildings and resources are preserved for future generations.*

Policy CD 3-2: *Preserve significant historical structures by encouraging adaptive reuse opportunities of historic buildings for contemporary uses.*

Policy CD 3-3: *Identify and document historical, cultural, and archeological resources including significant sites and structures*

Policy CD 3-4: *Require new development to avoid the disruption of cultural, archeological, and historical resources to the greatest extent feasible.*

Policy CD 3-5: *Encourage and support an increased public awareness of local cultural and historical resources.*

Policy CD 3-6: *Ensure that restoration efforts of City owned historic structures adhere to the original architecture style and period detail of the original structure whenever feasible.*

Actions

Action COS-2a: Maintain Zoning Ordinance provisions to require development project proposals, infrastructure projects, long-range planning projects, and other projects that may potentially impact special-status species and sensitive resources to submit a resources analysis as part of the project application which determines whether significant adverse impacts will occur. Evaluations shall be carried out by a qualified professional biologist approved by the Sebastopol Planning Department, and shall be funded by the project applicant. Generally, the resources analysis shall identify, describe, and locate, the following:

- *The type and location of all special-status plant and animal species;*
- *Riparian vegetation within at least 50 feet of the subject property;*
- *The location, type, functionality, and offsite connectivity of wetlands, if applicable;*
- *The location of protected native trees onsite (as defined by the Sebastopol Municipal Code);*
- *Potential archaeological, cultural, and historical resources, if applicable;*
- *Flood hazard areas, as defined by FEMA and/or the Department of Water Resources (DWR).*

The resources analysis shall determine, as applicable, the area and location of undeveloped land required to protect and enhance the continued viability of biotic resources, wetlands, and sensitive areas. The resources analysis shall identify land that is functionally a part of the nearby wetlands ecosystem, which should be preserved in a natural state.

Projects shall be designed to avoid impacts to sensitive resources; and in cases where impacts cannot be fully avoided, impacts shall be reduced. Where adverse impacts cannot be feasibly reduced or avoided through project design, projects shall include the implementation of site-specific or project-specific effective mitigation strategies developed by a qualified professional in consultation with state or federal resource agencies with jurisdiction (if applicable) that may include, but are not limited to, the following strategies:

- *Preservation of habitat and connectivity of adequate size, quality, and configuration to support the special-status species. Connectivity shall be determined based on the specifics of the species' needs.*
- *Project design measures, such as clustering of structures or locating project features to avoid known locations of special-status species and/or sensitive habitats.*
- *Provision of supplemental planting and maintenance of grasses, shrubs, and trees of similar quality and quantity to provide adequate vegetation cover to enhance water quality, minimize sedimentation and soil transport, and provide adequate shelter and food for wildlife.*
- *Protection for habitat and the known locations of special-status species through adequate buffering or other means to protect habitat functions.*
- *Provision of replacement habitat of like quantity and quality on- or off-site for special-status species. Preference shall be given to the preservation of habitat on-site or as close to the area of impact as feasible, so long as that habitat is of comparable quality.*
- *Enhancement of existing special-status species habitat values through restoration and replanting of native plant species.*

- *Provision of temporary or permanent buffers of adequate size (based on the specifics of the special-status species) to avoid nest abandonment by nesting migratory birds and raptors associated with construction and site development activities.*
- *Incorporation of the provisions or demonstration of compliance with applicable recovery plans for federally listed species.*
- *Monitoring of construction activities by a qualified biologist to avoid impacts to on-site special status species.*

Action COS-10b: Require a cultural and archaeological survey prior to approval of any development project where a potential or known historical, archaeological, or other cultural resource is located or which would require excavation in an area that is sensitive for cultural or archaeological resources. If significant cultural or archaeological resources, including historic and prehistoric resources, are identified, the project shall be required to implement appropriate measures, such as avoidance, capping of the resource site, or documentation and conservation, to reduce adverse impacts to the resource to a less than significant level.

Action COS-10c: Require all development, infrastructure, and other ground-disturbing projects to comply with the following conditions in the event of an inadvertent discovery of cultural resources or human remains:

- *If construction or grading activities result in the discovery of significant historic or prehistoric archaeological artifacts or unique paleontological resources, all work within 100 feet of the discovery shall cease, the Planning Department shall be notified, the resources shall be examined by a qualified archaeologist, paleontologist, or historian for appropriate protection and preservation measures; and work may only resume when appropriate protections are in place and have been approved by the Planning Department.*
- *If human remains are discovered during any ground disturbing activity, work shall stop until the Planning Department and the County Coroner have been contacted; if the human remains are determined to be of Native American origin, the Native American Heritage Commission (NAHC) and the most likely descendants have been consulted; and work may only resume when appropriate measures have been taken and approved by the Planning Department.*

Action COS-10e: Develop a Historic Sebastopol program to identify and protect historic resources, encourage landowners to voluntarily preserve and rehabilitate historical structures, and to provide a coordinated approach to draw visitors and tourists to these areas. The program may include:

- *Coordinated signage and identifying placards of historic areas, including downtown, specific buildings, and businesses.*
- *Maps available on-line, at the Chamber of Commerce, and key locations of the City that direct visitors and history aficionados to key historic and cultural resources in the City.*
- *Establishment of local historic districts (such as the downtown) with standards to conserve historical resources and promote the highest and best use of such resources.*
- *Property owner incentives for the preservation and restoration of historic buildings and sites. Consider the following incentives: Interest-free or reduced interest loans for rehabilitation work consistent with the original character of the building; tax incentives for the*

preservation of historic structures, including the use of Mills Act preservation contracts; reduced processing fees for preservation and protection of outstanding buildings; use of the State Historic Building Code where applicable; a brochure that identifies resources to purchase materials and fixtures that are historically accurate in appearance but offer modern benefits (e.g., energy-efficient lighting, windows, building materials that correlate to specific architectural or historic periods that are often seen in the City); and awards and grants for the preservation and protection of outstanding buildings.

Action COS-10f: Develop guidelines for remodels of potentially historic residential structures to ensure that the character and individuality of such residences is maintained. The guidelines should address:

- *Design styles, age of home, and other criteria to determine applicability of the guidelines;*
- *Exterior features that are important and covered by the guidelines (e.g., siding and exterior finishes, windows, doors, roofs, porches, garages, outbuildings, and streetscapes);*
- *Standards for modifications and renovation, including the extent of changes that can occur; and*
- *Activities that are exempt from the guidelines, such as interior improvements and routine maintenance and repair.*

Action COS-10h:Continue to implement the Cultural Heritage Chapter of the Sebastopol Municipal Code encourage the protection, restoration, and enhancement of the City's aesthetic and historic attractions and resources.

Action CD 2a: Maintain and update the Downtown Plan as necessary to reflect the urban design goals. Updates to the Downtown Plan should:

- *Include provisions for quality publicly-accessible open spaces at appropriate locations that enhance the pedestrian experience and attract people to the Downtown;*
- *Provide standards for the appropriate design, scale, and edge treatment to define, and create publicly-accessible spaces that positively contribute to the character of the area and provide public access to community gathering, recreational, artistic, cultural, or natural amenities;*
- *Recognize Downtown's unique character as the oldest part of the City, and leverage historic resources to create a unique urban environment for Downtown; and*
- *Respect and respond to on-site and surrounding historic character in proposals for development.*

Action CD-3a: Work with federal, state, and local agencies, nonprofit organizations, educational institutions, and interested citizens to obtain funding and increase community involvement to enhance and preserve historical sites and structures.

Action CD-3b: Inventory historical and cultural resources and prepare a comprehensive survey of sites and structures including those of architectural significance.

Action CD-3e: Develop a priority list for the restoration and preservation of City owned structures, such as City Hall.

Action CD-3f: Encourage and assist property owners' restoration efforts whenever feasible. This includes providing preservation guidance for design elements, and assisting in the placement of structures on the National Register of Historic Places.

Action CD-3g: Develop and maintain standard conditions of approval and require, as necessary, CEQA review of development projects to ensure the preservation of historical and cultural resources.

Action CD-3h: Seek funding strategies such as grants and tax incentives (i.e. Mills Act) for historic building rehabilitation, and to promote historic preservation throughout the community.

Action CD-3i: Utilize the City's Cultural Heritage ordinance to recognize historically or culturally significant structures.

Impact 3.5-2: General Plan implementation has the potential to result in disturbance of human remains (Less than Significant)

Indications are that humans have occupied areas along the Laguna de Santa Rosa, east of Sebastopol, for at least 11,000 years and it is not always possible to predict where human remains may occur outside of formal burials. Therefore, excavation and construction activities allowed under the 2016 General Plan may yield human remains that may not be marked in formal burials.

As future development and infrastructure projects are considered by the City, each project will be evaluated for conformance with the City's General Plan, Municipal Code, and other applicable state and local regulations. Subsequent development and infrastructure projects would also be analyzed for potential environmental impacts, consistent with the requirements of CEQA. Under CEQA, human remains are protected under the definition of archaeological materials as being "any evidence of human activity." Public Resources Code Section 5097 has specific stop-work and notification procedures to follow in the event that Native American human remains are inadvertently discovered during development activities. The 2016 General Plan includes Policy COS 10-2, which requires that human remains are treated with sensitivity and dignity, and ensures compliance with the provisions of California Health and Safety Code Section 7050.5 and California Public Resources Code Section 5097.98. Action COS-10c includes specific provisions that must be enacted if human remains are inadvertently discovered during construction activities. Implementation of these policies and actions ensures that potential adverse impacts to human remains would be **less than significant**.

2016 General Plan Policies and Actions that Mitigate Potential Impacts

Policies

Policy COS 10-2: *If found during construction, ensure that human remains are treated with sensitivity and dignity, and ensure compliance with the provisions of California Health and Safety Code and California Public Resources Code.*

Actions

Action COS-10c: Require all development, infrastructure, and other ground-disturbing projects to comply with the following conditions in the event of an inadvertent discovery of cultural resources or human remains:

- *If construction or grading activities result in the discovery of significant historic or prehistoric archaeological artifacts or unique paleontological resources, all work within 100 feet of the discovery shall cease, the Planning Department shall be notified, the resources shall be examined by a qualified archaeologist, paleontologist, or historian for appropriate protection and preservation measures; and work may only resume when appropriate protections are in place and have been approved by the Planning Department.*
- *If human remains are discovered during any ground disturbing activity, work shall stop until the Planning Department and the County Coroner have been contacted; if the human remains are determined to be of Native American origin, the Native American Heritage Commission (NAHC) and the most likely descendants have been consulted; and work may only resume when appropriate measures have been taken and approved by the Planning Department.*

Impact 3.5-3: General Plan implementation has the potential to result in damage to or the destruction of paleontological resources (Less than Significant)

There are no known paleontological resources located in the Sebastopol Planning Area. However, development allowed under the 2016 General Plan could result in the discovery and disturbance of previously unknown or undiscovered paleontological resources. Geologic formations, including the Upper Cretaceous marine sedimentary rocks and various Quaternary subunits, that have a high to moderate potential for paleontological resources are present throughout many areas in California. As future development and infrastructure projects are considered by the City, subsequent development and infrastructure would also be analyzed for potential environmental impacts, consistent with the requirements of CEQA. The 2016 General Plan provides guidance regarding the conservation of paleontological resources, ensuring that any unique paleontological resources discovered during implementation of the General Plan are conserved appropriately. The implementation of Action COS-10c, listed above, would ensure potential impacts to paleontological resources are reduced to **less than significant**.

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Geology is the science and study of the solid Earth and the processes by which it is shaped and changed. Modern geology is publicly important for predicting and understanding natural hazards, including risks from seismicity, erosion, and landslides.

This section provides a background discussion of the seismic and geologic hazards, and other geologic hazards, soils and mineral resources found in the City of Sebastopol and the regional vicinity. This section is organized with an existing setting, regulatory setting, and impact analysis. No comments were received during the public review period or scoping meeting for the Notice of Preparation regarding this topic.

3.6.1 ENVIRONMENTAL SETTING

The City of Sebastopol is located in Sonoma County, approximately 15 miles east of the Pacific Ocean, and 52 miles north of San Francisco. The Sebastopol City limits encompass approximately 1,188 acres. The City's Sphere of Influence covers an additional 227 acres.

GEOMORPHIC PROVINCE

California's geomorphic provinces are naturally defined geologic regions that display a distinct landscape or landform. Earth scientists recognize eleven provinces in California. Each region displays unique, defining features based on geology, faults, topographic relief and climate. These geomorphic provinces are remarkably diverse. They provide spectacular vistas and unique opportunities to learn about earth's geologic processes and history. (California Department of Conservation, 2002).

The City of Sebastopol lies within the Coastal Range Geomorphic Province, which are northwest-trending mountain ranges (2,000 to 4,000, occasionally 6,000 feet elevation above sea level), and valleys. The ranges and valleys trend northwest, subparallel to the San Andreas Fault. Strata dip beneath alluvium of the Great Valley. To the west is the Pacific Ocean. The coastline is uplifted, terraced and wave-cut. The Coast Ranges are composed of thick Mesozoic and Cenozoic sedimentary strata. The northern and southern ranges are separated by a depression containing the San Francisco Bay. The northern Coast Ranges are dominated by irregular, knobby, landslide-topography of the Franciscan Complex. The eastern border is characterized by strike-ridges and valleys in Upper Mesozoic strata. In several areas, Franciscan rocks are overlain by volcanic cones and flows of the Quien Sabe, Sonoma and Clear Lake volcanic fields. The Coast Ranges are subparallel to the active San Andreas Fault. The San Andreas is more than 600 miles long, extending from Pt. Arena to the Gulf of California. West of the San Andreas is the Salinian Block, a granitic core extending from the southern extremity of the Coast Ranges to the north of the Farallon Islands. (California Department of Conservation, 2002).

REGIONAL GEOLOGY

The topography in Sonoma County is complex, which is directly correlated to the complex geology within the region. The County has several prominent mountain ranges and valleys, as well as coastal terraces. The Santa Rosa Plain is an important region within Sonoma County. The Valley forms a

wide basin that stretches from the San Pablo Bay in the south to Santa Rosa in the north. The Mayacamas and Sonoma Mountains geographically physically separate Sonoma County from Lake and Napa Counties. The Sonoma Valley runs north-south between the Sonoma Mountains on the west and the taller Mayacamas Mountains to the east. The City of Sebastopol is located on the northwest section of the Santa Rosa Plain, which is bordered by the Sonoma Mountains to the east, and a series of rolling hills and mountainous areas to the west. Southwest of Sebastopol are the Estero Lowlands (aka Petaluma Gap), which opens to the Pacific Ocean, and Bodega Bay.

Sonoma County's complex geology can be explained in part by the historical geological processes in the Coast Range. These geologic processes include volcanic, erosion, sedimentation, and tectonic processes. The formation of mountains with parallel valleys in Sonoma County is a result of the subduction of the Pacific Plate under the North American Plate causing accretionary wedging (the scraping of material at convergent plate boundaries). The San Andreas Fault system forms the border of these two tectonic plates. This fault system is more than 600 miles long, extending from Pt. Arena to the Gulf of California, and is located along the western boundary of the County, just 11 miles west of the City of Sebastopol. The San Andreas Fault system is responsible for the structural alignment and orientation of the mountains and valleys in the Coast Range (Sonoma County Water Agency, 2011).

Lithology and Stratigraphy

The region is predominantly marine and nonmarine sediments of the Pliocene and Quaternary with recent alluvium. The oldest geologic units in the region are the Franciscan Complex, which is Jurassic (208 to 146 million years ago) (mya) to Early Cretaceous (146 to 106 mya). The Franciscan Complex consists of folded and faulted sandstones, shale, conglomerates, chert, greenstone, and serpentinite rocks. In some areas these rocks occur as large intact blocks, and in others may occur as a mixture of rocks. Much younger Miocene (5 to 23 mya) to Pliocene (1.8 to 5 mya) sedimentary rocks, including the Wilson Grove Formation (marine sandstone, conglomerate, and tuff) and the Petaluma Formation (mostly non-marine claystone, mudstone, and siltstone) were deposited on top of the Franciscan Complex. During Pliocene time volcanic activity created widespread deposits of the Sonoma Volcanics (basalt, andesite, rhyolite, tuff, and other volcanic rocks) in the eastern portion of the County. Pleistocene (1.8 mya to 11,000 years ago) to Holocene (<11,000 years ago) alluvium constitutes the youngest geologic unit in the region. (California Department of Water Resources, 2004).

Local Hydrogeology

The City of Sebastopol is located within the Lower Laguna de Santa Rosa Subbasin, and the Green Valley Subbasin. The Laguna de Santa Rosa Subbasin drains an area of 62 square miles in Sonoma County, and includes the majority of the City of Sebastopol. The Green Valley Subbasin is a tributary to the Russian River, and drains an area of approximately 38 square miles. The northwest portion of Sebastopol and the town of Forestville are located in this watershed.

Both unconfined and confined aquifers are found within the Santa Rosa Plain Subbasin depending upon locations in the basin with respect to relatively continuous clay layers, folding and faulting. The waterbearing deposits underlying the basin include the Wilson Grove Formation, the Glen Ellen

Formation, the Petaluma Formation, and a younger and older alluvium. The Wilson Grove Formation is the major water-bearing unit in the western part of the basin and ranges in thickness from 300 feet to 1,500 feet. Deposited during the Pliocene, it is a marine deposit of fine sand and sandstone with thin interbeds of clay, silty-clay and some lenses of gravel. Interbedded and interfingered with the Wilson Grove Formation are Sonoma Volcanic sediments in the eastern basin separating the water-bearing units. Aquifer continuity and water quality are considered good based on the most current and detailed reference on the hydrogeology of the subbasin. (Sonoma County Water Agency, 2013).

FAULTS

Faults are classified as Historic, Holocene, Late Quaternary, Quaternary, and Pre-Quaternary according to the age of most recent movement (California Geological Survey, 2002). These classifications are described as follows:

- **Historic:** faults on which surface displacement has occurred within the past 200 years;
- **Holocene:** shows evidence of fault displacement within the past 11,000 years, but without historic record;
- **Late Quaternary:** shows evidence of fault displacement within the past 700,000 years, but may be younger due to a lack of overlying deposits that enable more accurate age estimates;
- **Quaternary:** shows evidence of displacement sometime during the past 1.6 million years; and
- **Pre-Quaternary:** without recognized displacement during the past 1.6 million years.

Faults are further distinguished as active, potentially active, or inactive. (California Geological Survey, 2002).

- **Active:** An active fault is a Historic or Holocene fault that has had surface displacement within the last 11,000 years.
- **Potentially Active:** A potentially active fault is a pre-Holocene Quaternary fault that has evidence of surface displacement between about 1.6 million and 11,000 years ago.
- **Inactive:** An inactive fault is a pre-Quaternary fault that does not have evidence of surface displacement within the past 1.6 million years. The probability of fault rupture is considered low; however, this classification does not mean that inactive faults cannot, or will not, rupture.

There are no known active or potentially active faults located within the Planning Area. However, there are numerous faults located in the region. Figure 3.6-1 illustrates the location of these faults. Below is a brief summary of the most notable faults in the region:

- **San Andreas Fault System**: The San Andreas Fault system is an active fault located approximately 11 miles west of the City of Sebastopol. The fault generally follows a northwest to southeast line and is capable of an 8.0 magnitude earthquakes. The fault is characterized as a right-lateral strike-slip fault. Major seismic events along this fault were recorded on April 18, 1906 (in the Northern segment) and on January 9, 1857 (in the Mojave segment). The most recent seismic event along this fault was the 1989 Loma Prieta earthquake, which occurred on October 18, 1989. The epicenter was on the San Andreas Fault roughly 56 miles south of San Francisco and 10 miles northeast of Santa Cruz, near Mt. Loma Prieta in the Santa Cruz Mountains. The focal depth was 11 miles (typical California earthquake focal depths are 4 to 6 miles). Loma Prleta ruptured the southernmost 30 miles of the break that caused the 1906 San Francisco Earthquake. The Loma Prieta earthquake registered at a magnitude 6.9, and was felt as far away as San Diego and Western Nevada (California Geological Survey, 2002).
- **Rodgers Creek Fault:** The Rodgers Creek Fault is an active fault located approximately 6 miles to the east of the City of Sebastopol. The fault generally follows a path that is parallel to the San Andreas Fault and is capable of a 7.0 magnitude earthquake. This fault is considered a northern extension of the Hayward Fault System, although there is no evidence that they connect under the San Pablo Bay. The fault is characterized as a right-lateral strike slip fault. There are no historical reports of land rupture; however, geologists estimate the most recent rupture to have occurred sometime between 1670 and 1776. (California Geological Survey, 2002).
- **Healdsburg Fault:** The Healdsburg Fault is an active fault located to the approximately 6 miles east of the City of Sebastopol. The Healdsberg Fault extends north from the Rodgers creek fault in Santa Rosa, and generally follows a path that is parallel to the San Andreas Fault and is capable of a 7.5 magnitude earthquake. This fault is considered to be a northern extension of the Rodgers Creek Fault, which is part of the Hayward Fault System. The fault is characterized as a right-lateral strike slip fault. The last reported event was recorded on 1969. (California Geological Survey, 2002).
- **Mayacama Fault**: The Mayacama Fault is an active fault located to the northwest of the City of Sebastopol. The fault generally follows a path that is parallel to the San Andreas Fault and is capable of a 7.5 magnitude earthquake. This fault is considered to be the northern-most extension of Hayward Fault System. The fault is characterized as a right-lateral slip fault. There are no historical reports of land rupture; however, geologists estimate the most recent rupture to have occurred sometime between 1520 and 1660. (California Geological Survey, 2002).
- **West Napa Fault:** The West Napa fault located approximately 25 miles east of the City of Sebastopol. The fault is associated with an approximately 57-km-long zone of late Quaternary deformation that trends along the western margin of the Napa Valley from near the City of St. Helena on the north to Carquinez Strait on the south. The fault has an overall better geomorphic expression than previously thought, and additional evidence of young fault activity has been observed through recent studies. Geologists from UC Davis now warn that the West Napa Fault, which in 2014 triggered the Bay Area's strongest earthquake in the past 25 years (6.0 magnitude), is longer and quicker-moving than previously thought.

SEISMIC HAZARDS

Seismic hazards include both rupture (surface and subsurface) along active faults and ground shaking, which can occur over wider areas. Ground shaking, produced by various tectonic phenomena, is the principal source of seismic hazards in areas devoid of active faults. All areas of the state are subject to some level of seismic ground shaking.

Several scales may be used to measure the strength or magnitude of an earthquake. Magnitude scales (ML) measure the energy released by earthquakes. The Richter scale, which represents magnitude at the earthquake epicenter, is an example of an ML. As the Richter scale is logarithmic, each whole number represents a 10-fold increase in magnitude over the preceding number. Table 3.6-1 represents effects that would be commonly associated with Richter Magnitudes:

TABLE 3.6-1: RICHTER MAGNITUDES AND EFFECTS

MAGNITUDE	*EFFECTS*
< 3.5	Typically not felt
3.5 – 5.4	Often felt but damage is rare
5.4 – < 6	Damage is slight for well-built buildings
6.1 – 6.9	Destructive potential over ±60 miles of occupied area
7.0 – 7.9	"Major Earthquake" with the ability to cause damage over larger areas
≥ 8	"Great Earthquake" can cause damage over several hundred miles

SOURCE: ASSOCIATION OF BAY AREA GOVERNMENTS, 2011.

Moment Magnitude (Mw) is used by the United States Geological Service (USGS) to describe the magnitude of large earthquakes in the U.S. The value of moment is proportional to fault slip multiplied by the fault surface area. Thus, moment is a measurement that is related to the amount of energy released at the point of movement. The Mw scale is often preferred over other scales, such as the Richter, because it is valid over the entire range of magnitudes. Moment is normally converted to Mw, a scale that approximates the values of the Richter scale.

Seismic ground shaking hazards are calculated as a probability of exceeding certain ground motion over a period of time, usually expressed in terms of "acceleration." The acceleration of the Earth during an earthquake can be described in terms of its percentage of gravity (g). For example, the 10% probability of exceedance in 50 years is an annual probability of 1 in 475 of being exceeded each year. This level of ground shaking has been used for designing buildings in high seismic areas. This probability level allows engineers to design buildings for larger ground motions than what we think will occur during a 50-year interval, which will make buildings safer than if they were only designed for the ground motions that we expect to occur in the next 50 years. The California Geological Survey estimates a 10% probability of exceeding 40-50 percent of gravity at peak ground acceleration over the next 50 years in the Sebastopol Planning Area, as well as other communities within the Santa Rosa Plain. As one moves east toward the Rodgers Creek Fault, or west toward the San Andres Fault, the estimates increase up to 60-70 percent of gravity at peak ground acceleration. Table 3.6-2 represents the California Geological Survey's estimates of the 10 percent probability of

exceedance in 50 years for City of Sebastopol, as well as the foothill and mountainous regions to the east and west of Sebastopol.

TABLE 3.6-2: PERCENT PROBABILITY OF EXCEEDANCE IN 50 YEARS (%G)

Sebastopol Planning Area	Foothills	Mountains
40-50%	50-60%	60-70%

Source: California Geological Survey,

Additionally, Table 3.6-3 below lists the most recent USGS 30-Year Earthquake Probabilities for prominent faults within the vicinity of the Planning Area that have the potential to produce major earthquakes (6.7 or higher).

TABLE 3.6-3 USGS 30-YEAR EARTHQUAKE PROBABILITIES

Fault Segment	30-Year Probability of Magnitude 6.7 or Higher
Rodgers Creek Fault	14.5%
Hayward Fault	14.3%
Green Valley Fault	6.8%
San Andreas Fault North Segment	6.4%
West Napa Fault	2.3%

SOURCE: USGS EARTHQUAKE HAZARDS PROGRAM EARTHQUAKE PROBABILITIES 2014-2044

In contrast, other scales describe earthquake intensity, which can vary depending on local characteristics. The Modified Mercalli Scale (MM) expresses earthquake intensity at the surface on a scale of I through XII. While there are no known active faults located within the City of Sebastopol, the area could experience considerable ground shaking generated by faults outside the City. For example, the City of Sebastopol could experience intensities of MM VII to VIII generated by seismic events occurring in the region (ABAG, 2011). The following table represents the potential effects of an earthquake based on the Modified Mercalli Intensities.

TABLE 3.6-4: MODIFIED MERCALLI INTENSITIES AND EFFECTS

MM	*EFFECTS*
I	Movement is imperceptible
II	Movement may be perceived (by those at rest or in tall buildings)
III	Many feel movement indoors; may not be perceptible outdoors
IV	Most feel movement indoors; Windows, doors and dishes will rattle
V	Nearly everyone will feel movement, sleeping people may be awakened;
VI	Difficulty walking; Many items fall from shelves, pictures fall from walls
VII	Difficulty standing; Vehicle shaking felt by drivers; Some furniture breaks
VIII	Difficulty steering vehicles; Houses may shift on foundations
IX	Well-built buildings suffer considerable damage; ground may crack
X	Most buildings and foundations and some bridges destroyed
XI	Most buildings collapse; Some bridges destroyed; Large cracks in ground
XII	Large scale destruction; Objects can be thrown into the air

SOURCE: ASSOCIATION OF BAY AREA GOVERNMENTS, 2011.

The Significant United States Earthquakes 1568 – 2009 data published by the USGS in the National Atlas identifies earthquakes that caused deaths, property damage, geologic effects, or were felt by populations near the epicenter. No significant earthquakes are identified within Sebastopol. However, significant earthquakes are documented in the regional vicinity, as identified in the following tables.

The City of Sebastopol could also be subject to major earthquakes along currently inactive or unrecognized faults. Two examples include the 1983 Coalinga Quake (6.5 magnitude) and the 1994 Northridge Quake (6.7 magnitude), which was an unknown fault, and a "blind" thrust fault over 10 miles below the surface, respectively. Table 3.6-5 shows significant earthquakes within the region.

TABLE 3.6-5: SIGNIFICANT EARTHQUAKES IN THE REGION

MAGNITUDE	*LOCATION*	*YEAR*
6.0	South Napa	2014
5.2	Yountville	2000
6.9	Loma Prieta (San Andreas)	1989
5.6	Santa Rosa (Rodgers Creek)	1969
5.7	Santa Rosa (Rodgers Creek)	1969
7.9	San Francisco (San Andreas)	1906
4.0 – 5.0	Santa Rosa	1899
6.8	Mendocino (San Andreas?)	1898
6.2	Mare Island	1898
5.1	Santa Rosa	1893
6.2	Winters	1892
6.4	Vacaville	1892
5.5	Napa – Sonoma	1891
4.0 – 5.0	Petaluma	1888
6.8	East San Francisco Bay (Hayward)	1868
6.5	Santa Cruz Mountains	1865
4.0 – 5.0	Santa Rosa	1865
6.8	San Francisco Peninsula	1838

SOURCE: CALIFORNIA GEOLOGICAL SURVEY, 2009, AND 2014

SEISMIC HAZARD ZONES

Alquist-Priolo Fault Zones

An active earthquake fault, per California's Alquist-Priolo Act, is one that has ruptured within the Holocene Epoch (≈11,000 years). Based on this criterion, the California Geological Survey identifies Earthquake Fault Zones. These Earthquake Fault Zones are identified in Special Publication 42 (SP42), which is updated as new fault data become available. The SP42 lists all counties and cities within California that are affected by designated Earthquake Fault Zones. The Fault Zones are delineated on maps within SP42 (Earthquake Fault Zone Maps).

There are no Alquist-Priolo Earthquake Fault Zones located within the City of Sebastopol; however, approximately 7.5 miles to the east lies the Rodgers Creek Fault, which is delineated as an Alquist-Priolo Fault Zone. Additionally, approximately 11 miles to the west lies the San Andres Fault, which is also delineated as an Alquist-Priolo Fault Zone. Figure 3.6-1 illustrates the location of the closest Alquist-Priolo Earthquake Fault Zone.

Seismic Hazard Zones

The state Seismic Hazards Mapping Act (1990) addresses hazards along active faults. The Northern California counties affected by the Seismic Hazard Zonation Program include Alameda, San Francisco, San Mateo and Santa Clara. The Southern California counties affected by the Program include San Bernardino, Los Angeles, Orange, and Ventura. There are not currently any seismic hazard zones mapped in Sonoma County.

Although there are no fault lines within the Planning Area, the potential damage to structures and to public safety from earthquakes remains significant. The 1906 earthquake reduced most of the Downtown Sebastopol area to rubble, and even the milder 1969 earthquake and the 1990 Loma Prieta earthquake caused minor damage to buildings Downtown. Since the 1969 earthquake, the City has implemented a successful program to reinforce masonry buildings. Currently, all unreinforced masonry structures have been renovated to comply with today's seismic standards (Sebastopol General Plan 1994).

Liquefaction

Liquefaction, which is primarily associated with loose, saturated materials, is most common in areas of sand and silt or on reclaimed lands. Cohesion between the loose materials that comprise the soil may be jeopardized during seismic events and the ground will take on liquid properties. Thus, liquefaction requires specific soil characteristics and seismic shaking.

In collaboration with the USGS Earthquake Hazard Program, the California Geological Survey (CGS) produces liquefaction Susceptibility Maps and identifies "Zones of Required Investigation" per the state's Seismic Hazard Zonation Program.

The article *Mapping Liquefaction-Induced Ground Failure Potential* (Youd and Perkins, 1978) provides a generalized matrix to demonstrate the relationship between liquefaction potential and depositional landscapes. The following table, which is recreated from Youd and Perkins, demonstrates the general relationship between the nature and age of sediment and the anticipated liquefaction potential.

TABLE 3.6-6: LIQUEFACTION POTENTIAL BASED ON SEDIMENT TYPE AND AGE OF DEPOSIT

SEDIMENT	*SUSCEPTIBILITY BASED ON AGE OF DEPOSITS (YEARS BEFORE PRESENT)*			
	MODERN (< 500 YEARS)	*HOLOCENE (< 10,000)*	*PLEISTOCENE (< 2MILLION)*	*PRE-PLEISTOCENE (> 2 MILLION)*
River Channel	Very High	High	Low	Very Low
Flood Plain	High	Moderate	Low	Very Low
Alluvial Fan/Plain	Moderate	Low	Low	Very Low
Lacustrine/Playa	High	Moderate	Low	Very Low
Colluvium	High	Moderate	Low	Very Low
Talus	Low	Low	Very Low	Very Low
Loess	High	High	High	- ? -
Glacial Till	Low	Low	Very Low	Very Low
Tuff	Low	Low	Very Low	Very Low
Tephra	High	High	- ? -	- ? -
Residual Soils	Low	Low	Very Low	Very Low
Sebka	High	Moderate	Low	Very Low
Un-compacted Fill	Very High	NA	NA	NA
Compacted fill	Low	NA	NA	NA

SOURCE: YOUD AND PERKINS, 1978

The CGS Liquefaction Susceptibility Maps and “Zones of Required Investigation” are produced per the state’s Seismic Hazard Zonation Program. In Northern California, the areas of high liquefaction potential identified by the CGS are confined to the nine counties comprising the Bay Area, which includes Sonoma County.

Liquefaction potential in the Planning Area includes designations ranging from "Very Low" to "Very High" potential. Approximately 78 acres in Sebastopol are considered “Moderately” susceptible to liquefaction, while 78 acres are “High”, and 9 acres are considered “Very High”. The remainder of the city is considered to have a very low susceptibility to liquefaction hazards. Areas within Sebastopol that are susceptible to liquefaction are predominantly located in the northeastern portion of the City. Figure 3.6-2 illustrates the liquefaction potential in the Planning Area.

Structural Damage

There are four seismic zones in the United States. The zones are numbered one through four, with Zone 4 representing the highest level of seismic hazard. There are more stringent design and construction standards for areas within Zones 3 and 4, which includes all of California. The City of Sebastopol is located in Seismic Zone 4, the most seismically active of the four seismic zones in the United States. As such, building design in the City of Sebastopol is subject to more stringent seismic design standards.

The susceptibility of a structure to damage from ground shaking is related to the structural design and construction quality, as well as the underlying foundation material. Newer buildings in California have generally been built to a seismic design standard that is anticipated to withstand ground shaking. However, seismic events can have particularly negative effects on older buildings

constructed of unreinforced masonry, including materials such as brick, concrete and stone, pre-1940 wood frame houses, and pre-1973 tilt-up concrete buildings. In most cases, these older buildings require retrofit, or they risk significant structural damage during an earthquake.

According to the Association of Bay Area Governments (ABAG), the City of Sebastopol contains approximately 150 acres of land that is in the high category of shaking potential. Furthermore, ABAG notes that 1,075 acres within the City are at moderate risk for shaking potential, due to the close proximity to both the Rogers Creek and San Andreas Fault zones.

OTHER GEOLOGIC HAZARDS

Soils

The soils in the Planning Area are predominately sediments and recent alluvium. The sediments are Haploxerults, Pelloxererts, and Palexeralfs, and the recent alluvium are Fluvaquentic Haploxerolls and Pelloxererts. The soil temperature regimes are mesic and thermic. Soil moisture regimes are xeric (nearly ustic) and aquic on the Santa Rosa Plain and vicinity. (Natural Resource Conservation Service, 2011).

According to the Natural Resource Conservation Service (2013), there are eight different soil series located in the Sebastopol Planning Area. These include the Blucher, Clear Lake, Cortina, Goldridge, Pajaro, Sebastopol, Steinbeck, and Wright series. Figure 3.6-3 presents a map of the soils located in the Planning Area. Information from the NRCS official soil description for these series is provided below.

- **Blucher:** The Blucher series consists of deep, somewhat poorly drained soils that formed in alluvium from mixed sources. Blucher soils are in basins and on alluvial fans and have slopes of 2 to 5 percent. The mean annual precipitation is about 40 inches. The mean annual temperature is about 60 degrees F.

- **Clear Lake:** The Clear Lake series consists of very deep, poorly drained soils that formed in fine textured alluvium derived from sandstone and shale. Clear Lake soils are in basins and in swales of drainageways. Slopes are 0 to 2 percent. The mean annual precipitation is about 20 inches and the mean annual air temperature is about 60 degrees F.

- **Cortina:** The Cortina series consists of very deep, somewhat excessively drained soils on alluvial fans and floodplains. These soils formed in gravelly alluvium from mixed rock sources. Slope ranges from 0 to 15 percent. The mean annual precipitation is about 16 inches and the mean annual temperature is about 62 degrees F.

- **Goldridge:** The Goldridge series consists of deep and very deep, moderately well drained soils formed in material weathered from weakly consolidated sandstone. Goldridge soils are on rolling uplands with slopes of 2 to 50 percent. The mean annual precipitation is 45 inches and the mean annual temperature is 56 degrees F.

- **Pajaro:** The Pajaro series consists of somewhat poorly drained fine sandy loam. These soils are underlayn by mixed alluvial material derived from a variety of sedimentary sources. The soils are on alluvial floodplains in the valley, and low terraces areas. They are mainly found in the south-central and southwestern portion of the country between Petaluma and Two Rock, but are also found in the vicinity of Sebastopol. Slopes are 0 to 5 percent. Elevation ranges from 50 to 300 feet. Annual rainfall is 30 to 35 inches, annual temperature is 51 to 53 Degrees F.

- **Sebastopol:** The Sebastopol series consists of deep, well drained soils formed in material weathered from soft sandstone. Sebastopol soils are on old coastal terraces and have slopes of 2 to 30 percent. The mean annual precipitation is 40 inches and the mean annual temperature is 55 degrees F.

- **Steinbeck:** The Steinbeck series consists of deep, well drained soils that formed in material weathered from soft sand-stone. Steinbeck soils are on smooth rolling hills and have slopes of 2 to 50 percent. The mean annual precipitation is about 30 inches and the mean annual temperature is about 55 degrees F.

- **Wright:** The Wright series consists of deep, somewhat poorly drained soils formed in alluvium from mixed rock sources. Wright soils are on low terraces and have slopes of 0 to 9 percent. The mean annual precipitation is 30 inches and the mean annual temperature is 59 degrees F.

Erosion

The U.S. Natural Resources Conservation Service (NRCS) delineates soil units and compiles soils data as part of the National Cooperative Soil Survey. The following description of erosion factors is provided by the NRCS Physical Properties Descriptions:

- Erosion factor K indicates the susceptibility of a soil to sheet and rill erosion by water. Values of K range from 0.02 to 0.69. Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water. Erosion factor Kw indicates the erodibility of the whole soil, whereas Kf indicates the erodibiity of the fine soils. The estimates of Kw are modified by the presence of rock fragments. Value listed for K factor are used for factor K in the Universal Soil Loss Equation (USLE).

Soil erosion data for the City of Sebastopol were obtained from the NRCS. Figure 3.6-4 depicts the soil erosion susceptibility in the Planning Area. As identified in the table below, the erosion factor Kw varies from 0.10 to 0.43, which is considered low to high potential for erosion. Within Sebastopol the majority of soils fall within the low to moderate range for erosion potential. Table 3.6-7 displays the soil erosion factors for soils found within the Planning Area.

TABLE 3.6-7: SOIL EROSION FACTORS

Map symbol and soil name	Kw	Representative value		
		% Sand	% Silt	% Clay
BcA—BLUCHER FINE SANDY LOAM, OVERWASH, 0 TO 2 PERCENT SLOPES	0.2	53.6	22.8	23.6
BhB—BLUCHER LOAM, 2 to 5 PERCENT SLOPES	0.32	32.9	41.8	25.3
CeA—CLEAR LAKE CLAY, 0 TO 2 PERCENT SLOPES	0.15	22.1	27.9	50
CfA—CLEAR LAKE CLAY, PONDED, 0 TO 2 PERCENT SLOPES	0.15	22.1	27.9	50
CrA—CORTINA VERY GRAVELLY SANDY LOAM, 0 TO 2 PERCENT SLOPES	0.10	48.0	40.4	11.6
GdC—GOLDERIDGE FINE SANDY LOAM, 2 TO 9 PERCENT SLOPES	0.10	60.5	15.0	24.5
GdD—GOLDRIDGE FINE SANDY LOAM, 9 TO 15 PERCENT SLOPES	0.10	60.5	15.0	24.5
GdE —GOLDRIDGE FINE SANDY LOAM 15 TO 30 PERCENT SLOPES	0.10	60.5	15.0	24.5
GdE2—GOLDRIDGE FINE SANDY LOAM 15 TO 30 PERCENT SLOPES, ERODED	0.17	63.2	14.9	21.9
SbC—SEBASTOPOL SANDY LOAM, 2 TO 9 PERCENT SLOPES	0.24	46.6	24.1	29.3
SbD—SEBASTOPOL SANDY LOAM, 9 TO 15 PERCENT SLOPES	0.28	39.3	27.0	33.7
SbD2—SEBASTOPOL SANDY LOAM, 9 TO 15 PERCENT SLOPES, ERODED	0.28	39.3	27.0	33.7
SbE—SEBASTOPOL SANDY LOAM, 15 TO 30 PERCENT SLOPES	0.28	39.3	27.0	33.7
SnD2—STEINBECK LOAM, 9 TO 15 PERCENT SLOPES, ERODED	0.24	53.4	24.1	22.5
SnE2—STEINBECK LOAM 15 TO 30 PERCENT SLOPES, ERODED	0.24	55.5	19.1	25.4
WgC—WRIGHT LOAM, 0 TO 9 PERCENT SLOPES	0.43	37.3	31.1	31.6
WoA—WRIGHT LOAM, SHALLOW, WET, 0 TO 2 PERCENT SLOPES	0.43	35.2	29.7	35.1
PaA—PAJARO FINE SANDY LOAM, 0 TO 2 PERCENT SLOPES	0.24	65.6	24.7	9.7

SOURCE: NATURAL RESOURCE CONSERVATION SERVICE, 2013.

Expansive Soils

The NRCS delineates soil units and compiles soils data as part of the National Cooperative Soil Survey. The following description of linear extensibility (aka shrink-swell potential, or expansive potential) is provided by the NRCS Physical Properties Descriptions:

"Linear extensibility" used to determine the shrink-swell potential of soils, refers to the change in length of an unconfined clod as moisture content is decreased from a moist to a dry state. It is an expression of the volume change between the water content of the clod at 1/3- or 1/10-bar tension (33kPa or 10kPa tension) and oven dryness. The volume change is reported in the table as percent change for the whole soil. The amount, ratio, and type of clay minerals in the soil influence volume change.

The shrink-swell potential is low if the soil has a linear extensibility of less than 3 percent; moderate if 3 to 6 percent; high if 6 to 9 percent; and very high if more than 9 percent. If the linear extensibility is more than 3, shrinking and swelling can cause damage to buildings, roads, and other structures and to plant roots. Special design commonly is needed.

The linear extensibility of the soils within Sebastopol ranges from Low to High. Figure 3.6-5 illustrates the shrink-swell potential of soils in the Planning Area. Over 95 percent of the Planning Area has low expansive soils, while a small area in the northwestern portion of the Planning Area has high expansive soils. The high expansive soils located within the city limits are in areas that are currently used as parks and open space near the Laguna De Santa Rosa, including Clahan Park and the Laguna Wetlands Preserve. No portion of the high expansive soils are located in highly developed areas of Sebastopol. The areas with high expansive soils would require special design considerations due to shrink-swell potentials.

Landslides

The California Geological Survey classifies landslides with a two-part designation based on Varnes (1978) and Cruden and Varnes (1996). The designation captures both the type of material that failed and the type of movement that the failed material exhibited. Material types are broadly categorized as either rock or soil, or a combination of the two for complex movements. Landslide movements are categorized as falls, topples, spreads, slides, or flows.

Landslide potential is influenced by physical factors, such as slope, soil, vegetation, and precipitation. Landslides require a slope, and can occur naturally from seismic activity, excessive saturation, and wildfires, or from human-made conditions such as construction disturbance, vegetation removal, wildfires, etc.

Within Sonoma County, the hillsides have a medium to high susceptibility for landslides, while the valleys have a lower susceptibility. Figure 3.6-6 illustrates the landslide potential in the vicinity of the Planning Area. Given the relatively gentle slopes throughout the City of Sebastopol, the landslide potential is moderate in the majority of the City, and low in a small portion in the northeast corner of the City. The landslide potential increases in the foothills and mountains to the west of the Planning Area, and decreases to the west of the Planning Area. Furthermore, according to the Association of Bay Area Government's Risk Assessment Data, approximately 1,063 acres within the City of Sebastopol are subject to "few landslides".

Naturally Occurring Asbestos

The term "asbestos" is used to describe a variety of naturally occurring fibrous minerals that, when airborne, can result in serious human health effects. Naturally occurring asbestos is commonly associated with ultramafic rocks and serpentinite. Ultramafic rocks, such as dunite, peridotite and pyroxenite, are igneous rocks comprised largely of iron-magnesium minerals. As they are intrusive in nature, these rocks often undergo metamorphosis, prior to their being exposed on the Earth's surface. The metamorphic rock serpentinite is a common product of the alteration process. Naturally occurring asbestos is mapped in Sonoma County, although it is all located in mountainous areas. There is no naturally occurring asbestos mapped within the City of Sebastopol. Figure 3.6-7 illustrates the nearest areas that are more likely to contain naturally occurring asbestos.

Subsidence

Subsidence is the settlement of organic soils or of saturated mineral soils of very low density. Subsidence generally results from either desiccation and shrinkage, oxidation of organic material, or both, following drainage, or the over extraction of groundwater. Subsidence takes place gradually, usually over a period of several years.

The Natural Resource Conservation Service maps expected "initial subsidence," which usually is a result of drainage, and "total subsidence," which results from a combination of factors. While subsidence is an issue of concern in some areas of California, the Natural Resource Conservation Service does not identify it as an issue of concern in the City of Sebastopol.

Tsunami/Seiches

A tsunami is a series of ocean waves generated by sudden displacements in the sea floor, landslides, or volcanic activity. Seiches are standing oscillating waves that can occur in any semi-enclosed or fully-enclosed body of water (i.e. Bays and Lakes). Seiches are typically caused when strong winds and rapid changes in atmospheric pressure push water from one end of a body of water to the other. Both of these events can follow seismic, landslide and other events from local sources (California, Oregon, Washington coast) or distant sources (Pacific Rim, South American Coast, Alaska/Canadian coast).

The California Geological Survey notes 51 recorded tsunamis in central and southern California from 1812 to 2000. In northern California, Crescent City has had 17 recorded tsunamis in the past 60 years. Recorded tsunamis in California have ranged from less than a meter to six meters (approximately 20 feet). The most devastating tsunami to affect California in recent history was from the magnitude 9.2 Alaskan earthquake of 1964, which cause a 20-foot tall tsunami wave in northern California that flooded low-lying communities, and river valleys, killing 11 people.

An earthquake in the Cascadia subduction zone (northern California) is more likely to create tsunamis compared to the strike-slip faults south of Cape Mendocino because water is not typically displaced upward in the lateral movements caused by strike-slip faults. Although parts of Sonoma County are at risk of tsunami and seiche events, the City of Sebastopol is not within a tsunami or seiche hazard area due to its geographic location within the county.

Volcanism

The USGS identifies two principal areas of volcanic hazards in Northern California: the Shasta, Medicine Lake Highland, and Lassen Peak Area and the Clear Lake Area. Mount Shasta and Lassen Peak are located at the southern terminus of the Cascade Range and the associated subduction zones along the west coast of North America. The Clear Lake Volcanic Field is markedly different in its origins and topographic characteristics. Relative to tectonic activity, the Coast Range has been subjected primarily to the lateral faulting of the San Andreas system. The largest volcanic feature within the Clear Lake Field is Mount Konocti, located along the south shore of Clear Lake.

Relative to City of Sebastopol, the Clear Lake Volcanic Field is the nearest source of documented volcanic hazards. The U.S. Geological Survey's California Volcano Observatory, or (CalVO),

headquartered within existing USGS facilities in Menlo Park has developed a watch list of area volcanoes includes the Clear Lake Volcanic Field. According to CalVO, features within the volcanic field are The Geysers geothermal steamfield and the 300,000-year-old Mount Konocti rising about 975 m (3,200 ft) above the southwestern shore of the lake.

The following table is recreated from the Summary of Holocene eruptive activity and probable greatest hazards from future eruptions at volcanic centers in California (USGS Cascade Volcano Observatory, 2000), with citations from Berry et al (1976); Hearn et al (1976); and Sims & Rymer (1975).

TABLE 3.6-8: CLEAR LAKE VOLCANIC CENTER HOLOCENE ERUPTIONS

Recognized Products of Recent Eruptions	
Lava Flows/Cinder Cones	--
Domes	--
Tephra	Mafic tephras from eruptions ±10,000 YBP
Pyroclastic Flows	--
Blasts and Pyroclastic Surges	Phreatic eruptions, hydro-magmatic explosions, base-surges
Debris Flows/Avalanches	--

Source: USGS Volcano Observatory, 2000

Sims and Rymer (1975) estimate the most recent eruption for the Clear Lake Field occurred approximately 10,000 years before present. That event is thought to have produced mafic tephra generated by phreato-magmatic explosions. The USGS identifies the Clear Lake Field's "most probable" potential hazards as phreatic explosions, phreato-magmatic explosions and base surges. These events could result in "small-volume" tephra eruptions. Therefore, given the nature of the most probable potential volcanic hazards and the distance from City of Sebastopol, the Clear Lake Field is not likely to generate and significant impacts in the City of Sebastopol.

Although Clear Lake volcanic field has not erupted for several millennia, sporadic volcanic-type earthquakes do occur, and the numerous hot springs and volcanic gas seeps at in the area point to its potential to erupt again. Monitoring in the Clear Lake region by the USGS and a collaborative effort with Calpine Corporation in the Geysers Steam Field, provides real-time tracking of earthquake activity. In addition, the USGS periodically analyzes volcanic gases and hot springs in the region.

The USGS is unable to provide eruption predictions, as the region's activity has been irregular in the past. However, a future eruption would likely be signaled by heightened earthquake activity. Ash-fall associated with a volcanic eruption would likely be the largest hazards for areas near Sebastopol in the event of a volcanic eruption.

Mineral Resources

Sonoma County has many mineral resources that have been valuable enough to justify commercial extraction and processing. Historic activities, including mercury, chromite, and copper mining, have had long-term impacts on downstream soils and water quality. Sand, gravel, crushed rock, and building stone are considered the most valuable mineral resources in the county. Removal of bedrock for building blocks, road base, and fill materials has taken place in many different areas and geologic settings of the county, but usually in highland areas with steep terrain. Most of the Russian River and parts of other major streams in the county have been mined for sand and gravel to use in concrete and high-quality base and fill. Recent operations have been located along the middle and upper reaches of the Russian River, either within the channel or on adjacent alluvial terraces, along with operations along the Gualala River and Austin Creek.

3.6.2 REGULATORY SETTING

FEDERAL REGULATIONS

Earthquake Hazards Reduction Act

The Earthquake Hazards Reduction Act of 1977 (42 USC, 7701 et seq.) requires the establishment and maintenance of an earthquake hazards reduction program by the federal government.

Executive Order 12699

Signed in January 1990, this executive order of the President implements provisions of the Earthquake Hazards Reduction Act for "federal, federally assisted or federally regulated new building construction" and requires the development and implementation of seismic safety programs by federal agencies.

STATE REGULATIONS

California Building Standards Code (CBSC)

The CBSC is set forth in Title 24 of the California Code of Regulations (CCR). The CBSC contains specific requirements for seismic safety, excavation, foundations, retaining walls and site demolition. It also regulates grading activities, including drainage and erosion control. A local jurisdiction may establish more restrictive building standards reasonably necessary because of local climatic, geological or topographical conditions.

CA Health and Safety Code

Section 19100 et seq. of the California Health and Safety Code establishes the state's regulations for earthquake protection. This section of the code requires structural designs to be capable of resisting likely stresses produced by phenomena such as strong winds and earthquakes.

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act (formerly the Alquist-Priolo Special Studies Zone Act), signed into law December 1972, requires the delineation of zones along active faults in California. The purpose of the Alquist-Priolo Act is to regulate development on or near active fault traces to reduce the hazards associated with fault rupture and to prohibit the location of most structures for human occupancy across these traces.

Cities and counties must regulate certain development projects within the zones, which include withholding permits until geologic investigations demonstrate that development sites are not threatened by future surface displacement (Hart, 1997). Surface fault rupture is not necessarily restricted to the area within an Alquist-Priolo Zone.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act was developed to protect the public from the effects of strong groundshaking, liquefaction, landslides, or other ground failure, and from other hazards caused by earthquakes. This act requires the State Geologist to delineate various seismic hazard zones and requires cities, counties, and other local permitting agencies to regulate certain development projects within these zones. Before a development permit is granted for a site within a seismic hazard zone, a geotechnical investigation of the site has to be conducted and appropriate mitigation measures incorporated into the project design.

California Department of Transportation Highway Design Manual

The California Department of Transportation (Caltrans) sets forth roadway design standards for seismic safety in the latest version of the *Highway Design Manual* (originally published in 1995).

Surface Mining and Reclamation Act of 1975

The California Department of Conservation Surface Mining and Reclamation Act of 1975 (§ 2710), also known as SMARA, provides a comprehensive surface mining and reclamation policy that permits the continued mining of minerals, as well as the protection and subsequent beneficial use of the mined and reclaimed land. The purpose of SMARA is to ensure that adverse environmental effects are prevented or minimized and that mined lands are reclaimed to a usable condition and readily adaptable for alternative land uses. The production and conservation of minerals are encouraged, while giving consideration to values relating to recreation, wildlife, range and forage, as well as aesthetic enjoyment. Residual hazards to public health and safety are eliminated. These goals are achieved through land use planning by allowing a jurisdiction to balance the economic benefits of resource reclamation with the need to provide other land uses.

If a use is proposed that might threaten the potential recovery of minerals from an area that has been classified MRZ-2, SMARA would require the jurisdiction to prepare a statement specifying its reasons for permitting the proposed use, provide public notice of these reasons, and forward a copy of the statement to the State Geologist and the State Mining and Geology Board (Cal. Pub. Res. Code Section 2762).

Division of Mines and Geology

The California Division of Mines and Geology (DMG) operates within the Department of Conservation. The DMG is responsible for assisting in the utilization of mineral deposits and the identification of geological hazards.

State Geological Survey

Similar to the DMG, the California Geological Survey is responsible for assisting in the identification and proper utilization of mineral deposits, as well as the identification of fault locations and other geological hazards.

LOCAL REGULATIONS

Geotechnical Investigations

City of Sebastopol regulates construction activities through a process that requires the preparation of a site-specific geotechnical investigation in order to assess the design limitations. The purpose of a site-specific geotechnical investigation is to provide a geologic basis for the development of appropriate construction design. Geotechnical investigations typically assess bedrock and Quaternary geology, geologic structure, soils, and the previous history of excavation and fill placement. Proponents of the individual projects may need to prepare geotechnical investigations prior to project design.

3.6.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed project will have a significant impact on geology, soils, and minerals if it will:

- Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:
    - Rupture of a known earthquake fault;
    - Strong seismic ground shaking;
    - Seismic-related ground failure, including liquefaction; or
    - Landslides.
- Result in substantial soil erosion or the loss of topsoil;
- 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;
- 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;
- Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water;

- Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state; or
- Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan.

IMPACTS AND MITIGATION MEASURES

Impact 3.6.1: The General Plan has the potential to expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, strong seismic ground shaking, seismic-related ground failure, including liquefaction (Less than Significant)

There are no known active or potentially active faults, or Alquist-Priolo Earthquake Fault Zones, located within the Planning Area. However, there are numerous faults located in the region. Figure 3.6-1 illustrates the location of these faults. These include the San Andreas Fault System, the Rodgers Creek Fault, the Healdsburg Fault, West Napa Fault, and the Mayacama Fault. Rupture of any of these faults, or of an unknown fault in the region could cause seismic ground shaking. As a result, future development in the City of Sebastopol may expose people or structures to potential adverse effects associated with a seismic event, including strong ground shaking and seismic-related ground failure.

Currently, there are no seismic hazard zones mapped in Sonoma County; however, the California Geological Survey estimates a 10% probability of exceeding 40-50 percent of gravity at peak ground acceleration over the next 50 years in the Sebastopol Planning Area. As you move east toward the Rodgers Creek Fault, or west toward the San Andres Fault, the estimates increase up to 60-70 percent of gravity at peak ground acceleration.

The Association of Bay Area Governments (2011) estimates that the City of Sebastopol could experience Modified Mercalli Intensities of VII to VIII generated by seismic events occurring in the region. The effect of this intensity level includes: VII) difficulty standing; Vehicle shaking felt by drivers; some furniture breaks, VIII) difficulty steering vehicles; Houses may shift on foundations.

All projects undertaken in the City of Sebastopol would be required to comply with the provisions of the California Building Standards Code, which requires development projects to: perform geotechnical investigations in accordance with state law, engineer improvements to address potential seismic and ground failure issues, and to use earthquake-resistant construction techniques to address potential earthquake loads when constructing buildings and improvements. As future development and infrastructure projects are considered by the City, each project will be evaluated for conformance with the California Building Code, the City's General Plan, Municipal Code, and other regulations. Subsequent development and infrastructure would also be analyzed for potential environmental impacts, consistent with the requirements of CEQA. In addition to the requirements associated with the CBC and the Municipal Code, the General Plan includes policies and actions to address potential impacts associated with seismic activity, as shown in the list below.

Liquefaction potential in the Planning Area includes designations ranging from "Very Low" to "Very High" potential. Approximately 78 acres in Sebastopol are considered “Moderately” susceptible to liquefaction, while 78 acres are “High”, and 9 acres are considered “Very High”. The remainder of the city is considered to have a very low susceptibility to liquefaction hazards. Areas within Sebastopol that are susceptible to liquefaction are predominantly located in the northeastern portion of the City. Figure 3.6-2 illustrates the liquefaction potential in the Planning Area.

The General Plan policies (listed below) require new land development proposals to avoid unreasonable exposure to geologic hazards, including earthquake damage, subsidence, liquefaction and expansive soils. All development and construction proposals must be reviewed by the City to ensure conformance with applicable building standards. Development on soils sensitive to seismic activity is only allowed after adequate site analysis, including appropriate siting, design of structure, and foundation integrity. The General Plan policies require geotechnical investigations to be completed prior to approval of any buildings as a means to ensure that these facilities are constructed in a way that mitigates site-specific seismic and/or geological hazards. All future projects are subject to CEQA review to address seismic safety issues and provide adequate mitigation for existing and potential hazards identified. With the implementation of the policies and actions in the General Plan, as well as applicable state and county codes, potential impacts associated with a seismic event, including rupture of an earthquake fault, seismic ground shaking, and liquefaction would be **less than significant**.

2016 GENERAL PLAN POLICIES AND ACTIONS THAT MITIGATE POTENTIAL IMPACTS

Policies

Policy SA 1-1: Reduce the risk of loss of life, personal injury, and damage to property and the environment resulting from seismic hazards.

Policy SA 1-2: Enforce adopted regulations to identify and address potential hazards relating to seismic, geologic, and soils conditions.

Policy SA 1-3: Discourage construction of high density residential and other critical, high-occupancy or essential services buildings in areas with high seismic and/or geologic hazards, including high potential for shrink-swell, liquefaction, and landslides.

Policy SA 1-4: Regulate development in areas of seismic and geologic hazards to reduce risks to life and property associated with earthquakes, liquefaction, erosion, landslides, and expansive soils.

Policy SA 1-5: Where feasible, require new development to avoid unreasonable exposure to geologic hazards, including earthquake damage, subsidence, liquefaction, and expansive soils.

Policy SA 1-6: Ensure that critical facilities are designed and constructed to withstand the "maximum probable" earthquake and remain in service.

Policy SA 1-7: All structures and building foundations located within areas containing expansive soils shall be designed and engineered to comply with the most current version of the California Code of Regulations (CCR), Title 24.

Policy SA 1-8: Encourage community awareness of seismic safety issues, including building safety and emergency response plans, including steps to take for safety during and after an earthquake and identified evacuation routes.

Actions

Action SA-1a: Review all development projects to ensure conformance with applicable state and City building standards related to geologic and seismic safety.

Action SA-1b: Continue to require geotechnical reports by a state-registered geologist for development proposals and for all critical structures. These reports should include, but not be limited to: evaluation of and recommendations to mitigate the effects of fault displacement, ground shaking, landslides, expansive soils, liquefaction, subsidence, and settlement. Recommendations from the report shall be incorporated into the development project to address seismic and geologic risks identified in the report.

Action SA-1c: Require strict adherence to the requirements of the California Code of Regulations (CCR), Title 24 in all areas of the city and, during the development review process, ensure that public and critical use buildings shall not be located in areas susceptible to potential natural hazards.

Action SA-1d: Continue to require, as conditions of approval, measures to mitigate potential seismic and geologic safety hazards for structures, where necessary.

Action SA-1e: Require an erosion and sediment control plan prepared by a civil engineer, or other professional who is qualified to prepare such a plan, to be submitted as part of any grading permit application for new development. The erosion and sediment control plan shall delineate measures to appropriately and effectively minimize soil erosion and sedimentation, and shall comply with the design standards and construction site control measures contained in Title 15 of the Municipal Code.

Action SA-1f: Evaluate slopes over 15 percent and areas susceptible to liquefaction, settlement, instability, and expansive soils for safety hazards prior to issuance of any discretionary approvals and require mitigation measures or conditions of approval to address identified hazards.

Action SA-1g: All building code requirements shall be adhered to so as to provide for maximum safety requirements. Inspections for compliance shall be made by the Building Department prior to approval for occupancy.

Action SA-1h: Continue to require professional inspection of foundation, excavation, earthwork, and other geotechnical aspects of site development during construction on those sites specified in geotechnical studies as being prone to moderate or greater levels of seismic or geologic hazard.

Action SA-1i: Continue to monitor and review existing critical, high priority buildings to ensure structural compliance with seismic safety standards.

Action SA-1j: Provide information to the public on ways to reinforce buildings to reduce damage from earthquakes.

Action SA-1k: Maintain an inventory of all natural hazards, including active faults, Alquist-Priolo Special Study Zones, soil and geologic hazards, floodplains, and projected dam failure inundation areas.

Action SA-1l: Encourage Caltrans and the County of Sonoma to seismically reinforce bridges in the Sebastopol Planning Area.

Action SA-1m: Review all projects in relation to available hazards information contained in Figure 8.1 and other similar documents available in the Planning Department.

Action SA-1n: If active or potentially active faults are identified in the vicinity of the City or Planning Area, establish setbacks from active or potentially active fault traces for structures intended for human occupancy.

Action SA-1o: In order to limit the City's liability and financial risk, require financial protection, such as bonds or other security, as a condition of development approval where geological conditions indicate a potential for high maintenance costs.

Action SA-1p: Consider implementing a program to grade public buildings based on seismic safety. The program would include publicly posting building grades and providing information at City Hall and on the City's website explaining the grading process and meaning of each grade.

Action SA-1q: Consider developing a program to encourage owners of 'soft-story' buildings to improve earthquake resistance of the structures.

Impact 3.6.2: The General Plan has the potential to result in substantial soil erosion or the loss of topsoil (Less than Significant)

The General Plan would allow development and improvement projects that would involve some land clearing, mass grading, and other ground-disturbing activities that could temporarily increase soil erosion rates during and shortly after project construction. Construction-related erosion could result in the loss of a substantial amount of nonrenewable topsoil and could adversely affect water quality in nearby surface waters.

Soil erosion data for the City of Sebastopol were obtained from the NRCS. Figure 3.6-4 depicts the soil erosion susceptibility in the Planning Area. The erosion factor varies from 0.10 to 0.43, which is considered low to high potential for erosion. Within Sebastopol the majority of soils fall within the low to moderate range for erosion potential. Table 3.6-7 displays the soil erosion factors for soils found within the Planning Area.

As future development and infrastructure projects are considered by the City of Sebastopol, each project will be evaluated for conformance with the California Building Code, the General Plan, Municipal Code, and other regulations. In addition to compliance with City standards and policies, the Regional Water Quality Control Board will require a project specific Storm Water Pollution Prevention Plan (SWPPP) to be prepared for each project that disturbs an area of one acre or larger. The SWPPPs will include project specific best management measures that are designed to control drainage and erosion. Subsequent development and infrastructure projects would also be analyzed for potential environmental impacts, consistent with the requirements of CEQA.

The General Plan includes policies and actions related to development on slopes, requirements for erosion and sediment control plans, and drainage and erosion requirements. With the implementation of the policies and actions in the General Plan, as well as applicable state and local

requirements, potential impacts associated with erosion and loss of topsoil would be **less than significant**.

2016 GENERAL PLAN POLICIES AND ACTIONS THAT MITIGATE POTENTIAL IMPACTS

Policies

Policy SA 1-4: *Regulate development in areas of seismic and geologic hazards to reduce risks to life and property associated with earthquakes, liquefaction, erosion, landslides, and expansive soils.*

Actions

Action SA-1e: Require an erosion and sediment control plan prepared by a civil engineer, or other professional who is qualified to prepare such a plan, to be submitted as part of any grading permit application for new development. The erosion and sediment control plan shall delineate measures to appropriately and effectively minimize soil erosion and sedimentation, and shall comply with the design standards and construction site control measures contained in Title 15 of the Municipal Code.

Action SA-1f: Evaluate slopes over 15 percent and areas susceptible to liquefaction, settlement, instability, and expansive soils for safety hazards prior to issuance of any discretionary approvals and require mitigation measures or conditions of approval to address identified hazards.

Action SA-1g: All building code requirements shall be adhered to so as to provide for maximum safety requirements. Inspections for compliance shall be made by the Building Department prior to approval for occupancy.

Action SA-1h: Continue to require professional inspection of foundation, excavation, earthwork, and other geotechnical aspects of site development during construction on those sites specified in geotechnical studies as being prone to moderate or greater levels of seismic or geologic hazard.

Action SA-2d: Enforce measures to minimize soil erosion and volume and velocity of surface runoff both during and after construction through implementation of the Grading Ordinance.

Impact 3.6.3: The General Plan has the potential to result in development that would be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse (Less than Significant)

Development allowed under the General Plan could result in the exposure of people and structures to conditions that have the potential for adverse effects associated with ground instability or failure. As described in the Existing Setting discussion, soils and geologic conditions in the City of Sebastopol have the potential for landslides, lateral spreading, subsidence, liquefaction, or collapse. Each are discussed below:

Landslide: Within Sonoma County, the hillsides have a medium to high susceptibility for landslides, while the valleys have a low susceptibility. Figure 3.6-6 illustrates the landslide potential in the vicinity of the Planning Area. Given the relatively gentle slopes throughout the City, the landslide

potential varies from low to medium. Additionally, according to the Association of Bay Area Government's Risk Assessment Data, the majority of the Planning Area (approximately 1,063 acres) is subject to "few landslides". This is not considered a significant constraint in the Planning Area. The landslide potential increases in the foothills and mountains to the east and west of the Planning Area.

Lateral Spreading: Lateral spreading typically results when ground shaking moves soil toward an area where the soil integrity is weak or unsupported, and it typically occurs on the surface of a slope, although it does not occur strictly on steep slopes. Oftentimes, lateral spreading is also directly associated with areas of liquefaction. Soil conditions conductive to lateral spreading are typically characterized as having strong to gentle slopes combined with liquefiable soils. Given the relatively gentle slopes, and low potential for liquefaction throughout the majority of the Planning Area, the potential for lateral spreading is considered low. Areas of the city that include medium and highly liquefiable soils within the northeast portions of the Planning Area are relatively flat, thus, not considered at a significant risk of lateral spreading. This is not a significant constraint in the Planning Area. The potential for lateral spreading increases in the foothills and mountains to the east and west of the Planning Area.

Subsidence: The Natural Resource Conservation Service maps expected "initial subsidence," which usually is a result of drainage, and "total subsidence," which results from a combination of factors. While subsidence is an issue of concern in some areas of California, the Natural Resource Conservation Service does not identify it as an issue of concern in the City of Sebastopol.

Liquefaction: Liquefaction potential in the Planning Area includes designations ranging from "Very Low" to "Very High" potential. Approximately 78 acres in Sebastopol are considered "Moderately" susceptible to liquefaction, while 78 acres are "High", and 9 acres are considered "Very High". The remainder of the city is considered to have a very low susceptibility to liquefaction hazards. Areas within Sebastopol that are susceptible to liquefaction are predominantly located in the northeastern portion of the city. The remainder of the Planning Area is designated "Low" to "Very Low" potential for liquefaction. Figure 3.6-2 illustrates the liquefaction potential in the vicinity of the Planning Area.

Collapse: Collapsible soils undergo a rearrangement of their grains and a loss of cementation, resulting in substantial and rapid settlement under relatively low loads. Collapsible soils occur predominantly at the base of mountain ranges, where Holocene-age alluvial fan and wash sediments have been deposited during rapid run-off events. Differential settlement of structures typically occurs when heavily irrigated landscape areas are near a building foundation. Examples of common problems associated with collapsible soils include tilting floors, cracking or separation in structures, sagging floors, and nonfunctional windows and doors. Historically, collapsible soils have not been an issue of concern in Sebastopol, and the risk is considered low.

The Planning Area does not have a significant risk of becoming unstable as a result landslide, lateral spreading, subsidence, or collapse. Limited portions of the Planning Area are subject to liquefaction. As future development and infrastructure projects are considered by the City, each project will be evaluated for conformance with the California Building Code, the General Plan, Municipal Code, and other regulations. Subsequent development and infrastructure projects would also be analyzed for

potential environmental impacts, consistent with the requirements of CEQA. Future development and improvement projects would be required to have a specific geotechnical study prepared and incorporated into the improvement design, consistent with the requirements of state and local codes. In addition to the requirements associated with the CBC and the Land Use Code, the General Plan includes policies and actions to ensure that development, infrastructure, and other projects address potential ground failure and instability issues through compliance with applicable building standards, identification of potential geologic hazards, preparation of geotechnical studies, and appropriate site analysis and engineering measures to mitigate any identified hazards, including landslides, lateral spreading, liquefaction, and other potential ground failures, to an acceptable level. With the implementation of the policies and actions in the General Plan, as well as applicable state and local codes, potential impacts associated ground instability or failure would be **less than significant**.

2016 GENERAL PLAN POLICIES AND ACTIONS THAT MITIGATE POTENTIAL IMPACTS

Policies

Policy SA 1-1: Reduce the risk of loss of life, personal injury, and damage to property and the environment resulting from seismic hazards.

Policy SA 1-2: Enforce adopted regulations to identify and address potential hazards relating to seismic, geologic, and soils conditions.

Policy SA 1-3: Discourage construction of high density residential and other critical, high-occupancy or essential services buildings in areas with high seismic and/or geologic hazards, including high potential for shrink-swell, liquefaction, and landslides.

Policy SA 1-4: Regulate development in areas of seismic and geologic hazards to reduce risks to life and property associated with earthquakes, liquefaction, erosion, landslides, and expansive soils.

Policy SA 1-5: Where feasible, require new development to avoid unreasonable exposure to geologic hazards, including earthquake damage, subsidence, liquefaction, and expansive soils.

Policy SA 1-6: Ensure that critical facilities are designed and constructed to withstand the "maximum probable" earthquake and remain in service.

Policy SA 1-7: All structures and building foundations located within areas containing expansive soils shall be designed and engineered to comply with the most current version of the California Code of Regulations (CCR), Title 24.

Policy SA 1-8: Encourage community awareness of seismic safety issues, including building safety and emergency response plans, including steps to take for safety during and after an earthquake and identified evacuation routes.

Actions

Action SA-1a: Review all development projects to ensure conformance with applicable state and City building standards related to geologic and seismic safety.

Action SA-1b: Continue to require geotechnical reports by a state-registered geologist for development proposals and for all critical structures. These reports should include, but not be limited to: evaluation of and recommendations to mitigate the effects of fault displacement, ground shaking, landslides, expansive soils, liquefaction, subsidence, and settlement. Recommendations from the report shall be incorporated into the development project to address seismic and geologic risks identified in the report.

Action SA-1c: Require strict adherence to the requirements of the California Code of Regulations (CCR), Title 24 in all areas of the city and, during the development review process, ensure that public and critical use buildings shall not be located in areas susceptible to potential natural hazards.

Action SA-1d: Continue to require, as conditions of approval, measures to mitigate potential seismic and geologic safety hazards for structures, where necessary.

Action SA-1e: Require an erosion and sediment control plan prepared by a civil engineer, or other professional who is qualified to prepare such a plan, to be submitted as part of any grading permit application for new development. The erosion and sediment control plan shall delineate measures to appropriately and effectively minimize soil erosion and sedimentation, and shall comply with the design standards and construction site control measures contained in Title 15 of the Municipal Code.

Action SA-1f: Evaluate slopes over 15 percent and areas susceptible to liquefaction, settlement, instability, and expansive soils for safety hazards prior to issuance of any discretionary approvals and require mitigation measures or conditions of approval to address identified hazards.

Action SA-1g: All building code requirements shall be adhered to so as to provide for maximum safety requirements. Inspections for compliance shall be made by the Building Department prior to approval for occupancy.

Action SA-1h: Continue to require professional inspection of foundation, excavation, earthwork, and other geotechnical aspects of site development during construction on those sites specified in geotechnical studies as being prone to moderate or greater levels of seismic or geologic hazard.

Action SA-1m: Review all projects in relation to available hazards information contained in Figure 8.1 and other similar documents available in the Planning Department.

Impact 3.6.4: The General Plan has the potential to result in development on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property (Less than Significant)

Expansive soil properties can cause substantial damage to building foundations, piles, pavements, underground utilities, and/or other improvements. Structural damage, such as warping and cracking of improvements, and rupture of underground utility lines may occur if the expansive potential of soils is not considered during the design and construction of all improvements.

Linear extensibility is a method for measuring expansion potential. The expansion potential is low if the soil has a linear extensibility of less than 3 percent; moderate if 3 to 6 percent; high if 6 to 9

percent; and very high if more than 9 percent. If the linear extensibility is more than 3, shrinking and swelling can cause damage to buildings, roads, and other structures and to plant roots. Special design commonly is needed.

The linear extensibility of the soils within Sebastopol ranges from Low to High. Figure 3.6-5 illustrates the shrink-swell potential of soils in the Planning Area. Over 95 percent of the Planning Area has low expansive soils, while a small area in the northwestern portion of the Planning Area has high expansive soils. The high expansive soils located within the city limits are in areas that are currently used as parks and open space near the Laguna De Santa Rosa, including Clahan Park and the Laguna Wetlands Preserve. No portion of the high expansive soils are located in highly developed areas of Sebastopol. The areas with high expansive soils would require special design considerations due to shrink-swell potentials.

As future development and infrastructure projects are considered by the City, each project will be evaluated for conformance with the California Building Code, City's General Plan, Municipal Code, and other applicable regulations. Subsequent development and infrastructure projects would also be analyzed for potential environmental impacts, consistent with the requirements of CEQA.

The Safety Element of the General Plan establishes policies and programs that are designed to protect from geologic hazards, including expansive soils. Consistency with the General Plan policies and programs will require a site-specific design-level geotechnical investigation, prepared by a licensed professional, and submitted to the City for review and confirmation. A site-specific geotechnical investigation will identify the potential for damage related to expansive soils and non-uniformly compacted fill and engineered fill. If a risk is identified, design criteria and specification options may include removal of the problematic soils, and replacement, as needed, with properly conditioned and compacted fill material that is designed to withstand the forces exerted during the expected shrink-swell cycles and settlements.

Design criteria and specifications set forth in the design-level geotechnical investigation will ensure impacts from problematic soils are minimized. There are no additional significant adverse environmental impacts, apart from those disclosed in the relevant chapters of this Draft EIR, that are anticipated to occur associated with expansive soils. Therefore, this impact is considered **less than significant**.

2016 GENERAL PLAN POLICIES AND ACTIONS THAT MITIGATE POTENTIAL IMPACTS

Policies

Policy SA 1-4: Regulate development in areas of seismic and geologic hazards to reduce risks to life and property associated with earthquakes, liquefaction, erosion, landslides, and expansive soils.

Policy SA 1-5: Where feasible, require new development to avoid unreasonable exposure to geologic hazards, including earthquake damage, subsidence, liquefaction, and expansive soils.

Policy SA 1-7: All structures and building foundations located within areas containing expansive soils shall be designed and engineered to comply with the most current version of the California Code of Regulations (CCR), Title 24.

Actions

Action SA-1a: Review all development projects to ensure conformance with applicable state and City building standards related to geologic and seismic safety.

Action SA-1b: Continue to require geotechnical reports by a state-registered geologist for development proposals and for all critical structures. These reports should include, but not be limited to: evaluation of and recommendations to mitigate the effects of fault displacement, ground shaking, landslides, expansive soils, liquefaction, subsidence, and settlement. Recommendations from the report shall be incorporated into the development project to address seismic and geologic risks identified in the report.

Action SA-1c: Require strict adherence to the requirements of the California Code of Regulations (CCR), Title 24 in all areas of the city and, during the development review process, ensure that public and critical use buildings shall not be located in areas susceptible to potential natural hazards.

Action SA-1h: Continue to require professional inspection of foundation, excavation, earthwork, and other geotechnical aspects of site development during construction on those sites specified in geotechnical studies as being prone to moderate or greater levels of seismic or geologic hazard.

Impact 3.6.5: The General Plan does not have the potential to have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water (Less than Significant)

The National Resources Conservation Service has a rating system to assess the capability of soils to support septic absorption fields. The ratings for septic tanks are based on soil properties that affect absorption of the effluent, construction, and maintenance of the system and public health. The NRCS indicates that these limitations can be overcome or minimized by special planning, and design considerations.

Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect the specified use. "Not limited" indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. "Somewhat limited" indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. "Very limited" indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Soils within the planning area are considered Very Limited indicating that the soils have features that are unfavorable for the specified use. The limitations generally cannot be overcome without

major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

The Sebastopol Municipal Code Title 13 (Public Service) Section 13.08.040 (C), requires all new development to connect to the public sewer system. This requirement also pertains to the construction of an additional unit on the existing parcel. Additionally, General Plan Policy CSF 4-9 ensures future sewer systems are designed to meet or exceed all applicable water quality standards and are located to protect waterways and groundwater resources. Therefore, this impact is considered **less than significant**.

2016 GENERAL PLAN POLICIES AND ACTIONS THAT MITIGATE POTENTIAL IMPACTS

Policies

Policy CSF 4-8: Prioritize sewer service improvements to areas within the City that pose a threat to public health and the environment as a result of deficiencies in existing sewer or septic systems.

Policy CSF 4-9: Ensure future sewer and septic systems are designed to meet or exceed all applicable water quality standards and are located to protect waterways and groundwater resources.

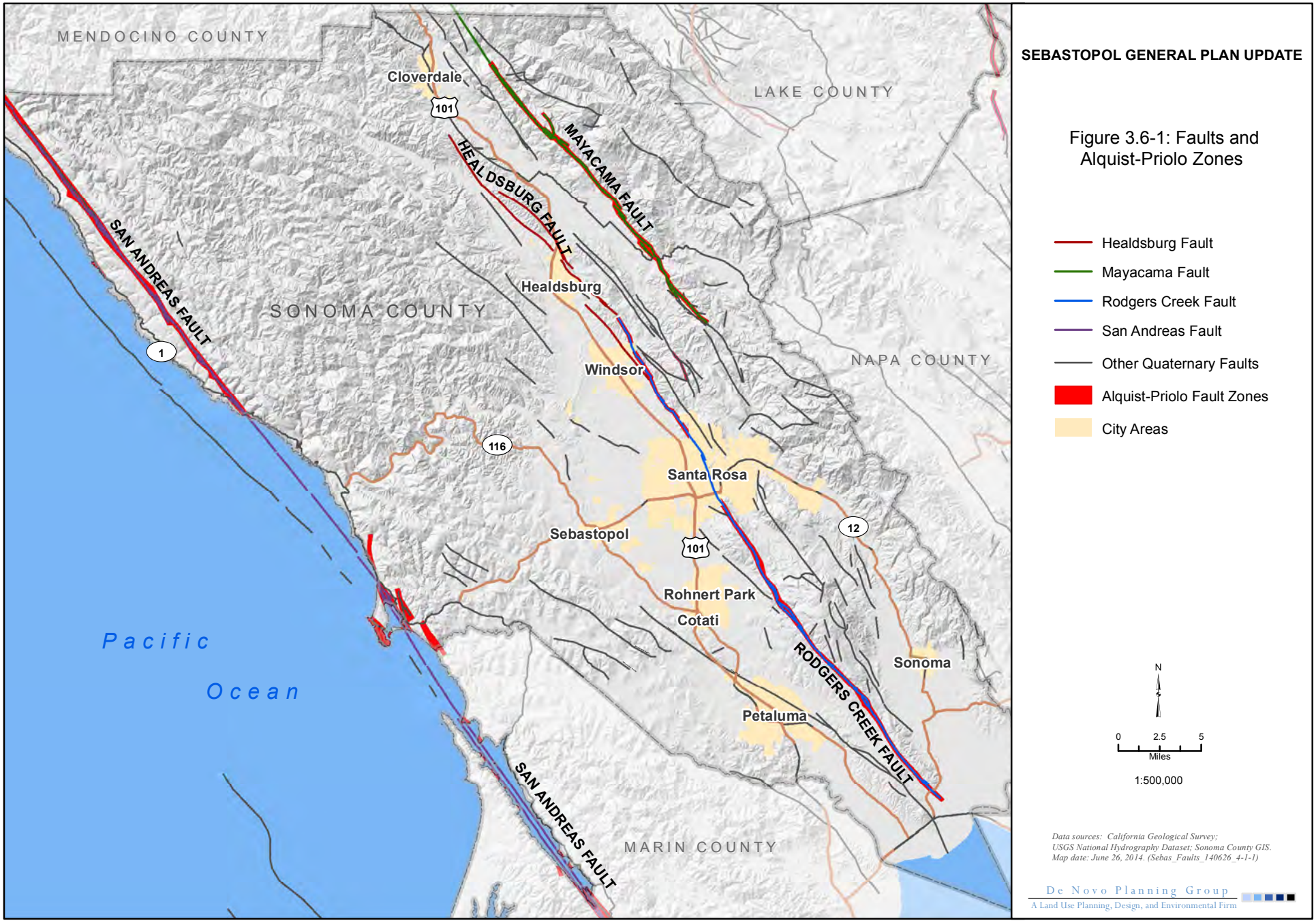
Impact 3.6.6: The General Plan does not Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state; or result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan. (Less than Significant)

Mineral resources are extremely valuable because of their limited supply and their usefulness in modern construction and industrial processes. Sonoma County has many mineral resources that have been valuable enough to justify commercial extraction and processing. Historic activities, including mercury, chromite, and copper mining, have had long-term impacts on downstream soils and water quality. Sand, gravel, crushed rock, and building stone are considered the most valuable mineral resources in the county. Removal of bedrock for building blocks, road base, and fill materials has taken place in many different areas and geologic settings of the county, but usually in highland areas with steep terrain. Most of the Russian River and parts of other major streams in the county have been mined for sand and gravel to use in concrete and high-quality base and fill. Recent operations have been located along the middle and upper reaches of the Russian River, either within the channel or on adjacent alluvial terraces, along with operations along the Gualala River and Austin Creek.

If a use is proposed that might threaten the potential recovery of minerals from an area that has been classified MRZ-2, SMARA would require the jurisdiction to prepare a statement specifying its reasons for permitting the proposed use, provide public notice of these reasons, and forward a copy of the statement to the State Geologist and the State Mining and Geology Board (Cal. Pub. Res. Code Section 2762). Within Sebastopol there are no major mineral deposits that are classified as MRZ-2

areas (where adequate information indicates that significant mineral deposits are present, or where it is judged that a high likelihood for their presence exists). The majority of lands within the Planning Area are classified as MRZ-1 (areas where available geologic information indicates that little likelihood exists for the presence of significant mineral resources). Small portions of eastern Sebastopol contain MRZ-3 designations (areas containing mineral occurrences of undetermined material resource significance).

The Planning Area is not mapped as having a known mineral resource of value to the region. Additionally, the Plan Area is not designated as a locally important mineral resource recovery site. Therefore, this impact is considered **less than significant**.


MENDOCINO COUNTY
LAKE COUNTY
SONOMA COUNTY
NAPA COUNTY
MARIN COUNTY
Cloverdale
Healdsburg
Windsor
Santa Rosa
Sebastopol
Rohnert Park
Cotati
Sonoma
Petaluma
101
116
1
12
HEALDSBURG FAULT
MAYACAMA FAULT
SAN ANDREAS FAULT
RODGERS CREEK FAULT
Pacific
Ocean
SEBASTOPOL GENERAL PLAN UPDATE
Figure 3.6-1: Faults and Alquist-Priolo Zones
Healdsburg Fault
Mayacama Fault
Rodgers Creek Fault
San Andreas Fault
Other Quaternary Faults
Alquist-Priolo Fault Zones
City Areas
N
0
2.5
5
Miles
1:500,000
Data sources: California Geological Survey; USGS National Hydrography Dataset; Sonoma County GIS.
Map date: June 26, 2014. (Sebas_Faults_140626_4-1-1)
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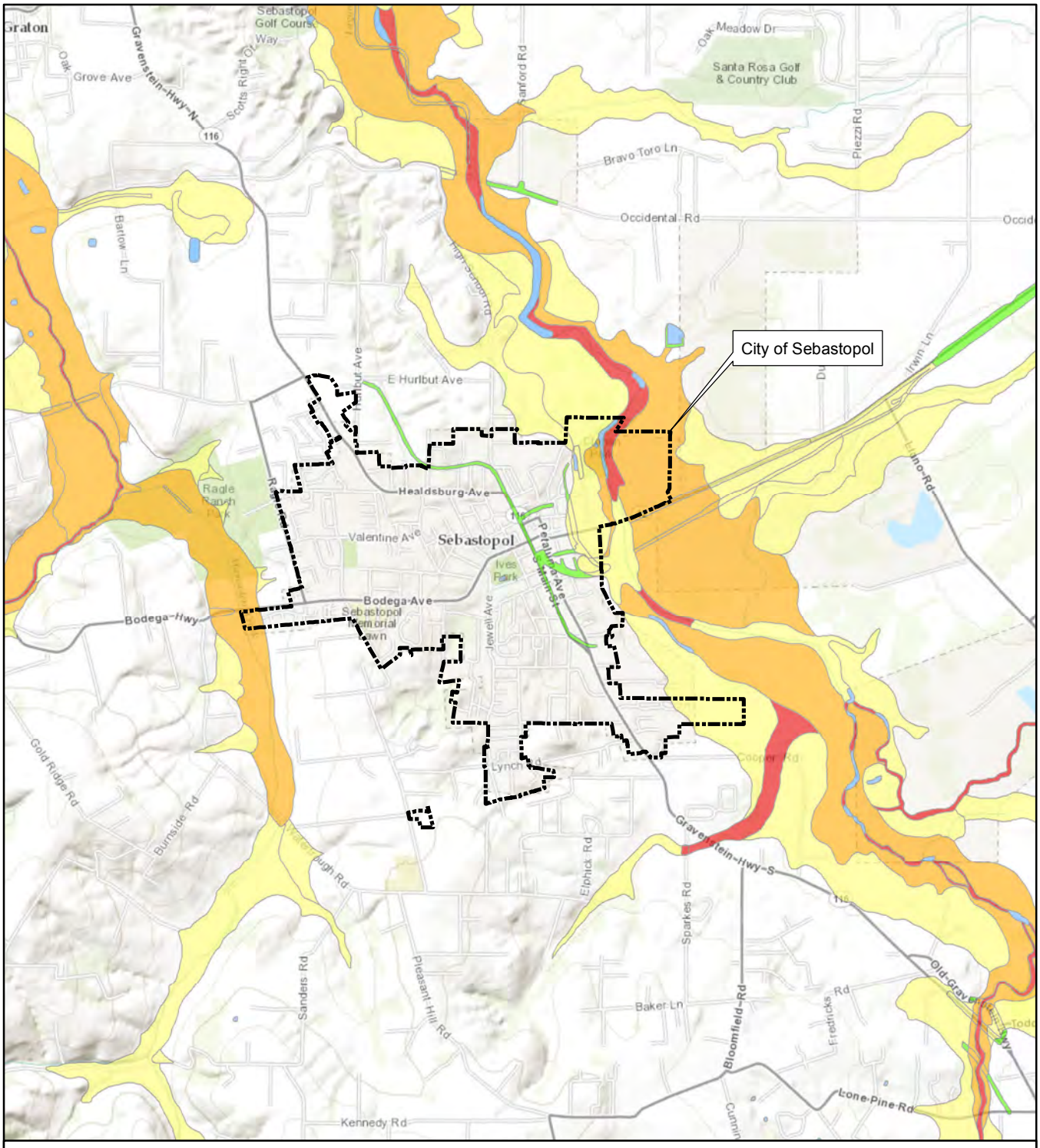

Susceptibility

- Very High
- High
- Moderate
- Low
- Very Low
- Water

SEBASTOPOL GENERAL PLAN UPDATE

Figure 3.6-2: Liquefaction Susceptibility

N

0 1,750 3,500

Feet

1:42,000

Data sources: U.S. Geological Survey in cooperation with the California Geologic Survey Open File Report 06-1037: Liquefaction Susceptibility, 2000; ArcGIS Online World Topo Basemap; Sonoma County GIS. Map date: June 26, 2014. (Sebas_Liquefaction_140626_4-1-2)

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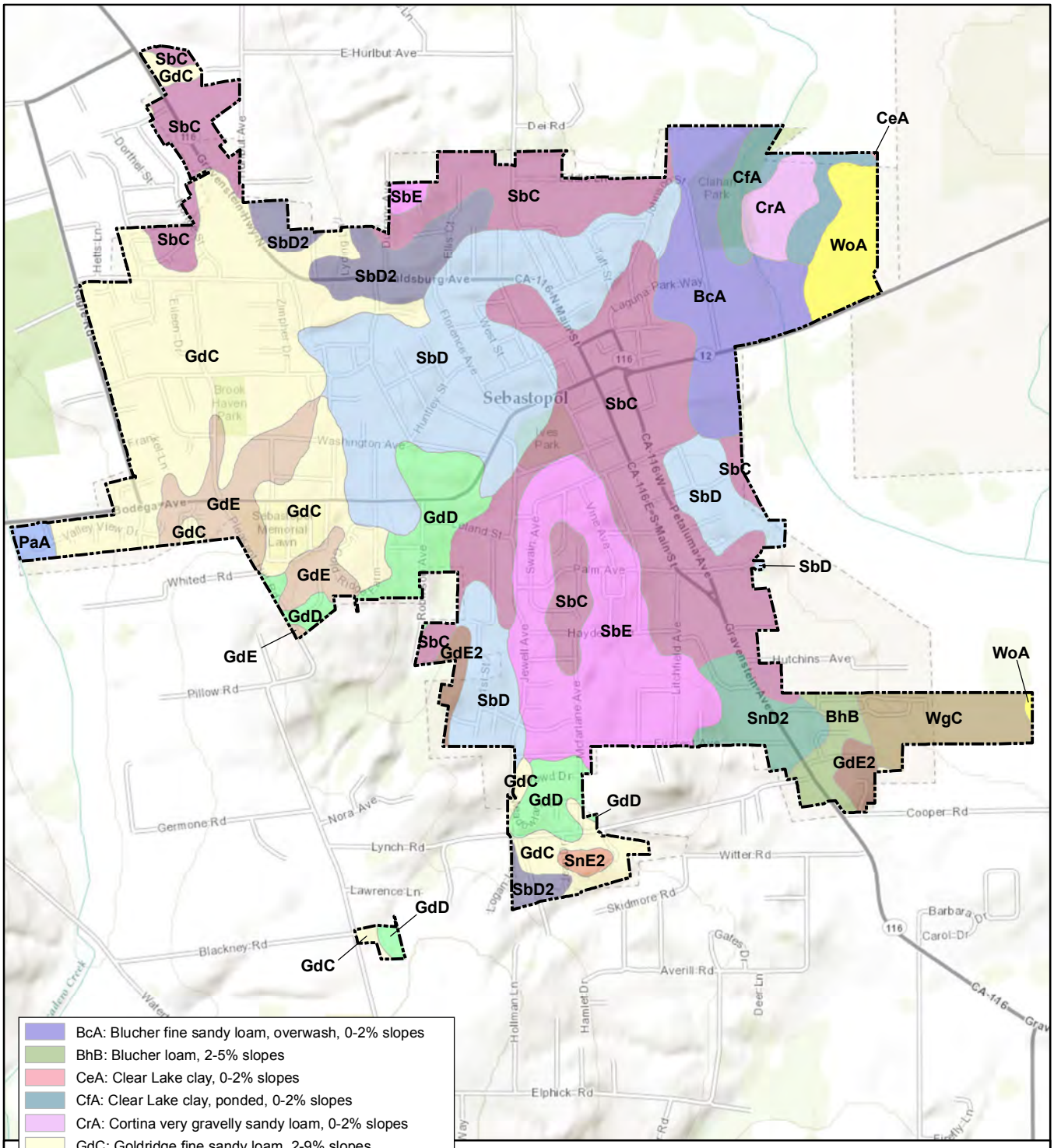

BcA: Blucher fine sandy loam, overwash, 0-2% slopes
BhB: Blucher loam, 2-5% slopes
CeA: Clear Lake clay, 0-2% slopes
CfA: Clear Lake clay, ponded, 0-2% slopes
CrA: Cortina very gravelly sandy loam, 0-2% slopes
GdC: Goldridge fine sandy loam, 2-9% slopes
GdD: Goldridge fine sandy loam, 9-15% slopes
GdE2: Goldridge fine sandy loam, 15-30% slopes, eroded
GdE: Goldridge fine sandy loam, 15-30% slopes
PaA: Pajaro fine sandy loam, 0-2% slopes
SbC: Sebastopol sandy loam, 2-9% slopes
SbD2: Sebastopol sandy loam, 9-15% slopes, eroded
SbD: Sebastopol sandy loam, 9-15% slopes
SbE: Sebastopol sandy loam, 15-30% slopes
SnD2: Steinbeck loam, 9-15% slopes, eroded
SnE2: Steinbeck loam, 15-30% slopes, eroded
WgC: Wright loam, 0-9% slopes
WoA: Wright loam, shallow, wet, 0-2% slopes

Sebastopol General Plan Update

Figure 3.6-3: Soils Map

N

0 750 1,500
Feet

1:21,000

Data sources: Data sources: U.S. Department of Agriculture, Natural Resources Conservation Service, Soil Survey Geographic (SSURGO) database for Sonoma County, California 11-27-2013; Sonoma County GIS; ArcGIS Online World Topo Map Basemap. Map date: June 26, 2014. (Sebas_Soils_140626_Fig4-1-3)

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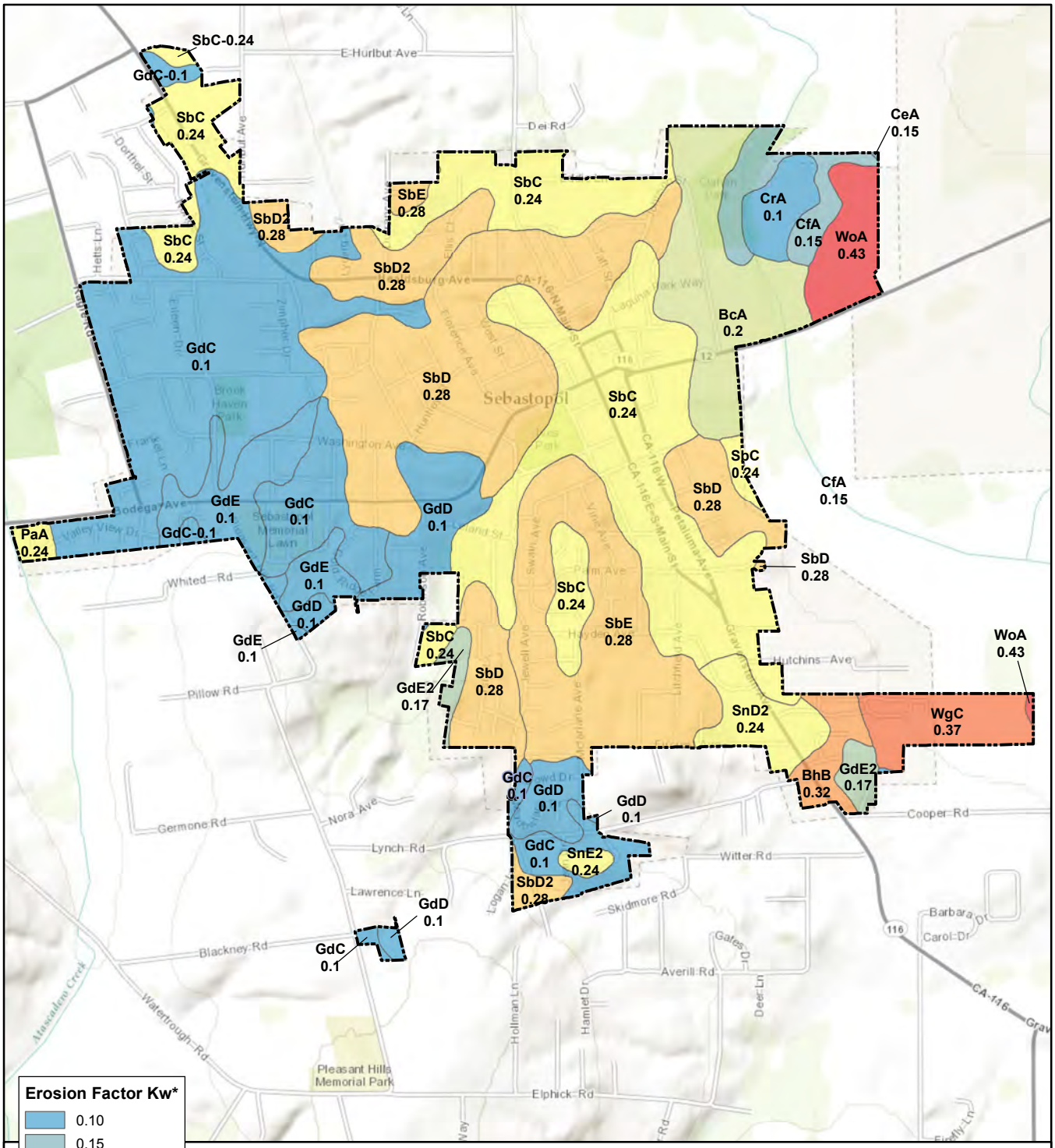

Sebastopol General Plan Update

Figure 3.6-4: Soil Erosion Susceptilility

** Erosion factor K indicates the susceptibility of a soil to sheet and rill erosion by water. Factor K is one of six factors used in the Universal Soil Loss Equation and the Revised Universal Soil Loss Equation to predict the average annual rate of soil loss by sheet and rill erosion in tons per acre per year. The estimates are based primarily on percentage of silt, sand, and organic matter and on soils structure and Ksat. Values of K range from 0.02 to 0.69. Other factors being equal, the higher the value, the more susceptible the soils is to sheet and rill erosion.*

Erosion factor Kw indicates the erodibility of the whole soil. Estimates are modified by the presence of rock fragments.

Data sources: Data sources: U.S. Department of Agriculture, Natural Resources Conservation Service, Soil Survey Geographic (SSURGO) database for Sonoma County, California 11-27-2013; Sonoma County GIS; ArcGIS Online World Topo Map Basemap. Map date: July 23, 2014. (Sebas_SoilErosion_140723_Fig4-1-4)

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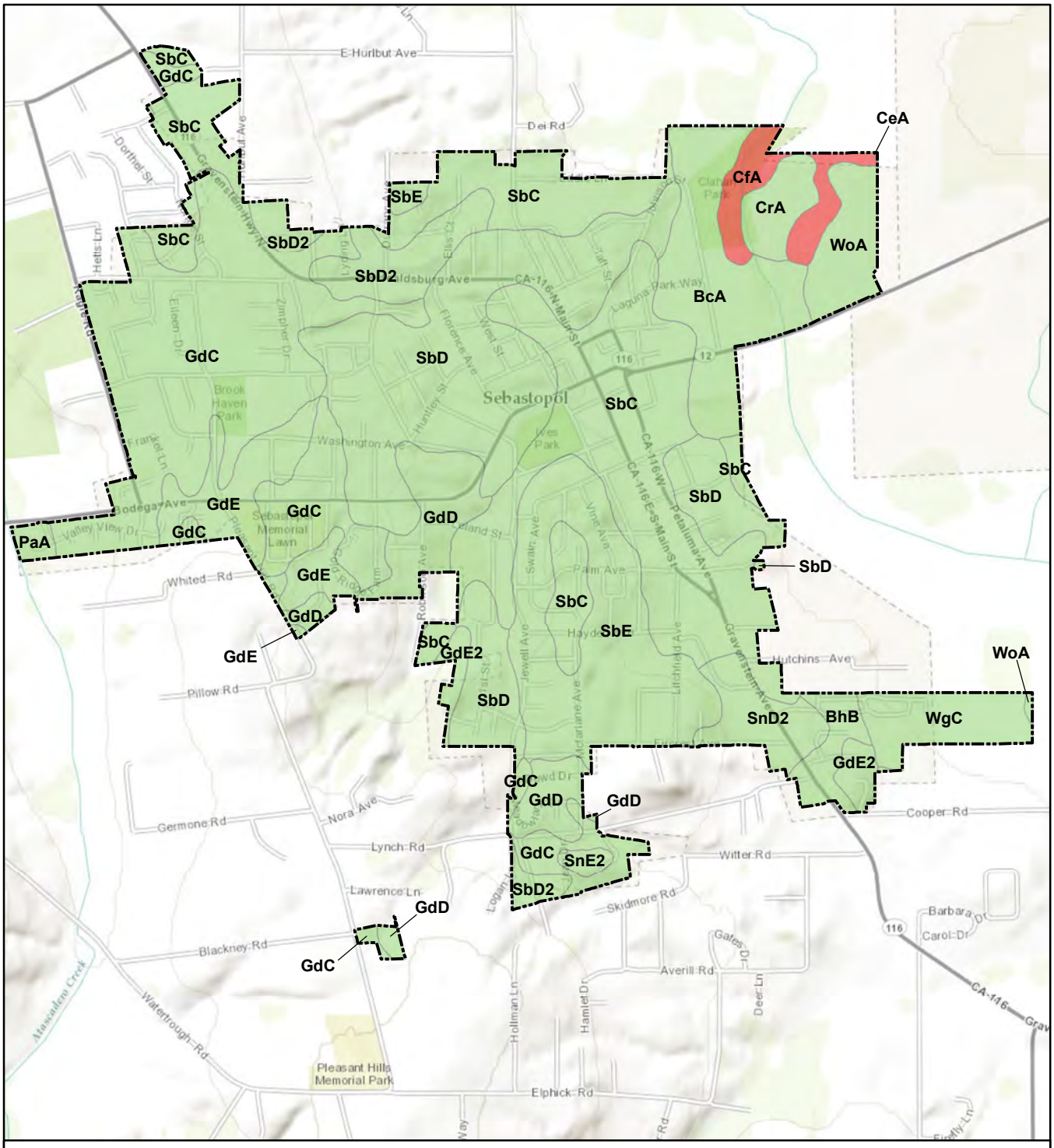

Sebastopol General Plan Update

Figure 3.6-5: Soils Shrink-Swell Potential

Shrink-Swell Potential of Surface Horizon

- High (Linear Extensibility: 6-9%)
- Low (Linear Extensibility: < 3%)

N

0 750 1,500
Feet

1:21,000

Data sources: Data sources: U.S. Department of Agriculture, Natural Resources Conservation Service, Soil Survey Geographic (SSURGO) database for Sonoma County, California 11-27-2013; Sonoma County GIS; ArcGIS Online World Topo Map Basemap. Map date: June 26, 2014. (Sebas_LinearExten_140626_4-1-5)

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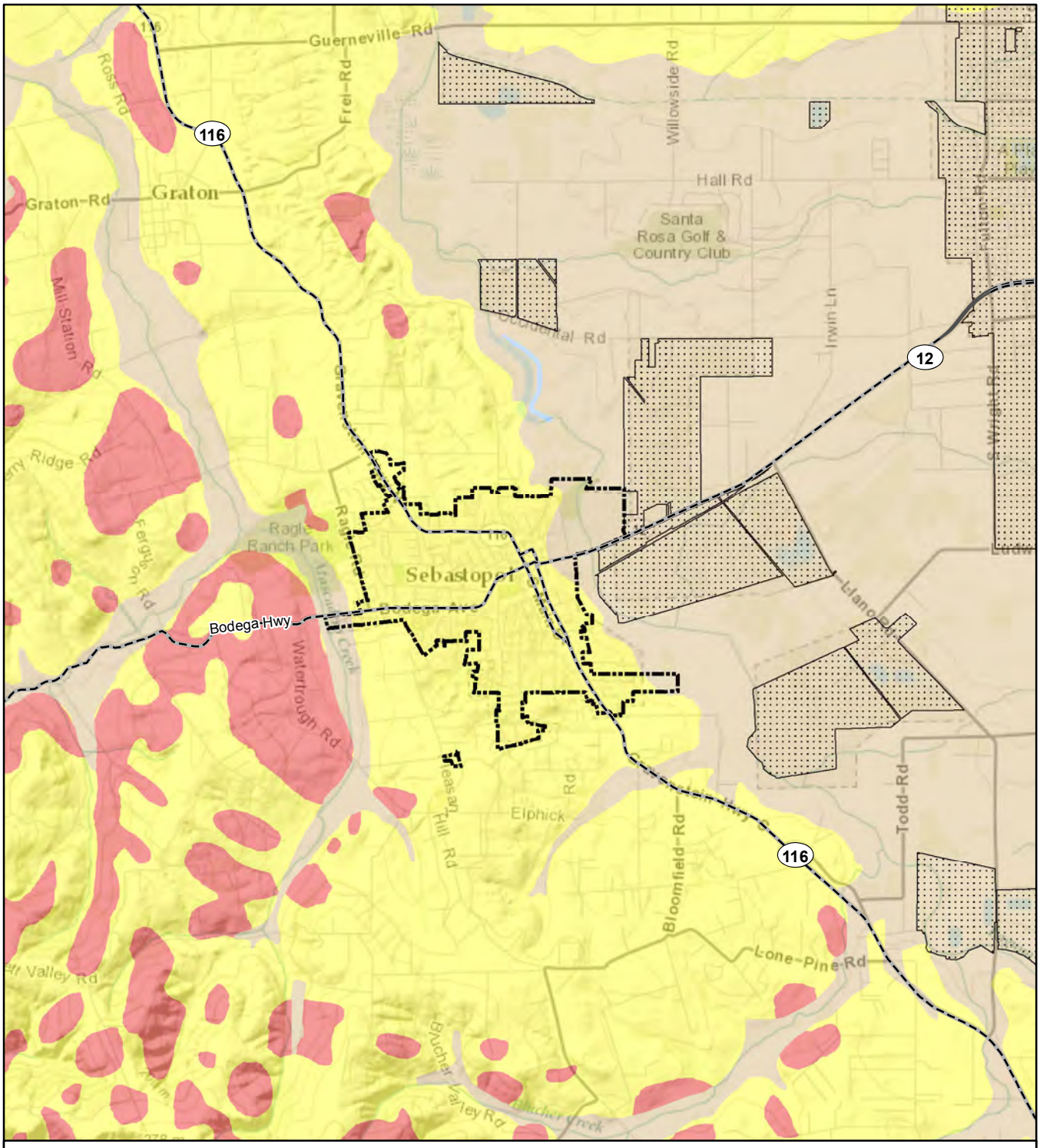

Landslide Potential

- Very High
- High
- Moderate
- Low
- Very Low
- Water

City Boundaries

- Sebastopol
- Santa Rosa

SEBASTOPOL GENERAL PLAN UPDATE

Figure 3.6-6: Landslide Potential

N

0 0.5 1
Miles

1:60,000

Data sources: Data sources: U.S. Department of the Interior, U.S. Geological Survey Open File Report 97-745 C; Sonoma County GIS. Map date: June 26, 2014. (Sebas_Landslide_140626_Fig4-1-6)

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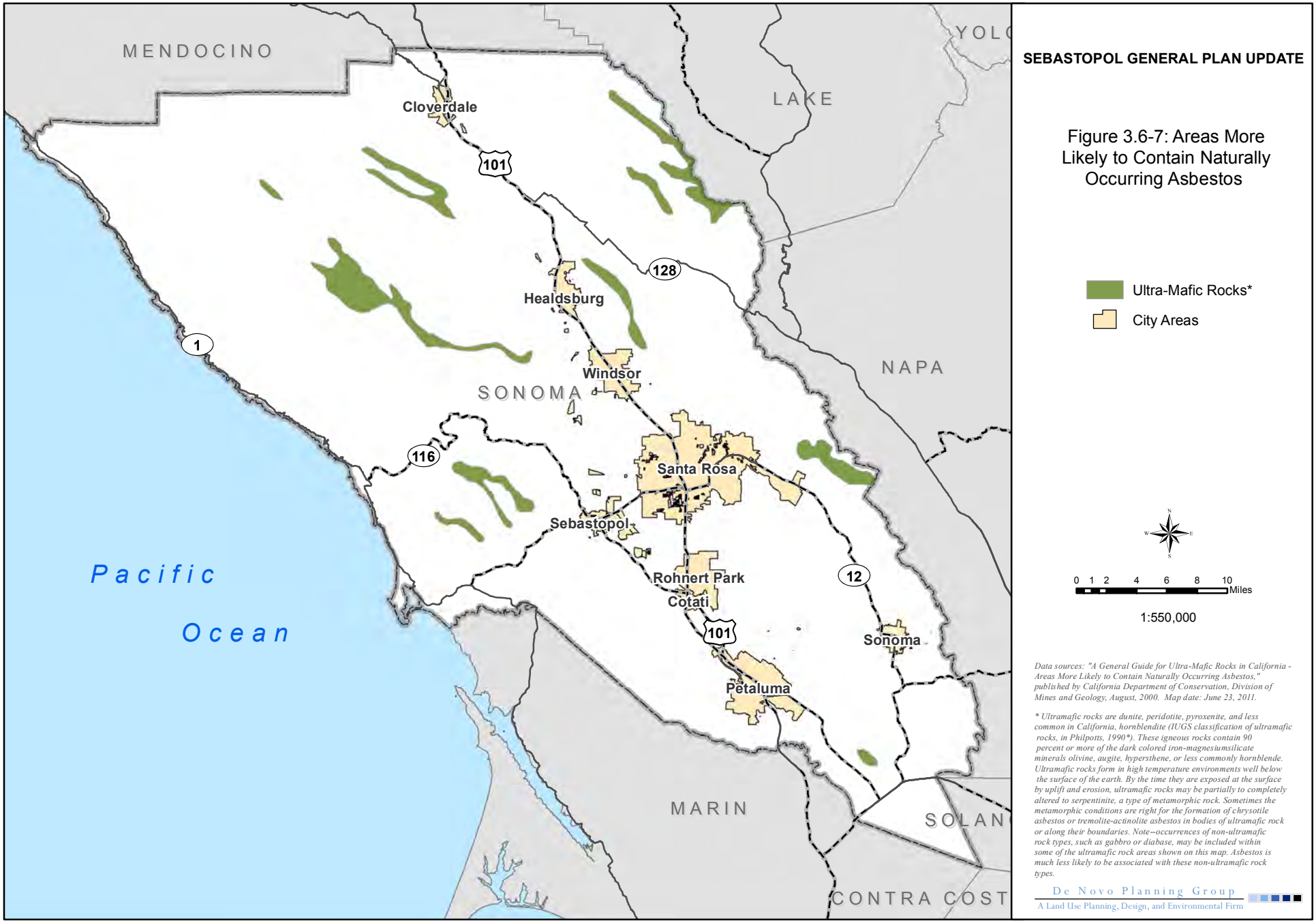
MENDOCINO
LAKE
YOLO
NAPA
SONOMA
MARIN
SOLANO
CONTRA COSTA
Pacific
Ocean
Cloverdale
Healdsburg
Windsor
Santa Rosa
Sebastopol
Rohnert Park
Cotati
Petaluma
Sonoma
101
128
1
116
12
SEBASTOPOL GENERAL PLAN UPDATE
Figure 3.6-7: Areas More Likely to Contain Naturally Occurring Asbestos
Ultra-Mafic Rocks*
City Areas
0 1 2 4 6 8 10
Miles
1:550,000
Data sources: "A General Guide for Ultra-Mafic Rocks in California - Areas More Likely to Contain Naturally Occurring Asbestos," published by California Department of Conservation, Division of Mines and Geology, August, 2000. Map date: June 23, 2011.
* Ultramafic rocks are dunite, peridotite, pyroxenite, and less common in California, hornblendite (IUGS classification of ultramafic rocks, in Philpotts, 1990*). These igneous rocks contain 90 percent or more of the dark colored iron-magnesiumsilicate minerals olivine, augite, hypersthene, or less commonly hornblende. Ultramafic rocks form in high temperature environments well below the surface of the earth. By the time they are exposed at the surface by uplift and erosion, ultramafic rocks may be partially to completely altered to serpentinite, a type of metamorphic rock. Sometimes the metamorphic conditions are right for the formation of chrysotile asbestos or tremolite-actinolite asbestos in bodies of ultramafic rock or along their boundaries. Note--occurrences of non-ultramafic rock types, such as gabbro or diabase, may be included within some of the ultramafic rock areas shown on this map. Asbestos is much less likely to be associated with these non-ultramafic rock types.
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This section discusses regional greenhouse gas (GHG) emissions and climate change impacts that could result from implementation of the proposed project. This section provides a background discussion of greenhouse gases and climate change linkages and effects of global climate change. This section is organized with an existing setting, regulatory setting, approach/methodology, and impact analysis.

The analysis and discussion of the GHG and climate change impacts in this section focuses on the proposed project's consistency with local, regional, and statewide climate change planning efforts and discusses the context of these planning efforts as they relate to the proposed project.

As described in greater detail below, emissions of GHGs have the potential to adversely affect the environment in a cumulative context. The emissions from a single project will not cause global climate change, however, GHG emissions from multiple projects throughout the world could result in a cumulative impact with respect to global climate change. Therefore, the analysis of GHGs and climate change is presented in terms of the proposed project's contribution to cumulative impacts related to GHGs and climate change.

Cumulative impacts are the collective impacts of one or more past, present, and future projects that, when combined, result in adverse changes to the environment. In determining the significance of a proposed project's contribution to anticipated adverse future conditions, a lead agency should generally undertake a two-step analysis. The first question is whether the *combined* effects from *both* the proposed project *and* other projects would be cumulatively significant. If the agency answers this inquiry in the affirmative, the second question is whether "the proposed project's *incremental* effects are cumulatively considerable" and thus significant in and of themselves. The cumulative project list for this issue (climate change) comprises anthropogenic (i.e., human-made) GHG emissions sources across the globe and no project alone would reasonably be expected to contribute to a noticeable incremental change to the global climate. However, legislation and executive orders on the subject of climate change in California have established a statewide context and process for developing an enforceable statewide cap on GHG emissions. Given the nature of environmental consequences from GHGs and global climate change, CEQA requires that lead agencies consider evaluating the cumulative impacts of GHGs. Small contributions to this cumulative impact (from which significant effects are occurring and are expected to worsen over time) may be potentially considerable and, therefore, significant.

One comment regarding climate change was received during the Notice of Preparation scoping period for the EIR. The County of Sonoma Permit and Resource Management Department commented that the EIR should address topics relating to climate change, and how the General Plan interacts with the Community Climate Action Plan.

3.7.1 ENVIRONMENTAL SETTING

GREENHOUSE GASES AND CLIMATE CHANGE LINKAGES

Various gases in the Earth's atmosphere, classified as atmospheric GHGs, play a critical role in determining the Earth's surface temperature. Solar radiation enters Earth's atmosphere from space, and a portion of the radiation is absorbed by the Earth's surface. The Earth emits this radiation back toward space, but the properties of the radiation change from high-frequency solar radiation to lower-frequency infrared radiation.

Naturally occurring greenhouse gases include water vapor (H_2O), carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), and ozone (O_3). Several classes of halogenated substances that contain fluorine, chlorine, or bromine are also greenhouse gases, but they are, for the most part, solely a product of industrial activities. Although the direct greenhouse gases CO_2, CH_4, and N_2O occur naturally in the atmosphere, human activities have changed their atmospheric concentrations. From the pre-industrial era (i.e., ending about 1750) to 2005, concentrations of these three greenhouse gases have increased globally by 36, 148, and 18 percent, respectively (IPCC, 2007).[1]

Greenhouse gases, which are transparent to solar radiation, are effective in absorbing infrared radiation. As a result, this radiation that otherwise would have escaped back into space is now retained, resulting in a warming of the atmosphere. This phenomenon is known as the greenhouse effect. Among the prominent GHGs contributing to the greenhouse effect are CO_2, CH_4, O_3, water vapor, N_2O, and chlorofluorocarbons (CFCs).

Emissions of GHGs contributing to global climate change are attributable in large part to human activities associated with the industrial/manufacturing, utility, transportation, residential, commercial, and agricultural sectors (California Air Resources Board [CARB], 2012).[2] In California, the transportation sector is the largest emitter of GHGs, followed by electricity generation (CARB, 2012).

As the name implies, global climate change is a global problem. GHGs are global pollutants, unlike criteria air pollutants and toxic air contaminants, which are pollutants of regional and local concern, respectively. California produced 492 million gross metric tons of carbon dioxide equivalents

[1] Intergovernmental Panel on Climate Change. 2007. "Climate Change 2007: The Physical Science Basis, Summary for Policymakers." <http://www.ipcc.ch/publications_and_data/publications_ipcc_fourth_assessment_report_wg1_report_the_physical_science_basis.htm>.

[2] California Air Resources Board. 2012. "Greenhouse Gas Inventory Data, 2000-2009. <http://www.arb.ca.gov/cc/inventory/data/data.htm>.

(MMTCO2e) in 2004 (California Energy Commission [CEC], 2006a).[3] By 2020, California is projected to produce 507 MMTCO2e per year.[4]

Carbon dioxide equivalents are a measurement used to account for the fact that different GHGs have different potential to retain infrared radiation in the atmosphere and contribute to the greenhouse effect. This potential, known as the global warming potential of a GHG, is also dependent on the lifetime, or persistence, of the gas molecule in the atmosphere. Expressing GHG emissions in carbon dioxide equivalents takes the contribution of all GHG emissions to the greenhouse effect and converts them to a single unit equivalent to the effect that would occur if only CO_2 were being emitted.

Consumption of fossil fuels in the transportation sector was the single largest source of California's GHG emissions in 2008, accounting for 36.9 percent of total GHG emissions in the state (CARB, 2012). This category was followed by the electric power sector (including both in-state and out of-state sources) (24.8 percent) and the industrial sector (21.1 percent) (CARB, 2012).

EFFECTS OF GLOBAL CLIMATE CHANGE

The effects of increasing global temperature are far-reaching and extremely difficult to quantify. The scientific community continues to study the effects of global climate change. In general, increases in the ambient global temperature as a result of increased GHGs are anticipated to result in rising sea levels, which could threaten coastal areas through accelerated coastal erosion, threats to levees and inland water systems and disruption to coastal wetlands and habitat.

If the temperature of the ocean warms, it is anticipated that the winter snow season would be shortened. Snowpack in the Sierra Nevada provides both water supply (runoff) and storage (within the snowpack before melting), which is a major source of supply for the state. The snowpack portion of the supply could potentially decline by 70 percent to 90 percent by the end of the 21st century (California Climate Change Center [CCCC], 2006).[5] This phenomenon could lead to significant challenges securing an adequate water supply for a growing state population. Further, the increased ocean temperature could result in increased moisture flux into the state; however, since this would likely increasingly come in the form of rain rather than snow in the high elevations, increased precipitation could lead to increased potential and severity of flood events, placing more pressure on California's levee/flood control system.

Sea level has risen approximately seven inches during the last century and it is predicted to rise an additional 22 to 35 inches by 2100, depending on the future GHG emissions levels (CCCC, 2006). If this occurs, resultant effects could include increased coastal flooding, saltwater intrusion and disruption of wetlands (CCCC, 2006). As the existing climate throughout California changes over

[3] California Energy Commission. 2006a. Inventory of California Greenhouse Gas Emissions and Sinks 1990 to 2004. <http://www.arb.ca.gov/cc/inventory/archive/archive.htm>.

[4] California Air Resources Board. 2010. "Functional Equivalent Document prepared for the California Cap on GHG Emissions and Market-Based Compliance Mechanisms."

[5] California Climate Change Center. 2006. Scenarios of Climate Change in California: An Overview. <http://www.climatechange.ca.gov/climate_action_team/reports/>.

time, mass migration of species, or failure of species to migrate in time to adapt to the perturbations in climate, could also result. Under the emissions scenarios of the Climate Scenarios report (CCCC, 2006), the impacts of global warming in California are anticipated to include, but are not limited to, the following:

Public Health

Temperatures in California are projected to rise significantly over the twenty-first century (CCCC, 2006). The estimates in the magnitude of warming vary due to uncertainties in climate sensitivity, differences in modeling approaches, and differences in future emissions scenarios (CCCC, 2006). Given the range in projected emissions and temperature increases, the California Climate Change Center has presented temperature increase estimates in the low range, medium range, and high range to reflect the variations in the modeling of future conditions. Higher temperatures are expected to increase the frequency, duration, and intensity of conditions conducive to air pollution formation. For example, days with weather conducive to ozone formation are projected to increase from 25 percent to 35 percent under the lower warming range and to 75 percent to 85 percent under the medium warming range. In addition, if global background ozone levels increase as predicted in some scenarios, it may become impossible to meet local air quality standards. Air quality could be further compromised by increases in wildfires, which emit fine particulate matter that can travel long distances depending on wind conditions. The Climate Scenarios report indicates that large wildfires could become up to 55 percent more frequent if GHG emissions are not significantly reduced.

In addition, under the higher warming scenario, there could be up to 100 more days per year with temperatures above 90°F in Los Angeles and 95°F in Sacramento by 2100, which provides a contextual background for understanding temperature increases throughout all areas of California. This is a large increase over historical patterns and approximately twice the increase projected if temperatures remain within or below the lower warming range. Rising temperatures will increase the risk of death from dehydration, heat stroke/exhaustion, heart attack, stroke, and respiratory distress caused by extreme heat.

Water Resources

A vast network of man-made reservoirs and aqueducts capture and transport water throughout the state from northern California rivers and the Colorado River. The current distribution system relies on Sierra Nevada snow pack to supply water during the dry spring and summer months. Rising temperatures, potentially compounded by decreases in precipitation, could severely reduce spring snow pack, increasing the risk of summer water shortages.

The state's water supplies are also at risk from rising sea levels. An influx of saltwater would degrade California's estuaries, wetlands, and groundwater aquifers. Saltwater intrusion caused by rising sea levels is a major threat to the quality and reliability of water within the southern edge of the Sacramento/San Joaquin River Delta, a major state fresh water supply to significant population centers throughout California, and a key water supply for much of California's agricultural economy,

which provides food sources for much of the state. Global warming is also projected to seriously affect agricultural areas, with California farmers projected to lose as much as 25 percent of the water supply they need; decrease the potential for hydropower production within the state (although the effects on hydropower are uncertain); and seriously harm winter tourism. Under the lower warming range, the snow dependent winter recreational season at lower elevations could be reduced by as much as one month. If temperatures reach the higher warming range and precipitation declines, there might be many years with insufficient snow for skiing, snowboarding, and other snow dependent recreational activities.

If GHG emissions continue unabated, more precipitation will fall as rain instead of snow, and the snow that does fall will melt earlier, reducing the Sierra Nevada spring snow pack by as much as 70 percent to 90 percent. Under the lower warming scenario, snow pack losses are expected to be only half as large as those expected if temperatures were to rise to the higher warming range. How much snow pack will be lost depends in part on future precipitation patterns, the projections for which remain uncertain. However, even under the wetter climate projections, the loss of snow pack would pose challenges to water managers, hamper hydropower generation, and nearly eliminate all skiing and other snow-related recreational activities.

Agriculture

Increased GHG emissions are expected to cause widespread changes to the agriculture industry reducing the quantity and quality of agricultural products statewide. Although higher carbon dioxide levels can stimulate plant production and increase plant water-use efficiency, California's farmers will face greater water demand for crops and a less reliable water supply as temperatures rise.

Plant growth tends to be slow at low temperatures, increasing with rising temperatures up to a threshold. However, faster growth can result in less-than-optimal development for many crops, so rising temperatures are likely to worsen the quantity and quality of yield for a number of California's agricultural products. Products likely to be most affected include wine grapes, fruits, and nuts.

Crop growth and development will be affected, as will the intensity and frequency of pest and disease outbreaks. Rising temperatures will likely aggravate ozone pollution, which makes plants more susceptible to disease and pests and interferes with plant growth.

In addition, continued global warming will likely shift the ranges of existing invasive plants and weeds and alter competition patterns with native plants. Range expansion is expected in many species while range contractions are less likely in rapidly evolving species with significant populations already established. Should range contractions occur, it is likely that new or different weed species will fill the emerging gaps. Continued global warming is also likely to alter the abundance and types of many pests, lengthen pests' breeding season, and increase pathogen growth rates.

Forests and Landscapes

Global warming is expected to alter the distribution and character of natural vegetation thereby resulting in a possible increased risk of large wildfires. If temperatures rise into the medium warming range, the risk of large wildfires in California could increase by as much as 55 percent, which is almost twice the increase expected if temperatures stay in the lower warming range. However, since wildfire risk is determined by a combination of factors, including precipitation, winds, temperature, and landscape and vegetation conditions, future risks will not be uniform throughout the state. For example, if precipitation increases as temperatures rise, wildfires in southern California are expected to increase by approximately 30 percent toward the end of the century. In contrast, precipitation decreases could increase wildfires in northern California by up to 90 percent.

Moreover, continued global warming will alter natural ecosystems and biological diversity within the state. For example, alpine and sub-alpine ecosystems are expected to decline by as much as 60 percent to 80 percent by the end of the century as a result of increasing temperatures. The productivity of the state's forests is also expected to decrease as a result of global warming.

Rising Sea Levels

Rising sea levels, more intense coastal storms, and warmer water temperatures will increasingly threaten the state's coastal regions. Under the higher warming scenario, sea level is anticipated to rise 22 to 35 inches by 2100. Elevations of this magnitude would inundate coastal areas with saltwater, accelerate coastal erosion, threaten vital levees and inland water systems, and disrupt wetlands and natural habitats.

ENERGY CONSUMPTION

The consumption of nonrenewable energy (primarily gasoline and diesel fuel) associated with the operation of passenger, public transit, and commercial vehicles results in GHG emissions that ultimately result in global climate change. Alternative fuels such as natural gas, ethanol, and electricity (unless derived from solar, wind, nuclear, or other energy sources that do not produce carbon emissions) also result in GHG emissions and contribute to global climate change.

Electricity Consumption

California relies on a regional power system composed of a diverse mix of natural gas, renewable, hydroelectric, and nuclear generation resources. Approximately 71 percent of the electrical power needed to meet California's demand is produced in the state. Approximately 29 percent of its electricity demand is imported from the Pacific Northwest and the Southwest (CEC, 2012).[6] In 2010, California's in-state generated electricity was derived from natural gas (53.4 percent), large hydroelectric resources (14.6 percent), coal (1.7 percent), nuclear sources (15.7 percent), and

[6] California Energy Commission. 2012. Energy Almanac. Retrieved August 2012, from: <http://energyalmanac.ca.gov/overview/index.html>.

renewable resources that include geothermal, biomass, small hydroelectric resources, wind, and solar (14.6 percent) (CEC, 2012).

According to the California Energy Commission (CEC), total statewide electricity consumption increased from 166,979 gigawatt-hours (GWh) in 1980 to 228,038 GWh in 1990, which is an estimated annual growth rate of 3.66 percent. The statewide electricity consumption in 1997 was 246,225 GWh, reflecting an annual growth rate of 1.14 percent between 1990 and 1997 (CEC Energy Almanac, 2012). Statewide consumption was 274,985 GWh in 2010, an annual growth rate of 0.9 percent between 1997 and 2010.

Oil

The primary energy source for the United States is oil, which is refined to produce fuels like gasoline, diesel, and jet fuel. Oil is a finite, nonrenewable energy source. World consumption of petroleum products has grown steadily in the last several decades. As of 2009, world consumption of oil had reached 96 million barrels per day. The United States, with approximately five percent of the world's population, accounts for approximately 19 percent of world oil consumption, or approximately 18.6 million barrels per day (The World Factbook 2009, Washington, DC: Central Intelligence Agency, 2009). The transportation sector relies heavily on oil. In California, petroleum based fuels currently provide approximately 96 percent of the state's transportation energy needs (CEC, 2012).

Natural Gas

Natural gas supplies are derived from underground sources and brought to the surface at gas wells. Once it is extracted, gas is purified and the odorant that allows gas leaks to be detected is added to the normally odorless gas. Natural gas suppliers, such as PG&E, then send the gas into transmission pipelines, which are usually buried underground. Compressors propel the gas through the pipeline system, which delivers it to homes and businesses.

The state produces approximately 12 percent of its natural gas, while obtaining 22 percent from Canada and 65 percent from the Rockies and the Southwest (CEC, 2012). In 2006, California produced 325.6 billion cubic feet of natural gas (CEC, 2012).

GHG MEASUREMENT

Carbon dioxide equivalents (CO_2e) provide a universal standard of measurement against which the impacts of releasing, or avoiding the release of, different GHGs can be evaluated. Every greenhouse gas has a Global Warming Potential (GWP), a measurement of the impact that particular gas has on radiative forcing; that is, the amount of heat/energy that is retained in the Earth's atmosphere through the addition of this gas to the atmosphere. The GWP of a given gas describes its effect on climate change relative to a similar amount of carbon dioxide (the GWP of CO_2 is 1.0 by definition).

The GWP of a gas depends on two factors, the ability of the gas to absorb energy, and the lifetime of the gas in the atmosphere. GWPs can be expressed on an instantaneous basis, which reflects only the relative ability of the gas to absorb energy, or with an explicit time factor built-in. The residence time of CO_2 in the atmosphere is generally believed to be in excess of 100 years, and some of the

other GHGs have even longer residence times. Thus, most analyses use a timeframe in the range of 25 – 100 years in determining the warming potential of GHGs that are emitted into the atmosphere today.

Of the five principal GHGs, only CO_2 and CH_4 (methane) are emitted during the combustion of fuels. On a per-carbon basis, CH_4 has a GWP that is 25 times greater than the GWP of CO_2 on an instantaneous basis. However, the average residence time of CH_4 in the atmosphere is only about one-tenth as long as the average residence time of CO_2, and its clearance involves conversion to CO_2, so when a time factor is added the relative GWP of CH_4 goes down to values in the range of 7.5 to 12.5 on a per-carbon basis, depending on the length of the timeframe being used in the analysis. GWPs are often reported on a per-weight basis, rather than a per-carbon basis. The instantaneous GWP of CH_4 on a weight basis is 69 relative to the same weight of CO_2, and with a time factor built-in it falls to a range of about 20 to 35.

3.7.2 REGULATORY SETTING

FEDERAL

Clean Air Act

The Federal Clean Air Act (FCAA) was first signed into law in 1970. In 1977, and again in 1990, the law was substantially amended. The FCAA is the foundation for a national air pollution control effort, and it is composed of the following basic elements: National ambient air quality standards (NAAQS) for criteria air pollutants, hazardous air pollutant standards, state attainment plans, motor vehicle emissions standards, stationary source emissions standards and permits, acid rain control measures, stratospheric ozone protection, and enforcement provisions.

The EPA is responsible for administering the FCAA. The FCAA requires the EPA to set NAAQS for several problem air pollutants based on human health and welfare criteria. Two types of NAAQS were established: primary standards, which protect public health, and secondary standards, which protect the public welfare from non-health-related adverse effects such as visibility reduction.

Federal Climate Change Policy

According to the EPA, "the United States government has established a comprehensive policy to address climate change" that includes slowing the growth of emissions; strengthening science, technology, and institutions; and enhancing international cooperation. To implement this policy, "the Federal government is using voluntary and incentive-based programs to reduce emissions and has established programs to promote climate technology and science." The federal government's goal is to reduce the GHG intensity (a measurement of GHG emissions per unit of economic activity) of the American economy by 18 percent over the 10-year period from 2002 to 2012. At the time of this writing, a quantification of the effectiveness of these policies at the national level is not available. In addition, the EPA administers multiple programs that encourage voluntary GHG reductions, including "ENERGY STAR", "Climate Leaders", and Methane Voluntary Programs.

However, as of this writing, there are no adopted federal plans, policies, regulations, or laws directly regulating GHG emissions.

STATE

Assembly Bill 1493

In response to AB 1493, CARB approved amendments to the California Code of Regulations (CCR) adding GHG emission standards to California's existing motor vehicle emission standards. Amendments to CCR Title 13 Sections 1900 (CCR 13 1900) and 1961 (CCR 13 1961), and adoption of Section 1961.1 (CCR 13 1961.1) require automobile manufacturers to meet fleet average GHG emission limits for all passenger cars, light-duty trucks within various weight criteria, and medium-duty passenger vehicle weight classes beginning with the 2009 model year. Emission limits are further reduced each model year through 2016. For passenger cars and light-duty trucks 3,750 pounds or less loaded vehicle weight (LVW), the 2016 GHG emission limits are approximately 37 percent lower than during the first year of the regulations in 2009. For medium-duty passenger vehicles and light-duty trucks 3,751 LVW to 8,500 pounds gross vehicle weight (GVW), GHG emissions are reduced approximately 24 percent between 2009 and 2016.

CARB requested a waiver of federal preemption of California's Greenhouse Gas Emissions Standards. The intent of the waiver is to allow California to enact emissions standards to reduce carbon dioxide and other greenhouse gas emissions from automobiles in accordance with the regulation amendments to the CCRs that fulfill the requirements of AB 1493. The EPA granted a waiver to California to implement its greenhouse gas emissions standards for cars.

Assembly Bill 1007

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

California Executive Orders S-3-05 and S-20-06, and Assembly Bill 32

On June 1, 2005, Governor Arnold Schwarzenegger signed Executive Order S-3-05. The goal of this Executive Order is to reduce California's GHG emissions to: 1) 2000 levels by 2010, 2) 1990 levels by the year 2020 and 3) 80 percent below the 1990 levels by the year 2050.

In 2006, this goal was further reinforced with the passage of Assembly Bill 32 (AB 32), the Global Warming Solutions Act of 2006. AB 32 sets the same overall GHG emissions reduction goals while further mandating that CARB create a plan, which includes market mechanisms, and implement

rules to achieve "real, quantifiable, cost-effective reductions of greenhouse gases." Executive Order S-20-06 further directs state agencies to begin implementing AB 32, including the recommendations made by the state's Climate Action Team.

Assembly Bill 32 - Climate Change Scoping Plan

On December 11, 2008 ARB adopted its *Climate Change Scoping Plan* (Scoping Plan), which functions as a roadmap of ARB's plans to achieve GHG reductions in California required by AB 32 through subsequently enacted regulations. The Scoping Plan contains the main strategies California will implement to reduce CO_2e emissions by 169 million metric tons (MMT), or approximately 30 percent, from the state's projected 2020 emissions level of 596 MMT of CO_2e under a business-as-usual scenario. (This is a reduction of 42 MMT CO_2e, or almost 10 percent, from 2002 to 2004 average emissions, but requires the reductions in the face of population and economic growth through 2020.) The Scoping Plan also breaks down the amount of GHG emissions reductions ARB recommends for each emissions sector of the state's GHG inventory. The Scoping Plan calls for the largest reductions in GHG emissions to be achieved by implementing the following measures and standards:

- improved emissions standards for light-duty vehicles (estimated reductions of 31.7 MMT CO_2e),
- the Low-Carbon Fuel Standard (15.0 MMT CO_2e),
- energy efficiency measures in buildings and appliances and the widespread development of combined heat and power systems (26.3 MMT CO_2e), and
- a renewable portfolio standard for electricity production (21.3 MMT CO_2e).

California Strategy to Reduce Petroleum Dependence (AB 2076)

In response to the requirements of AB 2076 (Chapter 936, Statutes of 2000), the CEC and the CARB developed a strategy to reduce petroleum dependence in California. The strategy, *Reducing California's Petroleum Dependence*, was adopted by the CEC and CARB in 2003. The strategy recommends that California reduce on-road gasoline and diesel fuel demand to 15 percent below 2003 demand levels by 2020 and maintain that level for the foreseeable future; the Governor and Legislature work to establish national fuel economy standards that double the fuel efficiency of new cars, light trucks, and sport utility vehicles (SUVs); and increase the use of non- petroleum fuels to 20 percent of on-road fuel consumption by 2020 and 30 percent by 2030.

Governor's Low Carbon Fuel Standard (Executive Order #S-01-07)

Executive Order #S-01-07 establishes a statewide goal to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020 through establishment of a Low Carbon Fuel Standard. The Low Carbon Fuel Standard is incorporated into the State Alternative Fuels Plan and is one of the proposed discrete early action GHG reduction measures identified by CARB pursuant to AB 32.

Senate Bill 97

Senate Bill 97 (Chapter 185, 2007) (SB 97) required the Governor's Office of Planning and Research (OPR) to develop recommended amendments to the State CEQA Guidelines for addressing greenhouse gas emissions. OPR prepared its recommended amendments to the State CEQA Guidelines to provide guidance to public agencies regarding the analysis and mitigation of greenhouse gas emissions and the effects of greenhouse gas emissions in draft CEQA documents. The Amendments became effective on March 18, 2010.

Senate Bill 375

Senate Bill No. 375 (Stats. 2008, Ch. 728) (SB 375) was built on AB 32 (California's 2006 climate change law). SB 375's core provision is a requirement for regional transportation agencies to develop a Sustainable Communities Strategy (SCS) in order to reduce GHG emissions from passenger vehicles. The SCS is one component of the existing Regional Transportation Plan (RTP).

On July 18, 2013, the Association of Bay Area Governments (ABAG) and the Metropolitan Transportation Commission (MTC) adopted Plan Bay Area an integrated transportation and land-use strategy through 2040 that marks the nine-county region's first long-range plan to meet the requirements of Senate Bill 375, which calls on each of the state's 18 metropolitan areas to develop a Sustainable Communities Strategy to accommodate future population growth and reduce greenhouse gas emissions from cars and light trucks. Working in collaboration with cities and counties, the Plan advances initiatives to expand housing and transportation choices, create healthier communities, and build a stronger regional economy.

Additionally, SB 375 modified the state's Housing Element Law to achieve consistency between the land use pattern outlined in the SCS and the Regional Housing Needs Assessment allocation. The legislation also substantially improved cities' and counties' accountability for carrying out their housing element plans.

LOCAL

Cities for Climate Protection Program

The City of Sebastopol passed Resolution 5229 in January 2002 endorsing the Cities for Climate Protection Campaign which includes a five milestone program to reduce greenhouse gas and air pollution emissions. The five milestones are as follows:

1. Conduct a baseline greenhouse gas emissions inventory and forecast to determine the sources and quantity of greenhouse gas emissions in the jurisdiction;
2. Establish a greenhouse gas emissions reduction target;
3. Develop a climate action plan consisting of both existing and future actions which, when implemented, will meet the local greenhouse gas reduction target;
4. Implement the action plan; and
5. Monitor and report progress.

In September 2003 the City reported their municipal baseline emissions in *Standing Together for the Future: Greenhouse Gas Emission Inventories for Eight Cities in Sonoma County, California*.

Sebastopol Mandatory Photovoltaic System Requirements

As of July 21, 2013 the City of Sebastopol established a Mandatory Solar Photovoltaic Requirements Ordinance to promote the reduction of Green House Gas Emissions.

Municipal Code section 15.72 requires a photovoltaic system on all new commercial or residential buildings, and alterations, additions and remodels to existing buildings. Any addition to an existing commercial building that increases the square footage by 1800 square feet or greater and all commercial remodels, alterations or repairs that are made involving demolition, remodel or repair of more than 50 percent of the structure.

Any addition to an existing residential building that increases the square footage by 75 percent or greater and all residential remodels, alterations or repairs that are made involving demolition, remodel or repair of more than 75 percent of the structure.

Minimum system size may be calculated by either of two methods, prescriptive or performance.

Prescriptive Method. The minimum system size utilizing the prescriptive method is two watts per square foot of building size. Watts are calculated by using the nameplate rating of the photovoltaic system. There are no considerations for performance such as tilt, orientation shading or tariffs.

Performance Method. The system sizing requirement for the performance model shall be calculated using modeling software or other methods approved by the official. The total building load is calculated in kilowatt hours. The photovoltaic system annual output is calculated by factoring in system orientation, tilt, shading, local weather conditions and equipment efficiency. On an annual basis the photovoltaic system must offset 75 percent of the building's total load.

Solar Sebastopol

Solar Sebastopol was the City of Sebastopol's pioneering effort to encourage Sebastopol residences and businesses to switch to solar energy, a much more environmentally sustainable, renewable source of electricity. The program was designed to make solar a simple, affordable, and compelling choice for Sebastopol property owners, while demonstrating to other municipalities how to take their local energy future into their own hands. The program has grown to what is now called Solar Sonoma County, which is led by the Solar Action Alliance.

The Solar Action Alliance is an organization that supports solar and energy efficiency-related policy issues, educates and trains community members in the field, advocates for a rapidly growing industry, and acts as a clearinghouse for clean energy activity in Sonoma County.

Sonoma County Climate Action Plan 2020

In 2005, the ten local governments within Sonoma County pledged to reduce GHG emissions community-wide to 25 percent below 1990 levels by 2015. The Regional Climate Protection Authority (RCPA) was created in 2009 to help each jurisdiction reach its goal. The RCPA includes representatives from each of the nine cities in Sonoma County and the Board of Supervisors.

Climate Action 2020 is a collaborative effort led by the RCPA and including all nine cities and the County of Sonoma and several partner entities to take further actions to reduce GHG emissions community-wide and respond to the threats of climate change. RCPA will work with each jurisdiction to develop a Community Climate Action Plan that will provide a comprehensive assessment of GHGs emission sources as well possible measures that jurisdictions can take to reduce GHG emissions and/or adapt to climate change to ensure their communities remain vibrant and resilient. The Public Review Draft of the Climate Action 2020 and Beyond was released on March 4, 2016.

Green Building Standards

CALGreen is a set of mandatory green building standards for new construction that went into effect throughout California on January 1, 2011. The 2013 California Green Building Standards Code went into effect on January 1, 2014. These building standards apply to all new public and privately-constructed commercial and residential buildings. CALGreen is referred to officially as the California Green Building Standards Code and includes a matrix of mandatory requirements tailored to residential and non-residential building classifications, as well as two sets of voluntary measures (CALGreen Tier 1 and Tier 2) that provide a host of more stringent sustainable building practices and features. Among the key mandatory provisions are requirements that new buildings:

- reduce indoor potable water use by at least 20 percent below current standards;
- recycle or salvage at least 50 percent of construction waste;
- utilize low VOC-emitting finish materials and flooring systems;
- install separate water meters tracking non-residential buildings' indoor and outdoor water use;
- utilize moisture-sensing irrigation systems for larger landscape areas;
- receive mandatory inspections by local officials of building energy systems, such as HVAC and mechanical equipment, to verify performance in accordance with specifications in non-residential buildings exceeding 10,000 square feet; and
- earmark parking for fuel-efficient and carpool vehicles.

3.7.3 IMPACTS AND MITIGATION MEASURES

GHG THRESHOLDS OF SIGNIFICANCE AND METHODOLOGY

Analysis Approach

The California Office of Planning and Research (OPR) recommends that lead agencies under CEQA make a good-faith effort, based on available information, to estimate the quantity of GHG emissions

that would be generated by a proposed project, including the emissions associated with construction activities, stationary sources, vehicular traffic, and energy consumption to determine whether the impacts have the potential to result in a significant project or cumulative environmental impact; and, where feasible mitigation is available, to mitigate any project or cumulative impact determined to be potentially significant. More recently, OPR prepared amendments to the State CEQA Guidelines, pursuant to SB 97 (Statutes of 2007) for adoption by the California Natural Resources Agency. The amendments added several provisions reinforcing the requirements to assess a project's GHG emissions as a contribution to the cumulative impact of climate change. The amendments went into effect on March 18, 2010.

Specifically, CEQA Guidelines Section 15064.4, as amended March 18, 2010, states:

(a) The determination of the significance of greenhouse gas emissions calls for a careful judgment by the lead agency consistent with the provisions in section 15064. A lead agency should make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate the amount of greenhouse gas emissions resulting from a project. A lead agency shall have discretion to determine, in the context of a particular project, whether to:

(1) Use a model or methodology to quantify greenhouse gas emissions resulting from a project, and which model or methodology to use. The lead agency has discretion to select the model or methodology it considers most appropriate provided it supports its decision with substantial evidence. The lead agency should explain the limitations of the particular model or methodology selected for use; and/or

(2) Rely on a qualitative analysis or performance based standards.

(b) A lead agency should consider the following factors, among others, when assessing the significance of impacts from greenhouse gas emissions on the environment:

(1) The extent to which the project may increase or reduce greenhouse gas emissions as compared to the existing environmental setting;

(2) Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project.

(3) The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions. Such requirements must be adopted by the relevant public agency through a public review process and must reduce or mitigate the project's incremental contribution of greenhouse gas emissions. If there is substantial evidence that the possible effects of a particular project are still cumulatively considerable notwithstanding compliance with the adopted regulations or requirements, an EIR must be prepared for the project.

THRESHOLDS OF SIGNIFICANCE

Per Appendix G of the CEQA Guidelines, climate change-related impacts are considered significant if implementation of the proposed project under consideration would do any of the following:

1. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.

2. Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

In order to determine whether or not the proposed project would generate GHG emissions that may have a significant impact on the environment, this EIR relies on the project's consistency with the GHG reduction strategies established by the AB 32 Scoping Plan and the associated guidance document prepared by the California Air Pollution Control Officers Association (CAPCOA). In June 2009 CAPCOA published the *Model Policies for Greenhouse Gases in General Plans*. This document includes recommended policy guidance and techniques that may be implemented by cities and counties during the preparation of general plan updates. The incorporation of the various policy recommendations included in this document into local general plans will assist the State of California in meeting the GHG reductions goals established by AB 32. The Bay Area Air Quality Management District (BAAQMD) recommends that measures from the 2009 CAPCOA publication be incorporated into general plans as an effective means of reducing GHG emissions from plan-level documents.

AB 32 and S-3-05 target the reduction of statewide emissions. It should be made clear that AB 32 and S-3-05 do not specify that the emissions reductions should be achieved through uniform reduction by geographic location or by emission source characteristics. The City of Sebastopol has determined that the establishment of a numerical threshold of significance is not appropriate for the General Plan GHG analysis. Consistent with the guidance provided in CEQA Guidelines Section 15064.4(a)(2), Sebastopol has prepared this EIR in a manner which includes a quantification of the cumulative General Plan buildout GHG emissions before and after the implementation of mitigation measures, as well as a qualitative analysis and discussion of the General Plan's consistency with AB 32 and the associated guidance document prepared by the CAPCOA.

IMPACTS AND MITIGATION MEASURES

Impact 3.7-1: General Plan implementation could generate GHGs, either directly or indirectly, that may have a significant effect on the environment. (Less than Significant)

Implementation of the 2016 General Plan would not directly result in the creation of GHG emissions. However, subsequent development allowed under the 2016 General Plan would result in new projects that would increase GHG emissions in the Sebastopol Area.

There are a variety of ways in which a general plan could contribute to climate change and result in the generation of GHGs. Sprawling land use patterns that place residences far from employment and retail centers can result in increased vehicle miles traveled (VMT), which increase GHG

generation. The conversion of forest lands and open space areas into urbanized uses removes vegetation and trees that have positive carbon sequestration value. Imbalances between local jobs and housing can result in increased commute times and increased VMT associated with longer travel distances between home and work.

CAPCOA has identified a number of key opportunities related to each mandatory element of a general plan, as well as optional elements of a general plan, that may assist in a reduction GHG emissions associated with land use planning decisions and general plan implementation. These key policy recommendations are summarized below, and are followed by a list of policies and action items contained in the 2016 Sebastopol General Plan that support or implement these recommendations. It is important to note that the CAPCOA recommendations are not mandatory, and were developed to be general enough to apply to different local agencies throughout California; therefore, not all of the recommendations would necessarily apply to, or be appropriate for, Sebastopol.

CAPCOA GENERAL PLAN RECOMMENDATIONS

- Foster land use intensity near, along with connectivity to, retail and employment centers and services to reduce vehicle miles traveled and increase the efficiency of delivery of services through adoption and implementation of smart growth principles and policies;
- Improve the local jobs/housing balance to reduce vehicle miles traveled;
- Zone for appropriate mixed use development to encourage walking and bicycling for short trips, rather than vehicles;
- Link residential and commercial development to transit facilities;
- Reduce parking requirements to facilitate higher density development that fosters access by walking, biking and public transit;
- Identify potential sites for renewable energy facilities and transmission lines;
- Promote recycling to reduce waste and energy consumption;
- Identify appropriate sites for waste recovery facilities to minimize escape of GHGs;
- Conserve natural lands for carbon sequestration;
- Identify lands suitable for wind power generation;
- Conserve water to promote energy efficiency;
- Promote recycling and waste recovery;
- Promote urban forestry and reforestation as feasible;
- Identify and prioritize infrastructure improvements needed to support increased use of alternatives to private vehicle travel, including transit, bicycle, and pedestrian modes;
- Coordinate with adjacent municipalities, transit providers, and regional transportation planning agencies to develop mutual policies and funding mechanisms to increase the use of alternative transportation;
- Establish higher priorities for transit funding relative to street and road construction and maintenance;
- Incorporate “Complete Streets” policies that foster equal access by all users, including pedestrians and bicyclists;

- Promote linkages between development locations and transportation facilities;
- Preserve transportation corridors for renewable energy transmission and for new transit lines;
- Identify appropriate locations for intermodal transportation stations;
- Identify opportunities, in cooperation with transit providers, to provide financing for transit operations and maintenance;
- Identify existing and potential future urban growth boundaries to limit sprawling development patterns and foster a more compact urban form;
- Conserve natural lands for carbon sequestration;
- Promote trail systems to facilitate bicycle and pedestrian trips in lieu of vehicle travel;
- Identify sites for higher density housing closer to employment centers, retail and services, and transit facilities;
- Identify sites for affordable housing for workers close to employment centers;
- Establish or support programs to assist in the energy-efficient retrofitting of older affordable housing units;
- Balance additional upfront costs for energy efficiency and affordable housing economic considerations by providing or supporting programs to finance energy-efficient housing;
- Energy-efficiency requirements for residential, commercial, and industrial construction under local jurisdiction that exceed current standards;
- Facilitate residential and commercial renewable energy facilities (solar array installations, individual wind energy generators, etc.);
- Promote cogeneration facilities for combined heating and electricity;
- Facilitate renewable energy facilities and transmission line siting;
- Establish energy-efficiency standards for public facilities;
- Incorporate urban design principles that promote higher residential densities in attractive forms with easily accessible parks and recreation opportunities nearby;
- Use urban design standards to facilitate clustered, higher-density, mixed use communities with greater potential for transit ridership, alternatives to vehicle travel, and shorter trips;
- Establish policies and design principles to incorporate inviting public spaces in high density, mixed use communities;
- Incorporate “Complete Streets” policies that foster equal access by all users, including pedestrians and bicyclists;
- Promote water-efficient and energy-efficient housing and commercial areas;
- Incorporate water conservation measures for municipal operations and throughout the community to reduce GHG emissions from pumping and water delivery;
- Adopt policies and standards to facilitate water recycling for use on landscaping, agricultural operations, and other applications where potable water is not required, to reduce pumping-related GHG emissions;
- Establishment of minimum parcel sizes for agricultural lands outside of Agricultural Preserves and restrictions on non-agriculture related development and uses on agricultural parcels to enhance the viability of local agriculture and prevent additional sprawl development that increases dependence on and emissions from private vehicles;

- Development of policies and incentives (e.g., carbon credit programs) to promote voluntary preservation of farmland for carbon sink purposes;
- Adoption of policies and programs that facilitate local farmer's markets and farmer co-ops that allow residents to purchase local farm goods and reduce emissions from transportation of agricultural products; and
- Support for agricultural industries that reduce the need to move agricultural products long distances for processing or packaging.

The CAPCOA recommendations listed above are grounded in the principles of developing compact communities with a mix of land uses, providing a range of alternative transportation opportunities, conserving areas of open space lands, including agricultural lands, conserving water resources, and reducing energy consumption.

The 2016 General Plan was developed with extensive input from the community. The core themes expressed by the community for inclusion in the General Plan closely mirror the policy priorities established by CAPCOA and AB 32.

In order to determine if the proposed project would generate GHGs that may have a significant effect on the environment, the City of Sebastopol has relied on the proposed project's consistency with previously adopted plans and programs aimed at reducing GHG levels both locally and regionally. In California, the primary legislation related to statewide GHG reduction targets is AB 32, which calls for reducing statewide GHG emissions to 1990 levels by 2020.

The City of Sebastopol participates in the Sonoma County RCPA. The RCPA was created in 2009 to improve coordination on climate change issues and establish a clearinghouse for efforts to reduce GHG emissions. The RCPA is made up of the same Board of Directors as the Sonoma County Transportation Authority (SCTA) and includes representatives from each of the nine cities in Sonoma County (including Sebastopol) and the Sonoma County Board of Supervisors.

The RCPA has completed and published the Community Climate Action Plan (CCAP), which recommends regional solutions to reduce emissions from buildings, transportation, the electrical grid, agriculture, forestry, and solid waste. As described in the CCAP, implementation of all major quantified GHG reduction solutions identified in the CCAP will achieve a 22 percent reduction below 1990 GHG levels, which is approximately 37 percent below business as usual GHG projections. These reduction targets are comparable to, and consistent with, the goals established by AB 32. The RCPA released the Public Review Draft of the Climate Action 2020 and Beyond on March 4, 2016.

The California Emission Estimator Model (CalEEMod)^{TM} (v.2013.2.2) was used to estimate project-level operational GHG emissions associated with full buildout of the Sebastopol Planning Area. GHG emissions generated by buildout of the General Plan Land Use Map would consist primarily of CO_2 emissions, with very limited quantities of methane (CH_4) also generated. The CO_2e metric provides a universal standard of measurement against which the impacts of releasing (or avoiding the release of) different greenhouse gases can be evaluated. Every greenhouse gas has a Global Warming Potential (GWP), a measurement of the impact that particular gas has on 'radiative forcing'; that is,

the additional heat/energy which is retained in the Earth's ecosystem through the addition of this gas to the atmosphere.

Table 3.7-1 shows the CO_2e emissions, which include mobile source, area source, and energy emissions that would result from operations under existing conditions within Sebastopol. Table 3.7-2 shows CO_2e emissions that would result from operations of development under the General Plan build out. Table 3.7-3 shows CO_2e emissions that would result from operations of development that may occur within the existing City Limits and the Sphere of Influence/Urban Growth Boundary (SOI/UGB) under General Plan buildout conditions, without taking into account development constraints identified in the proposed General Plan.

TABLE 3.7-1: GHG EMISSIONS UNDER EXISTING CONDITIONS

EMISSIONS CATEGORY	*UNMITIGATED CO_2E (METRIC TONS/YEAR)*	*MITIGATED CO_2E (METRIC TONS/YEAR)*
Area Source GHG Emissions	527.6709	241.8253
Energy Source GHG Emissions	21,854.0052	21,854.0052
Mobile Source GHG Emissions	64,576.4666	64,576.4666
Waste Source GHG Emissions	3,591.6970	3,591.6970
Water Usage GHG Emissions	1,632.0093	1,339.0165
Total Operational GHG Emissions	**92,181.8490**	**91,603.0105**

SOURCE: CALEEMOD (V.2013.2.2).

TABLE 3.7-2: GHG EMISSIONS UPON BUILDOUT OF PROPOSED GENERAL PLAN

EMISSIONS CATEGORY	*UNMITIGATED CO_2E (METRIC TONS/YEAR)*	*MITIGATED CO_2E (METRIC TONS/YEAR)*
Area Source GHG Emissions	100.3736	47.7995
Energy Source GHG Emissions	9,094.3472	9,094.3472
Mobile Source GHG Emissions	23,885.8979	23,885.8979
Waste Source GHG Emissions	1,277.8813	1,277.8813
Water Usage GHG Emissions	425.3697	346.9986
Total Operational GHG Emissions	**34,783.8697**	**34,652.9246**

SOURCE: CALEEMOD (V.2013.2.2).

TABLE 3.7-3: GHG EMISSIONS UPON BUILDOUT OF PROPOSED GENERAL PLAN (CUMULATIVE)

EMISSIONS CATEGORY	*UNMITIGATED CO_2E (METRIC TONS/YEAR)*	*MITIGATED CO_2E (METRIC TONS/YEAR)*
Area Source GHG Emissions	158.0464	75.3531
Energy Source GHG Emissions	12,810.3393	12,810.3393
Mobile Source GHG Emissions	29,852.2973	29,852.2973
Waste Source GHG Emissions	1,784.1526	1,784.1526
Water Usage GHG Emissions	931.1302	754.0756
Total Operational GHG Emissions	**45,535.9658**	**45,276.2179**

SOURCE: CALEEMOD (V.2013.2.2).

The full calculations, inputs, and assumptions are provided in Appendix B. CO_2e emissions are presented prior to the implementation of the GHG emissions reductions measures contained in the Conservation and Open Space Element of the General Plan (identified below), and following

implementation of the policies and actions identified below. The emissions calculations presented above assume implementation of the policies and actions that are immediately available to the City of Sebastopol in the near-term. As such, these estimates are considered a "worst-case" scenario, and do not account for additional GHG emissions reductions that may be achieved following adoption and implementation of a local climate action plan.

As shown in Table 3.7-1, under existing conditions, all sources within Sebastopol generate a combined total of 92,181.8 metric tons of CO_2e per year unmitigated, and 91,603.0 metric tons of CO_2e per year mitigated. Following implementation of the GHG reduction measures contained in the proposed General Plan, and accounting for a range of statewide legislative actions to reduce GHG emissions, upon full buildout of the General Plan, CO_2e emissions are projected to be 34,652.9 metric tons per year mitigated, which represents a decrease of approximately 62 percent. This decrease in citywide GHG emissions is consistent with the statewide GHG reduction targets established by AB 32. Additionally, following implementation of the GHG reduction measures contained in the proposed General Plan, and accounting for a range of statewide legislative actions to reduce GHG emissions, upon full buildout of the existing City Limits and the SOI/UGB under General Plan buildout conditions, without taking into account development constraints identified in the proposed General Plan, CO_2e emissions are projected to be 45,276.2 metric tons per year mitigated, which represents a decrease of approximately 51 percent. This decrease in citywide GHG emissions is consistent with the statewide GHG reduction targets established by AB 32.

As demonstrated by the policies and actions listed below, the 2016 Sebastopol General Plan has taken a progressive and proactive approach to the reduction of GHG emissions through a wide range of measures and programs. The policies and actions listed below are consistent with the policy guidance provided by CAPCOA through the 2009 *Model Policies for Greenhouse Gases in General Plans,* which is consistent with the AB 32 Scoping Plan, and GHG reduction measures recommended by the BAAQMD.

The extensive list of policies and action items provided below demonstrate Sebastopol's commitment to reducing GHGs and climate change impacts through General Plan implementation to the greatest degree feasible. The City has taken a comprehensive approach to climate change through development of the 2016 General Plan.

The 2016 General Plan Land Use Map was developed to maximize the preservation of agricultural and open space lands in areas outside of the City's Sphere of Influence. The Land Use Element places an emphasis on concentrating new urban development around and within existing established urbanized areas of the City. The General Plan includes numerous policies that promote and encourage infill development, increased residential densities, and permanent preservation of open space through the use of clustered development patterns.

The Circulation Element includes policies that require and promote the development of "complete streets", which provide opportunities for multimodal transportation and reduced VMT. The Circulation Element also promotes the development and expansion of several forms of alternative transit, including bicycle transportation, rail, bus routes, and pedestrian connectivity.

The Conservation and Open Space Element includes several policies that require water and energy conservation measures in new and existing development, and promotes the use of green building practices. This element also includes policies and actions that require the preservation of open space lands and the maintenance of open space buffers around urbanized areas.

All of the policies and actions identified below would encourage the development of a compact urban community, while preserving the agricultural and open space resources in the Planning Area. The City's comprehensive approach to this issue in the 2016 General Plan would result in increased local employment opportunities, increased transportation and transit options, and the incorporation of conservation and energy efficiency into new development.

The proposed 2016 General Plan is consistent with the policy guidance provided by CAPCOA and the BAAQMD, and would assist the state in meeting the GHG reduction goals established by AB 32. Therefore, this is a **less than significant** impact.

2016 GENERAL PLAN POLICIES AND ACTIONS THAT MITIGATE POTENTIAL IMPACTS

Policies

Policy COS 5-7: *Implement greenhouse gas reduction measures and participate in regional efforts to study the effects of climate change on precipitation levels as a key strategy in sustainably managing local groundwater supplies.*

Policy COS 7-1: *Improve air quality through continuing to require a compact development pattern that focuses growth in and around existing urbanized areas, locating new housing near places of employment, encouraging non-vehicular modes of transportation, and requiring projects to mitigate significant air quality impacts.*

Policy COS 7-2: *Minimize exposure of sensitive receptors to concentrations of air pollutant emissions and toxic air contaminants.*

Policy COS 7-3: *Implement the portfolio of policies and programs contained in the Circulation Element to reduce vehicle trips, vehicle miles travelled, and increase the use of non-vehicular modes of transportation such as bicycling, walking, and the use of shared transit.*

Policy COS 7-4: *Continue to cooperate with the Bay Area Air Quality Management District (BAAQMD) in implementing the regional Clean Air Plan.*

Policy COS 7-5: *Continue to enforce air quality standards in collaboration with the BAAQMD.*

Policy COS 7-6: *Require new development or significant remodels to install fireplaces, stoves, and/or heaters which meet current BAAQMD standards and the standards established in Section 15.70 of the Sebastopol Municipal Code.*

Policy COS 8-1: *Recognize that successful climate action planning efforts are dependent upon a wide range of factors and strategies detailed throughout this General Plan, including:*

- *a compact development pattern that promotes and encourages a mix of land uses and densities,*
- *circulation policies that reduce vehicle trips and increase the use of non-vehicular modes of transportation,*

- *programs that promote energy conservation and the use of renewable energy sources,*
- *programs that preserve the natural environment, including native trees and vegetation.*

Policy COS 8-2: *Coordinate with Sonoma County and nearby cities to implement regional greenhouse gas (GHG) reduction plans and consolidate efforts to reduce GHGs throughout the County.*

Policy COS 8-3: *Encourage local businesses and industries to engage in voluntary efforts to reduce GHG emissions and energy consumption.*

Policy COS 8-4: *Preserve, protect and enhance, as appropriate, the City's carbon sequestration resources, also referred to as "carbon sinks," to improve air quality and reduce net carbon emissions.*

Policy COS 8-5: *Encourage public transit, ridesharing and van pooling, shortened and combined motor vehicle trips to work and services, use of bicycles, and walking. Minimize single passenger motor vehicle use.*

Policy COS 8-6: *Demonstrate leadership in local and regional climate planning efforts through a range of tangible actions and policies.*

Policy COS 9-1: *Require all new public and privately constructed buildings to meet and comply with CALGreen Tier 1 standards.*

Policy COS 9-2: *Make energy conservation an important criterion in the development review process.*

Policy COS 9-3: *Support innovative and green building best management practices including, but not limited to, LEED certification for new development, and encourage project applicants to exceed the most current "green" development standards in the California Code of Regulations (CCR), Title 24, if feasible.*

Policy COS 9-4: *Encourage publicly-constructed projects to exceed CalGreen Tier 1 standards.*

Policy COS 9-5: *Promote the use of sustainable and carbon-neutral energy sources in new development.*

Policy COS 9-6: *Promote regional efforts and partnerships, such as Sonoma Clean Power, to increase opportunities for residential and business customers across the county to access environmentally friendly power generated by renewable sources (like solar, wind, and geothermal) at competitive rates.*

Policy COS 9-7: *Incorporate innovative green building techniques and best management practices in the site design, construction, and renovation of all public projects.*

Policy COS 9-16: *Integrate the values and practices of environmental sustainability in government operations.*

Actions

Action COS-7a: Review all new industrial and commercial development projects for potential air quality impacts to residences and other sensitive receptors. Staff shall ensure that mitigation measures and best management practices are implemented to reduce significant emissions of criteria pollutants to the greatest extent feasible.

Action COS-7b: Refer development, infrastructure, and planning projects to the Bay Area Air Quality Management District (BAAQMD) for review. Require project applicants to prepare air quality analyses to address BAAQMD and General Plan requirements, which include analysis and identification of:

I. *Air pollutant emissions associated with the project during construction, project operation, and cumulative conditions.*

II. *Potential exposure of sensitive receptors to toxic air contaminants.*

III. *Significant air quality impacts associated with the project for construction, project operation, and cumulative conditions.*

IV. *Mitigation measures to reduce significant impacts to less than significant or the maximum extent feasible where impacts cannot be mitigated to less than significant.*

Action COS-7c: Adequate buffers between new industrial uses and sensitive receptors shall be required to avoid potential air quality and nuisance impacts.

Action COS-7d: Continue to implement a Trip Reduction Ordinance in order to reduce vehicle trips generated by large employers.

Action COS-7e: Consider carbon monoxide levels at intersections when evaluating the need for intersection improvements.

Action COS-7h: Work with Sonoma County and the Bay Area Air Quality Management District to implement programs aimed at improving regional air quality.

Action COS-7i: During preparation of the City's long-range capital expenditure plans, explore the feasibility of replacing and improving the efficiency of the City's existing vehicle fleet.

Action COS-8a: Continue to participate in regional climate action planning efforts led by the Regional Climate Protection Authority (RCPA) towards development and implementation of the Climate Action Plan 2020.

Action COS-8b: Review new development, significant remodels, and infrastructure projects for consistency with the RCPA Climate Action Plan.

Action COS-8c: Periodically review and update the City's greenhouse gas reduction goals for municipal operations, and establish aggressive goals that demonstrate the City's firm and ongoing commitment to climate action planning.

Action COS-8d: Continue to provide information and resources to the public and businesses regarding steps the City is taking to address the issue of climate change, and provide the public and businesses with information that will assist in private efforts to reduce GHG emissions and assist the City in meeting established greenhouse gas reduction targets.

Action COS-8e: Consider adopting GHG reduction goals that meet or exceed the RCPA Climate Action Plan goals.

Action COS-9a: Revise the Municipal Code to adopt the most current version of the Title 24 CALGreen Tier 1 standards for energy efficiency in new construction and significant remodels.

Action COS-9b: Explore the feasibility of providing incentives for projects that implement CALGreen Tier 2 standards into new construction and significant remodels.

Action COS-9c: Encourage retrofitting of energy-saving features in existing dwellings as a part of the City's Housing Rehabilitation Program by providing information, technical assistance, and other incentives.

Action COS-9d: Continue to implement the requirements of the Mandatory Solar Photovoltaic Requirements Ordinance, as detailed in the Municipal Code.

Action COS-9e: Provide educational materials and resources to the public and local businesses that emphasize the benefits of energy efficiency construction measures and how such measures can offset increased construction costs and building operational costs.

Action COS-9f: Connect residents and businesses with programs that provide free or low-cost energy efficiency audits and retrofits to existing buildings.

Impact 3.7-2: Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases. (Less than Significant)

The City implements a range of regulatory vehicles in order to reduce GHG emissions in the city from existing and future sources. All new construction is required to implement CALGreen Mandatory plus Tier 1 standards, which include a detailed list of green building features that address energy efficiency, water efficiency, waste reduction, material conservation and indoor air quality. The requirements apply to newly constructed residential and non-residential facilities. Additions, alterations, repairs and existing structures may also be subject to the requirements of CALGreen.

As noted previously, the City of Sebastopol passed Resolution 5229 in January 2002 endorsing the Cities for Climate Protection Campaign which includes a five milestone program to reduce greenhouse gas and air pollution emissions. Additionally, in September 2003 the City reported their municipal baseline emissions in *Standing Together for the Future: Greenhouse Gas Emission Inventories for Eight Cities in Sonoma County, California*.

Additionally, as described under Impact 3.6-1, the City of Sebastopol participates in the Sonoma County RCPA. The RCPA was created in 2009 to improve coordination on climate change issues and establish a clearinghouse for efforts to reduce GHG emissions. The RCPA is made up of the same Board of Directors as the SCTA and includes representatives from each of the nine cities in Sonoma County (including Sebastopol) and the Sonoma County Board of Supervisors.

As noted previously, the RCPA has completed and published the CCAP, which recommends regional solutions to reduce emissions from buildings, transportation, the electrical grid, agriculture, forestry, and solid waste. As described in the CCAP, implementation of all major quantified GHG reduction

solutions identified in the CCAP will achieve a 22 percent reduction below 1990 GHG levels, which is approximately 37 percent below business as usual GHG projections. These reduction targets are comparable to, and consistent with, the goals established by AB 32. The 2016 Sebastopol General Plan Policies and Actions listed above under Impact 3.6-1 are consistent with the CCAP, and will assist in meeting the regional GHG reduction goals established by the CCAP.

The analysis, and resulting GHG emissions reduction plans, will incorporate many opportunities in the various contributing sectors (Building Efficiency, Fleet, Commute, Water/Sewer, Streetlights, and Photovoltaic), as identified during preparation of the climate action plan, utilizing the best available information at the time of research.

In addition to the proposed project's consistency with the CCAP and AB 32, new projects are required to fully implement the City's Electrical, Energy, and Green Building Standards. Compliance with the City's Electrical, Energy, and Green Building Standards would reduce GHG emissions from future development to the greatest extent feasible, and would further ensure that the General Plan and any future development following adoption of the General Plan would be consistent with all applicable plans and policies adopted for the purpose of reducing GHG emissions. This is a **less than significant** impact.

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Hazards include man-made or natural materials or man-made or natural conditions that may pose a threat to human health, life, property, or the environment. Hazardous materials and waste present health hazards for humans and the environment. These health hazards can result during the manufacture, transportation, use, or disposal of such materials if not handled properly. Hazards to humans can also existing from natural or human induced wildfire and air traffic accidents.

This section provides a background discussion of the hazardous materials and waste, fire hazards, and hazards from air traffic found in the City of Sebastopol. This section is organized with an existing setting, regulatory setting, and impact analysis. No comments were received during the public review period or scoping meeting for the Notice of Preparation regarding this topic.

3.8.1 ENVIRONMENTAL SETTING

HAZARDOUS MATERIALS AND WASTE

Hazardous Materials

A hazardous material is a substance or combination of substances which, because of its quantity, concentration, or physical, chemical, or infectious characteristics, may either (1) cause or significantly contribute to an increase in mortality or an increase in serious, irreversible, or incapacitating irreversible illness; or (2) pose a substantial present or potential hazard to human health and safety, or the environment when improperly treated, stored, transported, or disposed of. Hazardous materials are mainly present because of industries involving chemical byproducts from manufacturing, petrochemicals, and hazardous building materials.

Hazardous Waste

Hazardous waste is the subset of hazardous materials that has been abandoned, discarded, or recycled and is not properly contained, including contaminated soil or groundwater with concentrations of chemicals, infectious agents, or toxic elements sufficiently high to increase human mortality or to destroy the ecological environment. If a hazardous material is spilled and cannot be effectively picked up and used as a product, it is considered to be hazardous waste. If a hazardous material site is unused, and it is obvious there is no realistic intent to use the material, it is also considered to be a hazardous waste. Examples of hazardous materials include flammable and combustible materials, corrosives, explosives, oxidizers, poisons, materials that react violently with water, radioactive materials, and chemicals.

Transportation of Hazardous Materials

The transportation of hazardous materials within the State of California is subject to various federal, State, and local regulations. It is illegal to transport explosives or inhalation hazards on any public highway not designated for that purpose, unless the use of the highway is required to permit delivery, or the loading of such materials (California Vehicle Code §§ 31602(b), 32104(a)). The California Highway Patrol (CHP) designates through routes to be used for the transportation of hazardous materials. Transportation of hazardous materials is restricted to these routes except in

cases where additional travel is required from that route to deliver or receive hazardous materials to and from users.

Databases

There is a broad list of federal and state database that provide information for sites with varying potential for risk from the possible existence of hazardous materials. There are numerous redundancies among these various database listings. Below is a brief summary of each.

National Priorities List. The National Priorities List (NPL) of Superfund Sites is the Environmental Protection Agency (EPA) database of more than 1,200 sites designated for priority cleanup under the Superfund program. NPL sites may encompass relatively large areas.

RCRIS System. The Resource Conservation and Recovery Information System (RCRIS) is an EPA database that includes selective information on sites that generate, transport, store, treat, and/or dispose of hazardous waste as defined by RCRA. Identification on this list does not indicate that there has been an impact on the environment.

CERCLIS Data. Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) is an EPA database that contains information on potential hazardous waste sites that have been reported to EPA by states, municipalities, private companies, and individuals, pursuant to Section 103 of CERCLA. CERCLIS contains sites that are either proposed for or on the NPL, as well as sites that are in the screening and assessment phase for possible inclusion on the NPL.

CORRACTS. Corrective Action Report (CORRACTS) is an EPA database that identifies hazardous waste handlers with RCRA corrective action activity.

RAATS System. RCRA Administrative Action Tracking System (RAATS) is an EPA database that contains records based on enforcement actions issued under RCRA pertaining to major violators, and includes administrative and civil actions brought by EPA.

PADS System. PCB Activity Database System (PADS) is an EPA database that identifies generators, transporters, commercial storers, and/or brokers and disposers of polychlorinated biphynels (PCBs) who are required to notify EPA of such activities.

CHMIRS Data. The California Hazardous Material Incident Report System (CHMIRS) contains information on reported hazardous materials incidents (i.e., accidental releases or spills). The source of this information is the California Office of Emergency Services.

ERNS Sites. The Emergency Response Notification System (ERNS) records and stores information on reported releases of oil and hazardous substances. The source of this database is the U.S. EPA.

Cortese Database. The Cortese database identifies public drinking water wells with detectable levels of contamination, hazardous substance sites selected for remedial action, sites with known toxic material identified through the abandoned site assessment program, sites with underground storage tanks (USTs) having a reportable release, and all solid waste disposal facilities from which

there is known hazardous substance migration. The source of this database is the California Environmental Protection Agency (CAL-EPA).

LUST Reports. The Leaking Underground Storage Tank (LUST) Incident Reports contain an inventory of reported leaking underground storage tank incidents. This information comes from the State Water Resources Control Board Leaking Underground Storage Tank Information System.

UST Database. The Underground Storage Tank (UST) database lists registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The UST information comes from the State Water Resources Control Board's Hazardous Substance Storage Container Database.

HIST UST Sites. The Hazardous Substance Storage Container Database is a historical listing of UST sites. The data source is the State Water Resources Control Board.

CA FID Information. The Facility Inventory Database (CA FID) lists active and inactive underground storage tank locations. This database is maintained by the State Water Resources Control Board.

HAZNET Database. The Hazardous Waste Information System (HAZNET) includes data extracted from the copies of hazardous waste manifests each year by the State Department of Toxic Substances Control.

FINDS Data. The Facility Index System (FINDS) contains both facility information and "pointers" to other sources of information that contain more detail (e.g., RCRA Info, Permit Compliance System [PCS], Aerometric Information Retrieval System [AIRS]). The source of this information is the U.S. EPA.

FTTS Database. The Federal Toxics Tracking System (FTTS) tracks administrative cases and pesticide enforcement actions/compliance activities related to the Federal Insecticide, Fungicide, & Rodenticide Act (FIFRA), Toxic Substances Control Act (TSCA), and Emergency Planning and Community Right-to-Know Act (EPCRA). The source of this data is the Environmental Protection Agency (EPA) Office of Prevention, Pesticides, and Toxic Substances.

CA SLIC Database. The statewide Spills, Leaks, Investigations, and Cleanups (CA SLIC) database includes unauthorized discharges from spills and leaks, other than from underground storage tanks or other regulated sites. The data source is the State Water Resources Control Board.

Notify 65 Records. Proposition 65 Notification Records (Notify 65) contain facility notifications about any release that could impact drinking water and thereby expose the public to a potential health risk. The State Water Resources Control Board maintains this database.

EMI Data. Emissions Inventory Data (EMI) is comprised of toxics and criteria pollutant emissions data collected by the state Air Resources Board and local pollution agencies.

Manufactured Gas Plant Database. This database includes records of coal gas plants (manufactured gas plants), which were in operation in the U.S. until the 1950s. Due to common past practices, the potential for on-site hazardous by-products (such as coal tar, sludge, oils, and chemical compounds)

remains on such sites, which could result in soil or groundwater contamination. These records are maintained by EDR, Inc., as part of its proprietary database.

SWEEPS Records. The Statewide Environmental Evaluation and Planning System (SWEEPS) UST list, which is no longer maintained or updated, was under the purview of the State Water Resources Control Board. Other agencies (e.g., as identified above) now maintain UST records.

Hazardous Sites

The EPA Toxic Release Inventory (TRI) does not list data on disposal or other releases of toxic chemicals in the City of Sebastopol. (USEPA 2010).

The California Department of Toxic Substances Control (DTSC) maintains the *Envirostor Data Management System*, which provides information on hazardous waste facilities (both permitted and corrective action) as well as any available site cleanup information. No sites in the DTSC database are within the City of Sebastopol. The nearest site is located in Sonoma County, approximately 5 miles northwest of the City of Santa Rosa, and 5 miles northeast of Sebastopol. Between 1942 and 1946, the U.S. acquired the land for the Santa Rosa Army Airfield. The Santa Rosa Army Air Field comprised 1,589.13 acres. The site once served as a Sonoma County Municipal Airport, but is now an abandoned airfield. Facilities included large underground storage tanks (USTs) and pumping facilities, sewage treatment, and an incinerator. Upon deactivation, the USTs were pumped dry and filled with water. The property was also used for chemical weapons storage. Possible contamination of the site includes petroleum hydrocarbons, and unexploded ordnance, and lead from a skeet range that was operated on the site (California Department of Toxic Substances Control, 2014). As of 2002 the RWQCB noted that the overall restoration program is behind schedule with the Two-Year Joint CA Execution Plan. Additional work was proposed by USACE staff, however, this work has not been completed. No further comments have been noted. The site details are listed in Table 3.8-1 below. (California Department of Toxic Substances Control, 2014).

TABLE 3.8-1: DTSC ENVIROSTOR DATA MANAGEMENT SYSTEM

ENVIROSTOR	SITE/FACILITY	TYPE	STATUS	CITY
49450002	Naval Auxiliary Air Station	Military Evaluation	Refer: RWQCB	Santa Rosa

SOURCE: DTSC ENVIROSTOR DATA MANAGEMENT SYSTEM, 2014.

The Solid Waste Information System (SWIS) is a database of solid waste facilities that is maintained by the California Integrated Waste Management Board (CIWMB). The SWIS data identifies active, planned and closed sites. The City of Sebastopol has one active solid waste facility listed in the database. Atlas Tree Waste Recycling located at 6303 Sebastopol Road is listed under the category of composting facility with chipping and grinding of plant material being the main activity onsite. The main waste type is green materials and wood waste. The SWIS data also identifies one closed site in Sebastopol. The Sebastopol Burn Dump is an inactive facility located off Morris Street near the northeast corner of Sebastopol. The site details are listed in Table 3.8-2 below. (California Department of Resources Recycling and Recovery, 2014)

TABLE 3.8-2: CIWMB CLOSED FACILITIES/SITES

NUMBER	NAME	ACTIVITY	REGULATORY	STATUS
49-AA-0393	Atlas Tree Waste	Plant Material Disposal Site	Notification	Active
49-AA-0357	Sebastopol Burn Dump	Solid Waste Disposal Site	Pre-regulations	Closed

SOURCE: CALIFORNIA DEPARTMENT OF RESOURCES RECYCLING AND RECOVERY, 2014.

GeoTracker is the State Water Boards' data management system for managing sites that impact groundwater, especially those that require groundwater cleanup (i.e. Underground Storage Tanks, Department of Defense, Site Cleanup Program) as well as permitted facilities such as operating USTs and land disposal sites.

The City of Sebastopol has 48 sites identified in the Geotracker database, of which 39 have a cleanup status of "Completed – Case Closed", one is "Open – Remediation", one is "Open – Verification Monitoring", five are "Open – Site Assessment", one is "Open – Assessment and Interim Remedial Action", and one is "Open". The site details are listed in Table 3.8-3 below. (California Department of Water Resources, 2014)

TABLE 3.8-3: GEOTRACKER SITES

GEOTRACKER ID	SITE NAME	CLEANUP STATUS	ADDRESS
T0609700011	Alliance Service Station - Sebastopol	Completed – Case Closed	720 Main St., South
T0609700230	Analy Union High School	Completed – Case Closed	6980 Analy Ave.
T0609791297	Angelo Giusti Class III Disposal Site	Open – Site Assessment	--
T0609700298	Barlow Company	Completed – Case Closed	200 Morris St. (AKA 6750 McKinley St.)
T0609793404	Brown Property	Completed – Case Closed	7385 Healdsburg Ave.
T0609793179	Busse, Ruben	Completed – Case Closed	6901 Palm Ave.
T0609700016	C & W Ford	Completed – Case Closed	6791 Sebastopol Ave.
T0609700169	Dave's Texaco (Former)	Open – Site Assessment	7200 Healdsburg Ave.
T0609700517	Earth in Upheaval	Completed – Case Closed	198 High St.
T0609793430	EM's Chevron	Open – Site Assessment	280 Main St., South
SL0609730821	Fiesta Cleaners (Formerly La Blue's Cleaners)	Open – Site Assessment	580 Gravenstein Hwy., North
T0609781620	Free's Development Company Property	Open – Verification Monitoring	501 Main St., South
T0609700397	Fujihara & Zettler Prop.	Completed – Case Closed	8031 Bodega Ave.
T0609700173	Grateful Bagel	Completed – Case Closed	300 Main St., South
T0609700476	Gravenstein Station	Completed – Case Closed	6761 Sebastopol Ave.
T0609700481	Homan Tire Service (Former)	Completed – Case Closed	840 Gravenstein Hwy., North

GEOTRACKER ID	SITE NAME	CLEANUP STATUS	ADDRESS
T0609700470	J & W Foreign Auto Repair	Completed – Case Closed	401 Main St., South
T0609765241	McDonald's	Completed – Case Closed	775 Gravenstein Hwy., South
T0609793102	Molin Properties	Completed – Case Closed	290 Springdale Ave.
T0609793184	Nelson, Alan & Karen	Open – Site Assessment	327 Petaluma Ave.
T0609793302	Old Dry Cleaners / Talmadge Wood	Open – Assessment & Interim Remedial Action	250 Main St., South
T0609700171	Pacific Bell	Completed – Case Closed	7430 Bodega Ave.
T0609700184	Palm Drive Hospital	Completed – Case Closed	501 Petaluma Ave.
T0609700144	Parkside School	Completed – Case Closed	7450 Bodega Ave.
T0609700089	Pellini Chevrolet	Completed – Case Closed	105 Petaluma Ave.
T0609793230	Petaluma Palm Partners	Completed – Case Closed	651 Main St., South
T0609700345	Pozzi Property	Completed – Case Closed	330 Main St., South
T0609700227	R & S Trucking / Chevron	Completed – Case Closed	6861 Abbott Ave.
T0609791157	R & S Trucking / Chevron	Completed – Case Closed	6861 Abbott Ave.
T0609793333	SCWA, South Main Street Conduit	Completed – Case Closed	Main St., South
T0609700249	Sebastopol Chevron	Completed – Case Closed	5640 Sebastopol Rd.
L10005604025	Sebastopol City Burn Dump	Open	275 Morris St.
T0609700195	Sebastopol Co-Op	Completed – Case Closed	6782 Sebastopol Rd.
T0609791131	Sebastopol Maintenance Yard	Completed – Case Closed	714 Johnson St.
T0609700461	Sebastopol Ready Mix	Completed – Case Closed	385 Morris St.
T0609700328	Sebastopol Sewer Pump Station	Completed – Case Closed	275 Morris St.
T0609793305	Sebastopol Well #4	Completed – Case Closed	--
T0609793306	Sebastopol Well #5	Completed – Case Closed	Fannen St,
T0609700421	Sebastopol, City of	Completed – Case Closed	6901 McKinley St.
T0609700086	Shell	Completed – Case Closed	778 Gravenstein Hwy., South
T0609700084	Shell Service Station	Completed – Case Closed	7101 Wilton Ave.
SL0609732733	Superior Cleaners	Completed – Case Closed	732 Gravenstein Hwy., North
T0609700443	Talalaj Residence	Completed – Case Closed	525 Main St., North
T0609700159	Taylor Trust (T&G Apple)	Completed – Case Closed	755 Petaluma Ave.

GEOTRACKER ID	SITE NAME	CLEANUP STATUS	ADDRESS
T0609700104	U.S. Postal Service	Completed – Case Closed	290 Main St., South
T0609700158	UNOCAL #4674	Completed – Case Closed	200 Main St., South
T0609793450	West County Transportation Agency	Completed – Case Closed	745 Main St., North
T0609700359	Wyatt's Tire Service	Open – Remediation	100 Brown St.

SOURCE: CALIFORNIA WATER RESOURCES CONTROL BOARD, GEOTRACKER, 2014.

WILDFIRE HAZARDS

Wildfires are a potential hazard to development and land uses located in the foothill and mountain areas of the County. The severity of wildfire problems depends on a combination of vegetation, climate, slope and people. The grassland, chaparral, woodland, and forest vegetation found in areas of Sonoma County, coupled with hot, dry summers, present extreme fire hazards during critical fire periods for much of the County. In addition to natural factors such as lightning, human activity is a primary factor contributing to the incidence of wildfires. Campfires, smoking, debris burning, arson and equipment use are common human-related causes of wildfires.

Identifying Fire Hazards

FUEL RANK

Fuel rank is a ranking system developed by Calfire that incorporates four wildfire factors: fuel model, slope, ladder index, and crown index.

The USFS has developed a series of fuel models, which categorize fuels based on burn characteristics. These fuel models help predict fire behavior. In addition to fuel characteristics, slope is an important contributor to fire hazard levels. A surface ranking system has been developed by CalFire, which incorporates the applicable fuel models and slope data. The model categorizes slope into six ranges: 0-10%, 11-25%, 26-40%, 41-55%, 56-75% and >75%. The combined fuel model and slope data are organized into three categories, referred to as surface rank. Thus, surface rank is a reflection of the quantity and burn characteristics of the fuels and the topography in a given area.

The ladder index is a reflection of the distance from the ground to the lowest leafy vegetation for tree and plant species. The crown index is a reflection of the quantity of leafy vegetation present within individual specimens of a given species.

The surface rank, ladder index and crown index for a given area are combined in order to establish a fuel rank of medium, high or very high. Fuel rank is used by CalFire to identify areas in the California Fire Plan where large, catastrophic fires are most likely.

The City of Sebastopol is primarily devoid of CalFire fuel ranks. In contrast, CalFire data for the foothill and mountain areas to west of the City of Sebastopol include many areas of "high" and "very high" fuel ranks. (California Department of Forestry and Fire Protection, 2014).

FIRE THREAT

The fuel rank data are used by CalFire to delineate fire threat based on a system of ordinal ranking. Thus, the Fire Threat model creates discrete regions, which reflect fire probability and predicted fire behavior. The four classes of fire threat range from moderate to extreme (California Department of Forestry and Fire Protection, 2010).

Fire Hazard Severity Zones

The state has charged CalFire with the identification of Fire Hazard Severity Zones (FHSZ) within State Responsibility Areas. In addition, CalFire must recommend Very High Fire Hazard Severity Zones (VHFHSZ) identified within any Local Responsibility Areas. The FHSZ maps are used by the state Fire Marshall as a basis for the adoption of applicable building code standards. The nearest moderate and high level FHSZ is located approximately three miles to the west of the City of Sebastopol. FHSZ Zones in and around Sebastopol are shown in Figure 4.8-1. (California Department of Forestry and Fire Protection, 2013).

LOCAL RESPONSIBILITY AREAS

Local Responsibility Areas (LRA) are concentrated in the incorporated areas of Sonoma County. The City of Sebastopol is an LRA that is served by the Sebastopol Fire Department within the city limits, and the Gold Ridge Fire Protection District, which provides fire protection services to unincorporated rural areas surrounding Sebastopol.

The City of Sebastopol is not categorized as a "Very High" FHSZ by CalFire. (California Department of Forestry and Fire Protection, 2011). The combination of vegetation, topography, climate, and population density create a low potential for wildfires in Sebastopol. There are few vacant and undeveloped areas within the city and in the Sphere of Influence, particularly south of the city limits and west of Highway 116. According to the current Sebastopol General Plan, portions of Lynch Road, Beattie Lane and Redwood Heights have the highest risk of wildland fires in the Planning Area.

The 2011 Sonoma County Hazard Mitigation plan identifies several spot zones with low to moderate risk of wildfire just outside the City of Sebastopol, but none are located within the city limits. However, ABAG's 2009 hazard mapping identified 16 acres of urban land in Sebastopol that are in areas of high or very high wildfire threat.

STATE RESPONSIBILITY AREAS

State Responsibility Areas within the vicinity of Sebastopol are primarily found to the south and west of the city limits. Approximately four miles to the west of the city limits is a combination of "Moderate" and "High" FHSZs. This area is generally rolling to steep slopes with increased vegetation. (California Department of Forestry and Fire Protection, 2013).

FEDERAL RESPONSIBILITY AREAS

There are no Federal Responsibility Areas within the vicinity of City of Sebastopol (California Department of Forestry and Fire Protection, 2014).

HAZARDS FROM AIR TRAFFIC

The State Division of Aeronautics has compiled extensive data regarding aircraft accidents around airports in California. This data is much more detailed and specific than data currently available from the FAA and the National Transportation Safety Board (NTSB). According to the California Airport Land Use Planning Handbook (2002), prepared by the State Division of Aeronautics, 18.2 percent of general aviation accidents occur during takeoff and initial climb and 44.2 percent of general aviation accidents occur during approach and landing. The State Division of Aeronautics has plotted accidents during these phases at airports across the country and has determined certain theoretical areas of high accident probability.

Approach and Landing Accidents

As nearly half of all general aviation accidents occur in the approach and landing phase of flight, considerable work has been done to determine the approximate probability of such accidents. Nearly 77 percent of accidents during this phase of flight occur during touchdown onto the runway or during the roll-out. These accidents typically consist of hard or long landings, ground loops (where the aircraft spins out on the ground), departures from the runway surface, etc. These types of accidents are rarely fatal and often do not involve other aircraft or structures. Commonly these accidents occur due to loss of control on the part of the pilot and, to some extent, weather conditions (California Division of Aeronautics, 2002).

The remaining 23 percent of accidents during the approach and landing phase of flight occur as the aircraft is maneuvered towards the runway for landing, in a portion of the airspace around the airport commonly called the traffic pattern. Common causes of approach accidents include the pilot's misjudging of the rate of descent, poor visibility, unexpected downdrafts, or tall objects beneath the final approach course. Improper use of rudder on an aircraft during the last turn toward the runway can sometimes result in a stall (a cross-control stall) and resultant spin, causing the aircraft to strike the ground directly below the aircraft. The types of events that lead to approach accidents tend to place the accident site fairly close to the extended runway centerline. The probability of accidents increases as the flight path nears the approach end of the runway (California Division of Aeronautics, 2002).

According to aircraft accident plotting provided by the State Division of Aeronautics, most accidents that occur during the approach and landing phase of flight occur on the airport surface itself. The remainder of accidents that occur during this phase of flight are generally clustered along the extended centerline of the runway, where the aircraft is flying closest to the ground and with the lowest airspeed (California Division of Aeronautics, 2002).

Takeoff and Departure Accidents

According to data collected by the State Division of Aeronautics, nearly 65 percent of all accidents during the takeoff and departure phase of flight occur during the initial climb phase, immediately after takeoff. This data is correlated by two physical constraints of general aviation aircraft:

- The takeoff and initial climb phase are times when the aircraft engine(s) is under maximum stress and is thus more susceptible to mechanical problems than at other phases of flight; and
- Average general aviation runways are not typically long enough to allow an aircraft that experiences a loss of power shortly after takeoff to land again and stop before the end of the runway.

While the majority of approach and landing accidents occur on or near to the centerline of the runway, accidents that occur during initial climb are more dispersed in their location as pilots are not attempting to get to any one specific point (such as a runway). Additionally, aircraft vary widely in payload, engine power, glide ratio, and several other factors that affect glide distance, handling characteristics after engine loss, and general response to engine failure. This further disperses the accident pattern. However, while the pattern is more dispersed than that seen for approach and landing accidents, the departure pattern is still generally localized in the direction of departure and within proximity of the centerline. This is partially due to the fact that pilots are trained to fly straight ahead and avoid turns when experiencing a loss of power or engine failure. Turning flight causes the aircraft to sink faster and flying straight allows for more time to attempt to fix the problem (California Division of Aeronautics, 2002).

Facilities Located in the City of Sebastopol

The City of Sebastopol does not have any airport facilities located within the city limits, sphere of influence, of urban growth boundary.

Facilities Located Near the City of Sebastopol

Charles M. Schulz - Sonoma County Airport (STS): The Sonoma County Airport is located 11 miles north of the City of Sebastopol and offers scheduled air service into the North Bay region. Alaska Airlines offers daily nonstop flights to and from Los Angeles, Portland, San Diego, and Seattle. The Sonoma County Airport is a 24-hour facility with Air Traffic Control Tower operating from 7:00 am until 8:00 pm, seven days a week. Both Twin engine turboprop and jet powered aircraft utilize the Sonoma County Airport. Currently, the Sonoma County Airport is the only point for commercial airline service in the County. Approximately 100,000 take-offs and landings are recorded at the Airport each year. (Sonoma County General Plan Air Transportation Element, 2011).

Petaluma Municipal Airport: The Petaluma Municipal Airport is located at the northeast edge of the City of Petaluma. This airport is the second closest airport to Sebastopol, located approximately 19 miles southeast of the Sebastopol city limits. The Petaluma Municipal Airport is operational 24 hours a day and staffed Monday through Friday 8:00 am to 5:00 pm and Saturday and Sunday from 8:00 am to 4:00 pm and including Holidays. Airport operations encompass a host of services for the orderly and safe departure and arrival of aircraft. Approximately 60,000 take-offs and landings are recorded at the Petaluma Municipal Airport each year. There are 180 aircraft storage hangars and 130 tie down spaces for 240 based aircraft. (City of Petaluma, 2011).

The City of Sebastopol does not lie within the Runway Protection Zone, Inner/Outer Safety Zones, Inner Turning Zone, Sideline Safety Zone, or Traffic Pattern Zone of either of the above-referenced airports. (Sonoma County Airport Land Use Commission, 2001).

National Transportation Safety Board Aviation Accident Database

The National Transportation Safety Board Aviation Accident Database identifies 0 accidents within the City of Sebastopol from January of 1950 to June 2014. (National Transportation Safety Board, 2014).

3.8.2 REGULATORY SETTING

FEDERAL REGULATIONS

Aviation Act of 1958

The federal Aviation Act resulted in the creation of the Federal Aviation Administration (FAA). The FAA was charged with the creation and maintenance of a National Airspace System.

Clean Air Act

Per the Clean Air Act, the EPA has established National Emissions Standards for Hazardous Air Pollutants. Exceeding the emissions standard for a given air pollutant may cause an increase in illnesses and/or fatalities.

Clean Water Act

The CWA, which amended the WPCA of 1972, sets forth the §404 program to regulate the discharge of dredged and fill material into Waters of the US and the §402 National Pollutant Discharge Elimination System (NPDES) to regulate the discharge of pollutants into Waters of the US. The §401 Water Quality Certification program establishes a framework of water quality protection for activities requiring a variety of federal permits and approvals (including CWA §404, CWA §402, FERC Hydropower and §10 Rivers and Harbors).

Comprehensive Environmental Response, Compensation, and Liability Act

The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) introduced active federal involvement to emergency response, site remediation, and spill prevention, most notably the Superfund program. The Act was intended to be comprehensive in encompassing both the prevention of, and response to, uncontrolled hazardous substances releases. CERCLA deals with environmental response, providing mechanisms for reacting to emergencies and to chronic hazardous material releases. In addition to establishing procedures to prevent and remedy problems, it establishes a system for compensating appropriate individuals and assigning appropriate liability. It is designed to plan for and respond to failure in other regulatory programs and to remedy problems resulting from action taken before the era of comprehensive regulatory protection.

Environmental Protection Agency

The primary regulator of hazards and hazardous materials is the EPA, whose mission is to protect human health and the environment. The City of Sebastopol is located within EPA Region 9, which includes Arizona, California, Hawaii and New Mexico.

Federal Aviation Regulations (CFR, Title 14)

The Federal Aviation Regulations (FAR) establish regulations related to aircraft, aeronautics and inspections and permitting.

FY 2001 Appropriations Act

Title IV of the Appropriations Act required the identification of "Urban Wildland Interface Communities in the Vicinity of Federal Lands that are at High Risk from Wildfire" by the US Departments of the Interior and Agriculture.

Hazardous Materials Transportation Act

The Hazardous Materials Transportation Act, as amended, is the basic statute regulating hazardous materials transportation in the United States. The purpose of the law is to provide adequate protection against the risks to life and property inherent in transporting hazardous materials in interstate commerce. This law gives the U.S. Department of Transportation (USDOT) and other agencies the authority to issue and enforce rules and regulations governing the safe transportation of hazardous materials (DOE 2002).

Natural Gas Pipeline Safety Act

The Natural Gas Pipeline Safety Act authorizes the U.S. Department of Transportation Office of Pipeline Safety to regulate pipeline transportation of natural (flammable, toxic, or corrosive) gas and other gases as well as the transportation and storage of liquefied natural gas. The Office of Pipeline Safety regulates the design, construction, inspection, testing, operation, and maintenance of pipeline facilities. While the federal government is primarily responsible for developing, issuing, and enforcing pipeline safety regulations, the pipeline safety statutes provide for State assumption of the intrastate regulatory, inspection, and enforcement responsibilities under an annual certification. To qualify for certification, a state must adopt the minimum federal regulations and may adopt additional or more stringent regulations as long as they are not incompatible.

Resource Conservation and Recovery Act

The 1976 Federal Resource Conservation and Recovery Act (RCRA) and the 1984 RCRA Amendments regulate the treatment, storage, and disposal of hazardous and non-hazardous wastes. The legislation mandated that hazardous wastes be tracked from the point of generation to their ultimate fate in the environment. This includes detailed tracking of hazardous materials during transport and permitting of hazardous material handling facilities.

The 1984 RCRA amendments provided the framework for a regulatory program designed to prevent releases from USTs. The program establishes tank and leak detection standards, including spill and overflow protection devices for new tanks. The tanks must also meet performance standards to

ensure that the stored material will not corrode the tanks. Owners and operators of USTs had until December 1998 to meet the new tank standards. As of 2001, an estimated 85 percent of USTs were in compliance with the required standards.

STATE REGULATIONS

Aeronautics Act (Public Utilities Code §21001)

The Caltrans Division of Aeronautics bases the majority of its aviation policies on the Aeronautics Act. Policies include permits and annual inspections for public airports and hospital heliports and recommendations for schools proposed within two miles of airport runways.

Airport Land Use Commission Law (Public Utilities Code §21670 et seq.)

The law, passed in 1967, authorized the creation of Airport Land Use Commissions (ALUC) in California. Per the Public Utilities Code, the purpose of an ALUC is to protect *public health, safety, and welfare by encouraging orderly expansion of airports and the adoption of land use measures that minimizes exposure to excessive noise and safety hazards within areas around public airports to the extent that these areas are not already devoted to incompatible uses* (§21670). Furthermore, each ALUC must prepare an Airport Land Use Compatibility Plan (ALUCP). Each ALUCP, which must be based on a twenty-year planning horizon, should focus on broadly defined noise and safety impacts.

Assembly Bill 337

Per AB 337, local fire prevention authorities and the California Department of Forestry and Fire Protection (CalFire) are required to identify "Very High Fire Hazard Severity Zones (VHFHSZ) in Local Responsibility Areas (LRA). Standards related to brush clearance and the use of fire resistant materials in fire hazard severity zones are also established.

CA Code of Regulations

Title 3 of the CCR pertains to the application of pesticides and related chemicals. Parties applying regulated substances must continuously evaluate application equipment, the weather, the treated lands and all surrounding properties. Title 3 prohibits any application that would:

- Contaminate persons not involved in the application
- Damage non-target crops or animals or any other public or private property
- Contaminate public or private property or create health hazards on said property

Title 8 of the CCR establishes California Occupational Safety and Health Administration (Cal OSHA) requirements related to public and worker protection. Topics addressed in Title 8 include materials exposure limits, equipment requirements, protective clothing, hazardous materials and accident prevention. Construction safety and exposure standards for lead and asbestos are set forth in Title 8. Title 8 also establishes fire suppression service standards. The standards range from fire hose size requirements to the design of emergency access roads.

Title 14 of the CCR establishes minimum standards for solid waste handling and disposal and a variety of wildfire preparedness, prevention and response regulations.

Title 17 of the CCR establishes regulations relating to the use and disturbance of materials containing naturally occurring asbestos.

Title 19 of the CCR establishes a variety of emergency fire response, fire prevention and construction and construction materials standards.

Title 22 of the CCR sets forth definitions of hazardous waste and special waste. The section also identifies hazardous waste criteria and establishes regulations pertaining to the storage, transport and disposal of hazardous waste.

Title 26 of the CCR is a medley of state regulations pertaining to hazardous materials and waste that are presented in other regulatory sections. Title 26 mandates specific management criteria related to hazardous materials identification, packaging and disposal. In addition, Title 26 establishes requirements for hazardous materials transport, containment, treatment and disposal. Finally, staff training standards are set forth in Title 26.

Title 27 of the CCR sets forth a variety of regulations relating to the construction, operation and maintenance of the state's landfills. The title establishes a landfill classification system and categories of waste. Each class of landfill is constructed to contain specific types of waste (household, inert, special and hazardous).

California Fire Code

The California Fire Code (CFC) is Part 9 of Title 24, California Code of Regulations, also referred to as the California Building Standards Code. The CFC incorporates the 2009 International Fire Code of the International Code Council with necessary California amendments. The purpose of the CFC is to establish the minimum requirements consistent with nationally recognized good practices to safeguard the public health, safety and general welfare from the hazards of fire, explosion or dangerous conditions in new and existing buildings, structures and premises, and to provide safety and assistance to fire fighters and emergency responders during emergency operations.

CA Government Code Section 65302

This section, which establishes standards for developing and updating General Plans, includes fire hazard assessment and Safety Element content requirements.

CA Health & Safety Code

Division 11 of the Health and Safety Code establishes regulations related to a variety of explosive substances and devices, including high explosives and fireworks. Section 12000 et seq. establishes regulations related to explosives and explosive devices, including permitting, handling, storage and transport (in quantities greater than 1,000 pounds).

Division 12.5 of the Health and Safety Code establishes requirements for buildings used by the public, including essential services buildings, earthquake hazard mitigation technologies, school buildings and postsecondary buildings.

Division 20 of the Health and Safety Code establishes DTSC authority and sets forth hazardous waste and underground storage tank regulations. In addition, the division creates a state superfund framework that mirrors the federal program.

Division 26 of the Health and Safety Code establishes California Air Resources Board (CARB) authority. The division designates CARB as the air pollution control agency per federal regulations and charges the Board with meeting Clean Air Act requirements.

CA Health and Safety Code and UBC Section 13000 et seq.

State fire regulations are set forth in §13000 *et seq*. of the California Health and Safety Code, which is divided into "Fires and Fire Protection" and "Buildings Used by the Public." The regulations provide for the enforcement of the UBC and mandate the abatement of fire hazards.

The code establishes broadly applicable regulations, such as standards for buildings and fire protection devices, in addition to regulations for specific land uses, such as childcare facilities and high-rise structures.

CA Vehicle Code §31600 (Transportation of Explosives)

Establishes requirements related to the transportation of explosives in quantities greater than 1,000 pounds, including licensing and route identification.

CA Public Resources Code

The state's Fire Safe Regulations are set forth in Public Resources Code §4290, which include the establishment of State Responsibility Areas (SRA). Public Resources Code §4291 sets forth defensible space requirements, which are applicable to anyone that …*owns, leases, controls, operates, or maintains a building or structure in, upon, or adjoining a mountainous area, forest-covered lands, brush-covered lands, grass-covered lands, or land that is covered with flammable material* (§4291(a)).

Food and Agriculture Code

Division 6 of the CA Food and Agricultural Code (FAC) establishes pesticide application regulations. The division establishes training standards for pilots conducting aerial applications as well as permitting and certification requirements.

State Oversight of Hazards and Hazardous Materials

The DTSC is chiefly responsible for regulation, handling, use and disposal of toxic materials while the State Water Resources Control Board (SWRCB) regulates discharge of potentially hazardous materials to waterways and aquifers and administers the basin plans for groundwater resources in the various regions of the state. The Regional Water Quality Control Board (RWQCB) oversees

surface and groundwater in Sonoma County. Programs intended to protect workers from exposure to hazardous materials and from accidental upset are covered under the Occupational Health and Safety Administration at both the federal level (OSHA) and at the State level through the California Division of Occupational Safety and Health (CAL/OSHA), as well as through the California Department of Health Services (DHS). Air quality is regulated through the California Air Resources Board and Bay Area Air Quality Management District. The State Fire Marshal is responsible for the protection of life and property through the development and application of fire prevention engineering, education and enforcement; the California Department of Forestry and Fire Protection (CalFIRE) provides fire protection services for California's state- and privately-owned wildlands.

Uniform Fire Code

The Uniform Fire Code (UFC) establishes standards related to the design, construction and maintenance of buildings. The standards set forth in the UFC range from designing for access by firefighters and equipment and minimum requirements for automatic sprinklers and fire hydrants to the appropriate storage and use of combustible materials.

Water Code

Division 7 of the California Water Code, commonly referred to as the Porter-Cologne Water Quality Control Act, created the State Water Resources Control Board (SWRCB) and the Regional Water Quality Control Boards (SWRCB). In addition, water quality responsibilities are established for the SWRCB and RWQCBs.

LOCAL REGULATIONS

Certified Unified Program Agency (CUPA)

The California Environmental Protection Agency designates specific local agencies as Certified Unified Program Agencies (CUPA), typically at the county level. In Sonoma County, the Sonoma County Fire and Emergency Services Department Hazardous Materials Division is responsible for the County's Certified Unified Program Agency (CUPA) programs. Each designated CUPA is responsible for the implementation of six statewide programs within its jurisdiction. These programs include:

- Underground storage of hazardous substances (USTs)
- Hazardous Materials Business Plan (HMP) requirements
- Hazardous Waste Generator requirements
- California Accidental Release Prevention (Cal-ARP) program
- Uniform Fire Code hazardous materials management plan
- Above Ground Storage Tanks (Spill Prevention Control and Countermeasures Plan only)

Implementation of these programs involves:

- Permitting and inspection of regulated facilities
- Providing educational guidance and notice of changing requirements stipulated in State or Federal laws and regulations
- Investigations of complaints regarding spills or unauthorized releases

- Administrative enforcement actions levied against facilities that have violated applicable laws and regulations

Sonoma-Lake-Napa Fire Plan (2005)

The Sonoma-Lake-Napa Unit (LNU) of the CalFire prepared the Fire Management Plan as a planning tool to reduce wildfire impacts throughout Sonoma, Lake, Napa, Yolo, Solano and Colusa Counties. The Plan identifies high value, high-risk areas in the six counties comprising the LNU.

3.8.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed project will have a significant impact from hazards and hazardous materials if it will:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;
- Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school;
- 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;
- 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 in the project area;
- 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;
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; or
- 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.

IMPACTS AND MITIGATION MEASURES

Impact 3.8-1: General Plan implementation has the potential to create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials, or through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment (Less than Significant)

Future development, infrastructure, and other projects allowed under the 2016 General Plan may involve the transportation, use, and/or disposal of hazardous materials. Hazardous materials are typically used in industrial, agricultural, and commercial uses, as well as residential uses. Future uses may involve the transport and disposal of such materials from time to time. Future activities may involve equipment or construction activities that use hazardous materials (e.g., coatings, solvents and fuels, diesel-fueled equipment), cleanup of sites with known hazardous materials, the transportation of excavated soil and/or groundwater containing contaminants from areas that are identified as being contaminated, or disposal of contaminated materials at an approved disposal site. While hazardous materials may be associated with industrial and agricultural activities, hazardous materials may also be associated with the regular cleaning and maintenance of residential and other less intense uses. Accidental release of hazardous materials that are used in the construction or operation of a project may occur. There is also the potential for accidental release of pre-existing hazardous materials, either associated with previous activities on a site or naturally occurring hazards such as asbestos.

The use, transportation, and disposal of hazardous materials is regulated and monitored by local fire departments, Certified Unified Program Agencies (CUPAs), the State Division of Occupational Safety and Health, and the Department of Toxic Substances Control consistent with the requirements of federal, state, and local regulations and policies. Facilities that store hazardous materials on-site are required to maintain a Hazardous Materials Business Plan in accordance with state regulations. In the event of an accidental release of hazardous materials, the local CUPA, and emergency management agencies (e.g., Police Department, Fire Department) would respond. All future projects allowed under the General Plan would be required to comply with the provisions of federal, state, and local requirements related to hazardous materials. As future development and infrastructure projects are considered by the City, each project would be evaluated for potential impacts, specific to the project, associated with hazardous materials as required under CEQA.

In addition to the requirements associated with state and federal regulations and the Municipal Code, the General Plan includes policies and actions to address potential impacts associated with hazardous materials among other issues. These policies and actions in the General Plan would ensure that potential hazards are identified on a project site, that development is located in areas where potential exposure to hazards and hazardous materials can be mitigated to an acceptable level, and to require that businesses operations comply with federal and state regulations regarding the use, transport, storage, and disposal of hazardous materials. The General Plan includes policies and actions to also ensure that the City has adequate emergency response plans and measures to respond in the event of an accidental release of a hazardous substance. Compliance with applicable

General Plan policies and actions, as well as state and federal regulations, would ensure that potential impacts associated with the routine use, transport, storage, or disposal or accidental release of hazardous materials would be **less than significant**.

2016 GENERAL PLAN POLICIES AND ACTIONS THAT MITIGATE POTENTIAL IMPACTS

Policies

Policy SA 6-1: *Require measures to protect the public health from the hazards associated with the transportation, storage and disposal of hazardous wastes (TSD Facilities).*

Policy SA 6-2: *Use the environmental review process to comment on Hazardous Waste Transportation, Storage and Disposal (TSD) Facilities proposed in the Sebastopol Planning Area and throughout the County to request a risk assessment and ensure that potentially significant, widespread, and long-term impacts on public health and safety of these facilities are identified and mitigated, as such impacts do not respect jurisdictional boundaries.*

Policy SA 6-3: *Strictly regulate the storage of hazardous materials.*

Policy SA 6-4: *Develop, in cooperation with the County and neighboring cities, regulations prohibiting through-transport by truck of hazardous materials on the local street systems, and requiring that this activity be limited to State highways.*

Policy SA 6-5: *Continue to maintain Sebastopol as a Voluntary Toxics-Free Zone, as defined by City Resolution 5108.*

Actions

Action SA-6a: Continue to ensure that land use and transportation decisions and other programs are in accordance with the County's Hazardous Waste Management Plan.

Action SA-6b: Continue to support the existing Sonoma County Waste Management Agency (SCWMA) or any successor agency's hazardous waste disposal program and encourage SCWMA or any successor agency to provide locally convenient opportunities for hazardous waste disposal, such as the Community Toxics Collections and Toxics Rover Pick-up Services.

Action SA-6c: Consider adoption of a Hazardous Materials and Waste Ordinance that defines hazardous waste and hazardous materials and facilitates implementation of State and County hazardous materials and hazardous waste regulations and management programs.

Action SA-6d: As part of the development review process, identify whether a project would result in a low, medium, or high risk as described by the City's Multihazard Emergency Plan. Projects that would result in a medium or high risk shall be required, as a condition of approval, to include measures to address unacceptable risks and reduce the risks to an acceptable level.

Action SA-6e: Require as a condition of approval for development projects, that the Fire Department be notified of any hazardous substances that are transported, stored, treated, or could be released accidentally into the environment.

Action SA-6f: Request that the environmental review pursuant to CEQA and/or NEPA of proposed hazardous waste TSD facilities outside of the City's jurisdiction but within the County shall address the following risk assessment components:

- *A worst case description estimating the number, type, scale, scope, location, and operating characteristics of proposed TSD facility(ies) based on the projected volumes and types of hazardous waste;*
- *An assessment of risk resulting from the accidental release, fire, and explosion of hazardous waste. This assessment should take into account all phases of operation including transport, storage, and treatment. The assessment of risk should include the probability of occurrence of an adverse event and magnitude of impact;*
- *Quantitative estimates of toxic air emissions, by applying emissions rates of existing facilities to the future volumes of hazardous waste, and identifying emissions for incinerator facilities under worse case circumstances;*
- *An assessment of non-incineration alternatives for hazardous waste treatment such as chemical dechlorination for the detoxification of PCB's, dioxins, solvents and pesticides; photolysis; and biological treatment; and*
- *Review of the operating characteristics of proposed TSD facilities, taking into account maintenance and operating procedures, emissions monitoring, and safety devices to assure the ongoing enforceability of the mitigating measures that are required.*

Action SA-6g: Strictly regulate and enforce the storage of hazardous materials under California Administrative Code Title 19 requirements.

Action SA-6h: Continue to restrict the application of pesticides and other toxic chemicals, including glysophate, on City owned property, and discourage their use on private property and County-owned land, waterways, and public parks in the vicinity of the City, consistent with the policies established by City Resolution 5108. Coordinate with other local agencies, including Sonoma County and Caltrans, to halt the use of pesticides and other toxic chemicals within a two-mile radius of Sebastopol.

Impact 3.8-2: General Plan implementation has the potential to emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school (Less than Significant)

The General Plan would allow land uses, including commercial uses, that may result in hazardous emissions or handle hazardous materials, substances, or waste in the vicinity of Analy High School (located at 6950 Analy Avenue), Brook Haven Middle School (located at 7905 Valentine Avenue), and Park Side Elementary School (located at 7450 Bodega Avenue). The areas near Analy High School, Brook Haven Middle School, and Park Side Elementary School are planned for low, medium, and high residential development. The aforementioned residential land use designations allow for

single- and multi-family dwellings at densities of 1.1 to 25 units per acre. These types of uses are not likely to emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste. It is noted that one area to the south of Analy High School is designated as Light Industrial. This designation synthesizes Office and Light Industrial classifications and is intended to promote well planned, integrated business parks, which will serve as a major employment center within the community. Therefore, there is the potential for future businesses to handle, use, or store small quantities of common hazardous materials, which may pose a minimal risk to public health and safety within one-quarter mile of a public school.

All hazardous materials would be handled in accordance with federal, state, and county requirements, as described under Impact 3.8-1, which would limit the potential for a project to expose nearby uses, including schools, to hazardous emissions or an accidental release. Hazardous emissions are monitored by the Bay Area Air Quality Management District, Regional Water Quality Control Board, and Department of Toxic Substances Control, and the local CUPA. In the event of a hazardous materials spill or release, notification and cleanup operations would be performed in compliance with applicable federal, state, and local regulations and policies, including hazard mitigation plans. Compliance with all existing regulations and hazard mitigation plans as well as General Plan policies and actions discussed under Impact 3.8-1 would ensure that the impact would be **less than significant**.

Impact 3.8-3: General Plan implementation has the potential to result in projects located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 (Less than Significant)

As previously described, there are several sites in the Planning Area that are included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5. These sites have a history of contamination with hazardous materials and are subject to various State and federal laws and regulators, including the CERCLA, EPA, DTSC, and RWQCB. Of the 48 sites listed pursuant to Government Code Section 65962.5, 39 have completed all required clean-up measures and have had their cases closed. Only 9 sites remain as open cases, under various levels of remediation and clean-up compliance. Development allowed by the General Plan could create a hazard to the public or the environment through a disturbance or release of contaminated materials if the development occurs on or adjacent to contaminated sites without appropriate measures to contain or mitigate the existing contamination. State and federal regulations ensure that existing hazards, including those associated with known hazardous materials sites, are addressed prior to development. The General Plan includes policies and actions that are intended to prevent inappropriate disposal of household hazardous materials through an education program and a requirement to have interior and exterior storage areas for recyclables and green waste. Compliance with state and federal regulations would ensure that potential impacts associated with the hazardous conditions on sites listed pursuant to Government Code Section 65962.5 would be **less than significant**.

2016 GENERAL PLAN POLICIES AND ACTIONS THAT MITIGATE POTENTIAL IMPACTS

Policies

Policy SA 6-1: *Require measures to protect the public health from the hazards associated with the transportation, storage and disposal of hazardous wastes (TSD Facilities).*

Policy SA 6-2: *Use the environmental review process to comment on Hazardous Waste Transportation, Storage and Disposal (TSD) Facilities proposed in the Sebastopol Planning Area and throughout the County to request a risk assessment and ensure that potentially significant, widespread, and long-term impacts on public health and safety of these facilities are identified and mitigated, as such impacts do not respect jurisdictional boundaries.*

Policy SA 6-3: *Strictly regulate the storage of hazardous materials.*

Policy SA 6-4: *Develop, in cooperation with the County and neighboring cities, regulations prohibiting through-transport by truck of hazardous materials on the local street systems, and requiring that this activity be limited to State highways.*

Policy SA 6-5: *Continue to maintain Sebastopol as a Voluntary Toxics-Free Zone, as defined by City Resolution 5108.*

Actions

Action SA-6a: Continue to ensure that land use and transportation decisions and other programs are in accordance with the County's Hazardous Waste Management Plan.

Action SA-6b: Continue to support the existing Sonoma County Waste Management Agency (SCWMA) or any successor agency's hazardous waste disposal program and encourage SCWMA or any successor agency to provide locally convenient opportunities for hazardous waste disposal, such as the Community Toxics Collections and Toxics Rover Pick-up Services.

Action SA-6c: Consider adoption of a Hazardous Materials and Waste Ordinance that defines hazardous waste and hazardous materials and facilitates implementation of State and County hazardous materials and hazardous waste regulations and management programs.

Action SA-6d: As part of the development review process, identify whether a project would result in a low, medium, or high risk as described by the City's Multihazard Emergency Plan. Projects that would result in a medium or high risk shall be required, as a condition of approval, to include measures to address unacceptable risks and reduce the risks to an acceptable level.

Action SA-6e: Require as a condition of approval for development projects, that the Fire Department be notified of any hazardous substances that are transported, stored, treated, or could be released accidentally into the environment.

Action SA-6f: Request that the environmental review pursuant to CEQA and/or NEPA of proposed hazardous waste TSD facilities outside of the City's jurisdiction but within the County shall address the following risk assessment components:

- *A worst case description estimating the number, type, scale, scope, location, and operating characteristics of proposed TSD facility(ies) based on the projected volumes and types of hazardous waste;*

- *An assessment of risk resulting from the accidental release, fire, and explosion of hazardous waste. This assessment should take into account all phases of operation including transport, storage, and treatment. The assessment of risk should include the probability of occurrence of an adverse event and magnitude of impact;*

- *Quantitative estimates of toxic air emissions, by applying emissions rates of existing facilities to the future volumes of hazardous waste, and identifying emissions for incinerator facilities under worse case circumstances;*

- *An assessment of non-incineration alternatives for hazardous waste treatment such as chemical dechlorination for the detoxification of PCB's, dioxins, solvents and pesticides; photolysis; and biological treatment; and*

- *Review of the operating characteristics of proposed TSD facilities, taking into account maintenance and operating procedures, emissions monitoring, and safety devices to assure the ongoing enforceability of the mitigating measures that are required.*

Action SA-6g: Strictly regulate and enforce the storage of hazardous materials under California Administrative Code Title 19 requirements.

Action SA-6h: Continue to restrict the application of pesticides and other toxic chemicals, including glysophate, on City owned property, and discourage their use on private property and County-owned land, waterways, and public parks in the vicinity of the City, consistent with the policies established by City Resolution 5108. Coordinate with other local agencies, including Sonoma County and Caltrans, to halt the use of pesticides and other toxic chemicals within a two-mile radius of Sebastopol.

Impact 3.8-4: The General Plan Area is not located within an airport land use plan, two miles of a public airport or public use airport, or within the vicinity of a private airstrip, and would not result in a safety hazard for people residing or working in the project area (Less than Significant)

Hazards related to airports are typically grouped into two categories: air hazards and ground hazards. Air hazards jeopardize the safety of an airborne aircraft and expose passengers, pilots and crews to danger. Examples of air hazards include tall structures, glare-producing objects, bird and wildlife attractants, radio waves from communication centers, or other features that have the potential to interfere with take-off or landing procedures, posing a risk to aircraft. Ground hazards jeopardize the safety of current and future residents and/or workers in the vicinity of an airport. The most obvious ground hazard is a crash, which may produce a serious, immediate risk to those residing in or using areas adjacent to the airport. Most accidents occur during take-off and landing.

Therefore, the higher the density around an airport, including transportation facilities, the higher the risk associated with this type of hazard.

As discussed in this section, the City of Sebastopol does not have any airport facilities located within the city limits, sphere of influence, of urban growth boundary. The closest airport is the Charles M. Schulz – Sonoma County Airport located approximately 11 miles north of the City of Sebastopol. Alaska Airlines offers daily nonstop flights to and from Los Angeles, Portland, San Diego, and Seattle. The Sonoma County Airport is a 24-hour facility with Air Traffic Control Tower operating from 7:00 am until 8:00 pm, seven days a week. Both Twin engine turboprop and jet powered aircraft utilize the Sonoma County Airport. Currently, the Sonoma County Airport is the only point for commercial airline service in the County. Approximately 100,000 take-offs and landings are recorded at the Airport each year.

Additionally, the Petaluma Municipal Airport is located at the northeast edge of the City of Petaluma. This airport is the second closest airport to Sebastopol, located approximately 19 miles southeast of the Sebastopol city limits. The Petaluma Municipal Airport is operational 24 hours a day and staffed Monday through Friday 8:00 am to 5:00 pm and Saturday and Sunday from 8:00 am to 4:00 pm and including Holidays. Airport operations encompass a host of services for the orderly and safe departure and arrival of aircraft. Approximately 60,000 take-offs and landings are recorded at the Petaluma Municipal Airport each year. There are 180 aircraft storage hangars and 130 tie down spaces for 240 based aircraft. The City of Sebastopol does not lie within the Runway Protection Zone, Inner/Outer Safety Zones, Inner Turning Zone, Sideline Safety Zone, or Traffic Pattern Zone for this airport. According to the National Transportation Safety Board Aviation Accident Database, there have been no accidents within the City of Sebastopol between January of 1950 to January 2014. Implementation of the General Plan would have a **less than significant** impact with regard to this issue.

Impact 3.8-5: General Plan implementation does not have the potential to impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan (Less than Significant)

The General Plan would allow a variety of new development, including residential, commercial, industrial, and public service projects, which would result in increased jobs and population in the City of Sebastopol. Roads and infrastructure improvements would occur to accommodate the new growth. Future projects are not anticipated to remove or impede evacuation routes and the General Plan does not include land uses, policies, or other components that conflict with adopted emergency response or evacuation plans.

The General Plan would improve transportation systems throughout the City and includes policies and actions designed to ensure that an emergency response plan is prepared, and maintained. The General Plan would also ensure that the City's emergency access routes, emergency contact lists, and public information regarding designated facilities and routes are regularly reviewed to ensure that up to date information is available to the City and the public in the event of an emergency. Important new community safety facilities would be located outside of identified flood, geologic,

and fire hazard areas to ensure these facilities are available in the event of a natural disaster. Implementation of the General Plan would have a **less than significant** impact with regards to this issue.

2016 GENERAL PLAN POLICIES AND ACTIONS THAT MITIGATE POTENTIAL IMPACTS

Policies

Policy SA 1-8: *Encourage community awareness of seismic safety issues, including building safety and emergency response plans, including steps to take for safety during and after an earthquake and identified evacuation routes.*

Policy SA 3-1: *Continue to maintain, update, and implement the City's Multihazard Emergency Plan.*

Policy SA 3-2: *Continue to cooperate with Sonoma County's Emergency Preparedness Plan.*

Policy SA 3-3: *Provide an effective communications system to properly respond to emergencies.*

Policy SA 3-4: *Identify critical facilities and ensure that they will function in the event of a disaster.*

Policy SA 3-5: *Clearly communicate to the public the City's plans, procedures, and responsibilities in the event of a disaster or emergency.*

Policy SA 3-6: *Support and encourage community awareness of local and regional disaster planning and emergency response efforts, including the Sebastopol Community Emergency Response Training (CERT) program to provide emergency response training, the Multi-Jurisdictional Local Government Hazard Mitigation Plan for the San Francisco Bay Area, Map Your Neighborhood programs, and other tools available to neighborhood and community groups to improve disaster preparedness.*

Policy SA 3-7: *Encourage community awareness of various emergency preparedness measures, such as strapping water heaters, organizing periodic citywide earthquake drills, providing first aid training, and knowing how to check their home for potential structural or system (electrical, natural gas, water, etc.) damage following an earthquake or other disaster.*

Actions

Action SA-3a: Regularly review and update the City's Multihazard Emergency Plan to ensure consistency with the County's plan and regional plans and to address changing conditions.

Action SA-3b: Ensure that the City's Multihazard Emergency Plan or other disaster planning and emergency response plan: 1) identifies specific facilities and lifelines critical to effective emergency/disaster response and evaluate their abilities to survive and operate efficiently immediately after a disaster, 2) designates alternative facilities for post-disaster assistance in the event that the primary facilities have become unusable, and 3) identifies evacuation routes.

Action SA-3c: Continue to publicize and regularly update information at City Hall, other public locations, and via the City website related to emergency and disaster preparedness including evacuation routes and specific steps to take in the event of a flood, fire, earthquake, or other

emergency. Improve the visibility and accessibility of emergency and disaster preparedness information on the City's website by making information more prominent, more detailed, and by providing critical information in Spanish.

Action SA-3d: Encourage schools, neighborhood associations, senior organizations, mobile home park associations, business associations, and other interested groups to teach first aid and disaster preparedness, including Community Emergency Response Team (CERT) programs, Map Your Neighborhood programs, and other tools available to neighborhood and community groups to improve disaster preparedness. Update the City's website to provide additional information and links to these programs and services.

Action SA-3e: Adopt an emergency evacuation system and periodically review, maintain, and repair City roadways and emergency access routes, and provide signage, where necessary, to clearly identify emergency access routes.

Impact 3.8-6: General Plan implementation does not have the potential to 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 (Less than Significant)

The risk of wildfire is related to a variety of parameters, including fuel loading (vegetation), fire weather (winds, temperatures, humidity levels and fuel moisture contents) and topography (degree of slope). Steep slopes contribute to fire hazard by intensifying the effects of wind and making fire suppression difficult. Fuels such as grass are highly flammable because they have a high surface area to mass ratio and require less heat to reach the ignition point, while fuels such as trees have a lower surface area to mass ratio and require more heat to reach the ignition point.

Wild fires burn natural vegetation on developed and undeveloped lands and include timber, brush, woodland, and grass fires. While low intensity wild fires have a role in the County's ecosystem, wild fires put human health and safety, structures (e.g., homes, schools, businesses, etc.), air quality, recreation areas, water quality, wildlife habitat and ecosystem health, and forest resources at risk.

The City of Sebastopol is primarily devoid of CalFire fuel ranks. In contrast, CalFire data for the foothill and mountain areas to west of the City of Sebastopol include many areas of "high" and "very high" fuel ranks. Fire Hazard Severity Zones in and around the City of Sebastopol are shown in Figure 3.8-1.

Local Responsibility Areas (LRA) are concentrated in the incorporated areas of Sonoma County. The City of Sebastopol is an LRA that is served by the Sebastopol Fire Department within the city limits, and the Gold Ridge Fire Protection District, which provides fire protection services to unincorporated rural areas surrounding Sebastopol. The District's service area covers approximately 75 square miles.

State Responsibility Areas within the vicinity of Sebastopol are primarily found to the south and west of the city limits. Approximately four miles to the west of the city limits is a combination of

"Moderate" and "High" FHSZs. This area is generally rolling to steep slopes with increased vegetation. (California Department of Forestry and Fire Protection, 2013). The closest "Very High" FHSZ is located north of State Route 116 in Guerneville, which is over 9 miles from the northern city limits.

There are no Federal Responsibility Areas within the vicinity of City of Sebastopol.

All future projects allowed under the General Plan would be required to comply with the provisions of federal, state, and local requirements related to wildland fire hazards, including state fire safety regulations associated with wildland-urban interfaces, fire-safe building standards, and defensible space requirements. As future development and infrastructure projects are considered by the City, each project would be evaluated for potential impacts, specific to the project, associated with wildland fire hazards as required under CEQA. The General Plan establishes policies and actions to address fire protection services and avoid impacts related to wildland fires. The General Plan includes policies and actions that would ensure that potential wildland fire hazards are mitigated through requirements for adequate water supply and water flow availability, ensuring adequate emergency access, adequate fire protection services, and ensuring public awareness regarding fire safety. Implementation of the General Plan would have a **less than significant** impact with regards to this issue.

2016 GENERAL PLAN POLICIES AND ACTIONS THAT MITIGATE POTENTIAL IMPACTS

Policies

Policy SA 4-1: *Review all development proposals for fire risk and require mitigation measures to reduce the probability of fire.*

Policy SA 4-2: *Continue to enforce the California Building and Fire Standards Codes for all new construction and renovation and when occupancy or use changes occur.*

Policy SA 4-3: *Continue to adequately fund and staff the Sebastopol Fire Department to ensure a high level fire services and emergency response.*

Policy SA 4-4: *Encourage sufficient fire protection services within the Sphere of Influence.*

Policy SA 4-5: *Continue to evaluate and update the personnel and equipment requirements of the Fire Department to maintain a high level of readiness.*

Policy SA 4-6: *Ensure that there exists sufficient water flow in fire hydrants throughout Sebastopol. The standard adopted by the City is a minimum of 1,000 gallons per minute with 20 pounds per square inch (psi) residual pressure.*

Policy SA 4-7: *Continue to implement an effective and environmentally sound weed abatement program that minimizes or eliminates the use of potentially harmful chemical applications.*

Policy SA 4-8: *Continue to work cooperatively with state, regional, and local public agencies with responsibility for fire protection.*

Policy SA 4-9: *Continue to participate in mutual aid agreements with the County and State fire fighting agencies.*

Actions

Action SA-3f: Review new development proposals and critical facilities and infrastructure to ensure that California Building Standards Code requirements are met and that there are minimum road widths for emergency access and adequate clearance around structures, as those items address potential fire, flooding, seismic, and geologic hazards.

Action SA-4a: The Sebastopol Fire Department shall review all development proposals for conformance with adopted California Building Standards Code – California Fire Code requirements and identify measures, such as adequate emergency access, defensible space around structures, fire detectors, and, where appropriate, fire sprinklers, to reduce fire risk to structures and infrastructure.

Action SA-4b: Continue to update and enforce the City's Building Code and Fire Code provisions.

Action SA-4c: Continue to enforce the Municipal Code provisions requiring sprinkler systems for certain structures.

Action SA-4d: Require adequate fire resistance in roof coverings and exterior building materials for structures within or adjacent to hazardous areas (requirement may exceed building code requirements where necessary to ensure public safety), as determined by the Fire Chief.

Action SA-4e: Require the use of non-combustible roofing materials as specified by the Fire Chief.

Action SA-4f: Continue to require that all new developments be provided with sufficient fire flow facilities at the time of permit issuance.

Action SA-4g: To the extent feasible and appropriate, locate new critical facilities – including hospitals and health care facilities, emergency shelters, emergency command centers, and emergency communications facilities – outside of areas with significant fire risk. Continue to require all public facility development projects to meet or exceed the minimum California Building Standards Code requirements, as adopted by the City, established to address fire hazards.

Action SA-4h: Discourage development beyond a nine-minute response time of a fire station, unless it is determined that adequate response can be provided or acceptable mitigation measures are provided.

Action SA-4i: Consider creating a Fire Protection Impact Fee and/or Assessment Area to ensure that the City has and will continue to have adequate staffing, equipment, and infrastructure for fire protection services.

Action SA-4j: Provide incentives to ensure an adequate number of staff and volunteer firefighters who are certified Emergency Medical Technicians.

Action SA-4k: Obtain the equipment and trained personnel to provide emergency medical defibrillation for people suffering from cardiac arrest.

Action SA-4l: Strive to maintain adequate water supplies to provide reasonable protection of City assets from fire hazards without disruption to community water supplies.

Action SA-4m: Work with the California Department of Fish and Wildlife and other affected property owners to implement good forest management practices to reduce fire hazards in the eucalyptus groves in the Laguna de Santa Rosa and on Lynch Road.

Action SA-4n: Continue to use or recommend the following methods of weed abatement wherever possible: use of mechanical rather than chemical removal of weeds; reseeding with native bunchgrass varieties in sloping disturbed soils; and limiting weed abatement activities in areas with known endangered plant and animal species.

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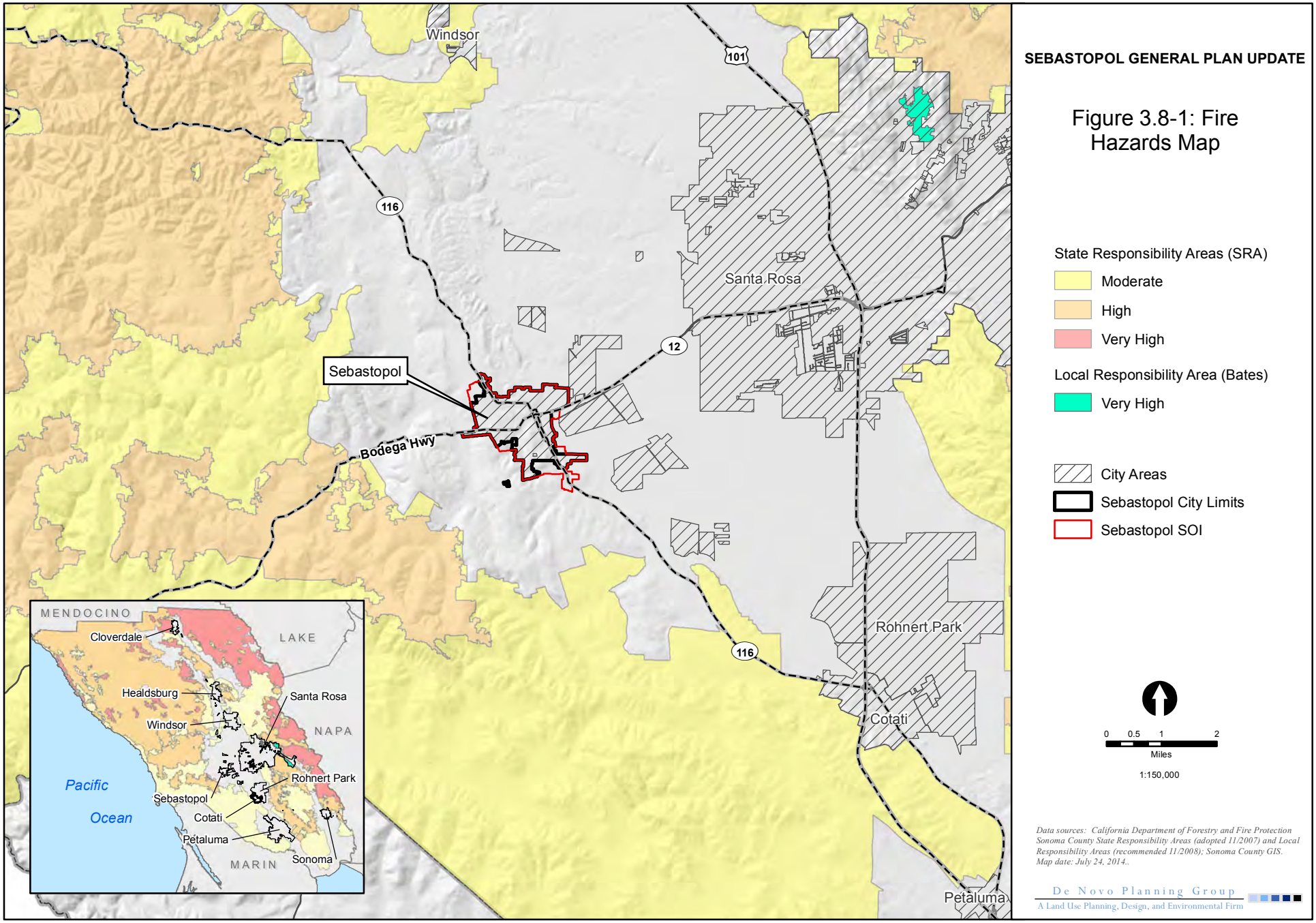

SEBASTOPOL GENERAL PLAN UPDATE

Figure 3.8-1: Fire Hazards Map

State Responsibility Areas (SRA)

- Moderate
- High
- Very High

Local Responsibility Area (Bates)

- Very High

- City Areas
- Sebastopol City Limits
- Sebastopol SOI

0 0.5 1 2

Miles

1:150,000

Data sources: California Department of Forestry and Fire Protection Sonoma County State Responsibility Areas (adopted 11/2007) and Local Responsibility Areas (recommended 11/2008); Sonoma County GIS. Map date: July 24, 2014..

De Novo Planning Group

A Land Use Planning, Design, and Environmental Firm

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This section provides a background discussion of the regional hydrology, flooding, water quality, and water sources in Sebastopol. This section is organized with an existing setting, regulatory setting, and impact analysis. One comment was received during the public review period or scoping meeting for the Notice of Preparation regarding this topic. The County of Sonoma Permit and Resource Management Department commented that the EIR should address topics relating to groundwater.

Key Terms

Acre feet: The volume of one acre of water to a depth of one foot. Each acre-foot of water is equal to approximately 325,851.4 gallons.

BGS: Below ground surface.

GPD: Gallons per day.

GPM: Gallons per minute.

Groundwater: Water that is underground and below the water table, as opposed to surface water, which flows across the ground surface. Water beneath the earth's surface fills the spaces in soil, gravel, or rock formations. Pockets of groundwater are often called "aquifers" and are the source of drinking water for a large percentage of the population in the United States. Groundwater is often extracted using wells which pump the water out of the ground and up to the surface. Groundwater is naturally replenished by surface water from precipitation, streams, and rivers when this recharge reaches the water table.

MG: Million gallons

MGD: Million gallons per day

Surface water: Water collected on the ground or from a stream, river, lake, wetland, or ocean. Surface water is naturally replenished through precipitation, but is naturally lost through evaporation and seepage into soil.

3.9.1 EXISTING SETTING

REGIONAL HYDROLOGY

Location and Climate

The City of Sebastopol is located in Sonoma County, California approximately 15 miles east of the Pacific Ocean, and 52 miles north of the San Francisco Bay. The climate is mild with average high temperatures ranging from 58-83 degrees Fahrenheit (F), and average lows ranging from 38-52. The average annual precipitation is 25 inches, most of which comes in the form of winter rain. Summer coastal fog often reaches Sebastopol through the coastal valleys to the west.

Watersheds

A watershed is a region that is bound by a divide that drains to a common watercourse or body of water. Watersheds serve an important biological function, oftentimes supporting an abundance of aquatic and terrestrial wildlife including special-status species and anadromous and native local fisheries. Watersheds provide conditions necessary for riparian habitat.

The State of California uses a hierarchical naming and numbering convention to define watershed areas for management purposes. This means that boundaries are defined according to size and topography, with multiple sub-watersheds within larger watersheds. Table 3.9-1 shows the primary watershed classification levels used by the State of California. The second column indicates the approximate size that a watershed area may be within a particular classification level, although variation in size is common.

TABLE 3.9-1: STATE OF CALIFORNIA WATERSHED HIERARCHY NAMING CONVENTION

WATERSHED LEVEL	*APPROXIMATE SQUARE MILES (ACRES)*	*DESCRIPTION*
Hydrologic Region (HR)	12,735 (8,150,000)	Defined by large-scale topographic and geologic considerations. The State of California is divided into ten HR's.
Hydrologic Unit (HU)	672 (430,000)	Defined by surface drainage; may include a major river watershed, groundwater basin, or closed drainage, among others.
Hydrologic Area (HA)	244 (156,000)	Major subdivisions of hydrologic units, such as by major tributaries, groundwater attributes, or stream components.
Hydrologic Sub-Area (HSA)	195 (125,000)	A major segment of an HA with significant geographical characteristics or hydrological homogeneity.

SOURCE: CALWATER, CALIFORNIA INTERAGENCY WATERSHED MAPPING COMMITTEE 2008

HYDROLOGIC REGIONS

North Coast Hydrologic Region: The City of Sebastopol is located within the North Coast Hydrologic Region. The North Coast hydrologic region covers approximately 19,500 square miles and includes all or portions of Modoc, Siskiyou, Del Norte, Trinity, Humboldt, Mendocino, Lake, and Sonoma counties, and small areas of Shasta, Tehama, Glenn, Colusa, and Marin counties. (California Department of Water Resources, 2009).

HYDROLOGIC UNITS

Russian Hydrologic Unit: The City of Sebastopol is located within the Russian hydrologic unit, which covers approximately 950,249 acres. Figure 3.9-1 illustrates the boundaries of the Sphere of Influence and City Limits relative to the boundaries of the hydrologic sub areas within the Russian Hydrologic Unit.

HYDROLOGIC AREAS

For purposes of planning on a region-wide basis, hydrologic areas are generally considered to be the appropriate watershed planning level. As a Planning Area becomes smaller the hydrologic area level may be too large in terms of scale, and a hydrologic subarea may be considered more appropriate. The City of Sebastopol is located within the Lower Laguna de Santa Rosa, and the Green Valley Creek hydrologic subarea of the Russian hydrologic unit. Table 3.9-2 provides a breakdown of the acreages of each watershed within the vicinity of Sebastopol.

TABLE 3.9-2: WATERSHED INFORMATION--RUSSIAN HYDROLOGIC UNIT

HYDROLOGIC INFORMATION	*DESCRIPTION*	*ACRES*	*SQUARE MILES*	*PERCENT OF WATERSHED*
HUC8 (Catalog Unit)	Russian	950,249	1,485	100%
HUC10 (Hydrologic Area)	Laguna de Santa Rosa	162,784	254	17%
HUC12 (Hydrologic Sub Area)	Lower Laguna de Santa Rosa	39,712	62	4%
HUC12 (Hydrologic Sub Area)	Green Valley Creek	24,320	38	2.5%

SOURCE: CALWATER 2.1.1, NATIONAL RESOURCES CONSERVATION SERVICE, IWMC.

FLOODING

FEMA Flood Zones

FEMA mapping provides important guidance for the City in planning for flooding events and regulating development within identified flood hazard areas. FEMA's National Flood Insurance Program (NFIP) is intended to encourage State and local governments to adopt responsible floodplain management programs and flood measures. As part of the program, the NFIP defines floodplain and floodway boundaries that are shown on Flood Insurance Rate Maps (FIRMs). The Citywide FEMA Firm Map is shown on Figure 3.9-2.

Areas that are subject to flooding are indicated by a series of alphabetical symbols, indicating anticipated exposure to flood events:

- **Zone A:** Subject to 100-year flooding with no base flood elevation determined. Identified as an area that has a one percent chance of being flooded in any given year.
- **Zone AE:** Subject to 100-year flooding with base flood elevations determined.
- **Zone AH:** Subject to 100-year flooding with flood depths between one and three feet being areas of ponding with base flood elevations determined.
- **Zone AO:** Subject to 100-year flooding with flood depths between one and three feet being subject to sheet flow on sloping terrain with average depths determined.
- **Zone X (unshaded):** Area of minimal flood hazard. Zone X is the area determined to be outside the 500-year flood and protected by levee from 100-year flood.
- **Zone X (shaded):** Subject to 500-year flooding. Identified as an area that has a 0.2 percent chance of being flooded in a given year.

- **Zone D:** Areas where flood hazards are yet to be determined.

The City of Sebastopol is subject to flooding problems along the natural creeks and drainages that traverse the area. The Laguna de Santa Rosa and Atascadero Creek are the most prominent drainages in Sebastopol that are subject to flooding. The 100-year flood plain extends onto many properties that are located immediately adjacent to these drainages. Additionally, land to the east of Highway 116 in the northeastern, and southeastern portions of Sebastopol, are within the 500 year floodplain. The flood hazards in Sebastopol are illustrated in Figure 3.9-2. Table 3.9-3 presents a breakdown of the acreage and percentage of the City, and Sphere of Influence, that are designed as a FEMA flood zone under the Federal Flood Insurance Rate Map (FIRM).

TABLE 3.9-3: FEMA FLOOD ZONE SURFACE AREAS IN CITY OF SEBASTOPOL

ZONE	*ACRES - CITY*	*% OF CITY*	*ACRES - SOI*	*% OF SOI*
X (shaded) (500yr)	27.14	2.3%	0	0.0%
AE (100yr)	184.88	15.6%	13.87	6.0%
X (unshaded)	972.02	82.1%	216.27	94.0%
Total	1184.04	100.0%	230.146	100.0%

SOURCE: USGS NATIONAL HYDROGRAPHY DATASET, FEMA, CALIFORNIA DWR, SEBASTOPOL GIS. MAP DATE: JULY 24, 2014.

Within the City of Sebastopol approximately 15.6 percent of the land within the city limits is located within an area with a FEMA flood zone AE, which is an area that is subject to 100-year flooding (a one percent chance of being flooded in any given year). Furthermore, approximately 6.0 percent of land within the City's Sphere of Influence is also located within this AE Zone.

Approximately 2.3 percent of the land within the city limits is located within an area with a FEMA flood zone X (shaded), which is an area that is subject to 500-year flooding (a 0.2 percent chance of being flooded in any given year). There is no land within the Sphere of Influence located within the 500-year flood zone. Areas within the 500-year flood zone are considered a low to moderate risk of flood hazards.

Approximately 82.1 percent of the land within the city limits is located within an area with a FEMA flood zone X (unshaded), which is an area that is determined to be outside the 500-year, and 100-year floodplain. Approximately 94 percent of the land within the Sphere of Influence is located within the X (unshaded) zone. These areas are considered to be at minimal risk from flood hazards.

Dam Inundation

Earthquakes centered close to a dam are typically the most likely cause of dam failure. Dam Inundation maps have been required in California since 1972, following the 1971 San Fernando Earthquake and near failure of the Lower Van Norman Dam. In The City of Sebastopol approximately 195 acres are subject to dam inundation. These areas lie in the northern-most, and southwestern portions of the city. (ABAG, and Sonoma County hazard mitigation plan). Figure. 3.9-3 shows the extent of dam inundation hazard areas in the City of Sebastopol.

WATER QUALITY

Stormwater Runoff

Potential hazards to surface water quality include the following nonpoint pollution problems: high turbidity from sediment resulting from erosion of improperly graded construction projects, concentration of nitrates and dissolved solids from agriculture or surfacing septic tank failures, contaminated street and lawn run-off from urban areas, and warm water drainage discharges into cold water streams.

The most critical period for surface water quality is following a rainstorm which produces significant amounts of drainage runoff into streams at low flow, resulting in poor dilution of contaminates in the low flowing stream. Such conditions are most frequent during the fall at the beginning of the rainy season when stream flows are near their lowest annual levels. Besides the greases, oils, pesticides, litter, and organic matter associated with such runoff, heavy metals such as copper, zinc, and cadmium can cause considerable harm to aquatic organisms when introduced to streams in low flow conditions.

Urban storm water runoff was managed as a non-point discharge (a source not readily identifiable) under the Federal Water Pollution Control Amendments of 1972 (PL 92-500, Section 208) until the mid-1980's. However, since then, the Federal Environmental Protection Agency has continued to develop implementing rules which categorize urban runoff as a point source (an identifiable source) subject to National Pollution Discharge Elimination System (NPDES) permits. Rules now affect medium and large urban areas, and further rulemaking is expected as programs are developed to meet requirements of Federal water pollution control laws.

Surface water pollution is also caused by erosion. Excessive and improperly managed grading, vegetation removal, quarrying, logging, and agricultural practices all lead to increased erosion of exposed earth and sedimentation of watercourses during rainy periods. In slower moving water bodies these same factors often cause a buildup of siltation, which ultimately reduces the capacity of the water system to percolate and recharge groundwater basins, as well as adversely affecting both aquatic resources and flood control efforts.

Creeks and Flood Control Facilities

The majority of Sebastopol's storm-drain system flows in an easterly direction and discharges into the Laguna de Santa Rosa along the City's eastern border. A small area in the western portion of the City drains to Atascadero Creek at the western City boundary. In addition to the storm drains operated by the City, surface water flowing in creeks and ditches contributes to the storm drain system. Zimpher Creek and Calder Creek are two major creek systems carrying surface water through the City, but other smaller seasonal creeks and tributaries are also located within the City boundaries.

The City of Sebastopol is a member of the Russian River Watershed Association. The Russian River watershed is a rich and diverse region of nearly 1,500 square miles of forests, agricultural lands, and urban lands in Mendocino and Sonoma Counties. The main stem of the Russian River flows 110 miles

from its headwaters near Redwood Valley and Potter Valley to the Pacific Ocean near Jenner. The watershed is home to approximately 360,000 people, 150 streams and creeks, and about 30 species of fish - three of which are listed as threatened or endangered: Chinook salmon, Coho salmon, and Steelhead trout (RRwatershed.org).

The Laguna de Santa Rosa is the second-largest freshwater marsh in Northern California. During heavy rains, the Laguna flows south carrying floodwaters away from the Russian River, reducing its flood levels. After rains subside and the tides fall, the Laguna reverses its flow, returning the floodwater north, back into the Russian River and eventually to the Pacific Ocean. More water enters the Laguna from a collection of creeks, tributaries, springs, seeps, and sub-surface flows. Because of this diverse water supply, the Laguna, though primarily a marsh, has characteristics of a stream, creek, seasonal wetland, open water, and other aquatic habitats depending on location.

As a major retention basin, the Laguna is critical to reducing flood levels in the Russian River. The watershed encompasses 250 square miles and drains the southwestern part of Santa Rosa, the Cotati-Rohnert Park area, as well as the eastern side of Sebastopol. Floodwaters flow from the Russian River into the Laguna whenever the flood stage in the river is higher than that in the Laguna, creating a temporary lake. The total flood storage capacity of the Laguna is 80,000 acre-feet at the 76-foot elevation (Sebastopol, 2013).

Atascadero Creek springs from the north flank of English Hill, just north of Burnside Road, about 3 miles (5 km) southwest of Sebastopol. It descends to the north, flowing under Barnett Valley Road, Watertrough Road, and Bodega Highway. It continues north through Ragle Ranch Regional Park in the City of Sebastopol, then crosses Mill Station Road, Occidental Road, Graton Road, and Green Valley Road to enter Green Valley Creek about 2 miles (3 km) northwest of Graton.

Zimpher Creek flows generally eastward through central Sebastopol, crossing under North Main Street near Keating Avenue and flowing under McKinley Street and joins the Laguna de Santa Rosa, about 0.25 miles (.5 km) east of Sebastopol's downtown. The stream has been incorporated into the City of Sebastopol's storm sewer system and flows underground for most of its length. The two open sections include a stretch from just east of Zimpher Drive to the end of Bately Court, and the final 150 feet west of Morris Street to its confluence with the Laguna de Santa Rosa.

The headwaters of Calder Creek are found just outside the southwest corner of the City. Calder Creek flows free until it reaches Jewel Avenue, above Ives Park; from there it enters a culvert and re-emerges to flow through Ives Park in a mostly steep-sided, concrete ditch. Then it enters another culvert that takes it nearly to the Laguna a quarter of a mile away.

The City of Sebastopol storm drain system includes over 24 miles of pipelines, hundreds of inlets and other structures, open channels, and ditches. The system represents an investment in excess of $15 million in infrastructure. There are no stormwater pump stations within the city. The storm drains generally range in size from 24-inches to 72-inches in diameter.

Stormwater Quality

Potential hazards to surface water quality include the following nonpoint pollution problems: high turbidity from sediment resulting from erosion of improperly graded construction projects, concentration of nitrates and dissolved solids from agriculture or surfacing septic tank failures, contaminated street and lawn run-off from urban areas, and warm water drainage discharges into cold water streams.

The most critical period for surface water quality is following a rainstorm which produces significant amounts of drainage runoff into streams at low flow, resulting in poor dilution of contaminants in the low flowing stream. Such conditions are most frequent during the fall at the beginning of the rainy season when stream flows are near their lowest annual levels. Besides the greases, oils, pesticides, litter, and organic matter associated with such runoff, heavy metals such as copper, zinc, and cadmium can cause considerable harm to aquatic organisms when introduced to streams in low flow conditions.

Surface water pollution is also caused by erosion. Excessive and improperly managed grading, vegetation removal, quarrying, logging, and agricultural practices all lead to increased erosion of exposed earth and sedimentation of watercourses during rainy periods. In slower moving water bodies these same factors often cause a buildup of siltation, which ultimately reduces the capacity of the water system to percolate and recharge groundwater basins, as well as adversely affecting both aquatic resources and flood control efforts.

Impaired Water Bodies

Section 303(d) of the Federal Clean Water Act requires states to identify waters that do not meet water quality standards or objectives and, thus, are considered "impaired." Once listed, Section 303(d) mandates prioritization and development of a Total Maximum Daily Load (TMDL). The TMDL is a tool that establishes the allowable loadings or other quantifiable parameters for a waterbody and thereby the basis for the states to establish water quality-based controls. The purpose of TMDLs is to ensure that beneficial uses are restored and that water quality objectives are achieved.

The City has one body of water listed on the 2010 Section 303(d) list of impaired water bodies. Laguna de Santa Rosa is listed as polluted by mercury, indicator bacteria, dissolved oxygen, nitrogen, phosphorus, sediment/siltation, and temperature.

WATER SOURCE

City of Sebastopol

The City relies exclusively on groundwater as a water supply source. The City of Sebastopol has five permitted wells, three of which are currently active for potable water uses, non-potable water uses, irrigation, and industrial uses. All of the City's available water is groundwater from these three active wells.

Currently the City's water supply comes from Wells No. 4, 6, 7, and 8. Well No. 8 was designed to produce water from zones with lower concentrations of arsenic and Well No. 4 tends to have lower

overall arsenic concentrations. Consequently, their combined effect has been to reduce the concentrations of arsenic in in water supply.

Groundwater

Santa Rosa Plain Subbasin: The Santa Rosa Plain area covers about 167,000 acres, and is home to around half of the population of Sonoma County. The groundwater system beneath the Santa Rosa Plain provides water to residents and municipal systems, irrigation water for agriculture, and baseflow to streams, surface water bodies and associated ecosystems. The Santa Rosa Plain is a large geologically complex groundwater basin, with multiple aquifers that exhibit wide variations in well yields and groundwater quality. In addition, the groundwater system is subdivided into several compartments that are separated by fault zones, including the Rodgers Creek Fault, the Sebastopol Fault, and the Trenton Fault. Groundwater flows through and is stored in sedimentary and volcanic formations, which include recent Alluvium/Glen Ellen, Wilson Grove, Petaluma, and the Sonoma Volcanics. Most of the City of Sebastopol is located within the Wilson Grove Formation Highlands (WGFH) groundwater basin. The basin straddles southern Sonoma and northern Marin Counties, and is located within an upland area between Santa Rosa Valley and the Pacific Ocean.

Groundwater Levels and Trends

Knowledge of groundwater levels and how they vary spatially and temporally is fundamental to understanding and managing water resources. The shape of the water-table and potentiometric surfaces, and combinations thereof, can reveal important hydrogeological characteristics of the watershed, such as the locations of key areas of recharge and discharge, and geologic effects on groundwater flow. Declining long-term hydrographs can indicate that an aquifer is being pumped in excess of recharge.

A comparison of groundwater contours between spring and fall 2007 revealed a similarity in the general shape and distribution of contours. Groundwater-level contours for spring 2007 indicated that water levels were higher than the spring 2001 levels and the southern pumping depression had disappeared, indicating that long-term reductions in pumping in the Rohnert Park-Cotati area allowed recovery of groundwater levels to altitudes typical of the early 1970s. The 2007 water level contours also indicate that Santa Rosa Creek was gaining water east of the Rodgers Creek fault zone (USGS, 2013).

As described in the 2013 USGS study, wells 6N/9W-02C1, 7N/9W-15K1, and 35D2 are in the Wilson Grove storage unit and all are perforated in the Wilson Grove Formation. Well 02C1 is a production well that is perforated between 332 and 600 ft below land surface (bls), well 15K1 is perforated between 59 and 69 ft bls, and well 35D2 is perforated between 55 and 167 ft bls. The water levels in well 2C1 showed 20–40 ft of seasonal variability (80 ft maximum), which could be in response to pumping, and no long-term trend. The water levels in well 15K1 showed a net increase of about 5 ft between 1980 and 2011. The water levels in well 35D2 showed no net change between 1970 and 2005 (USGS, 2013).

Water-level contour maps show that groundwater levels in the Windsor Basin storage unit were fairly steady with some seasonal variability, and some hydrographs showed the effects of the 1976–

77 and 1986–92 droughts. In the Cotati Basin storage unit, water levels from wells in the area near Rohnert Park recovered to 1974 conditions by 2007 as a result of a large reduction in municipal pumping that began in 2000. In the Valley storage unit, water levels were fairly steady with some seasonal variability in the Bennett and Rincon valleys; however, water levels increased in the Kenwood Valley. In the Wilson Grove storage unit, water levels showed seasonal variability but, generally, had no long-term trends. In the Upland storage unit, the water levels in the deeper well showed a long-term decline, while the water levels in the shallow well were steady. Sparse vertical profile data indicated that shallower wells have limited hydraulic communication with deeper aquifer material; this could be caused by the extensive clays in the Petaluma Formation and indicate confined aquifer conditions at depth (USGS, 2013).

3.9.2 REGULATORY SETTING

There are a number of regulatory agencies whose responsibility includes the oversight of the water resources of the state and nation including the Federal Emergency Management Agency, the US Environmental Protection Agency, the State Water Resources Board, and the Regional Water Quality Control Board. The following is an overview of the federal, state and local regulations that are applicable to the proposed project.

FEDERAL REGULATIONS

Clean Water Act (CWA)

The CWA, initially passed in 1972, regulates the discharge of pollutants into watersheds throughout the nation. Section 402(p) of the act establishes a framework for regulating municipal and industrial stormwater discharges under the National Pollutant Discharge Elimination System (NPDES) Program. Section 402(p) requires that stormwater associated with industrial activity that discharges either directly to surface waters or indirectly through municipal separate storm sewers must be regulated by an NPDES permit.

The State Water Resources Control Board (SWRCB) is responsible for implementing the Clean Water Act and does so through issuing NPDES permits to cities and counties through regional water quality control boards. Federal regulations allow two permitting options for storm water discharges (individual permits and general permits). The SWRCB elected to adopt a statewide general permit (Water Quality Order No. 2013-0001-DWQ) for small Municipal Separate Storm Sewer Systems (MS4s) covered under the CWA to efficiently regulate numerous storm water discharges under a single permit. Permittees must meet the requirements in Provision D of the General Permit, which require the development and implementation of a Storm Water Management Plan (SWMP) with the goal of reducing the discharge of pollutants to the maximum extent practicable. The SWMP must include the following six minimum control measures:

1) Public Education and Outreach on Storm Water Impacts
2) Public Involvement/Participation
3) Illicit Discharge Detection and Elimination

4) Construction Site Storm Water Runoff Control
5) Post-Construction Storm Water Management in New Development
6) Redevelopment and Pollution Prevention/Good Housekeeping for Municipal Operations

Sebastopol is covered under the statewide general permit, but is in the process of joining with other permittees in the Santa Rosa Plain under a Phase I NPDES permit (Water Quality Order No. R1-2003-0062) (NPDES No. CA0025054).

Federal Emergency Management Agency (FEMA)

FEMA operates the National Flood Insurance Program (NFIP). Participants in the NFIP must satisfy certain mandated floodplain management criteria. The National Flood Insurance Act of 1968 has adopted as a desired level of protection, an expectation that developments should be protected from floodwater damage of the Intermediate Regional Flood (IRF). The IRF is defined as a flood that has an average frequency of occurrence on the order of once in 100 years, although such a flood may occur in any given year. Communities are occasionally audited by the Department of Water Resources to insure the proper implementation of FEMA floodplain management regulations.

Flood Disaster Protection Act (FDPA)

The FDPA of 1973 was a response to the shortcomings of the NFIP, which were experienced during the flood season of 1972. The FDPA prohibited federal assistance, including acquisition, construction and financial assistance, within delineated floodplains in non-participating NFIP communities. Furthermore, all federal agencies and/or federally insured and federally regulated lenders must require flood insurance for all acquisitions or developments in designated Special Flood Hazard Areas (SFHAs) in communities that participate in the NFIP.

Improvements, construction and developments within SFHAs are generally subject to the following standards:

- All new construction and substantial improvements of residential buildings must have the lowest floor (including basement) elevated to or above the BFE.
- All new construction and substantial improvements of non-residential buildings must either have the lowest floor (including basement) elevated to or above the BFE or dry-floodproofed to the BFE
- Buildings can be elevated to or above the BFE using fill, or they can be elevated on extended foundation walls or other enclosure walls, on piles, or on columns
- Extended foundation or other enclosure walls must be designed and constructed to withstand hydrostatic pressure and be constructed with flood-resistant materials and contain openings that will permit the automatic entry and exit of floodwaters. Any enclosed area below the BFE can only be used for the parking of vehicles, building access, or storage.

National Flood Insurance Program (NFIP)

Per the National Flood Insurance Act of 1968, the NFIP has three fundamental purposes: *Better indemnify individuals for flood losses through insurance; Reduce future flood damages through State and community floodplain management regulations; and Reduce Federal expenditures for disaster assistance and flood control.*

While the Act provided for subsidized flood insurance for existing structures, the provision of flood insurance by FEMA became contingent on the adoption of floodplain regulations at the local level.

National Pollutant Discharge Elimination System (NPDES)

National Pollutant Discharge Elimination System (NPDES) permits are required for discharges of pollutants to navigable waters of the United States, which includes any discharge to surface waters, including lakes, rivers, streams, bays, the ocean, dry stream beds, wetlands, and storm sewers that are tributary to any surface water body. NPDES permits are issued under the Federal Clean Water Act, Title IV, Permits and Licenses, Section 402 (33 USC 466 et seq.)

The RWQCB issues these permits in lieu of direct issuance by the Environmental Protection Agency, subject to review and approval by the EPA Regional Administrator (EPA Region 9). The terms of these NPDES permits implement pertinent provisions of the Federal Clean Water Act and the Act's implementing regulations, including pre-treatment, sludge management, effluent limitations for specific industries, and anti- degradation. In general, the discharge of pollutants is to be eliminated or reduced as much as practicable so as to achieve the Clean Water Act's goal of "fishable and swimmable" navigable (surface) waters. Technically, all NPDES permits issued by the RWQCB are also Waste Discharge Requirements issued under the authority of the California Water Code (CWC).

These NPDES permits regulate discharges from publicly owned treatment works, industrial discharges, stormwater runoff, dewatering operations, and surface water discharges of groundwater pumped as part of groundwater cleanup activities. NPDES permits are issued for five years or less, and are therefore to be updated regularly. To expedite the permit issuance process, the RWQCB has adopted several general NPDES permits, each of which regulates numerous discharges of similar types of wastes. The SWRCB has issues general permits for stormwater runoff from construction sites statewide. Stormwater discharges from industrial and construction activities in the North Coast Region can be covered under these general permits, which are administered jointly by the SWRCB and RWQCB.

Rivers and Harbors Appropriation Act of 1899

One of the country's first environmental laws, this Act established a regulatory program to address activities that could affect navigation in Waters of the United States.

STATE REGULATIONS

California Code of Regulations

California Code of Regulations (CCR) Title 22, Chapter 15, Article 20 requires all public water systems to prepare a Consumer Confidence Report for distribution to its customers and to the Department of Health Services. The Consumer Confidence Report provides information regarding the quality of potable water provided by the water system. It includes information on the sources of the water, any detected contaminants in the water, the maximum contaminants levels set by regulation, violations and actions taken to correct them, and opportunities for public participation in decisions that may affect the quality of the water provided.

California Department of Health Services

The Department of Health Services, Division of Drinking Water and Environmental Management, oversees the Drinking Water Program. The Drinking Water Program regulates public water systems and certifies drinking water treatment and distribution operators. It provides support for small water systems and for improving their technical, managerial, and financial capacity. It provides subsidized funding for water system improvements under the State Revolving Fund ("SRF") and Proposition 50 programs. The Drinking Water Program also oversees water recycling projects, permits water treatment devices, supports and promotes water system security, and oversees the Drinking Water Treatment and Research Fund for MTBE and other oxygenates.

California Water Code

California's primary statute governing water quality and water pollution issues with respect to both surface waters and groundwater is the Porter-Cologne Water Quality Control Act of 1970 (Division 7 of the California Water Code) (Porter-Cologne Act). The Porter-Cologne Act grants the SWRCB and each of the Regional Water Quality Control Boards (RWQCBs) power to protect water quality, and is the primary vehicle for implementation of California's responsibilities under the Federal Clean Water Act. The Porter-Cologne Act grants the SWRCB and the RWQCBs authority and responsibility to adopt plans and policies, to regulate discharges to surface and groundwater, to regulate waste disposal sites and to require cleanup of discharges of hazardous materials and other pollutants. The Porter-Cologne Act also establishes reporting requirements for unintended discharges of any hazardous substance, sewage, or oil or petroleum product.

Each RWQCB must formulate and adopt a Water Quality Control Plan (Basin Plan) for its region. The regional plans are to conform to the policies set forth in the Porter-Cologne Act and established by the SWRCB in its State water policy. The Porter-Cologne Act also provides that a RWQCB may include within its regional plan water discharge prohibitions applicable to particular conditions, areas, or types of waste.

Water Quality Control Plan for the North Coast Region

The Water Quality Control Plan for the North Coast Region (Basin Plan) includes a summary of beneficial water uses, water quality objectives needed to protect the identified beneficial uses, and implementation measures. The Basin Plan establishes water quality standards for all the ground and

surface waters of the region. The term "water quality standards," as used in the Federal Clean Water Act, includes both the beneficial uses of specific water bodies and the levels of quality that must be met and maintained to protect those uses. The Basin Plan includes an implementation plan describing the actions by the RWQCB and others that are necessary to achieve and maintain the water quality standards.

The RWQCB regulates waste discharges to minimize and control their effects on the quality of the region's ground and surface water. Permits are issued under a number of programs and authorities. The terms and conditions of these discharge permits are enforced through a variety of technical, administrative, and legal means. Water quality problems in the region are listed in the Basin Plan, along with the causes, where they are known. For water bodies with quality below the levels necessary to allow all the beneficial uses of the water to be met, plans for improving water quality are included. The Basin Plan reflects, incorporates, and implements applicable portions of a number of national and statewide water quality plans and policies, including the California Water Code and the Clean Water Act.

California Government Code

The Senate and Assembly bills identified above have resulted in various changes and additions to the California Government Code. Key sections related to the above referenced bills are identified below.

Section 65584.04

Any land having inadequate flood protection, as determined by FEMA or DWR, must be excluded from land identified as suitable for urban development within the planning area.

Section 8589.4

California Government Code §8589.4, commonly referred to as the Potential Flooding-Dam Inundation Act, requires owners of dams to prepare maps showing potential inundation areas in the event of dam failure. A dam failure inundation zone is different from a flood hazard zone under the National Flood Insurance Program (NFIP). NFIP flood zones are areas along streams or coasts where storm flooding is possible from a "100-year flood." In contrast, a dam failure inundation zone is the area downstream from a dam that could be flooded in the event of dam failure due to an earthquake or other catastrophe. Dam failure inundation maps are reviewed and approved by the California Office of Emergency Services (OES). Sellers of real estate within inundation zones are required to disclose this information to prospective buyers.

Consumer Confidence Report Requirements

California Code of Regulations (CCR) Title 22, Chapter 15, Article 20 requires all public water systems to prepare a Consumer Confidence Report for distribution to its customers and to the Department of Health Services. The Consumer Confidence Report provides information regarding the quality of potable water provided by the water system. It includes information on the sources of the water, any detected contaminants in the water, the maximum contaminant levels set by regulation,

violations and actions taken to correct them, and opportunities for public participation in decisions that may affect the quality of the water provided.

LOCAL REGULATIONS

City of Sebastopol Water Master Plan (2005)

The City's 2005 Water Master Plan evaluates the water supply sources, storage capabilities and distribution capacity of the water system that the City owns and maintains for domestic use, commercial use, and firefighting. The study identifies system deficiencies and outlines existing and future system improvements necessary to meet projected demands.

Sonoma County Water Agency

Sonoma County Water Agency (SCWA) was created as a special district in 1949 by the California Legislature to provide flood protection and water supply services. The SCWA is responsible for providing flood protection to much of Sonoma County. They have partnered with federal agencies to build and manage a variety of flood protection projects, including Warm Springs Dam, Spring Lake, Coyote Valley Dam, Matanzas Creek Reservoir, Piner Creek Reservoir, Brush Creek Middle Fork Reservoir and Spring Creek Reservoir. They also manage a proactive stream maintenance program that maintains more than 80 miles of creeks throughout the County.

SCWA Santa Rosa Plain Groundwater Management Plan

The Basin Advisory Panel has been developing a Groundwater Management Plan in accordance with state water code to locally and voluntarily manage groundwater resources. The Panel is comprised of almost 30 technical experts, residential well users, businesses, agricultural groups, environmental organizations, governmental agencies, tribal groups, natural resource managers, and members of the general public. After nearly two years in development, the Plan is nearing completion. Four main elements guide the Plan:

- Groundwater management and land use planning
- Urban Water Management Plans tracking and integration
- Multi-agency and organization integration
- Climate change planning
- Multi-benefit actions and activities

3.9.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed project will have a significant impact on the environment associated with hydrology and water quality if it will:

- Violate any water quality standards or waste discharge requirements;
- 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 preexisting nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted;
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion, siltation, run-off or flooding on- or off-site;
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site;
- 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;
- Otherwise substantially degrade water quality;
- 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.
- 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;
- Place within a 100-year flood hazard area structures that would impede or redirect flood flows;
- Expose people or structures to significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam; or
- Result in inundation by seiche, tsunami or mudflow.

IMPACTS AND MITIGATION

Impact 3.9-1: General Plan implementation could result in a violation of water quality standards or waste discharge requirements (Less than Significant)

Construction-Related Water Quality Impacts: Grading, excavation, removal of vegetation cover, and loading activities associated with future construction activities could temporarily increase runoff, erosion, and sedimentation. Construction activities also could result in soil compaction and wind erosion effects that could adversely affect soils and reduce the revegetation potential at construction sites and staging areas.

As required by the Clean Water Act, each subsequent development project or improvement project will require an approved Storm Water Pollution Prevention Plan (SWPPP) that includes best management practices for grading, and preservation of topsoil. A SWPPP is not required if the project will disturb less than one acre. SWPPPs are designed to control storm water quality degradation to the extent practicable using best management practices during and after construction.

Future development project applicants must submit the SWPPP with a Notice of Intent to the Regional Water Quality Control Board (RWQCB) to obtain a General Permit. The RWQCB is an agency responsible for reviewing the SWPPP with the Notice of Intent, prior to issuance of a General Permit for the discharge of storm water during construction activities. The RWQCB accepts General Permit applications (with the SWPPP and Notice of Intent) after specific projects have been approved by the lead agency. Project applicants for each specific project that is larger than one acre are required to obtain a General Permit for discharge of storm water during construction activities prior to commencing construction (per the Clean Water Act).

Based upon the general planning nature of the General Plan, development of detailed, site-specific information on this impact at this planning level is not feasible. However, each future project must include detailed project specific drainage plans that control storm water runoff and erosion, both during and after construction. The Regional Water Quality Control Board will require a project specific Storm Water Pollution Prevention Plan (SWPPP) to be prepared for each future project that disturbs an area one acre or larger. The SWPPPs will include project specific best management measures that are designed to control drainage and erosion.

New Development-Related Water Quality Impacts: New development under the proposed General Plan would add additional areas of impervious surfaces within the Planning Area, which could introduce constituents into the storm water that are typically associated with urban runoff. These constituents include sediments, petroleum hydrocarbons, pesticides, fertilizers, and heavy metals such as lead, zinc, and copper. These pollutants tend to build up during the dry months of the year. Precipitation during the early portion of the wet season (generally from November to April) washes away most of these pollutants, resulting in high pollutant concentrations in the initial wet weather runoff. This initial runoff is referred to as the "first flush" of storm events. Subsequent periods of rain would result in less concentrated pollutant levels in the runoff.

The amount and type of runoff generated by the various future projects may be greater than under existing conditions, due to increases in impervious surfaces throughout the Planning Area associated with new development. There would be a corresponding increase in urban runoff pollutants and first flush roadway contaminants, as well as an increase in nutrients and other chemicals from landscaped areas. These constituents would result in water quality impacts to onsite and offsite drainage flows to area waterways.

The General Plan Conservation Element includes numerous policies specifically designed to address water quality. Policy COS 3-1 requires protection and enhancement of streams, channels, seasonal and permanent marshland, wetlands, sloughs, riparian habitat, and vernal pools through sound land use planning, community design, and site planning. Policy COS 3-2 requires the city to pursue a wide

range of opportunities to protect water quality and manage local surface water resources. Policy COS 3-5 requires discretionary projects, as well as new flood control and stormwater conveyance projects, to integrate best management practices (BMPs) and natural features to the greatest extent feasible, while ensuring that these features adequately convey and control stormwater to protect human health, safety, and welfare. Policy COS 3-6 requires the use and site design integration of natural features such as bioswales, vegetation, retention ponds, and other measures to remove surface water pollutants prior to discharge into surface waters. Policy COS 3-7 requires the preservation the existing and future floodwater carrying capacity of creeks and channels during creek restoration. Policy COS 3-8 requires new development to include maintained and managed setbacks and buffers along creeks, wetlands, riparian corridors, and adjacent to sensitive habitat. Policy COS 3-10 requires the City to consult with State and Federal agencies during the development review process to help identify wetland and riparian habitat that has candidacy for restoration, conservation, and/or mitigation. Policy COS 3-12 supports non-regulatory programs for protection of streams and riparian habitat, including education, technical assistance, tax incentives, and voluntary efforts to protect riparian resources. Policy COS 3-14 requires monitoring of wastewater discharge into the Laguna de Santa Rosa in order to protect water quality, and to ensure that any wastewater discharged into the Laguna does not exacerbate water quality deterioration.

Conclusion: Compliance with the Clean Water Act and regulations enforced by the Regional Water Quality Control Board would ensure that construction-related impacts to water quality are minimized and future projects comply with all applicable laws and regulations. The City's stormwater system is covered under a NPDES MS4 Phase II permit program, which requires both mitigation of stormwater quantity and stormwater quality. The Santa Rosa Storm Water Low Impact Development Technical Design Manual (LID Manual) provides specific guidance for post-construction stormwater control measures (as required under Action COS-3d). Implementation of the requirements of the NPDES permit, the LID Manual requirements (or any successor documents), as well as the various General Plan policies and action measures discussed above, and listed below would further ensure that future development projects under the General Plan do not result in significant adverse effects to water quality. The implementation of the General Plan would result in a **less than significant** impact relative to this topic.

2016 GENERAL PLAN POLICIES AND ACTIONS THAT MITIGATE POTENTIAL IMPACTS

Policies

Policy COS 3-1: Protect and enhance streams, channels, seasonal and permanent marshland, wetlands, sloughs, riparian habitat, and vernal pools through sound land use planning, community design, and site planning.

Policy COS 3-2: Aggressively pursue a wide range of opportunities to protect water quality and manage local surface water resources.

Policy COS 3-3: Support rehabilitation of any culverted or open existing channelized waterways, as feasible, to remove concrete linings and allow for a connection between the stream channel and the natural water table. Avoid creating additional culverted or open channelized waterways, unless no other alternative is available to protect human health, safety, and welfare.

Policy COS 3-4 Where feasible, support restoration of any existing culverted or channelized waterways to a more natural condition. Restoration efforts should provide for naturalized hydraulic functioning. Restoration should also promote the growth of riparian vegetation to effectively stabilize banks, screen pollutants from runoff entering the channel, enhance fisheries, and provide other opportunities for natural habitat restoration.

Policy COS 3-5: Require discretionary projects, as well as new flood control and stormwater conveyance projects, to integrate best management practices (BMPs) and natural features to the greatest extent feasible, while ensuring that these features adequately convey and control stormwater to protect human health, safety, and welfare. New flood control projects should utilize the natural benefits of slowing and spreading surface water runoff through natural features in order to promote groundwater infiltration, natural removal of contaminants, and enhancing riparian habitat health.

Policy COS 3-6: Require the use and site design integration of natural features such as bioswales, vegetation, retention ponds, and other measures to remove surface water pollutants prior to discharge into surface waters.

Policy COS 3-7: Preserve the existing and future floodwater carrying capacity of creeks and channels during creek restoration.

Policy COS 3-8: Require new development to include maintained and managed setbacks and buffers along creeks, wetlands, riparian corridors, and adjacent to sensitive habitat.

Policy COS 3-9: New development adjacent to creeks and streams should include opportunities for beneficial uses, such as flood control, ecological restoration activities, public access trails, and walkways.

Policy COS 3-10: As appropriate, consult with State and Federal agencies during the development review process to help identify wetland and riparian habitat that has candidacy for restoration, conservation, and/or mitigation. Focus restoration and/or conservation efforts on areas that would maximize multiple beneficial uses for such habitat.

Policy COS 3-11: Where feasible, for major development or substantial public works projects, encourage and support multipurpose detention basins that provide water quality protection, storm water detention, open space amenities, and recreational amenities.

Policy COS 3-12: Support non-regulatory programs for protection of streams and riparian habitat, including education, technical assistance, tax incentives, and voluntary efforts to protect riparian resources.

Policy COS 3-13: Require setbacks from channelized and culverted creeks that could be candidates for future daylighting and restoration improvements.

Policy COS 3-14: Monitor wastewater discharge into the Laguna de Santa Rosa in order to protect water quality. Ensure that any wastewater discharged into the Laguna does not exacerbate water quality deterioration.

Actions

Action COS-3a: Continue to implement the Storm Water mitigation requirements in the Sebastopol Municipal Code in order to protect and enhance the water quality of watercourses and water bodies by reducing pollutants in storm water discharges to the maximum extent practicable, by prohibiting non-storm water discharges to the storm drain system, and by improving water quality in "first flush" storm water flows.

Action COS-3b: Continue to implement the Wetlands District protection requirements in the Sebastopol Municipal Code in order to preserve and protect environmentally sensitive waterways and/or wetland areas. Review all development applications for consistency with the requirements of this Chapter, including use restrictions and development criteria established to protect surface water quality.

Action COS-3c: Continue to implement Creek Setback requirements of the Sebastopol Municipal Code in order to protect water quality, riparian habitat, and bank stability for all projects adjacent to creeks within the City.

Action COS-3d: Continue to require new development projects to construct and implement all applicable storm water retention and water quality requirement standards and improvements contained in the Santa Rosa LID Manual, or equivalent document that implements the City's storm water permit.

Action COS-3e: During updates to the City's Storm Drain System Utility Master Plan, identify opportunities to restore any channelized and culverted drainage systems to a naturalized condition, without compromising the conveyance effectiveness of the system, and identify standards and opportunities to construct new storm water drainage infrastructure utilizing natural drainage features and effective best management practices to remove pollutants from storm water runoff, while maintaining a system that effectively protects residents and businesses from flooding.

Action COS-3f: Utilize existing regulations and procedures, including but not limited to, the Zoning Ordinance, the design review process, and the environmental review process, in order to conserve wetlands and riparian habitat within the city limits and the Planning Area.

Action COS-3g: Coordinate with the California Department of Fish and Wildlife, Sonoma County, and local watershed protection groups to identify potentially impacted aquatic habitat within Sebastopol's Planning Area and to develop riparian management guidelines to be implemented by development, recreation, and other projects adjacent to creeks, streams, and other waterways. Efforts should be coordinated with the Laguna Wetlands Preserve Restoration and Management Plan.

Action COS-3h: Encourage volunteer-based programs that organize community creek restoration and/or clean-up events and provide public education regarding the benefits of city and regional water resources.

Action COS-3i: Provide a conservation page (or similar page) on the City's website that provides links to resource agencies (i.e., CDFW, USFWS, USACE, RWQCB, etc.) and provides information regarding local and regional conservation and environmental groups and programs, including the Atascadero Watershed Council and the Laguna de Santa Rosa Foundation, to the extent that the City has readily available information. Information that identifies creeks and tributaries affecting the Sebastopol area and the Laguna de Santa Rosa watershed should also be included.

Action COS-3j: Continue to identify which stormwater and drainage facilities are in need of repair and address these needs through the CIP process.

Action COS-3k: As part of the CIP process, identify channelized and buried creeks that may be suitable for naturalization and rehabilitation.

Action COS-3l: Preclude development that would adversely affect the natural vegetation, wildlife habitat, or rare or endangered species in designated wetland and riparian areas.

Action COS-3m: Periodically provide the Planning Commission and City Council with information regarding actions of the North Coast Regional Water Quality Control Board, the City of Santa Rosa, the Sonoma County Water Agency and other agencies within the Referral Area related to water quality protection efforts and activities.

Action COS-3n: Coordinate and collaborate with outside agencies, including but not limited to the North Coast Regional Water Quality Control Board, the City of Santa Rosa, and the Sonoma County Water Agency to implement regional water quality protection and improvement programs.

Action COS-3o: Develop maintenance guidelines for creeks and wetlands areas to reduce flooding, sedimentation and erosion while maintaining and/or enhancing the riparian vegetation and wildlife.

Action COS-3p: Label each stormwater inlet in the City to identify receiving waters. Signs should indicate the receiving watercourse and state that no dumping is permitted.

Impact 3.9.2: General Plan implementation could contribute to the depletion of groundwater supplies or interfere substantially with groundwater recharge (Less than Significant)

The Santa Rosa Plain is a subbasin of the Santa Rosa Valley Basin. The Santa Rosa Plain drains northwest toward the Russian River, and is thus part of the North Coast Hydrologic Region. The 167,410-acre Santa Rosa Plain watershed area includes all of the Mark West Creek watershed. The Mark West Creek watershed includes three drainage basins: Mark West Creek, Santa Rosa Creek, and Laguna de Santa Rosa.

The Santa Rosa Plain subbasin contains four principal water-bearing aquifer units (aquifers): Glen Ellen Formation, Wilson Grove Formation, Petaluma Formation, and Sonoma Volcanics. Each of the units has distinct aquifer properties that control how groundwater moves through them, such as zones of sands and gravels, or broken volcanic zones, that are porous and permeable enough to hold and convey substantial water volumes.

Rainfall is the main source of water inflow and groundwater recharge in the Santa Rosa Plain subbasin. Average annual rainfall is approximately 40 inches, amounting to more than 560,000 acrefeet per year distributed across the entire 167,400 acre subbasin. Precipitation is greatest (42 to 57 inches per year) in the Mayacamas and Sonoma Mountains on the east side of the subbasin, and lowest (averaging 30 inches per year) in the central lowlands. Mark West Creek, Santa Rosa Creek and Matanzas Creek are the major streams that drain the subbasin, flowing generally from east to west. All these streams originate in the Mayacamas Mountains and have spring-fed flows, so they flow year-round (perennially) through much of the higher elevations. The Laguna de Santa Rosa originates in the southern portion of the basin, and is perennial along most of its course. Groundwater generally flows from both the east and west sides of the basin towards the Laguna de Santa Rosa, along the western edge of the Santa Rosa Plain. As groundwater moves from east to

west, dissolved salt and mineral concentrations tend to increase due to interaction with the native rock and human inputs, including septic tank discharges and agricultural irrigation. Vertical groundwater movement and recharge in the central subbasin appears limited by low permeability clay in the Glen Ellen and Petaluma Formations. The low permeability clay deposits also confine deeper aquifers.

Groundwater exits the subbasin through wells, discharges to the Laguna de Santa Rosa, or as subsurface flow to some adjoining basins. In addition, surface outflows include evapotranspiration and streams, mostly as discharges from Mark West Creek to the Russian River drainage, estimated at approximately 192,000 acre-feet per year. Outflows also include wastewater exports to The Geysers, a geothermal power generation complex in Northern Sonoma County.

The USGS has developed a state-of-the-art computer model for the Santa Rosa Plain Watershed area that couples surface water with groundwater flows. The model, called GSFLOW, is a tool for simulating different future water supply scenarios, as land uses and climate conditions change, to improve water supply planning and management. The model's watershed component simulates rainfall and surface flow used by vegetation, and water moving through the soil zone into groundwater. The model's groundwater component simulates the flow of groundwater under the soil zone and its connection to surface water flow in streams. In combination, the two model components estimate the overall surface water and groundwater water budget for the subbasin, and suggest how climate changes may affect surface water and groundwater flows as well as future water uses. The model simulated an average groundwater budget for the subbasin from 1976 to 2010. Like a household budget, a groundwater budget shows the amounts and sources of groundwater coming into the area (known as inflow or recharge) and leaving the area (known as outflow or discharge). Most importantly, the budget shows the balance between inflows and outflows. The model results indicate the following for the 1976 to 2010 study period:

- Rainfall percolation and streambed infiltration together recharged an estimated 73,000 acre-feet per year of groundwater, accounting for over 90 percent of total groundwater inflow on average.

- Overall, streams are a net source of groundwater recharge. That is, over the entire watershed, more surface water was lost to groundwater (known as a losing stream reach) than was gained by groundwater flowing into streams (known as a gaining stream).

- Groundwater pumping increased from a long-term average of 36,000 acre-feet per year (1976-2010) to an estimated 42,000 acre-feet per year between 2004 and 2010. The increase is mainly attributed to increases in rural pumping.

- From 1976 to 2010, 120,000 acre-feet were lost from overall groundwater storage, or an average of roughly 3,300 acre-feet per year.

Thus, increased pumping has reduced the total amount of groundwater in storage across the subbasin, and groundwater levels have declined slightly — although the estimated storage loss is only a small percentage of both total groundwater storage and the long-term average recharge rate.

The final report from the USGS Groundwater Study for the Santa Rosa Plain was released to the public in May 2014. The Santa Rosa Plain Groundwater Management Plan Basin Advisory Panel (BAP) completed work on a Groundwater Management Plan, which was adopted formally by the County Board of Supervisors on October 7, 2014. The City of Sebastopol, along with other Cities in the basin, entered into a Cooperative Funding Agreement and Memorandum of Understanding in December, 2014, to formally adopt the Groundwater Management Plan for the basin.

Sebastopol's sole source of drinking water has been groundwater since the late 1920's. Sebastopol owns, operates, and maintains Sebastopol Municipal Water System, including the water distribution system network. Between 2006 and 2011, Sebastopol's annual groundwater production varied from 1,037 to 1,264 afy, and averaged 1,145 afy.

Recent water conservation efforts by the City of Sebastopol in response to prolonged dry weather conditions reduced water consumption and associated pumping from all wells from 333 million gallons in 2014 to 296 million gallons in 2015, a decrease of roughly 21%. This is the lowest total water production in the Sebastopol system since 1983.

The Sebastopol General Plan Community Services and Facilities Element and the Conservation and Open Space Element include policies and action items, which include numerous requirements that would increase water conservation efforts and decrease groundwater pumping levels. These include Policy CSF 3-1, which requires projects to demonstrate proof of adequate water supply and that potential cumulative impacts to water users and the environment will be addressed. Policy CSF 3-2 requires continued implementation of a comprehensive water strategy that balances the need to supply water to all users served by the City with potable water use reduction measures. Policy CSF 3-4 ensures the water system and supply is adequate to match the rate of growth and future development. Policy CSF 3-10 calls for the use of recycled water for landscape irrigation within City roadways, parks, and facilities to the greatest extent feasible. Policy COS 5-6 identifies the implementation of water conservation measures as a key strategy in sustainably managing local groundwater supplies. Policy COS 5-2 calls for Sebastopol to operate the City's well system in such a manner as to not exceed the sustainable yield of the local groundwater aquifer.

Additionally, subsequent development projects under the General Plan, such as residential, commercial, industrial, and roadway projects would result in new impervious surfaces and could reduce rainwater infiltration and groundwater recharge. Infiltration rates vary depending on the overlying soil types. In general, sandy soils have higher infiltration rates and can contribute to significant amounts of ground water recharge; clay soils tend to have lower percolation potentials; and impervious surfaces such as pavement significantly reduce infiltration capacity and increase surface water runoff. The amount of new pavement and the extent to which it affects infiltration depends on the site-specific soil type. Projects located in urban areas would have less of an impact than projects converting open lands and spaces. The City must evaluate individual projects as they are proposed to ensure that they would not result in a significant interference with recharge. In addition, the City is participating in the regional voluntary Santa Rosa Plain Groundwater Management Plan to better manage groundwater resources now and into the future.

The Sebastopol General Plan Community Services and Facilities Element and the Conservation and Open Space Element include policies and action items, which include numerous requirements that would reduce impermeable surfaces and increase groundwater recharge opportunities throughout the city. Policy COS 5-3 encourages new groundwater recharge opportunities and protects existing groundwater recharge areas throughout the Sebastopol Planning Area. Policy COS 5-4 promotes the use of permeable surface materials and provides for ample areas of open space and naturalized land in order to decrease surface runoff and promote groundwater recharge. Policy COS 5-5 ensures the City seeks opportunities to expand the groundwater recharge capacity of City-owned parcels throughout Sebastopol, and Action CSF-3j calls for the preparation of a study that accurately establishes the groundwater recharge area for Sebastopol.

Implementation of the following General Plan policies and action measures relating to water conservation and groundwater recharge, in addition to the City's participation in the regional Santa Rosa Plain Groundwater Management Plan, would ensure that the General Plan would have a **less than significant** impact relative to this topic.

2016 GENERAL PLAN POLICIES AND ACTIONS THAT MITIGATE POTENTIAL IMPACTS

Policies

Policy CSF 3-1: Prior to the approval of major new development, Specific Plans, major infrastructure improvements, or other projects that would result in increased demand for public water conveyance and treatment, such projects must demonstrate proof of adequate water supply (e.g., that existing services are adequate to accommodate the increased demand, or improvements to the capacity of the system to meet increased demand will be made prior to project implementation) and that potential cumulative impacts to water users and the environment will be addressed.

Policy CSF 3-2: Continue to implement a comprehensive water strategy that balances the need to supply water to all users served by the City with potable water use reduction measures.

Policy CSF 3-3: Routinely assess the City's ability to meet the demand for potable water by periodically updating the Water Master Plan.

Policy CSF 3-4: Ensure the water system and supply is adequate to match the rate of growth and future development.

Policy CSF 3-5: Priority shall be given to serving existing water uses over new water uses.

Policy CSF 3-6: Maintain and ensure adequate emergency water supplies.

Policy CSF 3-7: Continue to implement the City's water conservation requirements established in the Municipal Code.

Policy CSF 3-8: Ensure safe drinking water standards are met throughout the community.

Policy CSF 3-9: The Public Works Department shall continue to test potable water on schedules dictated by the State and the U.S. Environmental Protection Agency (EPA) for chemical residues resulting from pesticides and groundwater contamination.

Policy CSF 3-10: If a supply is available, use recycled water for landscape irrigation within City roadways, parks, and facilities to the greatest extent feasible.

Policy COS 5-1: Groundwater should be managed as part of a broader integrated approach that includes surface water, conservation, water quality, reuse, environmental stewardship, and other water management strategies.

Policy COS 5-2: Operate the City's well system in such a manner as to not exceed the sustainable yield of the local groundwater aquifer.

Policy COS 5-3: Encourage new groundwater recharge opportunities and protect existing groundwater recharge areas throughout the Sebastopol Planning Area.

Policy COS 5-4: Promote the use of permeable surface materials and provide for ample areas of open space and naturalized land in order to decrease surface runoff and promote groundwater recharge.

Policy COS 5-5: Seek opportunities to expand the groundwater recharge capacity of City-owned parcels throughout Sebastopol.

Policy COS 5-6: Implement water conservation measures as a key strategy in sustainably managing local groundwater supplies.

Policy COS 5-7: Implement greenhouse gas reduction measures and participate in regional efforts to study the effects of climate change on precipitation levels as a key strategy in sustainably managing local groundwater supplies.

Policy COS 5-8: Continue to encourage and support federal, state, and local research on and monitoring of local groundwater conditions, aquifer recharge, watersheds and streams where needed to assess groundwater quantity and quality.

Policy COS 5-9: Protect the water quality obtained from City wells.

Policy COS 5-10: Reduce agricultural and pharmaceutical contamination of potable water supplies in the local aquifer.

Actions

Action CSF-3a: Work with the County Permit and Resource Management Department, the Public Health Officer and Agricultural Commissioner to identify the impacts of agricultural operations and the use of herbicides, pesticides, and fertilizers on the City's domestic water supply if issues are identified

Action CSF-3b: Continue to regularly monitor Sebastopol's potable water supply for trace chemicals and other potential contaminants. Utilize updated industry-wide standards for evaluating potable water quality. Alert the County Public Health Officer, City Council and the public if water quality hazards are identified.

Action CSF-3c: Coordinate water supply and conservation planning efforts with the Santa Rosa Plain Groundwater Management Plan to ensure sustainable and reliable groundwater use practices.

Action CSF-3d: Regularly review and update the City's water conservation strategy to be consistent with current best management practices for water conservation, considering measures recommended by the State Department of Water Resources, and the California Urban Water Conservation Council.

Action CSF-3e: Explore opportunities to develop mechanisms and infrastructure to deliver recycled water to city water users from the Santa Rosa Subregional Treatment and Reclamation System.

Action CSF-3f: Develop a public outreach and incentive program to expand and promote the use of recycled water if delivery infrastructure becomes available.

Action CSF-3g: Update the City's water waste and conservation strategy established in Chapter 13.06 of the Municipal Code to be consistent with the most current BMPs for water conservation.

Action CSF-3h: Utilize standards for minimum water volume and flow established by Title 24 of the California Building Standards Code.

Action CSF-3i: Maintain and update the City's Capital Improvement Plan (CIP) to clearly identify and prioritize water delivery improvements.

Action CSF-3j: Commission the preparation of a study that accurately establishes the groundwater recharge area for Sebastopol.

Action COS-5a: Participate in regional efforts with the Sonoma County Water Agency and other local agencies to develop and implement a Groundwater Sustainability Plan for the Santa Rosa Plain Basin that meets the requirements set forth in the 2014 Sustainable Groundwater Management Act (SGMA).

Action COS-5b: Coordinate with the Santa Rosa Plain Basin Advisory Panel to help implement the goals and objectives identified in the Santa Rosa Plain Watershed Groundwater Management Plan.

Action COS-5c: Continue to monitor City wells to track local groundwater levels and monitor water quality. Share data with state and regional agencies, including the California Department of Water Resources (DWR), SCWA, and Sonoma County, and the public to ensure that regional groundwater sustainability planning efforts include the most complete and comprehensive data available.

Action COS-5d: Continue to implement measures to reduce known contaminants in City water supplies through the installation and use of treatment systems at City wells, or by other methods recommended by qualified professionals contracted by the City.

Action COS-5e: Investigate opportunities to utilize recycled water supplies to assist with groundwater recharge.

Action COS-5f: Explore the feasibility of using GIS technology, aerial photographs, lidar, and other data sources to track and monitor the volume (area) of impervious surfaces within the City. Utilize the data to track trends and rates of increase of impervious surfaces in Sebastopol. Consider establishing targets and incentives for decreases in areas of impervious surfaces.

Action COS-5g: Continue to initiate and support a range of educational and public outreach programs to inform residents, agriculture, businesses and other groundwater users of best management practices in the areas of efficient water use, water conservation, and increasing groundwater recharge. Continue to make these resources available to the public through the City's website.

Action COS-5h: In cooperation with Sonoma County Water Agency (SCWA), DWR, and other public agencies and well owners, support the establishment and maintenance of a system of voluntary monitoring of wells throughout the region, utilizing public water system wells and private wells where available. Encourage local private well owners to participate in voluntary monitoring programs.

Action COS-5i: In cooperation with SCWA, DWR and other public agencies, support the ongoing maintenance of a groundwater database from available application data, well tests, monitoring results, study reports and other sources. Encourage SCWA and Sonoma County to use the data, along with other available information, to continue to refine the mapping of groundwater availability classifications and develop refined strategies for groundwater conservation and management.

Action COS-5j: When considering public projects on City-owned land that may increase the volume of impervious surfaces on the site, seek opportunities to implement alternate approaches, such as the use of pervious paving materials, expanded areas of naturalized landscape, and other measures deemed feasible in order to increase the groundwater recharge potential of the site.

Action COS-5k: Continue to implement and strengthen programs aimed at reducing the illegal and harmful disposal of pharmaceutical products into the wastewater system. Programs may include buy-back programs, safe drop-off locations, and other available measures.

Impact 3.9-3: General Plan implementation could alter the existing drainage pattern in a manner which would result in substantial erosion, siltation, flooding, or polluted runoff (Less than Significant)

Individual future projects developed after adoption of the General Plan would create new impervious surfaces. This would result in an incremental reduction in the amount of natural soil surfaces available for infiltration of rainfall and runoff, potentially generating additional runoff during storm events. In addition, the increase in impervious surfaces, along with the increase in surface water runoff, could increase the non-point source discharge of pollutants. Anticipated runoff contaminants include sediment, pesticides, oil and grease, nutrients, metals, bacteria, and trash. Contributions of these contaminants to stormwater and non-stormwater runoff would degrade the quality of receiving waters. During the dry season, vehicles and other urban activities release contaminants onto the impervious surfaces, where they can accumulate until the first storm event. During this initial storm event, or first flush, the concentrated pollutants would be transported via runoff to stormwater drainage systems. Contaminated runoff waters could flow into the stormwater drainage systems that discharge into rivers, agricultural ditches, and channels and ultimately could degrade the water quality of any of these water bodies.

Additionally, individual future projects developed after adoption of the General Plan could potentially alter surface drainage patterns as a result of directly altering flow patterns, or placing structures in a floodway, all of which could yield increased amounts of stormwater runoff. The construction activities associated with future projects, such as commercial, residential and industrial

developments, as well as roadway, and other infrastructure projects that convert permeable surfaces or install permanent structures would require stormwater drainage management measures to avoid flooding impacts. The existing storm drainage network in the City may not have sufficient capacity to convey the additional runoff from individual future projects. If the storm drainage network is not appropriately designed it could be overwhelmed during a large storm event and result in flooding.

Based upon the general planning nature of the General Plan, development of detailed, site-specific information on this impact at the program level is not feasible. As previously discussed, each future development project must include detailed project specific floodplain and drainage studies that assess the drainage characteristics and flood risks so that an appropriate storm drainage plan can be prepared to control storm water runoff, both during and after construction. The drainage plan will ultimately include project specific best management measures that are designed to allow for natural recharge and infiltration of stormwater. Construction of storm drainage improvements would occur as part of an overall development project and is considered in the environmental impacts associated with project construction and implementation as addressed throughout this EIR.

The Sebastopol General Plan Community Services and Facilities Element and Conservation and Open Space Element include policies and action items, which include numerous requirements that would reduce the potential for General Plan implementation to result in increased flooding or result in water quality impacts associated with increased runoff, siltation or erosion, and polluted runoff. Policy CSF 1-4 provides for adequate public infrastructure including storm drainage to meet the needs of existing and future development. Policy CSF 4-4 ensures adequate funding is available for needed improvements to the wastewater conveyance infrastructure, and to reduce stormwater infiltration to the greatest extent feasible. Policy COS 3-5 requires discretionary projects, as well as new flood control and stormwater conveyance projects, to integrate best management practices (BMPs) and natural features to the greatest extent feasible, while ensuring that these features adequately convey and control stormwater to protect human health, safety, and welfare. Policy COS 3-6 requires the use and design integration of natural features such as bioswales, vegetation, retention ponds, and other measures to remove surface water pollutants prior to discharge into surface waters. Policy COS 3-7 preserves the existing and future floodwater carrying capacity of creeks and channels during creek restoration. Policy COS 3-8 requires new development to include maintained and managed setbacks and buffers along creeks, wetlands, riparian corridors.

The City of Sebastopol has developed the General Plan to include the policies and action items identified above and listed below, which include numerous requirements that would reduce the potential for General Plan implementation to result in increased flooding or result in water quality impacts associated with increased runoff, siltation or erosion. The implementation of these policies and action items would ensure that implementation of the General Plan would have a **less than significant** impact from these issues.

2016 GENERAL PLAN POLICIES AND ACTIONS THAT MITIGATE POTENTIAL IMPACTS

Policies

Policy CSF 1-4: Provide adequate public infrastructure (i.e., street, sewer, water, and storm drain) to meet the needs of existing and future development.

Policy CSF 1-5: Require development, infrastructure, and long-term planning projects to be consistent with all applicable City infrastructure plans, including the Water Master Plan, the Sanitary Sewer System Utility Master Plan, Stormwater Management Plan, and the Capital Improvement Program.

Policy CSF 4-4: Ensure adequate funding is available for needed improvements to the wastewater conveyance infrastructure, and to reduce stormwater infiltration to the greatest extent feasible.

Policy COS 3-4 Where feasible, support restoration of any existing culverted or channelized waterways to a more natural condition. Restoration efforts should provide for naturalized hydraulic functioning. Restoration should also promote the growth of riparian vegetation to effectively stabilize banks, screen pollutants from runoff entering the channel, enhance fisheries, and provide other opportunities for natural habitat restoration.

Policy COS 3-5: Require discretionary projects, as well as new flood control and stormwater conveyance projects, to integrate best management practices (BMPs) and natural features to the greatest extent feasible, while ensuring that these features adequately convey and control stormwater to protect human health, safety, and welfare. New flood control projects should utilize the natural benefits of slowing and spreading surface water runoff through natural features in order to promote groundwater infiltration, natural removal of contaminants, and enhancing riparian habitat health.

Policy COS 3-6: Require the use and site design integration of natural features such as bioswales, vegetation, retention ponds, and other measures to remove surface water pollutants prior to discharge into surface waters.

Policy COS 3-7: Preserve the existing and future floodwater carrying capacity of creeks and channels during creek restoration.

Policy COS 3-8: Require new development to include maintained and managed setbacks and buffers along creeks, wetlands, riparian corridors, and adjacent to sensitive habitat.

Policy COS 3-11: Where feasible, for major development or substantial public works projects, encourage and support multipurpose detention basins that provide water quality protection, storm water detention, open space amenities, and recreational amenities.

Policy COS 5-4: Promote the use of permeable surface materials and provide for ample areas of open space and naturalized land in order to decrease surface runoff and promote groundwater recharge.

Policy COS 9-14: Control soil erosion and retain topsoil onsite to protect soil resources, maintain water quality, and reduce potential flooding.

Actions

Action COS-3a: Continue to implement the Storm Water mitigation requirements in the Sebastopol Municipal Code in order to protect and enhance the water quality of watercourses and water bodies by reducing pollutants in storm water discharges to the maximum extent practicable, by prohibiting non-storm water discharges to the storm drain system, and by improving water quality in "first flush" storm water flows.

Action COS-3d: Continue to require new development projects to construct and implement all applicable storm water retention and water quality requirement standards and improvements contained in the Santa Rosa LID Manual, or equivalent document that implements the City's storm water permit.

Action COS-3e: During updates to the City's Storm Drain System Utility Master Plan, identify opportunities to restore any channelized and culverted drainage systems to a naturalized condition, without compromising the conveyance effectiveness of the system, and identify standards and opportunities to construct new storm water drainage infrastructure utilizing natural drainage features and effective best management practices to remove pollutants from storm water runoff, while maintaining a system that effectively protects residents and businesses from flooding.

Action COS-3f: Utilize existing regulations and procedures, including but not limited to, the Zoning Ordinance, the design review process, and the environmental review process, in order to conserve wetlands and riparian habitat within the city limits and the Planning Area.

Action COS-3j: Continue to identify which stormwater and drainage facilities are in need of repair and address these needs through the CIP process.

Action COS-3o: Develop maintenance guidelines for creeks and wetlands areas to reduce flooding, sedimentation and erosion while maintaining and/or enhancing the riparian vegetation and wildlife.

Action COS-3p: Label each stormwater inlet in the City to identify receiving waters. Signs should indicate the receiving watercourse and state that no dumping is permitted.

Action COS-9n: Continue to require grading permits for new construction and maintain rigorous storm water mitigation requirements.

Action CSF-1c: Periodically review and update the various City master plans for the provision and/or extension of public services to serve existing and future development. These plans include, but are not limited to, the Water Master Plan, the Sanitary Sewer System Utility Master Plan, the Stormwater Management Plan, and the Capital Improvement Program.

Impact 3.9-4 General Plan implementation could otherwise substantially degrade water quality (Less than Significant)

Water Quality Impacts from Discharges to 303(d) Listed Water Bodies: Section 303(d) of the federal Clean Water Act requires States to identify waters that do not meet water quality standards or objectives and thus, are considered "impaired." Once listed, Section 303(d) mandates prioritization and development of a Total Maximum Daily Load (TMDL). The TMDL is a tool that establishes the allowable loadings or other quantifiable parameters for a waterbody and thereby the basis for the States to establish water quality-based controls. The purpose of TMDLs is to ensure that beneficial uses are restored and that water quality objectives are achieved.

The City of Sebastopol has one water body listed on the 2010 Section 303(d) list of impaired water bodies. The Laguna de Santa Rosa is listed as a Category 5 segment, which means it is a water segment where standards are not met and a TMDL is required, but not yet completed, for at least one of the pollutants being listed for this segment. The pollutants listed for the segment include: indicator bacteria (2008), mercury (2006), nitrogen (1992), dissolved oxygen (1990), phosphorous (1992), sedimentation/siltation (1998), and temperature (2002).

The TMDL was scheduled for completion on each of these pollutants in 2012, except for mercury, which is scheduled for 2019 (Department of Water Resources, 2010). According to the North Coast Regional Water Quality Control Board's website, (accessed April 12, 2016) TMDL efforts due for completion in 2012 remain ongoing. Regional Water Board staff are currently developing TMDLs for nitrogen, phosphorus, dissolved oxygen, temperature, and sediment in the Laguna de Santa Rosa watershed to address continuing water quality impairments. These TMDLs will apply to the entire Laguna de Santa Rosa watershed, including Mark West Creek, Santa Rosa Creek, and all the tributaries. The indicator bacteria listings in the Laguna de Santa Rosa and Santa Rosa Creek are being addressed as part of the larger Russian River Pathogen TMDL development effort. A TMDL or other program to address the mercury listing for the Laguna de Santa Rosa is not yet scheduled (North Coast RWQCB).

The General Plan Conservation and Open Space Element includes numerous policies specifically designed to address water quality within receiving waters. Policy COS 3-5 requires discretionary projects, as well as new flood control and stormwater conveyance projects, to integrate best management practices (BMPs) and natural features to the greatest extent feasible, while ensuring that these features adequately convey and control stormwater to protect human health, safety, and welfare. New flood control projects should utilize the natural benefits of slowing and spreading surface water runoff through natural features in order to promote groundwater infiltration, natural removal of contaminants, and enhancing riparian habitat health. Policy COS 3-6 requires the use and site design integration of natural features such as bioswales, vegetation, retention ponds, and other measures to remove surface water pollutants prior to discharge into surface waters. Policy COS 3-8 requires new development to include maintained and managed setbacks and buffers along creeks, wetlands, riparian corridors, and adjacent to sensitive habitat. Policy COS 3-12 supports non-regulatory programs for protection of streams and riparian habitat, including education, technical assistance, tax incentives, and voluntary efforts to protect riparian resources. Policy COS 3-14 requires the monitoring of wastewater discharge into the Laguna de Santa Rosa in order to protect water quality, and ensures that any wastewater discharged into the Laguna does not exacerbate water quality deterioration.

Based upon the general planning nature of the General Plan, development of detailed, site-specific information on this impact at this planning level is not feasible. However, all future development projects are required to prepare a detailed project specific erosion control plan and incorporate post-construction water quality BMPs into grading plans, in compliance with City regulations and the Santa Rosa LID Manual. Projects that would result in the disturbance of one or more acres are required to prepare a Storm Water Pollution Prevention Plan (SWPPP) that will control storm water runoff and erosion, both during and after construction. Implementation of the General Plan policies

and action measures would ensure that the General Plan would have a **less than significant** impact from these issues.

2016 GENERAL PLAN POLICIES AND ACTIONS THAT MITIGATE POTENTIAL IMPACTS

Policies

Policy COS 3-1: Protect and enhance streams, channels, seasonal and permanent marshland, wetlands, sloughs, riparian habitat, and vernal pools through sound land use planning, community design, and site planning.

Policy COS 3-2: Aggressively pursue a wide range of opportunities to protect water quality and manage local surface water resources.

Policy COS 3-4 Where feasible, support restoration of any existing culverted or channelized waterways to a more natural condition. Restoration efforts should provide for naturalized hydraulic functioning. Restoration should also promote the growth of riparian vegetation to effectively stabilize banks, screen pollutants from runoff entering the channel, enhance fisheries, and provide other opportunities for natural habitat restoration.

Policy COS 3-5: Require discretionary projects, as well as new flood control and stormwater conveyance projects, to integrate best management practices (BMPs) and natural features to the greatest extent feasible, while ensuring that these features adequately convey and control stormwater to protect human health, safety, and welfare. New flood control projects should utilize the natural benefits of slowing and spreading surface water runoff through natural features in order to promote groundwater infiltration, natural removal of contaminants, and enhancing riparian habitat health.

Policy COS 3-6: Require the use and site design integration of natural features such as bioswales, vegetation, retention ponds, and other measures to remove surface water pollutants prior to discharge into surface waters.

Policy COS 3-8: Require new development to include maintained and managed setbacks and buffers along creeks, wetlands, riparian corridors, and adjacent to sensitive habitat.

Policy COS 3-10: As appropriate, consult with State and Federal agencies during the development review process to help identify wetland and riparian habitat that has candidacy for restoration, conservation, and/or mitigation. Focus restoration and/or conservation efforts on areas that would maximize multiple beneficial uses for such habitat.

Policy COS 3-11: Where feasible, for major development or substantial public works projects, encourage and support multipurpose detention basins that provide water quality protection, storm water detention, open space amenities, and recreational amenities.

Policy COS 3-12: Support non-regulatory programs for protection of streams and riparian habitat, including education, technical assistance, tax incentives, and voluntary efforts to protect riparian resources.

Policy COS 3-14: Monitor wastewater discharge into the Laguna de Santa Rosa in order to protect water quality. Ensure that any wastewater discharged into the Laguna does not exacerbate water quality deterioration.

Actions

Action COS-3a: Continue to implement the Storm Water mitigation requirements in the Sebastopol Municipal Code in order to protect and enhance the water quality of watercourses and water bodies by reducing pollutants in storm water discharges to the maximum extent practicable, by prohibiting non-storm water discharges to the storm drain system, and by improving water quality in "first flush" storm water flows.

Action COS-3b: Continue to implement the Wetlands District protection requirements in the Sebastopol Municipal Code in order to preserve and protect environmentally sensitive waterways and/or wetland areas. Review all development applications for consistency with the requirements of this Chapter, including use restrictions and development criteria established to protect surface water quality.

Action COS-3c: Continue to implement Creek Setback requirements of the Sebastopol Municipal Code in order to protect water quality, riparian habitat, and bank stability for all projects adjacent to creeks within the City.

Action COS-3d: Continue to require new development projects to construct and implement all applicable storm water retention and water quality requirement standards and improvements contained in the Santa Rosa LID Manual, or equivalent document that implements the City's storm water permit.

Action COS-3e: During updates to the City's Storm Drain System Utility Master Plan, identify opportunities to restore any channelized and culverted drainage systems to a naturalized condition, without compromising the conveyance effectiveness of the system, and identify standards and opportunities to construct new storm water drainage infrastructure utilizing natural drainage features and effective best management practices to remove pollutants from storm water runoff, while maintaining a system that effectively protects residents and businesses from flooding.

Action COS-3f: Utilize existing regulations and procedures, including but not limited to, the Zoning Ordinance, the design review process, and the environmental review process, in order to conserve wetlands and riparian habitat within the city limits and the Planning Area.

Action COS-3g: Coordinate with the California Department of Fish and Wildlife, Sonoma County, and local watershed protection groups to identify potentially impacted aquatic habitat within Sebastopol's Planning Area and to develop riparian management guidelines to be implemented by development, recreation, and other projects adjacent to creeks, streams, and other waterways. Efforts should be coordinated with the Laguna Wetlands Preserve Restoration and Management Plan.

Action COS-3h: Encourage volunteer-based programs that organize community creek restoration and/or clean-up events and provide public education regarding the benefits of city and regional water resources.

Action COS-3i: Provide a conservation page (or similar page) on the City's website that provides links to resource agencies (i.e., CDFW, USFWS, USACE, RWQCB, etc.) and provides information regarding local and regional conservation and environmental groups and programs, including the

Atascadero Watershed Council and the Laguna de Santa Rosa Foundation, to the extent that the City has readily available information. Information that identifies creeks and tributaries affecting the Sebastopol area and the Laguna de Santa Rosa watershed should also be included.

Action COS-3j: Continue to identify which stormwater and drainage facilities are in need of repair and address these needs through the CIP process.

Action COS-3l: Preclude development that would adversely affect the natural vegetation, wildlife habitat, or rare or endangered species in designated wetland and riparian areas.

Action COS-3m: Periodically provide the Planning Commission and City Council with information regarding actions of the North Coast Regional Water Quality Control Board, the City of Santa Rosa, the Sonoma County Water Agency and other agencies within the Referral Area related to water quality protection efforts and activities.

Action COS-3n: Coordinate and collaborate with outside agencies, including but not limited to the North Coast Regional Water Quality Control Board, the City of Santa Rosa, and the Sonoma County Water Agency to implement regional water quality protection and improvement programs.

Action COS-3o: Develop maintenance guidelines for creeks and wetlands areas to reduce flooding, sedimentation and erosion while maintaining and/or enhancing the riparian vegetation and wildlife.

Action COS-3p: Label each stormwater inlet in the City to identify receiving waters. Signs should indicate the receiving watercourse and state that no dumping is permitted.

Impact 3.9-5 General Plan implementation could place housing and structures within a 100-year flood hazard area as mapped on a Federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map, or impede or redirect flood flows (Significant and Unavoidable)

The City of Sebastopol is subject to flooding problems along the natural creeks and drainages that traverse the area. The Laguna de Santa Rosa is the most prominent drainages in Sebastopol that is subject to flooding. Small areas in the western-most portion of the city are also subject to flooding from Atascadero Creek. The 100-year floodplain extends onto many properties that are located immediately adjacent to these drainages. Additionally, land near the Downtown Area, and in the southeast portions of the city is within the 500 year floodplain. The flood hazards in Sebastopol are illustrated in Figure 3.9-2. Table 3.9-4 presents a breakdown of the acreage and percentage of the City, Sphere of Influence, and Urban Growth Boundary that are designated as a FEMA flood zone.

TABLE 3.9-4: FEMA FLOOD ZONE SURFACE AREAS IN CITY OF SEBASTOPOL

ZONE	ACRES - CITY	% OF CITY	ACRES - SOI	% OF SOI
X (shaded) (500yr)	27.14	2.3%	0	0.0%
AE (100yr)	184.88	15.6%	13.87	6.0%
X (unshaded)	972.02	82.1%	216.27	94.0%
Total	1184.04	100.0%	230.146	100.0%

SOURCE: USGS NATIONAL HYDROGRAPHY DATASET, FEMA, CALIFORNIA DWR, SEBASTOPOL GIS. MAP DATE: JULY 24, 2014.

Within the City of Sebastopol approximately 15.6 percent of the land within the city limits is located within an area with a FEMA flood zone AE, which is an area that is subject to 100-year flooding (a

one percent chance of being flooded in any given year). Furthermore, approximately 6.0 percent of land within the City's Sphere of Influence is also located within this AE Zone.

Approximately 2.3 percent of the land within the city limits is located within an area with a FEMA flood zone X (shaded), which is an area that is subject to 500-year flooding (a 0.2 percent chance of being flooded in any given year). There is no land within the Sphere of Influence located within the 500-year flood zone. Areas within the 500-year flood zone are considered a low to moderate risk of flood hazards.

Approximately 82.1 percent of the land within the city limits is located within an area with a FEMA flood zone X (unshaded), which is an area that is determined to be outside the 500-year, and 100-year floodplain. Approximately 94 percent of the land within the Sphere of Influence is located within the X (unshaded) zone. These areas are considered to be at minimal risk from flood hazards.

The General Plan Safety Element includes numerous policies specifically designed to address flood hazards. Policy SA 2-1 supports strong local and countywide measures to protect and increase the floodwater storage capacity in the Laguna de Santa Rosa. Policy SA 2-2 ensures the City utilizes the most recent Federal Emergency Management Agency's Flood Insurance Rate Maps (FIRM) to reduce risk of flooding, identify special flood hazard areas subject to 100-year flood inundation, and calculate flow rates within identified stream channels. Policy SA 2-3 requires the City to continue to work with the Sonoma County agencies to ensure that additional storm drain runoff resulting from development occurring in unincorporated areas upstream from drainage channels in the Sebastopol Planning Area is adequately mitigated through improvements on-site and/or downstream. Policy SA 2-5 reduces flood risk to development and infrastructure by maintaining effective flood drainage systems and regulating construction. Policy SA 2-7 requires new critical facilities and essential public buiildings – including hospitals and health care facilities, emergency shelters, emergency command centers, and emergency communications facilities be outside of flood hazard zones to protect from any unreasonable risk of flooding. Policy SA 2-8 requires all development projects to demonstrate how storm water runoff will be detained or retained on-site, treated, and/or conveyed to the nearest drainage facility, and to demonstrate that project implementation would not result in increases in the peak flow runoff to adjacent lands or drainage facilities that would exceed the design capacity of the drainage facility or result in an increased potential for offsite flooding. Policy SA 2-9 disallows development in the 100-year flood zone unless requirements of the City's Flood Damage Protection Ordinance criteria are met. Policy SA 2-10 ensures that the structural and operational integrity of critical facilities is maintained during flooding.

Additionally, any development allowed within a flood hazard zone could potentially impede or redirect flood flows. All future projects would be required to comply with Title 15 (Building & Construction) Chapter (15.90) of the Sebastopol municipal code, which contains requirements and standards for the placement of fill and elevated structures in special flood hazard areas.

Subsequent development, infrastructure, and planning projects would be subject to the General Plan policies and actions. The policies and actions contained in the Safety Element of the General Plan represent a comprehensive and holistic approach by the City of Sebastopol to reduce the risks of flooding to City residents and properties to the greatest extent feasible. Furthermore, as

described in the setting section, numerous federal, state, and local agencies are responsible for maintaining flood protection features in the City of Sebastopol, including US Army Corps of Engineers (USACE), Department of Water Resources (DWR), and Department of Fish and Wildlife (CDFW) at the federal and state level, as well as the Sonoma County Water Agency at the local level.

Areas prone to flooding within the Sebastopol Planning Area are largely built-out. However, even with the implementation of the policies, actions, and requirements stated above implementation of the General Plan could result additional people and structures placed within a delineated flood hazard area. This impact is mitigated to the greatest extent feasible through the following General Plan policies and actions. However this impact is considered **significant and unavoidable** relative to this topic.

2016 GENERAL PLAN POLICIES AND ACTIONS THAT MITIGATE POTENTIAL IMPACTS

Policies

Policy SA 2-1: Support strong local and countywide measures to protect and increase the floodwater storage capacity in the Laguna de Santa Rosa.

Policy SA 2-2: Utilize the most recent Federal Emergency Management Agency's Flood Insurance Rate Maps (FIRM) to reduce risk of flooding, identify special flood hazard areas subject to 100-year flood inundation, and calculate flow rates within identified stream channels. Once available, also utilize Department of Water Resources 200-year floodplain maps to identify areas subject to potential 200-year flood inundation.

Policy SA 2-3: Continue to work with the Sonoma County agencies to ensure that additional storm drain runoff resulting from development occurring in unincorporated areas upstream from drainage channels in the Sebastopol Planning Area is adequately mitigated through improvements on-site and/or downstream.

Policy SA 2-4: Continue to coordinate with the Sonoma County Water Agency in pursuing all available sources of funding to finance improvements to storm drain facilities.

Policy SA 2-5: Reduce flood risk to development and infrastructure by maintaining effective flood drainage systems and regulating construction.

Policy SA 2-6: Maintain unobstructed water flow in the storm drainage system.

Policy SA 2-7: Locate new critical facilities and essential public buiildings – including hospitals and health care facilities, emergency shelters, emergency command centers, and emergency communications facilities – outside of flood hazard zones to protect from any unreasonable risk of flooding.

Policy SA 2-8: Require all development projects to demonstrate how storm water runoff will be detained or retained on-site, treated, and/or conveyed to the nearest drainage facility as part of the development review process. Project applicants shall demonstrate that project implementation would not result in increases in the peak flow runoff to adjacent lands or drainage facilities that would

exceed the design capacity of the drainage facility or result in an increased potential for offsite flooding.

Policy SA 2-9: Disallow development in the 100-year flood zone unless requirements of the City's Flood Damage Protection Ordinance criteria are met.

Policy SA 2-10: Ensure that the structural and operational integrity of critical facilities is maintained during flooding.

Policy SA 2-11: Monitor ongoing efforts by Federal and State agencies to update flood hazard maps, including 200-year flood plain mapping, that affect the City and Planning Area.

Policy SA 2-12: Ensure that flood control and management facilities are integrated with efforts to improve water supply and management. Consider factors such as groundwater recharge, surface water quality, and the protection of riparian habitat when implementing plans and improvements to construct and maintain flood control and management facilities.

Policy SA 2-13: Encourage and accommodate multipurpose flood control projects that incorporate recreation, resource conservation, preservation of natural riparian and biological habitat, and agricultural uses. Where appropriate and feasible, the City shall also encourage the use of flood and/or storm water retention facilities for use as groundwater recharge facilities.

Actions

Action SA-2a: If critical facilities, new development, and/or infrastructure are proposed in a flood hazard zone, evaluate whether the use is appropriate for the flood hazard zone. Any new development and infrastructure in the 100-year flood zone or other special flood hazard area as identified by FEMA shall be subject to the City's Flood Damage Prevention Ordinance and built in accordance with best practices and shall be flood-resistant or shall incorporate methods to minimize flood damage, such as being adequately anchored to prevent flotation or collapse, constructed with flood resistant materials below the base flood elevation, and designed or located such that floodwater is prevented from entering or accumulating in the components that are not flood resistant.

Action SA-2b: Continue to require new development to prepare hydraulic storm drainage studies defining the net increase in storm water run-off resulting from construction and require mitigation of those impacts.

Action SA-2c: Require developers to cover the costs of drainage facilities needed for surface runoff generated as a result of new development.

Action SA-2d: Enforce measures to minimize soil erosion and volume and velocity of surface runoff both during and after construction through implementation of the Grading Ordinance.

Action SA-2e: Require, where necessary, construction of siltation/retention ponds to be incorporated into the design of development projects.

Action SA-2f: Continue to participate in the National Flood Insurance program.

Action SA-2g: Continue to work with the Sonoma County Water Agency in the project review process to ensure that adequate measures are implemented to prevent flooding, to establish and maintain effective storm drainage systems, and collect the required mitigation fees.

Action SA-2h: Request that the County refer all development proposals located in the Sebastopol Planning Area to the City of Sebastopol for review of potential flooding impacts.

Action SA-2i: Work with other jurisdictions to reduce the volume of wastewater discharge into the Laguna de Santa Rosa.

Action SA-2j: Collaborate with other agencies to monitor the volume of wastewater discharge and water quality in the Laguna de Santa Rosa.

Action SA-2k: Prepare inundation maps and drainage plans for existing and new water storage tanks constructed within the city.

Action SA-2l: Continue the annual inspection of the drainage systems and informing residents and property owners of illegal structures and debris that must be removed. Work with property owners to reduce the potential for pollutants and other toxins to enter local drainage systems.

Action SA-2m: As part of the regular update of the Capital Improvement Program, review and identify needed improvements to the storm drainage system, such as routine maintenance of existing facilities and new facilities needed to provide increased system capacity and retention.

Action SA-2n: Maintain and restore creeks and tributaries within the City in the most naturalized condition possible, while still retaining adequate flood conveyance functions.

Action SA-2o: Continue to implement the City's Flood Prevention Ordinance and Storm Drain Master Plan.

Impact 3.9-6: The General Plan would not expose people or structures to a significant risk of loss, injury, or death involving flooding as a result of failure of a levee or dam, seiche, tsunami, or mudflow (Less than Significant)

Earthquakes centered close to a dam or levee are typically the most likely cause of dam or levee failure. Dam Inundation maps have been required in California since 1972, following the 1971 San Fernando Earthquake and near failure of the Lower Van Norman Dam. There are no significant levee systems protecting the City of Sebastopol.

The City of Sebastopol is located within dam inundation areas. As shown of Figure 3.9-3, the city is subject to inundation through the failure of one, or a combination of several area dams including: Matanzas Creek Reservoir, Coyote Valley Dam (Lake Mendocino), and Warm Springs (Lake Sonoma). Dam failure is generally a result of structural instability caused by improper design or construction, instability resulting from seismic shaking, or overtopping and erosion of the dam. As discussed previously, larger dams that are higher than 25 feet or with storage capacities over 50 acre-feet of water are regulated by the California Dam Safety Act, which is implemented by the California Department of Water Resources, Division of Safety of Dams (DSD). The DSD is responsible for inspecting and monitoring these dams. The Act also requires that dam owners submit to the

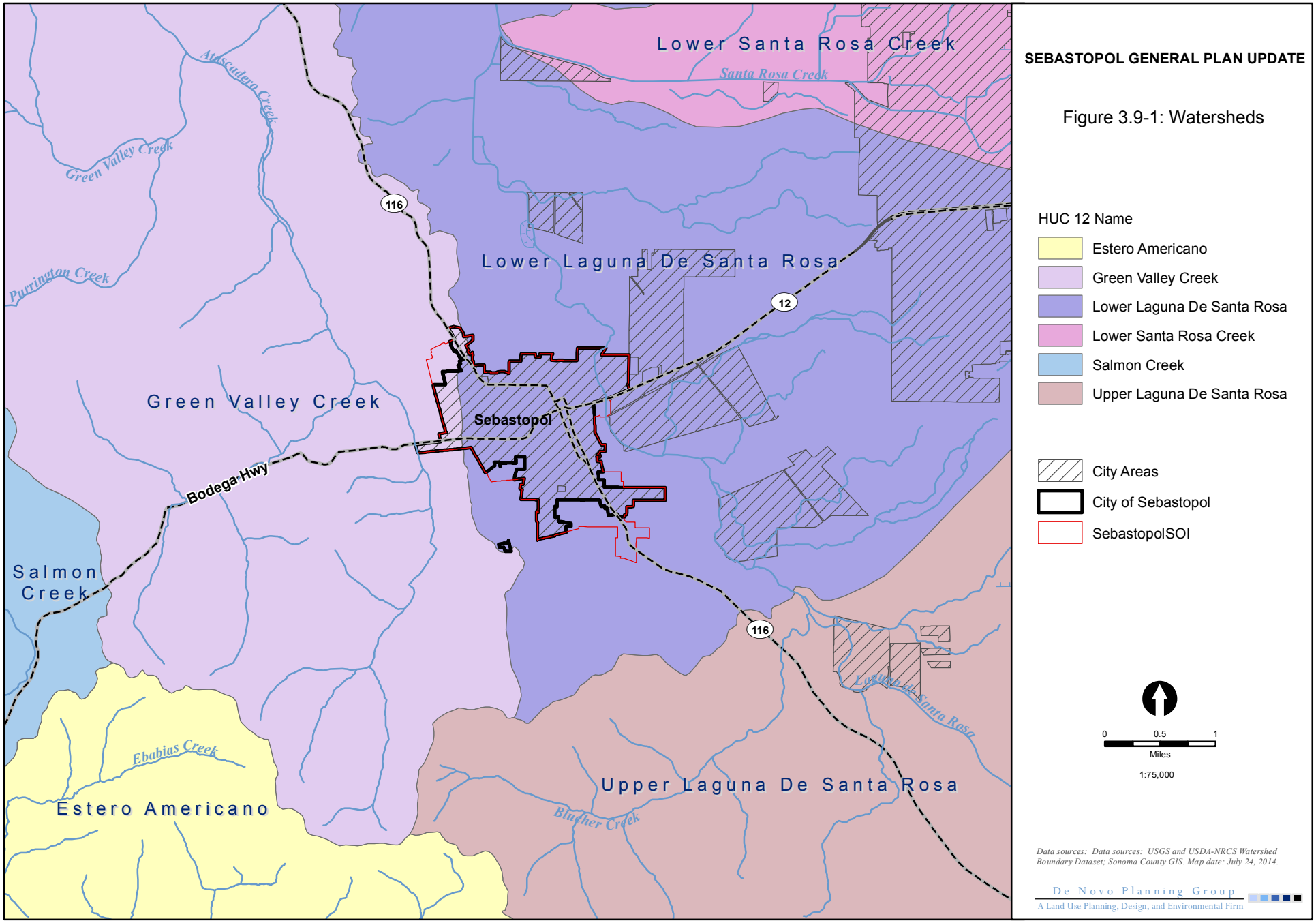
California Office of Emergency Services inundation maps for dams that would cause significant loss of life or personal injury as a result of dam failure. The County Office of Emergency Services is responsible for developing and implementing a Dam Failure Plan that designates evacuation plans, the direction of floodwaters, and provides emergency information. Through regular inspections by DSD and maintenance by the dam owners ensure that the dams are kept in safe operating condition. As such, failure of these dams is considered to have an extremely low probability of occurring and is not considered to be a reasonably foreseeable event. The Sebastopol General Plan Safety Element includes Action SA-1k to maintain an inventory of all natural hazards, including projected dam failure inundation areas. The implementation of the General Plan would result in a **less than significant** impact relative to this topic.

A tsunami is a sea wave caused by a submarine earthquake, landslide, or volcanic eruption. Tsunami can cause catastrophic damage to shallow or exposed shorelines. The Plan Area is sufficiently distant from the San Francisco Bay to preclude effects from a tsunami. The implementation of the General Plan would result in a **less than significant** impact relative to this topic.

Seiches are changes or oscillations of water levels within a confined water body. Seiches are caused by fluctuation in the atmosphere, tidal currents or earthquakes. The effect of this phenomenon is a standing wave that would occur when influences by the external causes. The Plan Area is not located within close proximity to a confined water body that would pose a significant risk from a seiche. The implementation of the General Plan would result in a **less than significant** impact relative to this topic.

A mudflow is a type of mass wasting or landslide, where earth and surface materials are rapidly transported downhill under the force of gravity. Mudflow events are caused by a combination of factors, including soil type, soil profile, precipitation, and slope. Mudflow may be triggered by heavy rainfall that the soil is not able to sufficiently drain or absorb. As a result of this super-saturation, soil and rock materials become unstable and eventually slide away from their existing location. Soils most susceptible to mudflow are saturated, loose, non-plastic, uniformly graded, and fine-grained sand deposits. As discussed in Section 3.6 (Geology, Soils, and Minerals) given the relatively gentle slopes throughout the City, landslide potential varies from low to medium.

Given the relatively gentle slopes throughout the City of Sebastopol, the mudflow potential is low. This is not a significant constraint in the Planning Area. The mudflow potential increases in the foothills and mountains to the east and west of the Planning Area. The implementation of the General Plan would result in a **less than significant** impact relative to this topic.



SEBASTOPOL GENERAL PLAN UPDATE

Figure 3.9-1: Watersheds

HUC 12 Name

- Estero Americano
- Green Valley Creek
- Lower Laguna De Santa Rosa
- Lower Santa Rosa Creek
- Salmon Creek
- Upper Laguna De Santa Rosa

- City Areas
- City of Sebastopol
- SebastopolSOI

0 0.5 1
Miles

1:75,000

Data sources: Data sources: USGS and USDA-NRCS Watershed Boundary Dataset; Sonoma County GIS. Map date: July 24, 2014.

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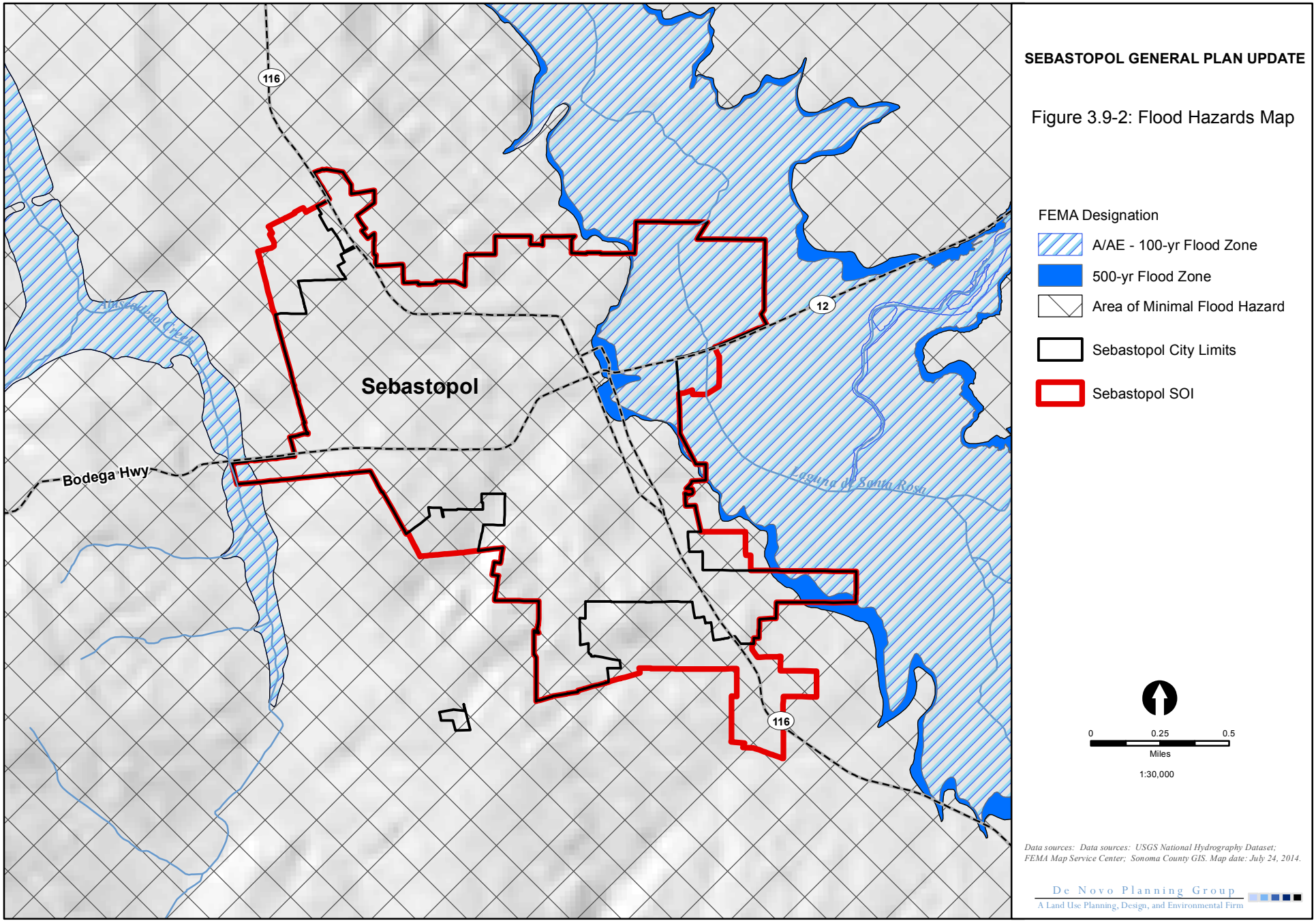
SEBASTOPOL GENERAL PLAN UPDATE
Figure 3.9-2: Flood Hazards Map
FEMA Designation
A/AE - 100-yr Flood Zone
500-yr Flood Zone
Area of Minimal Flood Hazard
Sebastopol City Limits
Sebastopol SOI
Sebastopol
Bodega Hwy
116
12
Laguna de Santa Rosa
0
0.25
0.5
Miles
1:30,000
Data sources: Data sources: USGS National Hydrography Dataset; FEMA Map Service Center; Sonoma County GIS. Map date: July 24, 2014.
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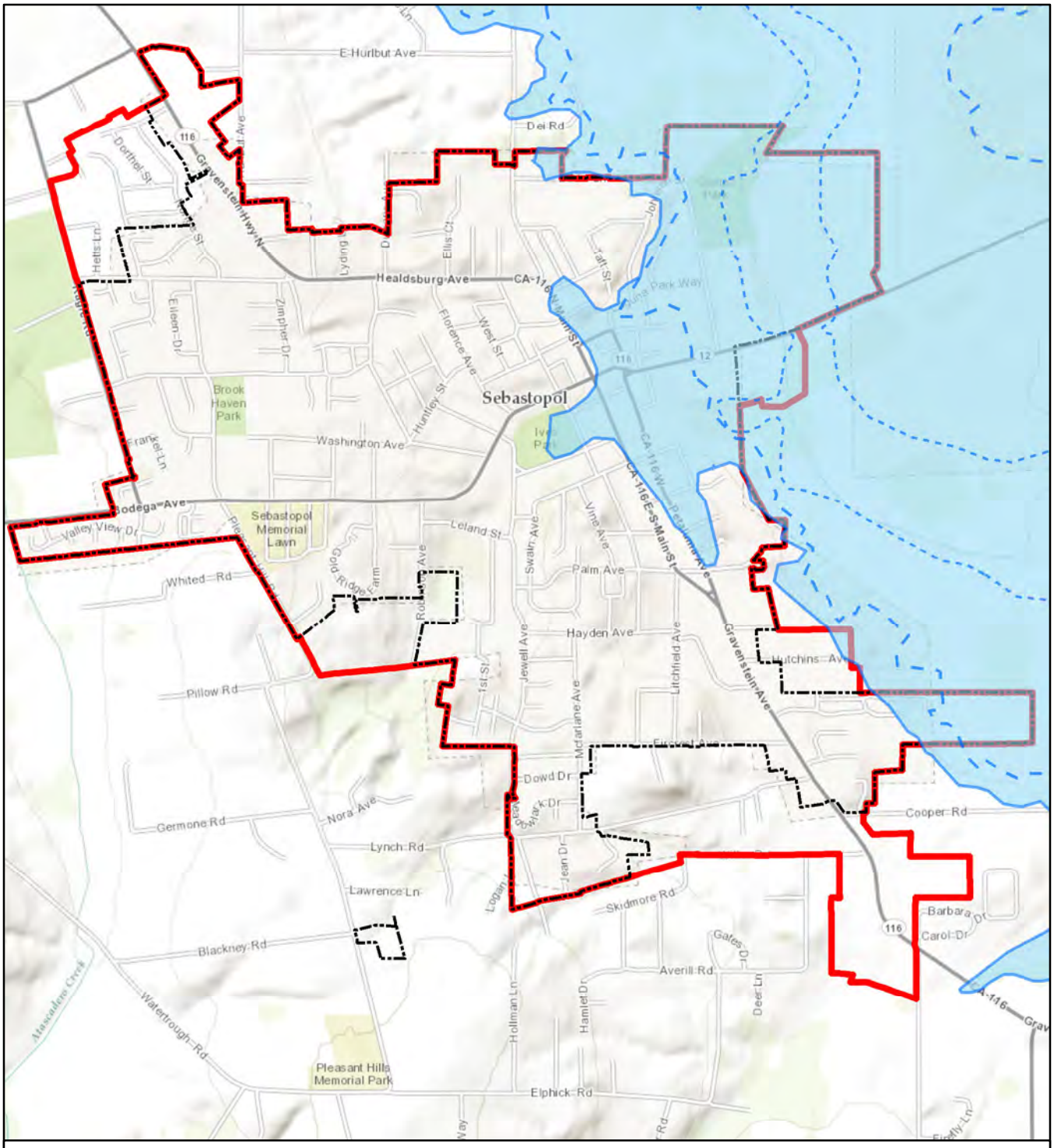

Dam Inundation Area

Individual Dam Inundation Boundaries

Matanzas Creek Reservoir

Coyote Valley Dam (Lake Mendocino)

Warm Springs (Lake Sonoma)

City of Sebastopol

Sebastopol SOI/UGB

Sebastopol General Plan Update

Figure 3.9-3: Dam Inundation

N

0 750 1,500

Feet

1:21,000

Data sources: Cal EMA; Sonoma County GIS; ArcGIS Online World Topo Map Basemap. Map date: August 8, 2014. (Sebas_DamInundation_140808_Fig4-3-3)

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The purpose of this EIR section is to address at a programmatic level the consistency of the General Plan Update with applicable local land use and planning regulations and policies, and to identify whether the General Plan Update would impact the city by inducing substantial population growth or displace substantial numbers of people or housing. This section identifies the existing land use conditions, analyzes the project's consistency with relevant planning documents and policies adopted for the purpose of avoiding or mitigating an environmental effect, and recommend mitigation measures to avoid or minimize the significance of potential environmental impacts. General Plan policies associated with other specific environmental topics (aesthetics, air quality, biological resources, cultural resources, geology/soils, greenhouse gas, hazards, hydrology/water quality, noise, public services, recreation, transportation, and utilities) are discussed in the relevant sections of this EIR.

Information in this section is based on information provided by the following reference materials: *Plan Bay Area* (ABAG, 2013), Population and Housing Estimates for Cities, Counties, and the State, *January 1, 2011-2013*, with 2010 Benchmark (DOF, 2013), the *Existing Conditions Report* (City of Sebastopol, 2014), the *Housing Element (*City of Sebastopol, 2015), *Land Use* – Title 17 of the Sebastopol Municipal Code (City of Sebastopol, 2015), the *Sebastopol Downtown Plan* (1990), and review of ground and aerial photographs.

One comment regarding population growth was received during the Notice of Preparation scoping period for the EIR. The County of Sonoma Permit and Resource Management Department commented that the EIR should address growth inducing impacts resulting from expansions of the UGB.

3.10.1 ENVIRONMENTAL SETTING

EXISTING CONDITIONS

The City of Sebastopol is located in Sonoma County, approximately 15 miles east of the Pacific Ocean, and 52 miles north of San Francisco. The Sebastopol City limits and SOI encompass approximately 1.400 acres.

Sebastopol is at the crossroads of two State Highways, Highways 116 and 12, and is just eight miles from Sonoma County's largest city, Santa Rosa. Sebastopol is a community of approximately 7,500, and is considered the hub of West Sonoma County. While the incorporated area is small, Sebastopol serves a much larger unincorporated area stretching to the Pacific Ocean and the Russian River.

Land Use

Existing land uses refers to the existing built environment, which may be different from the land use or zoning designations applied to land in the city for planning purposes. Existing land uses are based on data provided by the County Assessor and are described below.

RESIDENTIAL

Residential uses in Sebastopol include single-family homes and multi-family developments.

Single family residential is the dominant land use type in the city, accounting for 38.9% of the city's land area. Single family residential land uses, including single family homes, condominiums,

townhomes, and second (granny) units developed in conjunction with a single family residence, are generally located throughout the city. There are approximately 2,255 single family residential units in the city, located on 461.8 acres. The majority of single family residential units (1,721 units) are typical single family residences, with one residence located on one parcel. Single family uses in a condominium, townhome or other attached single family-type of residential development are the second most common type of single family residential use, accounting for 312 units on 9.1 acres. There are 222 single family units built with two or more single family uses on a parcel or a single family residence and second (granny) unit on a single parcel.

Multifamily residential refers to parcels that contain more than one housing unit, including duplexes, triplexes, fourplexes, and apartment buildings. The predominate type of multifamily development, based on land area, is small structures with two to four residential units, which account for 357 multifamily units located on 28.5 acres. Multifamily complexes with five to 40 units account for 357 units on 25.9 acres. Large multifamily apartment complexes with 41 or more units represent 248 units and a total of 14 acres. Multifamily uses are generally located near services, including retail uses, and are located along Bodega Avenue and Healdsburg Avenue and are also located northeast of the downtown core area.

COMMERCIAL

The majority of non-residential development in the city is commercial, which includes approximately 1.4 million square feet (s.f.) on 119.2 acres. Commercial uses, as identified by the County Assessor, are varied. The predominate type of commercial land use, based on s.f. of development, is office buildings, which account for 299,480 s.f. of development on 20.9 acres. This is followed by miscellaneous commercial uses (not supermarkets) which account for 223,258 s.f. of development. Commercial stores (151,713 s.f.), shopping centers (150,181 s.f.), and also represent a large portion of the city's commercial uses. Commercial/residential development, including residences above or within the same building as offices and stores, and live/work units, represent 100,134 s.f. and include 49 dwelling units on a total of 7 acres. Other commercial uses in Sebastopol include auto sales and/or repair, banks, grocery stores/supermarkets, health clubs (classified under recreational by the Assessor), hotels, restaurants and bars, service stations and car washes, theaters, and veterinary offices. Many of the city's commercial uses are located in and around the Downtown core and the main arterials running through town, Healdsburg Avenue, Main Street, Petaluma Avenue, and Sebastopol Avenue.

INDUSTRIAL

Industrial uses represent 2.3% of the land area in Sebastopol. Industrial uses total approximately 342,334 s.f. of development on 27 acres. Industrial uses include light manufacturing and/or warehousing (163,613 s.f. of development on 12 acres), miscellaneous industrial (115,067 s.f. of development on 9.1 acres), public storage units (34,190 s.f.), retail feed and lumber sales (18,000 s.f.), food processing (8,464 s.f.), and mineral processing (3,000 s.f.). Industrial uses are generally located west of Petaluma Avenue and are mainly focused in the area north and south of Sebastopol Avenue.

GOVERNMENTAL

Governmental uses include City, County, State, Federal, special district, and utility buildings and facilities and total 174.8 acres (14.7% of land area). Municipal utilities represent the largest

governmental use in the city, with 74.1 acres, followed by school districts (51.5 acres), and the City (35.4 acres). It is noted that the assessor data does not including building square footages for all governmental uses. Government facilities include City Hall, the Community Center, the Senior Activity Center, City parks and recreation facilities, and facilities operated by other governmental entities.

INSTITUTIONAL

Institutional uses include churches and religious facilities, hospitals, residential and convalescent care facilities, cemeteries and mortuaries, and service organizations (lodge and club facilities are identified as a Recreational use by the Assessor). There are 54.4 acres with institutional uses that include 145,770 s.f. of development. Churches and religious facilities represent the most development in the institutional category with 91,746 s.f. on 25.5 acres. The category with the second highest amount of development is residential care facilities, which include 47,064 s.f. of development on 3.6 acres. Cemeteries and mortuaries account for the second highest amount of land (21.1 acres) in this category.

AGRICULTURE

The agriculture category represents a total of 7.1 acres. This land is not developed with built structures. The non-irrigated orchard category has 5.9 acres. The wasteland category represents 1.2 acres.

MISCELLANEOUS

Miscellaneous uses include right-of-ways, private roads, parking lots (non-governmental), and various common areas and account of 185.3 acres (15.6% of total land area).

VACANT

Vacant land is currently unused and has minimal development. Approximately 5% of the land in Sebastopol is City land (22.5 acres), according to the County Assessor. Vacant residential lands total 16 acres, while commercial and industrial lands represent 18.7 and 2 acres, respectively.

Demographics

POPULATION TRENDS

The population of Sebastopol has increased steadily over the years, growing from 5,595 persons in 1980 to 7,440 in 2014; growth has slowed in this decade with the City increasing by 61 persons from 2010 to 2014. Historical population growth in Sebastopol and the County as a whole is shown in Table 3.10-1.

TABLE 3.10-1: POPULATION GROWTH

	1980	*1990*	*2000*	*2010*	*2014*
Sebastopol					
Population	5,595	7,004	7,774	7,379	7,440
Percent Change	-	25%	11%	-5%	<1%
Sonoma County					
Population	299,681	388,222	458,614	483,878	490,486
Percent Change	-	30%	18%	6%	1%

SOURCE: CALIFORNIA DEPARTMENT OF FINANCE, 2000; US CENSUS, 2000; US CENSUS, 2010; CALIFORNIA DEPARTMENT OF FINANCE, 2014.

HOUSING STOCK

Table 3.10-2 summarizes the growth of the City of Sebastopol housing stock between 1990 and 2014. The number of housing units has increased from 2,842 in 1990 to 3,296 in 2014. Since 2010, the DOF reports that the housing stock in the City has increased by 20 units.

TABLE 3.10-2: HOUSING UNIT GROWTH

YEAR	*HOUSING UNITS*	*PERCENT CHANGE*
1990	2,842	-
2000	3,250	14%
2010	3,276	<1%
2014	3,296	<1%

SOURCE: CALIFORNIA DEPARTMENT OF FINANCE, 2010; CALIFORNIA DEPARTMENT OF FINANCE, 2014.

PERSONS PER DWELLING UNIT

The average number of persons residing in a dwelling unit in Sebastopol is 2.22 (DOF, 2014).

Growth Projections

The Association of Bay Area Governments (ABAG) projects population growth in the San Francisco Bay area. The adopted Plan Bay Area does not include population projections at the local level, but rather presents regional projections. Plan Bay Area states that by 2040 the San Francisco Bay Area is projected to add 2.1 million people, increasing total regional population from 7.2 million to 9.3 million, an increase of 30 percent or roughly 1 percent per year.

3.10.2 REGULATORY SETTING

STATE

California General Plan Law

Government Code Section 65300 requires that each county and city adopt a General Plan "for the physical development of the county or city, and any land outside its boundaries which bears relation to its planning."

The General Plan consists of a statement of development policies and includes a diagram or diagrams and text setting forth objectives, principles, standards, and plan proposals. It is a comprehensive long-term plan for the physical development of the county or city and is considered

a "blueprint" for development. The General Plan must contain seven state-mandated elements: Land Use, Open Space, Conservation, Housing, Circulation, Noise, and Safety. It may also contain any other elements that the City wishes to include. The land use element designates the general location and intensity of designated land uses to accommodate housing, business, industry, open space, education, public buildings and grounds, recreation areas, and other land uses.

The 2003 General Plan Guidelines, established by the Governor's Office of Planning and Research (OPR) to assist local agencies in the preparation of their general plans, further describes the mandatory land use element as a guide to planners, the general public, and decision makers prescribing the ultimate pattern of development for the City.

Regional Housing Needs Plan

California General Plan law requires each city and county to have land zoned to accommodate a fair share of the regional housing need. The state determines the fair-share allocated to each region in the state. The share is known as the Regional Housing Needs Allocation (RHNA). The RHNA for the bay area is based on a Regional Housing Needs Plan (RHNP) developed by the local council of government. ABAG is the lead agency for developing the RHNP for a nine-county area that includes Sonoma County and the City of Sebastopol. The City's RHNA for 2014 through 2022 consists of 120 units. The allocation is equivalent to a yearly need of approximately 13 to 14 housing units for the nine-year time frame. This total is below the number of units assigned during the last Housing Element period of 2007 to 2014, at which time 176 units were allocated.

Transportation 2035 Plan

The *Transportation 2035 Plan* (MTC 2009) is the most recently adopted Regional Transportation Plan prepared by the Metropolitan Transportation Commission (MTC) for the San Francisco Bay Area region. The *Transportation 2035 Plan* specifies how some $218 billion in anticipated federal, state and local transportation funds will be spent in the nine-county Bay Area during the next 25 years. Consistency with applicable air quality plans is demonstrated through the *Transportation Air Quality Conformity Analysis for the Transportation 2035 Plan* (MTC 2009), which was prepared using population forecasts for each local jurisdiction as inputs into the regional travel demand model.

LOCAL

City of Sebastopol General Plan

The City's current General Plan was adopted May 31, 1994 and reflects amendments through 2011. Land uses in Sebastopol have been developed based on the Land Use Map, goals, and policies established by the City of Sebastopol General Plan. The City's General Plan includes the following chapters: I - Land Use, II - Transportation, III - Conservation, Parks, and Open Space, IV – Housing, V – Community Identity, VI – Economic Vitality, and VII – Safety, that guide land use and planning decisions within the city. Goals in the General Plan most related to the topic of land use include:

I – LAND USE

Goal 1 Phase future growth so that City resources are not exceeded.

Goal 2 Maintain Sebastopol as a small town.

Goal 3 Ensure that development adjacent to the Sphere of Influence is compatible with the goals and policies of the Sebastopol General Plan.

Goal 4 Preserve the unique character and ambiance of residential areas.

Goal 4 Emphasize, develop, and establish Sebastopol's role as a market and service center for the West County.

Goal 5 Increase the city's retail sales tax base.

Goal 6 Increase job opportunities in the office sector of the economy.

Goal 7 Increase industrial employment in Sebastopol while maintaining the quality of the environment.

Goal 8 Create opportunities for economic development and redevelopment.

Goal 9 Ensure that development adjacent to the Sphere of Influence is compatible with the goals and policies of the Sebastopol General Plan.

III – CONSERVATION, PARKS, AND OPEN SPACE

Goal 1 Preserve areas with important biotic resources such as wetlands, riparian corridors, and areas with scenic features.

Goal 2 Ensure the maintenance of wetlands areas adjacent to City boundaries as permanent open space.

Goal 3 Protect, maintain and restore wetlands areas.

Goal 11 Develop open space, parks, and recreation facilities in harmony with the surroundings.

Goal 12 Incorporate open space in all major developments.

Goal 15 Protect and enhance existing sensitive habitats in the Laguna.

V - COMMUNITY IDENTITY

Goal 2 Preserve the character of existing residential neighborhoods.

Goal 3 Ensure that new residential development demonstrates quality, excellence of design, and sensitivity to the character of the surrounding neighborhood.

Goal 4 Maintain Sebastopol's identity as a small, compact town.

Goal 7 Continue to maintain a *Downtown Plan*.

Goal 9 Establish the Downtown as the retail center of the community.

Goal 10 Establish the Downtown as a place for community and cultural activities.

Goal 11 Provide housing in Downtown areas for diversity, security and in order to extend "life on the streets" into the evening hours.

VII – SAFETY

Goal 10 Ensure the compatibility of new development with existing and future noise environment.

Goal 11 Prevent land uses which increase the existing noise level above established acceptable standards.

These guiding goals are reinforced by the City's General Plan Land Use Map through focusing future growth within the community and/or adjacent to developed areas; the establishment of permanent open space and conservation areas that protect natural resources, buffer the community, and limit the extent of growth; the designation of commercial, mixed use, and office uses in the downtown and along primary transportation corridors; the designation of residential uses proximate to existing and/or planned services, parkland, and other amenities; and the designation of lands for parks and community facilities.

Land Use Designations

Table 3.10-3 summarizes the City's General Plan land use designations for areas within the City limits, Sphere of Influence, and Planning Area by acreage and parcels. Land use designations adopted under the 1994 General Plan, as amended through 2011, are shown on Figure 3.10-1. A brief description of each of the adopted General Plan land use designations is provided below. These descriptions are based on the text of the General Plan Land Use Element, as updated in 2001.

TABLE 3.10-3: EXISTING GENERAL PLAN LAND USE DESIGNATIONS

LAND USE	CITY	SOI/UGB	TOTAL
Open Space and Recreation			
Open Space	90.7	0	90.7
Parkland	34.4	0	34.4
Subtotal	*125.1*	*0*	*125.1*
Commercial, Office, and Industrial			
Downtown Core	44.8	0	44.8
General Commercial	66.4	0	66.4
Light Industrial	32.7	44.8	77.4
Office	35.8	0	35.8
Office/Light Industrial	13.3	0	13.3
Subtotal	*193.0*	*44.8*	*237.7*
Residential			
Very Low Density Residential	7.4	69.0	76.3
Low Density Residential	89.9	18.3	108.2
Medium Density Residential	369.7	67.0	436.7
High Density Residential	134.5	0	134.5
Subtotal	*601.5*	*154.3*	*755.7*
Other			
Community Facilities	96.3	0	96.3
Right-of-Way	172.5	15.5	188.0
No Label	0	12.6	12.6
Subtotal	*268.8*	*28.1*	*296.9*
TOTALS	***1,188.4***	***227.2***	***1,415.4***

Very Low Density Single Family Residential: Designates areas suitable for single family dwellings at a density up to one unit per acre. Smaller existing parcels within this designation would not be precluded from developing one house unit. Population density for this designation could range from zero to 2.4 persons per acre.

Low Density Single Family Residential: Designates areas suitable for single family dwellings at a density of 1.1 to 2.0 units per acre. Smaller existing parcels within this designation would not be precluded from developing one housing unit. Population density for this designation could range from 2.6 to 4.8 persons per acre.

Medium Density Single Family Residential: Designates areas suitable for single family dwellings at a density of 2.1 to 6.0 units per acre. Smaller existing parcels within this designation would not be precluded from developing one housing unit. Population density for this designation would range from 5.0 to 14.4 persons per acre.

High Density Single Family Residential: Designates areas suitable for multifamily dwellings at a density of 6.1 to 22 units per acre. Population density would range from 14.6 to 36.0 persons per acre. This designation is suitable for duplexes, apartments, townhouses, and other attached dwelling units.

Office: This designation provides areas for office activities which serve local and regional needs. It allows professional, administrative, medical, dental, and business offices, bed and breakfast users, along with ancillary commercial and service uses. Residential uses are permitted as a secondary use to the primary office use at the Medium Density Residential density of 2.1 to 15 units per acre. The maximum FAR shall not exceed 1.0 (not including the residential use).

General Commercial: This designation provides areas for commercial uses with off-street parking and/or clusters of street-front stores. This designation permits primarily local-serving retail establishments, specialty shops, banks, professional offices, motels and business and personal services. This designation is typically assigned to parcels, located on a major arterial street, that can provide sufficient land for commercial establishments that do not benefit from high-volume pedestrian concentrations found Downtown. The following types of retail uses are discouraged in this land use designation: factory outlets; large regional-serving shopping centers; and other similar retail uses generating high traffic volumes. Maximum FAR shall not exceed 1.0. Residential uses are permitted as a secondary use to the primary commercial uses permitted in this land use designation if generally located above the ground floor at the High Density Residential density of 6.1 to 22 units per acre. The residential space will not be counted in calculating the FAR for a development. (Residential uses in the General Commercial designation would require a conditional use permit.)

Downtown Core: This designation applies to Sebastopol's Downtown and permits office, commercial and retail uses, as well as mixed-use residential developments. Residential uses are permitted at a density of 15 to 44 units per acre if combined with commercial land uses, such as office and retail. Maximum FAR shall not exceed 2.0 (not including the residential use). This designation is intended to implement the Downtown Plan and enhance the vitality and character of Sebastopol's historic commercial area. Second story housing is encouraged.

Light Industrial: This designation provides for a wide variety of commercial, wholesale, service, and processing uses which do not generate excessive adverse environmental impacts. Other uses permitted in this designation include office ancillary to industrial uses; warehousing and agricultural products sales and services; auto sales and repair; food and drink processing; construction yards; light manufacturing; and similar uses. Residential uses are permitted as a secondary use to the primary light industrial uses permitted in this land use designation at the High Density Residential density of 6.1 to 22 units per acre. Maximum FAR shall not exceed 0.55 (not including the residential use).

Office/Light Industrial: This designation represents a synthesis of the Office and Light Industrial classifications and is intended to promote well planned, integrated business parks, which will serve as major employment center within the community. The Office/Light Industrial designations only applies to sites of three (3) acres or larger and must be implemented through the PC-Planned Community zoning process. Land uses within business parks shall be limited to non-polluting, "clean" industries and businesses with primary permitted uses including corporate and administrative offices and research development uses. Ancillary uses shall be permitted under this designation, which may include warehousing and distribution, exercise facilities, child care uses, and food service uses which provides support services to primary uses. FAR shall not exceed 0.40.

Open Space: This designation applies to areas of land which are essentially unimproved and devoted to the preservation of natural resources, agriculture, outdoor recreation, and for the maintenance of public health and safety. The only structures permitted are shelters, restrooms, storage sheds, and other structures needed to accommodate public use or provide for maintenance of the land. Maximum FAR shall not exceed 0.10.

Parkland: This designation applies to existing and proposed active and passive parks, and linear parks (landscaped paths) in urban areas. Structures allowed are shelters, restrooms, storage sheds, other structures needed to accommodate public use or provide for maintenance of the land, and recreational facilities. Maximum FAR shall not exceed 0.10.

Community Facilities: This designation includes public buildings and facilities, utility facilities and related easements, public libraries, city offices, fire and police stations, and school sites. Maximum FAR shall not exceed 1.0.

CITY OF SEBASTOPOL ZONING ORDINANCE

Title 17 of the Sebastopol Municipal Code is the City's Zoning Ordinance. The Zoning Ordinance carries out the policies of the General Plan by classifying and regulating the uses of land and structures within the city, consistent with the General Plan. The Zoning Ordinance is adopted to promote and protect the public health, safety, peace, comfort, convenience, and general welfare. More specifically, the purpose of the Zoning Ordinance is to achieve the following objectives:

A. To implement the General Plan of the City of Sebastopol including the Growth Management policies.

B. To provide a definite and comprehensive zoning plan for development of the City and to guide, control, and regulate the future growth of the City in accordance with such plan and the City's General Plan.

C. To protect the character and the social and economic stability of the land uses within the City, and to assure the orderly and beneficial development thereof.

D. To minimize disagreements between private individuals or groups or other disagreements which might result from incompatible or inappropriate adjacent land uses.

E. To maintain and enhance desirable characteristics of neighborhoods; to provide for open space for light and air; to prevent undue concentration of population; to promote orderly community development; and to otherwise promote the implementation of the Sebastopol General Plan.

F. To promote efficient use of land, thereby minimizing unnecessary cost of development.

Chapter 17.12 of the Zoning Ordinance establishes the City's zoning districts and includes the City's Zoning Map and provides direction for the interpretation of the Zoning Map. Chapters 17.16 through 17.94 define allowable land uses within each zoning and combining district, provide development standards for each zoning district and, where applicable, provide performance standards and identify design criteria. Chapter 17.96 establishes supplementary development standards and provisions. Chapter 17.110 establishes special use permit criteria. Chapter 17.250 through 17.340 establishes administrative procedures, permit requirements, and procedures for amending the General Plan and Zoning Ordinance.

COMPREHENSIVE AIRPORT LAND USE PLAN FOR SONOMA COUNTY

In January 2001, the Sonoma County Airport Land Use Commission adopted the Comprehensive Airport Land Use Plan for Sonoma County (CALUP), which sets forth the "referral area boundaries" around each airport and the limits on land use, building height and population density in those areas. The CALUP regulates land use in three major areas: safety zones, noise zones, and height restrictions. It provides land use compatibility guidelines for lands near the airport, to avert potential safety problems and to ensure unhampered airport operations. The CALUP establishes three safety zones that are linked to land use compatibility: clear, approach/departure, and overflight.

Under California Government Code Section 65302.3(a), general plans must be consistent with any airport land use plan adopted pursuant to Public Utilities Code Section 21675. Lands within the City of Sebastopol, the City's SOI and the City's Urban Growth Area are not located within any of the airport influence areas identified in the CALUP.

SEBASTOPOL DOWNTOWN PLAN

The Sebastopol Downtown Plan was adopted in 1990 and provides direction for the continued development of Downtown in order to maintain and strengthen the city's role as a western county retail/cultural center and as a viable alternative to retail/service shopping in nearby cities. The Downtown Plan provides for the coordination of public and private investment in order to fulfill identified objectives for the Downtown area. The Downtown Plan was developed to encourage pedestrian-friendly streets, provide for a focal point (Town Square), and provide open spaces for community events.

The Downtown Plan establishes the following eight broad goals:

- Economic: Enrich existing businesses and increase the self-sufficiency of the community.
- Economic: Establish the Downtown area as the retail center of the community.
- Community/Culture: Establish the Downtown as a place for community activities.
- Community/Culture: Establish the historic Downtown area as the cultural core of the community.
- Community/Culture: Provide housing in the Downtown area for diversity, security, and in order to extend "life on the streets" into the evening hours.
- Environment: Retain and enhance the quality of life and environment in the Sebastopol Downtown area.
- Environment: Reduce automobile congestion by promoting other modes of transportation and providing alternatives to existing vehicle travel patterns.
- Environment: Promote ridership for transit by developing higher density residential and commercial areas on transit corridors.

The Downtown Plan provides and identifies 16 specific implementation measures including establishing the Town Square, opportunity sites for mixed-use development (Diamond Lumber/Brown Street, Main Street/High Street/Burnett Street, and Morris-Old Duraglass Area locations), retail space improvements, pocket parks, downtown entries, improvements to specific buildings/sites (Glendale/Tuttle Drug and Sprouse), identification of a potential hotel site, and improvements to the circulation system, including street, bicycle lane, pedestrian path, and parking improvements.

LOCAL AGENCY FORMATION COMMISSION OF SONOMA COUNTY

In 1963, the State Legislature created a local agency formation commission (LAFCO) for each county, with the authority to regulate local agency boundary changes. Subsequently, the State has expanded the authority of a LAFCO. The goals of the LAFCO include preserving agricultural and open space land resources and providing for efficient delivery of services. The Sonoma County LAFCO has authority over land use decisions in Sonoma County affecting local agency boundaries. Its authority extends to the incorporated cities, including annexation of County lands into a city, and special districts within the County. LAFCO has the authority to review and approve or disapprove the following:

- Annexations to or detachments from cities or districts.
- Formation or dissolution of districts.
- Incorporation or disincorporation of cities.
- Consolidation or reorganization of cities or districts.
- Establishment of subsidiary districts.
- Development of, and amendments to, Spheres of Influence. The Sphere of Influence (SOI) is the probable physical boundary and service area of each local government agency. This may extend beyond the current service area of the agency.

- Extensions of service beyond an agency's jurisdictional boundaries.
- Provision of new or different services by districts.
- Proposals that extend service into previously unserved territory in unincorporated areas.

In addition, the Sonoma County LAFCO conducts Municipal Service Reviews (MSRs) for services within its jurisdiction. An MSR typically includes a review of existing municipal services provided by a local agency and its infrastructure needs and deficiencies. It also evaluates financing constraints and opportunities, management efficiencies, opportunities for rate restructuring and shared facilities, local accountability and governance, and other issues.

SONOMA COUNTY GENERAL PLAN

Sonoma County adopted its General Plan in September 2008. The County's General Plan provides a comprehensive set of goals, policies, and implementing actions to guide the County's growth through the year 2020. The County's General Plan includes the following 10 elements:

- Land Use Element
- Housing Element
- Agricultural Resources Element
- Open Space and Resource Conservation Element
- Water Resources Element
- Public Safety Element
- Circulation and Transit Element
- Air Transportation Element
- Public Facilities and Services Element
- Noise Element

The County's General Plan establishes allowed land uses for lands within the City of Sebastopol's Sphere of Influence and Urban Growth Boundary. While the City of Sebastopol General Plan Land Use Map identifies planned land uses within the SOI and UGB, the County of Sonoma has ultimate land use planning and project approval authority within the SOI and UGA unless the lands are annexed to the City.

The Sonoma County General Plan designates lands in the SOI primarily as Rural Residential and also designates small areas as Diverse Agriculture, General Commercial, Limited Commercial, and Limited Industrial.

3.10.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed project will have a significant impact on land use and planning if it will:

- Physically divide an established community;
- 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;

- Conflict with any applicable habitat conservation plan or natural community conservation plan;
- Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure);
- Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere; and/or
- Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.

Potential conflicts with any applicable habitat conservation plan or natural community conservation plan are discussed in Section 3.4, Biological Resources.

IMPACTS AND MITIGATION MEASURES

Impact 3.10-1: Potential to physically divide an established community (Less than Significant)

The proposed General Plan establishes the City's vision for future growth and development. Goal LU 2 of the General Plan is to "*Maintain and urban growth boundary in order to promote orderly growth, ensure adequate provision of public services, and to protect the natural environment*." The land uses allowed under the proposed General Plan (Figure 2.0-3, Section 2.0) provide opportunities for cohesive new growth at in-fill locations within existing communities, as well as new growth areas adjacent to existing communities, but would not create physical division within existing communities. New development and redevelopment projects would be designed to complement the character of the existing community and neighborhoods and provide connectivity between existing development and new development. The proposed General Plan land use map designate sites for a range of urban and rural developed uses as well as open space. The proposed General Plan does not include any new areas designated for urbanization or new roadways, infrastructure, or other features that would divide existing communities. The proposed General Plan would have a **less than significant** impact associated with the physical division of an established community.

Impact 3.10-2: Potential to conflict with an applicable land use plan, policy, or regulation of an agency with jurisdiction over the project adopted to avoid or mitigate an environmental effect (Less than Significant)

STATE PLANS: The proposed General Plan was prepared in conformance with state laws and regulations associated with the preparation of general plans, including requirements for environmental protection. Discussion of the proposed General Plan's consistency with state regulations, plans, and policies associated with specific environmental issues (e.g., air quality, traffic, water quality, etc.) is provided in the relevant chapters of this Draft EIR. The State would continue to

have authority over any State-owned lands in the vicinity of the City and the proposed General Plan would not conflict with continued application of State land use plans, policies, and regulations adopted to avoid or mitigate environmental effects.

CITY PLANS: As set forth by state law, the General Plan serves as the primary planning document for the City and subordinate documents and plans would be updated to be consistent with the General Plan. Similar to the existing General Plan, the 2016 General Plan focuses on ensuring that the City's small-town quality of life is maintained, that conservation uses and activities are maintained and enhanced, that the majority of growth remains focused within the City, and that growth outside of the City's current boundaries would remain within the adopted Urban Growth Boundary. The proposed 2016 General Plan carries forward and enhances policies and measures from the 1994 General Plan that were intended for environmental protection and would not remove or conflict with City plans, policies, or regulations adopted for environmental protection. The proposed General Plan would require modifications to the City's Zoning Ordinance to provide consistency between the General Plan and zoning; however, these modifications will not remove or adversely modify portions of the Zoning Ordinance that were adopted to mitigate an environmental effect. The proposed General Plan is consistent with the adopted Sebastopol Downtown Plan and has been designed to encourage implementation of the plan.

Subsequent development projects would be required to be consistent with all applicable policies, standards, and regulations, including those land use plans, policies, and regulations adopted by the City to mitigate environmental effects as well as those adopted by agencies with jurisdiction over components of future development projects. Any potential environmental impact associated with conflicts with land use requirements would be **less than significant**.

The proposed project could result in potential adverse environmental impacts, including to traffic, noise, water quality, biological resources, drainage and water quality, air quality, hazards, geology/soils, and cultural resources. Impacts to these resources, including consistency with applicable plans, policies, and regulations, are evaluated in the appropriate sections of this EIR.

Impact 3.10-3: Potential to induce substantial population growth (Less than Significant)

The proposed General Plan accommodates future growth in Sebastopol, including new businesses, expansion of existing businesses, and new residential uses. Infrastructure and services would need to be extended to accommodate future growth.

As described in Section 2.0, buildout of the General Plan could yield up to 750 new residential units, 341,159 square feet of new commercial space, 59,959 square feet of new industrial space, and 137,375 square feet of new office space within the City Limits. This new growth would increase the City's population by approximately 1,658 residents.[1] The full development of the new commercial,

[1] Based on the 2015 California Department of Finance estimate of 2.21 persons per household in Sebastopol.

office, and industrial uses would increase the employment opportunities in Sebastopol by approximately 1,545 employees.[2]

Additionally, cumulative buildout of the General Plan within the City Limits and the SOI/UGB could yield up to 1,185 new residential units, 341,159 square feet of new commercial space, 684,889 square feet of new industrial space, and 137,375 square feet of new office space within the City Limits and the Sphere of Influence. This reflects the maximum level of additional new development (beyond the General Plan Buildout Scenario) that may occur within the existing City Limits and the SOI/UGB under General Plan buildout conditions, without taking into account development constraints identified in the proposed General Plan. This new cumulative growth would increase the City's population by approximately 2,619 residents.[3] The full development of the new commercial, office, and industrial uses shown in Table 2.0-4 would increase the employment opportunities in Sebastopol by approximately 2,632 employees.[4]

Depending on growth rates, the actual growth during the life of the General Plan, could be lower or higher, but would not exceed the theoretical buildout described in Chapter 2.0.

Given the historical and current population, housing, and employment trends, growth in the City, as well as the entire state, is inevitable. The primary factors that account for population growth are natural increase and net migration. The average annual birth rate for California is expected to be 20 births per 1,000 population. Additionally, California is expected to attract more than one third of the Country's immigrants. Other factors that affect growth include the cost of housing, the location of jobs, the economy, the climate, and also, transportation. While these factors would likely result in growth in Sebastopol during the planning period of the proposed General Plan, growth will continue to occur based primarily on the demand of the housing market and demand for new commercial, industrial, and other non-residential uses. As future development occurs under the proposed General Plan, new roads, infrastructure, and services would be necessary to serve the development and this infrastructure would accommodate planned growth. However, growth under the proposed General Plan would remain within the general growth levels projected statewide and would not be anticipated to exceed any applicable growth projections or limitations that have been adopted to avoid an environmental effect. The proposed General Plan is intended to accommodate the City's fair share of statewide housing needs, which are allocated by the Association of Bay Area Governments, based on regional numbers provided by the California Department of Housing and Community Development, on a regular basis (every five to eight years).

The proposed General Plan includes policies and actions that mitigate environmental impacts associated with growth, such as air quality, noise, traffic, water supply, and water quality effects.

[2] Assumes one employee generated for: every 350 square feet of commercial space, every 295 square feet of office space, and every 575 square feet of industrial space.

[3] Based on the 2013 California Department of Finance estimate of 2.21 persons per household in Sebastopol.

[4] Assumes one employee generated for: every 350 square feet of commercial space, every 295 square feet of office space, and every 575 square feet of industrial space.

Additionally, this Draft EIR includes mitigation measures, where appropriate, to reduce or eliminate potentially significant impacts associated with specific environmental issues associated with growth. Chapters 3.1 through 3.9 and 3.11 through 4.0 provide a discussion of environmental effects associated with development allowed under the proposed General Plan.

With implementation of General Plan policies and actions intended to guide growth to appropriate areas and provide services necessary to accommodate growth, the land uses allowed under the proposed General Plan, the infrastructure anticipated to accommodate proposed land uses, and the goal and policy framework would not induce growth that would exceed adopted thresholds. Therefore, population and housing growth associated with the proposed General Plan would result a **less than significant** impact.

Impact 3.10-4: Potential to displace substantial numbers of people or existing housing (Less than Significant)

While the proposed General Plan does not directly propose any development, the proposed General Plan would allow for the development and redevelopment of lands within the City that are currently occupied by people and existing housing units. Residences may be removed as part of future development activities allowed under the proposed General Plan; however, the proposed General Plan would accommodate approximately 750 to 1,185 new housing units which would provide adequate replacement housing opportunities for any displacement that occurs. While the proposed General Plan may result in development that would remove residences, development allowed under the General Plan would result in an increase in the total number of residences and provide housing opportunities for persons that may be displaced as a result of development. This provision of replacement "housing opportunities" is essentially a self-mitigating aspect as a result of implementation of the proposed General Plan. Therefore, impacts of the proposed General Plan on the displacement of people or housing are considered **less than significant**.

SEBASTOPOL GENERAL PLAN UPDATE

Figure 3.10-1 City of Sebastopol General Plan Land Use Designations

Land Use Designation

- VDR - Very Low Density Residential
- LDR - Low Density Residential
- MDR -Medium Density Residential
- HDR - High Density Residential
- CD- Downton Core
- CG - General Commercial
- LI - Light Industrial
- OLI - Office/Light Industrial
- O - Office
- CF - Community Facility
- OS - Open Space
- PA - Park

Planning Boundaries

- City of Sebastopol
- Sphere of Influence
- Urban Growth Boundary

0 500 1,000 2,000
Feet

1:14,000

De Novo Planning Group
A Land Use Planning, Design, and Environmental Firm

Data sources: Sebas_Parcels04/s_140723; City of Santa Rosa GIS; Sonoma County GIS; USGS National Hydrography Data Set. Map date: July 23, 2014. Updated August 15, 2014.

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This section provides a discussion of the regulatory setting and a general description of existing noise sources in the City of Sebastopol. The analysis in this section was prepared with assistance from j.c. brennan & associates, Inc. No comments were received during the public review period or scoping meeting for the Notice of Preparation regarding this topic.

3.11.1 ENVIRONMENTAL SETTING

KEY TERMS

Acoustics	The science of sound.
Ambient Noise	The distinctive acoustical characteristics of a given area consisting of all noise sources audible at that location. In many cases, the term ambient is used to describe an existing or pre-project condition such as the setting in an environmental noise study.
Attenuation	The reduction of noise.
A-Weighting	A frequency-response adjustment of a sound level meter that conditions the output signal to approximate human response.
Decibel or dB	Fundamental unit of sound, defined as ten times the logarithm of the ratio of the sound pressure squared over the reference pressure squared.
CNEL	Community Noise Equivalent Level. Defined as the 24-hour average noise level with noise occurring during evening hours (7 - 10 p.m.) weighted by a factor of three and nighttime hours weighted by a factor of 10 prior to averaging.
Frequency	The measure of the rapidity of alterations of a periodic acoustic signal, expressed in cycles per second or Hertz.
Impulsive	Sound of short duration, usually less than one second, with an abrupt onset and rapid decay.
Ldn	Day/Night Average Sound Level. Similar to CNEL but with no evening weighting.
Leq	Equivalent or energy-averaged sound level.
Lmax	The highest root-mean-square (RMS) sound level measured over a given period of time.
L(n)	The sound level exceeded a described percentile over a measurement period. For instance, an hourly L50 is the sound level exceeded 50 percent of the time during the one-hour period.
Loudness	A subjective term for the sensation of the magnitude of sound.
Noise	Unwanted sound.
SEL	A rating, in decibels, of a discrete event, such as an aircraft flyover or train passby, that compresses the total sound energy into a one-second event

FUNDAMENTALS OF ACOUSTICS

Acoustics is the science of sound. Sound may be thought of as mechanical energy of a vibrating object transmitted by pressure waves through a medium to human (or animal) ears. If the pressure variations occur frequently enough (at least 20 times per second), then they can be heard and are called sound. The number of pressure variations per second is called the frequency of sound, and is expressed as cycles per second or Hertz (Hz).

Noise is a subjective reaction to different types of sounds. Noise is typically defined as (airborne) sound that is loud, unpleasant, unexpected or undesired, and may therefore be classified as a more specific group of sounds. Perceptions of sound and noise are highly subjective from person to person.

Measuring sound directly in terms of pressure would require a very large and awkward range of numbers. To avoid this, the decibel scale was devised. The decibel scale uses the hearing threshold (20 micropascals), as a point of reference, defined as 0 dB. Other sound pressures are then compared to this reference pressure, and the logarithm is taken to keep the numbers in a practical range. The decibel scale allows a million-fold increase in pressure to be expressed as 120 dB, and changes in levels (dB) correspond closely to human perception of relative loudness.

The perceived loudness of sounds is dependent upon many factors, including sound pressure level and frequency content. However, within the usual range of environmental noise levels, perception of loudness is relatively predictable, and can be approximated by A-weighted sound levels. There is a strong correlation between A-weighted sound levels (expressed as dBA) and the way the human ear perceives sound. For this reason, the A-weighted sound level has become the standard tool of environmental noise assessment. All noise levels reported in this section are in terms of A-weighted levels, but are expressed as dB, unless otherwise noted.

The decibel scale is logarithmic, not linear. In other words, two sound levels 10 dB apart differ in acoustic energy by a factor of 10. When the standard logarithmic decibel is A-weighted, an increase of 10 dBA is generally perceived as a doubling in loudness. For example, a 70 dBA sound is half as loud as an 80 dBA sound, and twice as loud as a 60 dBA sound.

Community noise is commonly described in terms of the ambient noise level, which is defined as the all-encompassing noise level associated with a given environment. A common statistical tool to measure the ambient noise level is the average, or equivalent, sound level (Leq), which corresponds to a steady-state A weighted sound level containing the same total energy as a time varying signal over a given time period (usually one hour). The Leq is the foundation of the composite noise descriptor, Ldn, and shows very good correlation with community response to noise.

The day/night average level (Ldn) is based upon the average noise level over a 24-hour day, with a +10 decibel weighing applied to noise occurring during nighttime (10:00 p.m. to 7:00 a.m.) hours. The nighttime penalty is based upon the assumption that people react to nighttime noise exposures as though they were twice as loud as daytime exposures. Because Ldn represents a 24-hour average, it tends to disguise short-term variations in the noise environment. CNEL is similar to Ldn, but includes a +3 dB

penalty for evening noise. Table 3.11-1 lists several examples of the noise levels associated with common situations.

TABLE 3.11-1: TYPICAL NOISE LEVELS

COMMON OUTDOOR ACTIVITIES	NOISE LEVEL (DBA)	COMMON INDOOR ACTIVITIES
	--110--	Rock Band
Jet Fly-over at 300 m (1,000 ft)	--100--	
Gas Lawn Mower at 1 m (3 ft)	--90--	
Diesel Truck at 15 m (50 ft), at 80 km/hr (50 mph)	--80--	Food Blender at 1 m (3 ft) Garbage Disposal at 1 m (3 ft)
Noisy Urban Area, Daytime Gas Lawn Mower, 30 m (100 ft)	--70--	Vacuum Cleaner at 3 m (10 ft)
Commercial Area Heavy Traffic at 90 m (300 ft)	--60--	Normal Speech at 1 m (3 ft)
Quiet Urban Daytime	--50--	Large Business Office Dishwasher in Next Room
Quiet Urban Nighttime	--40--	Theater, Large Conference Room (Background)
Quiet Suburban Nighttime	--30--	Library
Quiet Rural Nighttime	--20--	Bedroom at Night, Concert Hall (Background)
	--10--	Broadcast/Recording Studio
Lowest Threshold of Human Hearing	--0--	Lowest Threshold of Human Hearing

SOURCE: CALTRANS, TECHNICAL NOISE SUPPLEMENT, TRAFFIC NOISE ANALYSIS PROTOCOL. NOVEMBER 2009.

EFFECTS OF NOISE ON PEOPLE

The effects of noise on people can be placed in three categories:

- Subjective effects of annoyance, nuisance, and dissatisfaction;
- Interference with activities such as speech, sleep, and learning; and
- Physiological effects such as hearing loss or sudden startling.

Environmental noise typically produces effects in the first two categories. Workers in industrial plants can experience noise in the last category. There is no completely satisfactory way to measure the subjective effects of noise or the corresponding reactions of annoyance and dissatisfaction. A wide variation in individual thresholds of annoyance exists and different tolerances to noise tend to develop based on an individual's past experiences with noise.

Thus, an important way of predicting a human reaction to a new noise environment is the way it compares to the existing environment to which one has adapted: the so-called ambient noise level. In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise will be judged by those hearing it.

With regard to increases in A-weighted noise level, the following relationships occur:

- Except in carefully controlled laboratory experiments, a change of 1 dBA cannot be perceived;
- Outside of the laboratory, a 3 dBA change is considered a just-perceivable difference;
- A change in level of at least 5 dBA is required before any noticeable change in human response would be expected; and
- A 10 dBA change is subjectively heard as approximately a doubling in loudness, and can cause an adverse response.

Stationary point sources of noise – including stationary mobile sources such as idling vehicles – attenuate (lessen) at a rate of approximately 6 dB per doubling of distance from the source, depending on environmental conditions (i.e. atmospheric conditions and either vegetative or manufactured noise barriers, etc.). Widely distributed noises, such as a large industrial facility spread over many acres, or a street with moving vehicles, would typically attenuate at a lower rate.

EXISTING NOISE LEVELS

Traffic Noise Levels

The FHWA Highway Traffic Noise Prediction Model (FHWA-RD 77-108) was used to develop Ldn (24-hour average) noise contours for all highways and major roadways in the General Plan study area. The model is based upon the CALVENO noise emission factors for automobiles, medium trucks, and heavy trucks, with consideration given to vehicle volume, speed, roadway configuration, distance to the receiver and the acoustical characteristics of the site. The FHWA Model predicts hourly Leq values for free-flowing traffic conditions, and is generally considered to be accurate within 1.5 dB. To predict Ldn values, it is necessary to determine the hourly distribution of traffic for a typical 24-hour period.

Existing traffic volumes were obtained from the traffic modeling performed for the General Plan study area. Day/night traffic distributions were based upon continuous hourly noise measurement data and j.c. brennan & associates, Inc. file data for similar roadways. Caltrans vehicle truck counts were obtained for SR 12 and SR 116. Using these data sources and the FHWA traffic noise prediction methodology, traffic noise levels were calculated for existing conditions. Table 3.11-2 shows the results of this analysis.

Traffic noise levels are predicted at the sensitive receptors located at the closest typical setback distance along each project-area roadway segments. In some locations sensitive receptors may be located at distances which vary from the assumed calculation distance and may experience shielding from intervening barriers or sound walls. However, the traffic noise analysis is believed to be representative of the majority of sensitive receptors located closest to the project-area roadway segments analyzed in this report.

The actual distances to noise level contours may vary from the distances predicted by the FHWA model due to roadway curvature, grade, shielding from local topography or structures, elevated roadways, or elevated receivers. The distances reported in Table 3.11-2 are generally considered to be conservative estimates of noise exposure along roadways in the City of Sebastopol.

TABLE 3.11-2: PREDICTED EXISTING TRAFFIC NOISE LEVELS

ROADWAY	SEGMENT	NOISE LEVEL AT CLOSEST RECEPTORS (DB, LDN)[1]	DISTANCES TO TRAFFIC NOISE CONTOURS, LDN (FEET)		
			70 DB	65 DB	60 DB
SR 12 / Sebastopol Ave.	East of Main	68.4	39	84	181
Bodega Ave.	West of Main	64.9	23	49	105
Bodega Ave.	West of Ragle	65.8	26	56	121
SR 116	North of Covert	66.7	30	65	140
SR 116	Covert to McKinley	67.4	33	72	155
SR 116 South / Main St.	McKinley to Bodega	65.5	25	54	117
SR 116 South / Main St.	Bodega to SR 116 North	65.9	27	58	124
SR 116 North / Petaluma Ave.	Main Street to Sebastopol Ave.	65.1	23	50	109
SR 116 North / Petaluma Ave.	Sebastopol to SR 116 South	64.8	23	49	105
SR 116	Petaluma Ave. to Lynch Rd.	67.7	35	76	163
SR 116	South of Lynch Rd.	67.6	34	74	160

NOTES: DISTANCES TO TRAFFIC NOISE CONTOURS ARE MEASURED IN FEET FROM THE CENTERLINES OF THE ROADWAYS.

[1] *TRAFFIC NOISE LEVELS ARE PREDICTED AT THE CLOSEST SENSITIVE RECEPTORS*

SOURCE: W-TRANS TRANSPORTATION ENGINEERS, CALTRANS, J.C. BRENNAN & ASSOCIATES, INC., 2014.

Fixed Noise Sources

The production of noise is a result of many industrial processes, even when the best available noise control technology is applied. Noise exposures within industrial facilities are controlled by federal and state employee health and safety regulations (OSHA and Cal-OSHA), but exterior noise levels may exceed locally acceptable standards. Commercial, recreational and public service facility activities can also produce noise which affects adjacent sensitive land uses. These noise sources can be continuous and may contain tonal components which have a potential to annoy individuals who live nearby. In addition, noise generation from fixed noise sources may vary based upon climatic conditions, time of day and existing ambient noise levels.

In the City of Sebastopol, fixed noise sources typically include parking lots, loading docks, parks, schools, and other commercial/retail use noise sources (HVAC, exhaust fans, etc.)

From a land use planning perspective, fixed-source noise control issues focus upon two goals:

1. To prevent the introduction of new noise-producing uses in noise-sensitive areas, and
2. To prevent encroachment of noise sensitive uses upon existing noise-producing facilities.

The first goal can be achieved by applying noise level performance standards to proposed new noise-producing uses. The second goal can be met by requiring that new noise-sensitive uses in near proximity

to noise-producing facilities include mitigation measures that would ensure compliance with noise performance standards.

Fixed noise sources which are typically of concern include but are not limited to the following:

- HVAC Systems
- Pump Stations
- Steam Valves
- Generators
- Air Compressors
- Conveyor Systems
- Pile Drivers
- Drill Rigs
- Welders
- Outdoor Speakers
- Chippers
- Loading Docks
- Cooling Towers/Evaporative Condensers
- Lift Stations
- Steam Turbines
- Fans
- Heavy Equipment
- Transformers
- Grinders
- Gas or Diesel Motors
- Cutting Equipment
- Blowers
- Cutting Equipment
- Amplified music and voice

The types of uses which may typically produce the noise sources described above, include, but are not limited to: wood processing facilities, pump stations, industrial/agricultural facilities, trucking operations, tire shops, auto maintenance shops, metal fabricating shops, shopping centers, drive-up windows, car washes, loading docks, public works projects, batch plants, bottling and canning plants, recycling centers, electric generating stations, race tracks, landfills, sand and gravel operations, special events such as concerts, and athletic fields. Typical noise levels associated with various types of stationary noise sources are shown in Table 3.11-3.

TABLE 3.11-3: TYPICAL STATIONARY SOURCE NOISE LEVELS

USE	NOISE LEVEL AT 100 FEET, LEQ[1]	DISTANCE TO NOISE CONTOURS, FEET			
		50 DB LEQ (NO SHIELDING)	45 DB LEQ (NO SHIELDING)	50 DB LEQ (WITH 5 DB SHIELDING)	45 DB LEQ (WITH 5 DB SHIELDING)
Auto Body Shop	56 dB	200	355	112	200
Auto Repair (Light)	53 dB	141	251	79	141
Busy Parking Lot	54 dB	158	281	89	158
Cabinet Shop	62 dB	398	708	224	398
Car Wash	63 dB	446	792	251	446
Cooling Tower	69 dB	889	1,581	500	889
Loading Dock	66 dB	596	1,059	335	596
Lumber Yard	68 dB	794	1,413	447	794
Maintenance Yard	68 dB	794	1,413	447	794
Outdoor Music Venue	90 dB	10,000	17,783	5,623	10,000
Paint Booth Exhaust	61 dB	355	631	200	355
Skate Park	60 dB	316	562	178	316
School Playground / Neighborhood Park	54 dB	158	281	89	158
Truck Circulation	48 dB	84	149	47	84
Vendor Deliveries	58 dB	251	446	141	251

[1] Analysis assumes a source-receiver distance of approximately 100 feet, no shielding, and flat topography. Actual noise levels will vary depending on site conditions and intensity of the use. This information is intended as a general rule only, and is not suitable for final site-specific noise studies.

Source: j.c. brennan & associates, Inc. 2014.

COMMUNITY NOISE SURVEY

A community noise survey was conducted to document ambient noise levels at various locations throughout the City. Short-term noise measurements were conducted at seven locations throughout the City on June 10th and 11th, 2014 during daytime and nighttime periods. In addition, three continuous 24-hour noise monitoring sites were also conducted to record day-night statistical noise level trends. The data collected included the hourly average (Leq), median (L50), and the maximum level (Lmax) during the measurement period. Noise monitoring sites and the measured noise levels at each site are summarized in Table 3.11-4 and Table 3.11-5. Figure 3.11-1 shows the locations of the noise monitoring sites.

Community noise monitoring equipment included Larson Davis Laboratories (LDL) Model 820 precision integrating sound level meters equipped with LDL ½" microphones. The measurement systems were calibrated using a LDL Model CAL200 acoustical calibrator before and after testing. The measurement equipment meets all of the pertinent requirements of the American National Standards Institute (ANSI) for Type 1 (precision) sound level meters.

TABLE 3.11-4: EXISTING CONTINUOUS 24-HOUR AMBIENT NOISE MONITORING RESULTS

SITE	LOCATION	LDN (DBA)	MEASURED HOURLY NOISE LEVELS, DBA LOW-HIGH (AVERAGE)					
			DAYTIME (7:00 AM - 10:00 PM)			NIGHTTIME (10:00 PM – 7:00 AM)		
			LEQ	L50	LMAX	LEQ	L50	LMAX
A	510 Lyding Avenue & Healdsburg Ave., 60 ft to centerline.	64	59-65 (63)	57-64 (62)	73-83 (77)	46-61 (55)	27-57 (39)	66-81 (72)
B	101 Nelson Way & Bodega Ave., 60 ft to centerline.	64	59-64 (63)	55-63 (61)	76-85 (80)	47-60 (55)	26-55 (39)	65-80 (72)
C	554 Petaluma Ave., 45 ft to centerline.	66	59-71 (65)	51-64 (61)	76-101 (83)	47-62 (56)	35-53 (41)	70-82 (74)

SOURCE – J.C. BRENNAN & ASSOCIATES, INC. – 2014

TABLE 3.11-5: EXISTING SHORT-TERM COMMUNITY NOISE MONITORING RESULTS

SITE	LOCATION	TIME[1]	MEASURED SOUND LEVEL, DB			NOTES
			LEQ	L50	LMAX	
1	Community Center at Morris St.	12:20 p.m.	50	50	58	Traffic on Morris St. is primary noise source. Wind steady 10-15 mph from SW.
		11:42 p.m.	43	41	52	Traffic on Morris St. is primary noise source.
2	Behind Lucky's, at Hill Dr.	12:45 p.m.	52	47	67	Fan noise from cooling tower steady, trash pick up 67 dB
		11:10 p.m.	45	44	52	Traffic, Fan noise from cooling tower, steady hum
3	Libby Park at Pleasant Hill Ave.	1:11 p.m.	55	54	64	Traffic 64 dB, kids playing, wind steady 10-15 mph from SW.
		10:59 p.m.	44	37	55	Traffic
4	Ives Park at Willow St.	1:54 p.m.	58	56	69	People recreating at pool, traffic on Willow St.
		10:45 p.m.	40	36	50	Traffic
5	End of Jean Dr. (Cul-de-sac)	2:45 p.m.	50	48	62	Wind in trees, steady 10-15 mph from SW.
		11:30 p.m.	42	36	59	Wind in trees, steady 5-10 mph from SW.
6	Industrial Ave. at Barbara Dr.	2:38 p.m.	58	58	68	Background SR 12 traffic, forklift at Wine Secret 67 dB
		10:15 p.m.	52	50	64	Fan at Wine Secret steady 50-53 dB, Motor/Compressor starts 64 dB
7	Skate Garden Park at 440 Flynn St.	11:55 a.m.	51	51	60	Background Fan Noise 50 dB, Skateboards hit pavement 54 dB, traffic pass by 60 dB

1 - ALL COMMUNITY NOISE MEASUREMENT SITES HAVE A TEST DURATION OF 10:00 MINUTES.

SOURCE - J.C. BRENNAN & ASSOCIATES, INC. 2014.

The results of the community noise survey shown in Table 3.11-4 and 3.11-5 indicate that existing transportation (traffic) noise sources were the major contributor of noise observed during daytime hours, especially during vehicle passbys.

3.11.2 REGULATORY FRAMEWORK

FEDERAL

Federal Highway Administration (FHWA)

The FHWA has developed noise abatement criteria that are used for federally funded roadway projects or projects that require federal review. These criteria are discussed in detail in Title 23 Part 772 of the Federal Code of Regulations (23CFR772).

Environmental Protection Agency (EPA)

The EPA has identified the relationship between noise levels and human response. The EPA has determined that over a 24-hour period, an Leq of 70 dBA will result in some hearing loss. Interference with activity and annoyance will not occur if exterior levels are maintained at an Leq of 55 dBA and interior levels at or below 45 dBA. Although these levels are relevant for planning and design and useful for informational purposes, they are not land use planning criteria because they do not consider economic cost, technical feasibility, or the needs of the community.

The EPA has set 55 dBA Ldn as the basic goal for residential environments. However, other federal agencies, in consideration of their own program requirements and goals, as well as difficulty of actually achieving a goal of 55 dBA Ldn, have generally agreed on the 65 dBA Ldn level as being appropriate for residential uses. At 65 dBA Ldn activity interference is kept to a minimum, and annoyance levels are still low. It is also a level that can realistically be achieved.

Department of Housing and Urban Development (HUD). HUD was established in response to the Urban Development Act of 1965 (Public Law 90-448). HUD was tasked by the Housing and Urban Development Act of 1965 (Public Law 89-117) "to determine feasible methods of reducing the economic loss and hardships suffered by homeowners as a result of the depreciation in the value of their properties following the construction of airports in the vicinity of their homes."

HUD first issued formal requirements related specifically to noise in 1971 (HUD Circular 1390.2). These requirements contained standards for exterior noise levels along with policies for approving HUD-supported or assisted housing projects in high noise areas. In general, these requirements established the following three zones:

- 65 dBA Ldn or less - an acceptable zone where all projects could be approved.
- Exceeding 65 dBA Ldn but not exceeding 75 dBA Ldn - a normally unacceptable zone where mitigation measures would be required and each project would have to be individually evaluated for approval or denial. These measures must provide 5 dBA of attenuation above the attenuation provided by standard construction required in a 65 to 70 dBA Ldn area and 10 dBA of attenuation in a 70 to 75 dBA Ldn area.
- Exceeding 75 dBA Ldn - an unacceptable zone in which projects would not, as a rule, be approved.

HUD's regulations do not include interior noise standards. Rather a goal of 45 dBA Ldn is set forth and attenuation requirements are geared towards achieving that goal. HUD assumes that using standard construction techniques, any building will provide sufficient attenuation so that if the exterior level is 65 dBA Ldn or less, the interior level will be 45 dBA Ldn or less. Thus, structural attenuation is assumed at 20 dBA. However, HUD regulations were promulgated solely for residential development requiring government funding and are not related to the operation of schools or churches.

The federal government regulates occupational noise exposure common in the workplace through the Occupational Health and Safety Administration (OSHA) under the EPA. Noise exposure of this type is dependent on work conditions and is addressed through a facility's or construction contractor's health

and safety plan. With the exception of construction workers involved in facility construction, occupational noise is irrelevant to this study and is not addressed further in this document.

STATE

California Department of Transportation (Caltrans)

Caltrans has adopted policy and guidelines relating to traffic noise as outlined in the Traffic Noise Analysis Protocol (Caltrans 2011). The noise abatement criteria specified in the protocol are the same as those specified by FHWA.

Governor's Office of Planning and Research (OPR)

OPR has developed guidelines for the preparation of general plans (Office of Planning and Research, 2003). The guidelines include land use compatibility guidelines for noise exposure.

LOCAL

Existing City Noise Thresholds

The City of Sebastopol General Plan Safety Element establishes goals and policies, as well as criteria for evaluating the compatibility of individual land uses with respect to noise exposure. The intent is to provide guidance for determining noise impacts due to, and upon proposed projects. The existing Goals, Policies, and Programs of the City's General Plan Noise Element are provided below:

Goal 10 **Ensure the compatibility of new development with existing and future noise environment.**

Goal 11 **Prevent land uses which increase the existing noise level above established acceptable standards.**

Goal 12 **Reduce noise to acceptable levels where it now exceeds those standards.**

Policies and Implementation Programs to Reduce Noise Level

P.40 Maintain Noise and Land Use Compatibility Standards: Encourage the maintenance of the noise and land use compatibility standards indicated in Table 3 (Table 3.11-6). The normally acceptable standards for outdoor noise are summarized below (noise measurements in Ldn)

Program 40.1: Review all land use and development proposals for compliance with the Noise and Land Use Compatibility Standards.

Responsibility: Planning Department

Program 40.2: Require a standard of Ldn 45 dB for indoor noise for all new residential development, including hotels and motels.

Responsibility: Planning Department

Program 40.3: Use the 'Normally Acceptable' standards in Table 3 (Table 3.11-6) to determine the need for noise studies and require new developments to provide noise attenuation features as a condition of approving new projects.

Responsibility: Planning Department

Program 40.4: Require an acoustical study for all new residential projects with a future Ldn noise exposure of 60 dB or greater as shown on Map 7. The study shall describe how the project will comply with the Noise and Land Use Compatibility Standards.

Responsibility: Planning Department

Program 40.5: Require post-construction testing and sign-off by an acoustical engineer for residential and office projects exposed to a Ldn in excess of 65 dB to ensure compliance with applicable exterior and interior standards contained in the Noise and Land Use Compatibility Standards.

Responsibility: Planning and Building Departments

Program 40.6: Continue to implement the Noise Ordinance which limits construction noise.

Responsibility: Planning and Building Departments

Program 40.7: Require acoustical studies and mitigation measures for new development and roadway improvements which affect noise sensitive uses such as schools, hospitals, libraries and convalescent homes.

Responsibility: Planning Department

P.41 Reduce Outdoor Noise in Existing Residential Areas: Reduce outdoor noise in existing residential areas where economically and aesthetically feasible.

Program 41.1: Verify projected noise levels with noise monitors at locations adjacent to residential and other noise sensitive areas where traffic volumes increase by over 50 percent from baseline noise data.

Responsibility: Planning and Public Works Department

Program 41.2: Consider and carefully evaluate the noise impacts of all street, highway and other transportation projects.

Responsibility: Planning and Public Works Department

Program 41.3: Continue to seek State and Federal funding to construct noise barrier where impact of noise can be significantly reduced.

Responsibility: Planning Department

Program 41.4: Establish a standard for new commercial development adjacent to residential areas which does not permit an increase in noise levels in residential areas of more than 3 dB Ldn, or creates noise impacts which would increase noise levels to more than 65 dB Ldn at the boundary of a residential area, whichever is the more restrictive standard.

Responsibility: Planning Department

P.42 Noise Standards Applied to Remodel Projects: Noise standards shall be applied to residential remodel projects, where the remodeling is substantial.

Program 42.1: Review all building permit applications for compliance with the applicable noise standards, and require as necessary, the appropriate noise mitigation features.

Responsibility: Planning and Building Departments

P.43 Protect Existing Noise Environment in Residential Areas.

Program 43.1: Require mitigation for projects that would cause the following criteria to be exceeded or would generate noise which could cause significant adverse community response:

- Cause the Ldn in existing residential areas to increase by 3 dB or more and exceed a Ldn of 55 dB
- Cause the Ldn in existing residential areas to increase by 3 dB or more if the Ldn currently exceeds 55 dB

(Noise: a 3 dB increase would result in traffic increased by 100 percent over existing levels. It is recognized that there are locations where the outdoor criteria of a Ldn of 55 dB cannot be reasonably and feasibly achieved. These situations will be evaluated on a case-by-case basis to determine the appropriate level of mitigation.)

Program 43.2: Consider development a comprehensive noise ordinance including noise standards for home power tools, animals such as barking dogs, and industrial uses.

Responsibility: Planning Department

P.44 Reduce Noise in Residential Areas: Reduce noise levels in existing residential

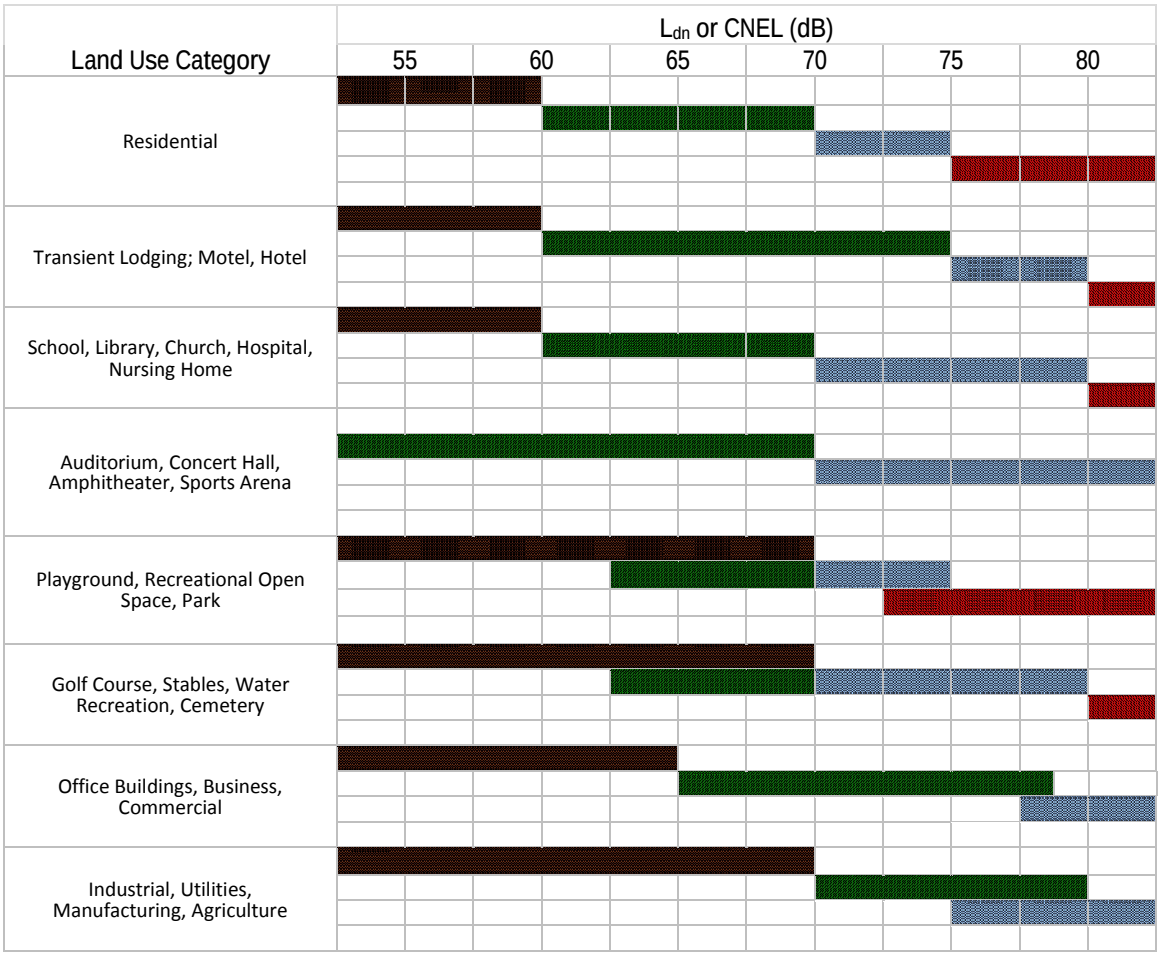
Program 44.1: Restrict truck traffic to designated routes.

Responsibility: Planning and Public Works Department

Program 44.2: Enforce California Vehicle Code § 23130, 23130.5, 27150, 27151, and 38275. These sections pertain to the allowable noise emission of vehicles operated on public streets.

Responsibility: Police Department

TABLE 3.11-6: CITY OF SEBASTOPOL NOISE AND LAND USE COMPATIBILITY STANDARDS



	Normally Acceptable	Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.
	Conditionally Acceptable	New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features are included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.
	Normally Unacceptable	New construction or development should be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirement must be made and needed noise insulation features included in the design.
	Clearly Unacceptable	New construction or development generally should not be undertaken.

SOURCE: State of California, Governor's Office of Planning and Research, 2003. *General Plan Guidelines*.

FUNDAMENTALS OF VIBRATION

Ground vibration consists of rapidly fluctuating motions or waves with an average motion of zero. Several methods are typically used to quantify the amplitude of vibration including Peak Particle Velocity (PPV) and Root Mean Square (RMS) velocity. PPV is defined as the maximum instantaneous positive or negative peak of the vibration wave. RMS velocity is defined as the average of the squared amplitude of the signal. PPV is normally used to evaluate structural damage, PPV and RMS vibration velocity amplitudes are used to evaluate human response to vibration.

Low-level vibrations can cause irritating secondary vibration, such as a slight rattling of windows, doors or stacked dishes. The rattling sound can give rise to exaggerated vibration complaints, even though there is very little risk of actual structural damage. In high noise environments, which are more prevalent where ground-borne vibration approaches perceptible levels, this rattling phenomenon may also be produced by loud airborne environmental noise causing induced vibration in exterior doors and windows.

In suburban environments, such as Sebastopol, sources of ground-borne vibration include construction activities and heavy trucks and buses.

CONSTRUCTION VIBRATION

Construction activities can cause vibration that varies in intensity depending on several factors. The use of pile driving and vibratory compaction equipment typically generates the highest construction related ground-borne vibration levels. Because of the impulsive nature of such activities, the use of the peak particle velocity descriptor (PPV) has been routinely used to measure and assess ground-borne vibration and almost exclusively to assess the potential of vibration to induce structural damage and the degree of annoyance for humans.

The two primary concerns with construction-induced vibration, the potential to damage a structure and the potential to interfere with the enjoyment of life are evaluated against different vibration limits. Studies have shown that the threshold of perception for average persons is in the range of 0.2 to 0.3 mm/sec (0.008 to 0.012 inches/sec), PPV. Human perception to vibration varies with the individual and is a function of physical setting and the type of vibration. Persons exposed to elevated ambient vibration levels such as people in an urban environment may tolerate a higher vibration level.

Structural damage can be classified as cosmetic only, such as minor cracking of building elements, or may threaten the integrity of the building. Safe vibration limits that can be applied to assess the potential for damaging a structure vary by researcher and there is no general consensus as to what amount of vibration may pose a threat for structural damage to the building. Construction-induced vibration that can be detrimental to a building is very rare and has only been observed in instances where the structure is at a high state of disrepair and the construction activity (e.g., impact pile driving) occurs immediately adjacent to the structure.

Table 3.11-7 displays continuous vibration impacts on human annoyance and on buildings. As discussed previously, annoyance is a subjective measure and vibrations may be found to be annoying at much lower

levels than those shown, depending on the level of activity or the sensitivity of the individual. To sensitive individuals, vibrations approaching the threshold of perception can be annoying.

TABLE 3.11-7: REACTION OF PEOPLE AND DAMAGE TO BUILDINGS FORM CONTINUOUS VIBRATION LEVELS

VELOCITY LEVEL, PPV (IN/SEC)	HUMAN REACTION	EFFECT ON BUILDINGS
0.01	Barely perceptible	No effect
0.04	Distinctly perceptible	Vibration unlikely to cause damage of any type to any structure
0.08	Distinctly perceptible to strongly perceptible	Recommended upper level of the vibration to which ruins and ancient monuments should be subjected
0.1	Strongly perceptible	Virtually no risk of damage to normal buildings
0.3	Strongly perceptible to severe	Threshold at which there is a risk of damage to older residential dwellings such as plastered walls or ceilings
0.5	Severe - Vibrations considered unpleasant	Threshold at which there is a risk of damage to newer residential structures

SOURCE: TRANSPORTATION- AND CONSTRUCTION-INDUCED VIBRATION GUIDANCE MANUAL, CALIFORNIA DEPARTMENT OF TRANSPORTATION, JUNE 2004.

Typical background vibration levels in residential areas are usually 50 VdB or lower, well below the threshold of perception for most humans. Perceivable vibration levels inside residences are attributed to the operation of heating and air conditioning systems, door slams, and foot traffic. Construction activities (in particular, pile driving for taller buildings in certain soil conditions), train operations, and street traffic are some of the most common external sources of perceptible vibration inside residences. Table 3.11-8 identifies some common sources of vibration, corresponding VdB levels, and associated human perception and potential for structural damage.

TABLE 3.11-8: LEVELS OF GROUNDBORNE VIBRATION

HUMAN/STRUCTURAL RESPONSE	VELOCITY LEVEL, VDB	TYPICAL EVENTS (AT 50 FEET)
Threshold, minor cosmetic damage	100	Blasting, pile driving, vibratory compaction equipment, heavy tracked vehicles (bulldozers, cranes, drill rigs)
Difficulty with tasks such as reading a video or computer screen	90	Commuter rail, upper range
Residential annoyance, infrequent	80	Rapid transit, upper range
Residential annoyance, occasional		Commuter rail, typical bus or truck over bump or on rough roads
Residential annoyance, frequent	70	Rapid transit, typical
Approximate human threshold of perception to vibration	60	Buses, trucks and heavy street traffic Background vibration in residential settings in the absence of activity
Lower limit for equipment ultra-sensitive to vibration	50	

SOURCE: TRANSIT NOISE AND VIBRATION IMPACT ASSESSMENT, US DEPARTMENT OF TRANSPORTATION FEDERAL TRANSIT ADMINISTRATION, MAY 2006.

One of the problems with developing suitable criteria for ground-borne vibration is the limited research into human response to vibration and more importantly human annoyance inside buildings. The U.S. Department of Transportation, Federal Transit Administration has developed rational vibration limits that can be used to evaluate human annoyance to ground-borne vibration. These criteria are primarily based on experience with passenger train operations, such as rapid transit and commuter rail systems. The main difference between passenger and freight operations is the time duration of individual events; a passenger train lasts a few seconds whereas a long freight train may last several minutes, depending on speed and length.

SIGNIFICANT CHANGE CRITERIA

Generally, a project may have a significant effect on the environment if it will substantially increase the ambient noise levels for adjoining areas or expose people to severe noise levels. In practice, more specific professional standards have been developed. These standards state that a noise impact may be considered significant if it would generate noise that would conflict with local project criteria or ordinances, or substantially increase noise levels at noise sensitive land uses. The potential increase in traffic noise from the project is a factor in determining significance. Research into the human perception of changes in sound level indicates the following:

- A 3-dB change is barely perceptible,
- A 5-dB change is clearly perceptible, and
- A 10-dB change is perceived as being twice or half as loud.

A limitation of using a single noise level increase value to evaluate noise impacts is that it fails to account for pre-project-noise conditions. Table 3.11-9 is based upon recommendations made by the Federal Interagency Committee on Noise (FICON) to provide guidance in the assessment of changes in ambient noise levels resulting from aircraft operations. The recommendations are based upon studies that relate aircraft noise levels to the percentage of persons highly annoyed by the noise. Although the FICON recommendations were specifically developed to assess aircraft noise impacts, it has been accepted that they are applicable to all sources of noise described in terms of cumulative noise exposure metrics such as the Ldn.

TABLE 3.11-9: SIGNIFICANCE OF CHANGES IN NOISE EXPOSURE

Ambient Noise Level Without Project, L_{dn}	Increase Required for Significant Impact
<60 dB	+5.0 dB or more
60-65 dB	+3.0 dB or more
>65 dB	+1.5 dB or more

SOURCE: FEDERAL INTERAGENCY COMMITTEE ON NOISE (FICON)

Based on the Table 3.11-9 data, an increase in traffic noise levels of 5 dB or more would be significant where the pre-project noise level is less than 60 dB Ldn. Extending this concept to higher noise levels, an increase in the traffic noise level of 1.5 dB or more may be significant where the pre-project traffic noise level exceeds 65 dB Ldn. The rationale for the Table 3.11-9 criteria is that, as ambient noise levels increase, a smaller increase in noise resulting from a project is sufficient to cause annoyance.

3.11.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the project will have a significant impact related to noise if it will:

- Expose people to or generate noise levels in excess of established in the local general plan, noise ordinance, or applicable standards of other agencies;
    - A significant noise impact would be identified if the project would expose persons to or generate noise levels that would exceed applicable noise standards presented in the General Plan or Municipal Code (see Table 3.11-6). For single family residences the noise exposure is considered "normally acceptable" up to 60 dBA L_{dn} for exterior uses. For interior uses, a significant noise impact would be identified if the project would expose persons to or generate noise levels that would exceed 45 dBA L_{dn}.
- Expose people to or generate excessive ground-borne vibration or ground-borne noise levels;
    - A significant vibration impact would be identified if the project would expose persons to excessive vibration levels. Groundborne vibration levels from construction activities exceeding those specified in the Caltrans Guidance Manual would result in a significant impact.
- Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project;

  - A significant permanent increase would be identified if noise generated by the project would substantially increase noise levels at sensitive receivers in the vicinity. Following standard practice, a substantial increase would occur if existing plus project noise levels would exceed the FICON significant increase thresholds outlined in Table 3.11-9.

- Result in a substantial temporary or periodic increase in the ambient noise levels in the project vicinity above levels existing without the project;
  - A significant temporary increase would be identified if noise generated by the project would substantially increase noise levels at sensitive receivers in the vicinity. Following standard practice, a substantial increase would occur if existing plus project noise levels would exceed the FICON significant increase thresholds outlined in Table 3.11-9. It should be noted that normal construction activities would be exempt from the requirement if performed according to the City's restrictions on hours/days of construction and best practice guidelines.

- Where projects within an area covered by an airport land use plan or within two miles of a public airport or public use airport when such an airport land use plan has not been adopted, or within the vicinity of a private airstrip, expose people residing or working in the project area to excessive aircraft noise levels; or
  - This guideline is not applicable because the project is not located within an airport land use plan or within two miles of a public airport or public use airport. Therefore, this checklist item is not carried forward for further analysis.

- For a project within the vicinity of a private airstrip, expose people residing or working in the project area to excessive noise levels.
  - This guideline is not applicable because the project is not located within the vicinity of a private airstrip. Therefore, this checklist item is not carried forward for further analysis.

IMPACTS AND MITIGATION MEASURES

Impact 3.11-1: Traffic Noise Sources (Significant and Unavoidable)

The FHWA Highway Traffic Noise Prediction Model (FHWA-RD 77-108) was used to develop Ldn (24-hour average) noise contours for all highways and major roadways in the General Plan study area. The model is based upon the CALVENO noise emission factors for automobiles, medium trucks, and heavy trucks, with consideration given to vehicle volume, speed, roadway configuration, distance to the receiver and the acoustical characteristics of the site. The FHWA Model predicts hourly Leq values for free-flowing traffic conditions, and is generally considered to be accurate within 1.5 dB. To predict Ldn values, it is necessary to determine the hourly distribution of traffic for a typical 24-hour period.

Existing traffic volumes were obtained from the traffic modeling performed for the General Plan study area. Day/night traffic distributions were based upon continuous hourly noise measurement data and j.c. brennan & associates, Inc. file data for similar roadways. Caltrans vehicle truck counts were obtained for SR 12 and SR 116. Using these data sources and the FHWA traffic noise prediction methodology, traffic noise levels were calculated for existing and future General Plan buildout conditions. Tables 3.11-10 and 3.11-11 shows the results of this analysis.

Traffic noise levels are predicted at the sensitive receptors located at the closest typical setback distance along each project-area roadway segments. In some locations sensitive receptors may be located at distances which vary from the assumed calculation distance and may experience shielding from intervening barriers or sound walls. However, the traffic noise analysis is believed to be representative of the majority of sensitive receptors located closest to the project-area roadway segments analyzed in this report.

The actual distances to noise level contours may vary from the distances predicted by the FHWA model due to roadway curvature, grade, shielding from local topography or structures, elevated roadways, or elevated receivers. The distances reported in Tables 3.11-10 and 3.11-11 are generally considered to be conservative estimates of noise exposure along roadways in the City of Sebastopol.

TABLE 3.11-10: TRAFFIC NOISE LEVELS - GENERAL PLAN BUILDOUT TO CITY LIMITS VS. EXISTING NOISE LEVELS

Roadway	Segment	Noise Levels (Ldn, dB) at Sensitive Receptors[1]			Distance to General Plan Buildout to City Limits Traffic Noise Contours, feet[2]		
		Existing	Buildout to City Limits	Change (dB)	70 dB Ldn	65 dB Ldn	60 dB Ldn
SR 12 / Sebastopol Ave.	East of Main	68.4	69.2	0.8	44	96	206
Bodega Ave.	West of Main	64.9	65.8	0.9	26	56	121
Bodega Ave.	West Ragle	65.8	66.6	0.8	30	64	137
SR 116	North of Covert	66.7	67.6	0.9	35	75	161
SR 116	Covert to McKinley	67.4	68.6	1.2	40	86	186
SR 116 South / Main St.	McKinley to Bodega	65.5	66.8	1.2	30	66	141
SR 116 South / Main St.	Bodega to SR 116 North	65.9	66.9	1.0	31	67	145
SR 116 North / Petaluma Ave.	Main Street to Sebastopol Ave.	65.1	66.4	1.4	29	62	134
SR 116 North / Petaluma Ave.	Sebastopol to SR 116 South	64.8	66.1	1.3	28	59	128
SR 116	Petaluma Ave. to Lynch Rd.	67.7	68.8	1.1	41	89	192
SR 116	South of Lynch Rd.	67.6	68.5	0.9	40	85	183

Bold Underline *= Significant increase in noise.*

[1] TRAFFIC NOISE LEVELS ARE PREDICTED AT THE CLOSEST SENSITIVE RECEPTORS OR AT A DISTANCE OF 100 FEET IN COMMERCIAL/RETAIL AREAS.

[2] NOISE CONTOURS ARE MEASURED FROM ROADWAY CENTERLINES AND ACCOUNT FOR AREAS WHICH ARE PRIMARILY SHIELDED BY SOUND WALLS.

Source: W-trans Transportation Engineers, Caltrans, j.c. brennan & associates, Inc., 2016

TABLE 3.11-11: TRAFFIC NOISE LEVELS - GENERAL PLAN BUILDOUT TO PLANNING AREA VS. EXISTING NOISE LEVELS

Roadway	Segment	Noise Levels (Ldn, dB) 100 Feet From Centerline[1]			Distance to General Plan Buildout to Planning Area Traffic Noise Contours, feet[2]		
		Existing	Buildout to Planning Area	Change (dB)	70 dB Ldn	65 dB Ldn	60 dB Ldn
SR 12 / Sebastopol Ave.	East of Main	68.4	69.4	1.0	46	99	213
Bodega Ave.	West of Main	64.9	66.0	1.1	27	58	126
Bodega Ave.	West Ragle	65.8	66.8	1.0	31	66	142
SR 116	North of Covert	66.7	67.8	1.1	36	77	166
SR 116	Covert to McKinley	67.4	68.8	1.4	42	90	194
SR 116 South / Main St.	McKinley to Bodega	65.5	67.0	**1.5**	32	68	147
SR 116 South / Main St.	Bodega to SR 116 North	65.9	67.3	1.4	33	71	153
SR 116 North / Petaluma Ave.	Main Street to Sebastopol Ave.	65.1	66.7	**1.7**	30	65	140
SR 116 North / Petaluma Ave.	Sebastopol to SR 116 South	64.8	66.7	**1.9**	30	65	140
SR 116	Petaluma Ave. to Lynch Rd.	67.7	69.3	**1.6**	45	96	208
SR 116	South of Lynch Rd.	67.6	68.9	1.3	42	90	195

***Bold Underline** = Significant increase in noise.*

[1] TRAFFIC NOISE LEVELS ARE PREDICTED AT THE CLOSEST SENSITIVE RECEPTORS OR AT A DISTANCE OF 100 FEET IN COMMERCIAL/RETAIL AREAS.

[2] NOISE CONTOURS ARE MEASURED FROM ROADWAY CENTERLINES AND ACCOUNT FOR AREAS WHICH ARE PRIMARILY SHIELDED BY SOUND WALLS.

Source: W-trans Transportation Engineers, Caltrans, j.c. brennan & associates, Inc., 2016

Table 3.11-10 shows the future noise levels and the increase in noise levels associated with traffic on the local roadway network under the proposed General Plan Update and under the buildout of the General Plan to City Limits.

Table 3.11-11 shows the future noise levels and the increase in noise levels associated with traffic on the local roadway network under the proposed General Plan Update and under the buildout of the General Plan to the City Planning Area.

Buildout of the General Plan may contribute to an exceedance of the City's transportation noise standards and/or result in significant increases in traffic noise levels at existing sensitive receptors. As indicated by Table 3.11-10, the related traffic noise level increases under buildout of the General Plan to City Limits are predicted to increase between 0.8 to 1.4 dB. Under Buildout of the General Plan to the City Planning Area, the increases would be 1.0 to 1.9 dB, as shown by Table 3.11-11.

The General Plan includes Policies N 1-1 through N 1-10, N 2-2, N2-4 and Actions N-1a, N-1c through N-1e, identified below, which are intended to minimize exposure to excessive noise, including noise associated with traffic. Specifically, Policies N 1-1 and N 1-2 support noise-compatible land uses in the vicinity of traffic noise sources and require that new development and infrastructure projects be reviewed for consistency with the noise standards established in Table N-1. The proposed General Plan standards, required under Policies N 1-2 and Action N 1c, for exposure to traffic noise shown in Table 3.11-10 and Table 3.11-11 meet or exceed the noise level standards of the adopted General Plan shown in Table 3.11-6. Policy N 1-3 and N 1-4 and Actions N 1a and N 1c would ensure that new development mitigates potential noise impacts through incorporating the noise control treatments necessary to achieve acceptable noise levels. Policy N 1-7 establishes standards to determine the significance of increased noise levels associated with transportation. Policy N 1-5 requires the City to review and update the City's noise ordinance to address excessive noise from noise-generating land uses and to address vehicle noise to the extent allowed by State law; Action N 1a would ensure that the municipal code, including the new noise ordinance, is consistent with the noise standards established in the General Plan. Policy N 1-9 would limit truck traffic to specific routes to reduce potential noise impacts on residential streets. Policy N 1-10 would encourage working with Caltrans to ensure that adequate noise studies are prepared and that noise mitigation measures are considered in State transportation projects. While implementation of the proposed policies and actions of the General Plan will reduce noise and land use compatibility impacts from vehicular traffic noise sources, and would ensure that new development is designed to include noise-attenuating features, some traffic noise impacts cannot be mitigated to a less-than-significant level due the proximity of sensitive receivers to major roadways, and because noise attenuation may not be feasible in all circumstances. There would be a significant increase in ambient noise levels with buildout of the General Plan to the City Planning Area as shown in Table 3.11-11. The proposed General Plan would have a ***significant and unavoidable*** impact relative to traffic noise.

2016 GENERAL PLAN POLICIES AND ACTIONS THAT MITIGATE POTENTIAL IMPACTS

Policies

Policy N 1-1: Ensure the noise compatibility of existing and future development when making land use planning decisions.

Policy N 1-2: Require development and infrastructure projects to be consistent with the Land Use Compatibility for Community Noise Environments standards indicated in Table N-1 to ensure acceptable noise levels for existing and future development.

Policy N 1-3: Require new development to mitigate excessive noise through best practices, including building location and orientation, building design features, placement of noise-generating equipment away from sensitive receptors, shielding of noise-generating equipment, placement of noise-tolerant features between noise sources and sensitive receptors, and use of noise-reducing materials.

Policy N 1-4: Require mixed-use projects to minimize noise exposure for indoor areas of nearby residential areas through the use of noise attenuating building materials, engineering techniques, and site design practices. Site design practices may include locating mechanical equipment, loading bays, parking lots, driveways, and trash enclosures away from residential uses, and providing noise-attenuating screening features on-site.

Policy N 1-5: Periodically review and update, as necessary, Chapter 8.25 (Noise Control Ordinance) of the Sebastopol Municipal Code in order to address issues such as excessive noise from commercial, industrial, and other noise generating land uses, as well as vehicle noise, to the extent allowed by State law.

Policy N 1-6: Require acoustical studies for new developments, projects seeking use permits related to activities that would increase noise levels, and transportation improvements that affect noise-sensitive uses such as schools, hospitals, libraries, group care facilities, convalescent homes, and residential areas.

Policy N 1-7: For projects that are required by the California Environmental Quality Act (CEQA) to analyze noise impacts, the following criteria shall be used to determine the significance of those impacts:

TRANSPORTATION NOISE SOURCES

- Where existing traffic noise levels are less than 60 dB Ldn at the outdoor activity areas of noise-sensitive uses, a +5 dB Ldn increase in roadway noise levels will be considered significant; and

- Where existing traffic noise levels range between 60 and 65 dB Ldn at the outdoor activity areas of noise-sensitive uses, a +3 dB Ldn increase in roadway noise levels will be considered significant; and

- Where existing traffic noise levels are greater than 65 dB Ldn at the outdoor activity areas of noise-sensitive uses, a + 1.5 dB Ldn increase in roadway noise levels will be considered significant.

Policy N 1-8: Support noise-compatible land uses along existing and future roadways, including County, State, and Federal routes.

Policy N 1-9: Local truck traffic, including loading and unloading, shall be limited to specific routes, times, and speeds appropriate to each zoning district.

Policy N 1-10: Work with Caltrans to ensure that adequate noise studies are prepared and locally-appropriate noise mitigation measures are implemented in State transportation projects that may result in increased noise levels in Sebastopol.

Policy N 2-2: Consider the potential for traffic noise reduction when exploring opportunities to improve traffic conditions in the Downtown. Circulation improvements that reduce vehicle speeds, incorporate quiet pavement technology, and enhance the pedestrian environment should be explored.

Policy N 2-4: The City may elect to allow new noise-sensitive land uses on a case by case basis in proximity to transportation and stationary sources in the Downtown that exceed the Land Use Compatibility Standards in Table N-1. Noise mitigation, including an acoustical analysis, shall be required to reduce interior space noise levels to 45 dB L_{dn}, or less, for sensitive receptors. Exterior noise levels shall be reduced to the extent feasible using building orientation, construction and design features; however ultimately, noise levels may exceed the noise standards identified in Table N-1.

Actions

Action N-1a: Update Chapter 8.25 and Title 17 of the Sebastopol Municipal Code to:

- *Ensure that the noise standards are consistent with this element, including Tables N-1 and N-2;*
- *Require new residential, mixed-use with a residential component, and other noise-sensitive development to be designed to minimize noise exposure to noise sensitive uses through incorporation of site planning and architectural techniques;*
- *Include regulations to reduce exposure to exterior periodic nuisance noise, including trash collection, street sweeping, and other noise-generating activities.*
- *Establish maximum interior noise levels for activities held at public and community buildings.*

Action N-1c: Review new development projects for compliance with the noise requirements established in this element, including the standards established in Tables N-1 and N-2. Where necessary, require mitigation measures to achieve the noise standards.

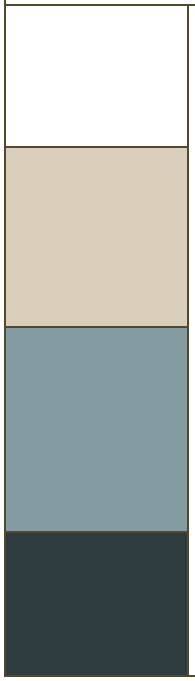
Action N-1d: Require acoustical studies for all new discretionary projects, including those related to development and transportation, which have the potential to generate noise impacts which exceed the standards identified in this element. The studies shall include representative noise measurements, estimates of existing and projected noise levels, and mitigation measures necessary

to ensure compliance with this element and relevant noise standards in the Sebastopol Municipal Code.

Action N-1e: Coordinate with Caltrans and Sonoma County, when necessary, to ensure that these agencies obtain City concurrence prior to initiating any noise mitigation or other project affecting the noise environment in Sebastopol.

TABLE N-1 LAND USE COMPATIBILITY FOR COMMUNITY NOISE ENVIRONMENT

Land Use Category	Exterior Noise Exposure (Ldn) 55 60 65 70 75 80 90
Residential	
Transient Lodging; Motel, Hotel	
School, Library, Church, Hospital, Nursing Home	
Auditorium, Concert Hall, Amphitheater, Sports Arena	
Playground, Recreational Open Space, Park	
Golf Course, Stables, Water Recreation, Cemetery	
Office Buildings, Business, Commercial	
Industrial, Utilities, Manufacturing, Agriculture	



NORMALLY ACCEPTABLE
Specified land use is satisfactory, assuming that any buildings involved are of 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 noise insulation features included in the design.

UNACCEPTABLE
New construction or development should be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirement must be made and needed noise insulation features included in the design.

CLEARLY UNACCEPTABLE
New construction or development generally should not be undertaken.

TABLE N-2 STATIONARY (NON-TRANSPORTATION) NOISE SOURCE STANDARDS

Land Use Receiving the Noise	Hourly Noise-Level Descriptor	Exterior Noise-Level Standard (dBA)	
		Daytime (7am-10pm)	Nighttime (10pm-7am)
Residential	L_{eq} L_{max}	55 70	45 65

Notes:

a) The residential standards apply to all properties that are zoned for residential use. The exterior noise level standard is to be applied at the property line of the receiving land use or at a designated outdoor activity area (at the discretion of the Planning Director) of the new development. For mixed-use projects, the exterior noise level standard may be waived (at the discretion of the Planning Director) if the project does not include a designated activity area and mitigation of property line noise for on-site uses is not practical. These noise level standards do not apply to residential units established in conjunction with industrial or commercial uses (e.g., caretaker dwellings). The City can impose standards that are more restrictive than specified above based upon determination of existing low ambient noise levels.

b) Each of the noise levels specified above shall be lowered by 5 dBA for tonal noises characterized by a whine, screech, or hum, noises consisting primarily of speech or music, or recurring impulsive noises. In no case shall mitigation be required to a level that is less than existing ambient noise levels, as determined through measurements conducted during the same operational period as the subject noise source.

c) In situations where the existing noise level exceeds the noise levels indicated in the above table, any new noise source must include mitigation that reduces the noise level of the noise source to the existing level plus 3 dB.

Impact 3.11-2: Stationary Noise Sources (Less than Significant)

Implementation of the General Plan Update could result in the future development of land uses that generate noise levels in excess of applicable City of Sebastopol noise standards for non-transportation noise sources. Such land uses may include commercial area loading docks, industrial uses, HVAC equipment, car washes, daycare facilities, auto repair, as well as recreational uses. While the General Plan does not specifically propose any new noise generating uses, the Land Use Maps include industrial land use designations, which may result in new noise sources. Specific land uses that would be located in the City are not known at this time. Additionally, noise from existing stationary noise sources, as identified in background section of this report, will continue to result in noises that may impact noise-sensitive land uses in the vicinity. New projects which may include stationary noise sources such as automotive and truck repair facilities, tire installation centers, car washes, loading docks, corporation yards, parks, and play fields may create noise levels in excess of the City's standards.

The General Plan includes policies and actions that are intended to reduce noise associated with stationary sources (listed below). Specifically, policies N 1-1, N 1-3, N 1-4, N 1-5, N 1-6, N 1-7, N 1-11, N-13, N 1-14, N-15, N-16, N-17, N-18, N 2-1, N 2-3 and Actions N-1a, N-1b, N-1c, N-1d, N-2a, and N-2b would reduce noise associated with stationary sources. Implementation of the proposed policies and actions of the General Plan will reduce noise impacts from stationary noise sources to a **less than significant** level.

2016 General Plan Policies and Actions that Mitigate Potential Impacts

Policies

Policy N 1-1: Ensure the noise compatibility of existing and future development when making land use planning decisions.

Policy N 1-3: Require new development to mitigate excessive noise through best practices, including building location and orientation, building design features, placement of noise-generating equipment away from sensitive receptors, shielding of noise-generating equipment, placement of noise-tolerant features between noise sources and sensitive receptors, and use of noise-reducing materials.

Policy N 1-4: Require mixed-use projects to minimize noise exposure for indoor areas of nearby residential areas through the use of noise attenuating building materials, engineering techniques, and site design practices. Site design practices may include locating mechanical equipment, loading bays, parking lots, driveways, and trash enclosures away from residential uses, and providing noise-attenuating screening features on-site.

Policy N 1-5: Periodically review and update, as necessary, Chapter 8.25 (Noise Control Ordinance) of the Sebastopol Municipal Code in order to address issues such as excessive noise from commercial, industrial, and other noise generating land uses, as well as vehicle noise, to the extent allowed by State law.

Policy N 1-6: Require acoustical studies for new developments, projects seeking use permits related to activities that would increase noise levels, and transportation improvements that affect

noise-sensitive uses such as schools, hospitals, libraries, group care facilities, convalescent homes, and residential areas.

Policy N 1-7: For projects that are required by the California Environmental Quality Act (CEQA) to analyze noise impacts, the following criteria shall be used to determine the significance of those impacts:

STATIONARY AND NON-TRANSPORTATION NOISE SOURCES

A significant impact will occur if the project results in an exceedance of the noise level standards contained in this element, or the project will result in an increase in ambient noise levels by more than 3 dB, whichever is greater. This does not apply to construction activities which are conducted according to the best practices outlined in Action N-1f. Compliance with the requirements outlined in Action N 1f shall be sufficient to reduce construction-related noise impacts to a **less than significant** level.

Policy N 1-9: Local truck traffic, including loading and unloading, shall be limited to specific routes, times, and speeds appropriate to each zoning district.

Policy N 1-11: Ensure that existing development is protected, to the greatest extent feasible, from noise impacts due to construction on adjacent or nearby properties through implementation of best practices, as outlined in Action N 1f.

Policy N 1-13: Control non-transportation related noise from site specific noise sources to the standards shown in Table N-2.

Policy N 1-14: Ensure that new development does not result in indoor noise levels exceeding 45 dBA Ldn for residential uses.

Policy N 1-15: Require construction activities to comply with standard best practices (see Action N 1f).

Policy N 1-16: Require new development to minimize vibration impacts to adjacent uses during demolition and construction. For sensitive historic structures, a vibration limit of 0.08 in/sec PPV (peak particle velocity) will be used to minimize the potential for cosmetic damage to the building. A vibration limit of 0.30 in/sec PPV will be used to minimize the potential for cosmetic damage at buildings of normal conventional construction.

Policy N 1-17: Temporary special events including, but not limited to, festivals, concerts, carnivals, rodeos, and other similar activities may be allowed to exceed the noise standards established in this General Plan and the standards established by Chapter 8.25 of the Sebastopol Municipal Code through issuance of a temporary use permit (see Section 8.25.120 of the Sebastopol Municipal Code).

Policy N 1-18: Ensure that an acceptable noise environment is maintained in residential areas and areas with sensitive uses by ensuring that uses, operations, and fixed equipment maintain compliance with City standards and by providing for the regulation of short-term increases in non-transportation noise levels through the Municipal Code.

Policy N 1-19: Ensure that indoor noise levels at public and community buildings does not reach harmful levels, generally considered to be 100dB or higher.

Actions in Support of Goal N 1

Action N-1a: Update Chapter 8.25 and Title 17 of the Sebastopol Municipal Code to:

- *Ensure that the noise standards are consistent with this element, including Tables N-1 and N-2;*
- *Require new residential, mixed-use with a residential component, and other noise-sensitive development to be designed to minimize noise exposure to noise sensitive uses through incorporation of site planning and architectural techniques;*
- *Include regulations to reduce exposure to exterior periodic nuisance noise, including trash collection, street sweeping, and other noise-generating activities.*
- *Establish maximum interior noise levels for activities held at public and community buildings.*

Action N-1b: Continue to implement and enforce the requirements of Chapter 8.25 of the Sebastopol Municipal Code in order to reduce nuisance noise from stationary sources near residential areas. During future updates to Chapter 8.25 of the Municipal Code, the City should develop standards and procedures to verify ongoing compliance with applicable noise standards by stationary sources, and develop more rigorous enforcement procedures to respond to and correct verified noise violations.

Action N-1c: Review new development projects for compliance with the noise requirements established in this element, including the standards established in Tables N-1 and N-2. Where necessary, require mitigation measures to achieve the noise standards.

Action N-1d: Require acoustical studies for all new discretionary projects, including those related to development and transportation, which have the potential to generate noise impacts which exceed the standards identified in this element. The studies shall include representative noise measurements, estimates of existing and projected noise levels, and mitigation measures necessary to ensure compliance with this element and relevant noise standards in the Sebastopol Municipal Code.

Policies

Policy N 2-1: Through the use permit process, consider establishing a mechanism that provides flexibility for Downtown businesses to occasionally exceed the Table N-1 exterior noise standards on weekend nights (Friday and Saturday).

Policy N 2-3: Ensure that maintenance activities in the Downtown area do not pose a noise nuisance.

Actions in Support of Goal N 2

Action N-2a: Review and consider updates to the Municipal Code that would allow businesses within the Downtown to apply for a special use permit that allows for periodic exceedances of the

exterior noise standards contained in Table N-1. The Municipal Code updates should consider the following:

- *Establishment of a special use permit process and standards for periodic noise level exceedances;*
- *Limitations on the days of the week and hours of the day when elevated noise generating activities may be permissible;*
- *Requirements for verifiable self-monitoring and reporting of noise levels generated by special use permit holders,*
- *Procedures for processing and responding to noise complaints received against a special use permit holder; and*
- *Criteria for the revocation of a special use permit in the event that violations of the permissible noise levels occur.*

Action N-2b: Review Chapter 8.25 of the Municipal Code to ensure that maintenance activities in the Downtown area, such as street sweeping, sidewalk blowing, trash collection, etc., occur during times that minimize noise impacts.

Impact 3.11-3: Construction Noise Sources (Less than Significant)

New development, maintenance of roadways, installation of public utilities and infrastructure generally require construction activities. These activities include the use of heavy equipment, impact tools. Table 3.11-12 provides a list of the types of equipment which may be associated with construction activities, and their associated noise levels.

TABLE 3.11-12: CONSTRUCTION EQUIPMENT NOISE

TYPE OF EQUIPMENT	PREDICTED NOISE LEVELS, LMAX DB				DISTANCES TO NOISE CONTOURS (FEET)	
	NOISE LEVEL AT 50'	NOISE LEVEL AT 100'	NOISE LEVEL AT 200'	NOISE LEVEL AT 400'	70 DB LMAX CONTOUR	65 DB LMAX CONTOUR
Backhoe	78	72	66	60	126	223
Compactor	83	77	71	65	223	397
Compressor (air)	78	72	66	60	126	223
Concrete Saw	90	84	78	72	500	889
Dozer	82	76	70	64	199	354
Dump Truck	76	70	64	58	100	177
Excavator	81	75	69	63	177	315
Generator	81	75	69	63	177	315
Jackhammer	89	83	77	71	446	792
Pneumatic Tools	85	79	73	67	281	500

Source: Roadway Construction Noise Model User's Guide. Federal Highway Administration. FHWA-HEP-05-054. January 2006. j.c. brennan & associates, Inc. 2014.

Activities involved in construction would typically generate maximum noise levels ranging from 85 to 90 dB at a distance of 50 feet. Construction could result in periods of significant ambient noise level increases and the potential for annoyance. However, the Sebastopol Noise Ordinance provides the following noise exemption for construction activities which occur during the following periods:

8.25.060.F – Noise Levels, Exemptions (1) Noise generated by any construction equipment which is operated during daytime hours, defined for the purposes of this section as from 7:00 AM to 8:00 PM, Monday through Friday, 8:00 AM to 5:00 PM on Saturdays and from 8:00 AM to 5:00 PM on Sundays.

The General Plan also includes policies and actions that are intended to reduce noise associated with construction noise (listed below). Specifically, policy N 1-15 and Action N 1e would reduce noise associated with construction noise. Implementation of the proposed policies and actions of the General Plan will reduce noise impacts from construction noise to a **less than significant** level.

2016 GENERAL PLAN POLICIES AND ACTIONS THAT MITIGATE POTENTIAL IMPACTS

Policies

Policy N 1-11: Ensure that existing development is protected, to the greatest extent feasible, from noise impacts due to construction on adjacent or nearby properties through implementation of best practices, as outlined in Action N 1f.

Policy N 1-15: Require construction activities to comply with standard best practices (see Action N 1f).

Actions

Action N-1f: Require construction projects that may generate excessive noise impacts to implement the following types of standard best practices, as applicable, to reduce construction noise impacts to the extent feasible:

- *Noise-generating construction activities, including truck traffic coming to and from the construction site for any purpose, shall be limited as specified in the Noise Ordinance.*
- *All equipment driven by internal combustion engines shall be equipped with mufflers, which are in good condition and appropriate for the equipment.*
- *The construction contractor shall utilize "quiet" models of air compressors and other stationary noise sources where technology exists.*
- *At all times during project grading and construction, stationary noise-generating equipment shall be located as far as practicable from sensitive receptors and placed so that emitted noise is directed away from residences.*
- *Unnecessary idling of internal combustion engines shall be prohibited.*
- *Construction staging areas shall be established at locations that will create the greatest distance between the construction-related noise sources and noise-sensitive receptors nearest the project site during all project construction activities, to the extent feasible.*

- *Neighbors located adjacent to the construction site shall be notified of the construction schedule in writing.*
- *The construction contractor shall designate a "noise disturbance coordinator" who will be responsible for responding to any local complaints about construction noise. The disturbance coordinator shall be responsible for determining the cause of the noise complaint (e.g., starting too early, poor muffler, etc.) and instituting reasonable measures as warranted to correct the problem. A telephone number for the disturbance coordinator shall be conspicuously posted at the construction site.*

Impact 3.11-4: Construction Vibration (Less than Significant)

Construction activities facilitated by the plan may include demolition of existing structures, site preparation work, excavation of below grade levels, foundation work, pile driving, and new building erection. Demolition for an individual site may last several weeks and at times may produce substantial vibration. Excavation for underground levels would also occur on some project sites and vibratory pile driving could be used to stabilize the walls of the excavated area. Piles or drilled caissons may also be used to support building foundations.

Heavy tracked vehicles (e.g., bulldozers or excavators) can generate distinctly perceptible groundborne vibration levels when this equipment operates within approximately 25 feet of sensitive land uses. Impact pile drivers can generate distinctly perceptible groundborne vibration levels at distances up to about 100 feet, and may exceed building damage thresholds within 25 feet of any building, and within 50-100 feet of a historical building, or building in poor condition. Other 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.) may also potentially generate substantial vibration in the immediate vicinity.

Depending on the proximity of existing structures to each construction site, the structural soundness of the existing buildings, and the methods of construction used, vibration levels may be high enough to damage existing structures. Given the scope of the General Plan and the close proximity of many existing structures, groundborne vibration impacts would be potentially significant.

As with any type of construction, vibration levels may at times be perceptible. However, construction phases that have the highest potential of producing vibration (pile driving and use of jackhammers and other high power tools) would be intermittent and would only occur for short periods of time for any individual project site.

Action N 1f would ensure administrative controls such as notifying neighbors of scheduled construction activities and scheduling construction activities with the highest potential to produce perceptible vibration to hours with least potential to affect nearby businesses, perceptible vibration can be kept to a minimum and as such would not result in a significant impact with respect to perception. Therefore, the potential for significant impacts associated with construction vibration is **less than significant**.

2016 GENERAL PLAN POLICIES AND ACTIONS THAT MITIGATE POTENTIAL IMPACTS

Policies

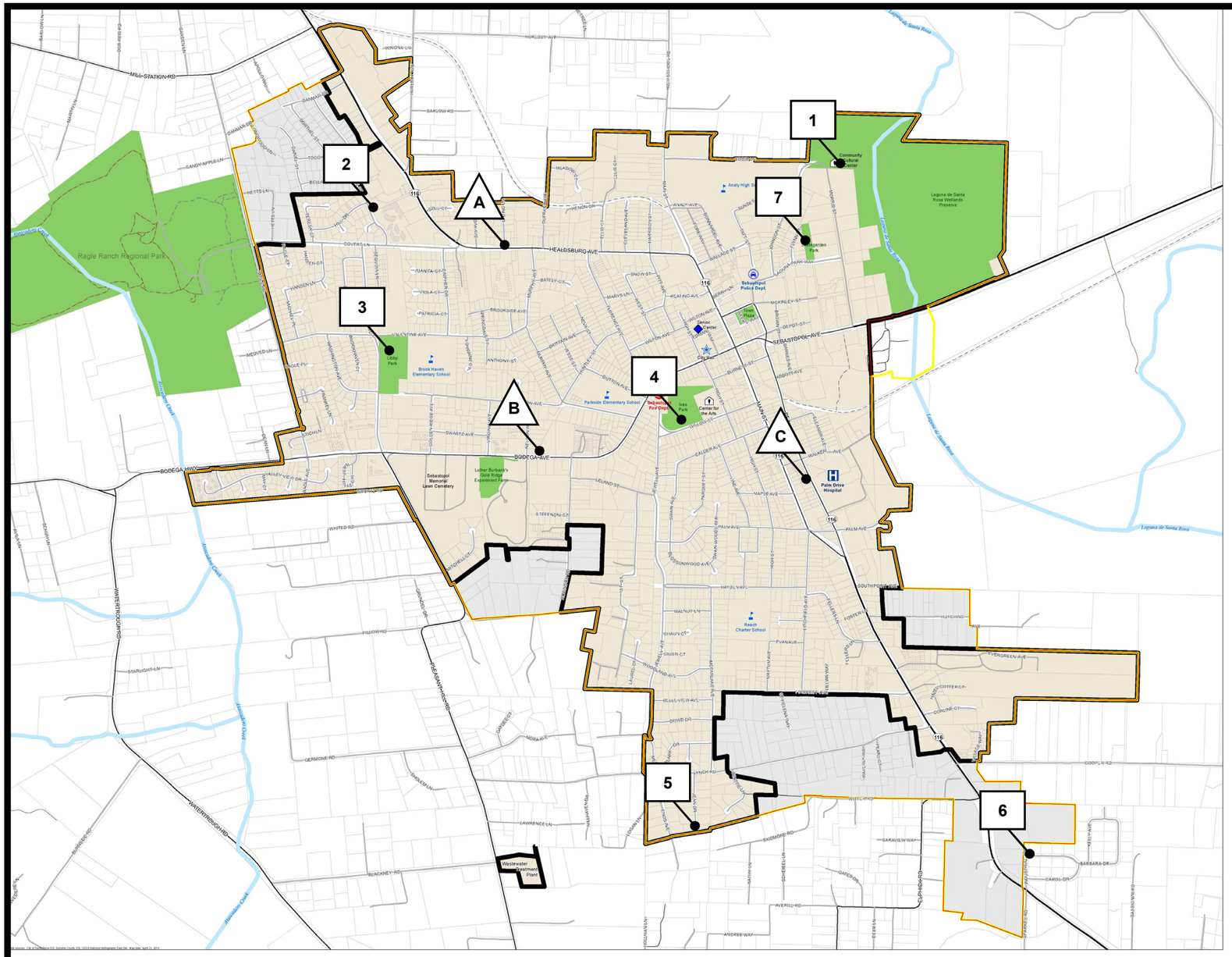
Policy N 1-15: Require construction activities to comply with standard best practices (see Action N 1f).

Policy N 1-16: Require new development to minimize vibration impacts to adjacent uses during demolition and construction. For sensitive historic structures, a vibration limit of 0.08 in/sec PPV (peak particle velocity) will be used to minimize the potential for cosmetic damage to the building. A vibration limit of 0.30 in/sec PPV will be used to minimize the potential for cosmetic damage at buildings of normal conventional construction.

Actions

Action N-1f: Require construction projects that may generate excessive noise impacts to implement the following types of standard best practices, as applicable, to reduce construction noise impacts to the extent feasible:

- *Noise-generating construction activities, including truck traffic coming to and from the construction site for any purpose, shall be limited as specified in the Noise Ordinance.*
- *All equipment driven by internal combustion engines shall be equipped with mufflers, which are in good condition and appropriate for the equipment.*
- *The construction contractor shall utilize "quiet" models of air compressors and other stationary noise sources where technology exists.*
- *At all times during project grading and construction, stationary noise-generating equipment shall be located as far as practicable from sensitive receptors and placed so that emitted noise is directed away from residences.*
- *Unnecessary idling of internal combustion engines shall be prohibited.*
- *Construction staging areas shall be established at locations that will create the greatest distance between the construction-related noise sources and noise-sensitive receptors nearest the project site during all project construction activities, to the extent feasible.*
- *Neighbors located adjacent to the construction site shall be notified of the construction schedule in writing.*
- *The construction contractor shall designate a "noise disturbance coordinator" who will be responsible for responding to any local complaints about construction noise. The disturbance coordinator shall be responsible for determining the cause of the noise complaint (e.g., starting too early, poor muffler, etc.) and instituting reasonable measures as warranted to correct the problem. A telephone number for the disturbance coordinator shall be conspicuously posted at the construction site.*



Base Map

City of Sebastopol
Visioning Workshop Mapping Activity

De Novo Planning Group
A Land Use Planning, Design, and Environmental Firm

Legend

X : **Continuous (24-hr) Noise Measurement Site**

\# : **Short-Term Noise Measurement Site**

Figure 3.11-1
Noise Measurement Locations

j.c. brennan & associates
consultants in acoustics

Figure Prepared:
June 2014

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Public services such as fire and police protection services are core to the maintaining a safe and healthy community. Educational services serve as a foundation for providing citizens with the skills and resources to excel the economy today and in the future. There are many other public services that are important to a community such as parks and recreational opportunities, libraries, museums, hospitals, and other healthcare facilities.

This section provides a background discussion and analysis of fire protection services, police services, schools, parks and recreational facilities, libraries, and other community facilities and services. This section is organized with an existing setting, regulatory setting, and impact analysis. No comments were received during the public review period or scoping meeting for the Notice of Preparation regarding this topic.

3.12.1 EXISTING CONDITIONS

FIRE PROTECTION SERVICES

The City of Sebastopol provides fire protection through the City's volunteer fire department. The Sebastopol Fire Station serves the City of Sebastopol. The station is located at 7425 Bodega Avenue in Sebastopol. Additional information related to wildland fires is located in Section 3.8 (Hazards and Hazardous Materials).

The Sebastopol Fire Department, along with automatic mutual aid staff from Granton and Gold Ridge Fire Districts, provides fire suppression, firefighting personnel, and emergency medical service (basic life support) to the residents and businesses in Sebastopol. The City's Fire Department has 31 volunteer staff members and is in the process of testing two new recruits (Sebastopol Fire Department, 2016).

Each fire protection district earns a rating from the Insurance Service Office (ISO). This rating, known as a Public Protection Classification (PPC), is utilized by many insurance providers to calculate insurance premiums within the district. Ratings range from 1 to 10. Class 1 generally represents superior property fire protection, and Class 10 indicates that the area's fire-suppression program does not meet ISO's minimum criteria.

The PPC ratings are calculated on the following factors:

- Fire alarm and communication systems, including telephone systems, telephone lines, staffing, and dispatching systems;
- The fire department, including equipment, staffing, training, and geographic distribution of fire companies; and,
- The water-supply system, including the condition and maintenance of hydrants, and a careful evaluation of the amount of available water compared with the amount needed to suppress fires.

Sebastopol's Fire Department has an Insurance Service Office (ISO) rating of three (3). Only five percent of fire departments nationally have a Class 3 or better rating.

In 2015 the Sebastopol Fire Department responded to 1,071 calls for service. The average response time is 6 minutes and 50 seconds for 100 percent of calls, and 4 minutes and 55 seconds for 80 percent of calls.

POLICE PROTECTION SERVICES

The Sebastopol Police Department provides law enforcement and police protection services throughout the city.

The Sebastopol Police Department is a full service law enforcement agency that is charged with the enforcement of local, state, and federal laws, as well as providing 24-hour protection of the lives and property of the public.

The Police Department, in 2013, had 14 sworn police officers and another 8 civilian support staff. In addition to the permanent staff, the department had 11 Reserve Officers, 11 Community Service Volunteers, and 7 Police Explorers.

The Police Department administers two budgets: Police Service and Animal Control, providing comprehensive community-based police services. The department also coordinates with a community-based agency to provide counseling for at-risk youth.

Crimes by Category in Sebastopol

Statistics on the number of crimes by category of crime in Sebastopol during 2010, 2012, and 2014 as reported by the Federal Bureau of Investigation (FBI) Criminal Justice Information Services Division, are shown in Table 3.12-1 below.

TABLE 3.12-1 CRIMES BY CATEGORY

CATEGORY	*2010*	*2012*	*2014*
Violent Crimes	17	8	10
Homicide	0	0	0
Rape	0	0	2
Robbery	5	2	2
Aggravated Assault	12	6	6
Property Crimes	221	170	124
Burglary	77	40	48
Larceny-Theft	134	122	62
Vehicle Theft	10	8	14
Arson	0	2	0

SOURCE: FEDERAL BUREAU OF INVESTIGATION, CRIMINAL JUSTICE INFORMATION SERVICES DIVISION, OFFENSES KNOWN TO LAW ENFORCEMENT TABLES (2010, 2012 AND 2014).

As shown in the table, the majority of crimes committed in Sebastopol consist of non-violent property crimes, primarily larceny-theft.

Police Response Times

Response times are an important benchmark of police service. Response times can vary greatly depending on the size of the city and department, geographical location, and levels of crime. Smaller cities usually have faster response times, primarily due to the smaller geographic territory.

In 2015, the Sebastopol Police Department handled 17,608 events/calls for service. The average response time to all emergency calls, in 2015, was 3 minutes 45 seconds. The average response time for at least 70% of emergency calls was within 3 minutes.

SCHOOLS

Existing Facilities

The City of Sebastopol is served by the Sebastopol Union School District, serving Kindergarten through 8th grade students, and the West Sonoma County Union High School District, serving grades 9 through 12. Analy High School has a student population of 1,317 during the 2014-2015 school year. Park Side Elementary School serves Kindergarten through 5th graders. Park Side is an International Baccalaureate School offering the Primary Years Program, with a student population of 211 during the 2014-2015 school year. Brook Haven School, formerly the District's Middle School, is now a K-8 school. There are Multi-age classrooms K-5, a core program for 6th graders to help transition to departmentalized instruction, and a fully departmentalized 7-8 program. Brook Haven serves a student population of 299 during the 2014-2015 school year. Table 3.12-2 provides a summary of the public schools serving the city's population.

TABLE 3.12-2 PUBLIC SCHOOLS SERVING SEBASTOPOL

SCHOOL	*GRADES SERVED*	*ADDRESS*	*ENROLLMENT (2014-2015 SCHOOL YEAR)*
ELEMENTARY SCHOOLS			
Analy High School	9-12	6950 Analy Avenue	1317
Brook Haven School	K-8	7905 Valentine Avenue	299
Park Side Elementary	K-5	7450 Bodega Avenue	211

SOURCES: CALIFORNIA DEPARTMENT OF EDUCATION EDUCATIONAL DEMOGRAPHICS UNIT (2016)

PARKS AND RECREATION

City Parks

Sebastopol contains a wide array of park, open space and recreational resources, including those provided by local non-profits and a private development. In the last 20 years, a number of significant new park and open space areas have been created. These include: the town Plaza; the Laguna

Preserve; the Skategarden Park; the Laguna Uplands; the Railroad Forest bike path connector; Tomodachi Park; and the Barlow green. An expansion of Skategarden Park is pending.

Sebastopol has approximately 36.3 acres of developed parkland, and approximately 240 acres of undeveloped park space. Much of the undeveloped park space contains developed trails that count toward developed parkland within the city.

A summary of existing City parks with notable amenities, including locations and acreages is provided in Table 3.12-3.

TABLE 3.12-3 EXISTING PARK FACILITIES

PARK	*LOCATION*	*ACREAGE*	*FACILITIES*
Ives Park	7400 Willow Street	6.4	Swimming pool, baseball field, play structure, ponds, stage area, grass fields, picnic areas, restrooms, and 3 bridges
Laguna de Santa Rosa Wetlands Preserve	Adjacent to Laguna Youth Park	81*	Passive recreation uses: Trails, outdoor classroom for 50, and wildlife observation areas
Laguna Youth Park	Adjacent to Community Center	6.0**	2 baseball fields, play structure, and picnic areas.
Gold Ridge Experiment Farm	7777 Bodega Avenue	3.2	Cottage, walking trails, and historical plantings.
Skategarden Park	6750 Laguna Park Way	1.1***	Skate structure, 23 garden plots, art wall, and chess table.
Spooner Park	910 South Main Street	0.5	Grass, solar panels, and 'welcome' sign.
Tomodachi Park	6665 Sebastopol Avenue	8.7****	Picnic area, short walking trail in Oak Woodland area
Mario Savio Free Speech Town Plaza	6901 McKinley Street	0.9	Gazebo, fountain, benches, and restrooms.
Libby Park	7985 Valentine Avenue	5.5	Parks Play structure, bocce ball court, volleyball court, gazebo, pond, and Garzot Community Building.
Laguna Uplands	Adjacent to the former Palm Drive Hospital	8.0	Natural Laguna landscape, short walking trail, and outdoor classroom/helicopter landing area.
Ragle Ranch Regional Park	500 Ragle Road	155.9	Regional park with soccer fields, tennis courts, play structure, pond, picnic areas, dog park, extensive walking trails.
Total Park Acreage		**277.2**	

SOURCE: SEBASTOPOL PARKS AND RECREATION REPORT. ACCESSED JUNE 2014; CITY OF SEBASTOPOL STAFF

- *Acreage approximate due to overlap with Youth Park and other parcels; includes area behind/around Youth Park, Meadowlark Field, natural areas along west side of Laguna channel, Railroad Forest.
- **Acreage approximate; includes Youth Park, ball fields
- ***Does not include 0.5 acre Expansion Project area
- ****Park/open space area only; does not include Village Mobile Home area.

Preserve Areas

The Laguna de Santa Rosa Wetlands Preserve is an area adjacent to Laguna Youth Park which consists of several miles of trails on both sides of the Laguna de Santa Rosa, and an outdoor classroom designed to accommodate approximately 50 people. The City of Sebastopol's Laguna

Wetland Preserve is the only publicly designated natural park in the Laguna. The Laguna is one of the premier bird-watching areas in Northern California. By providing public access to the Laguna and education about it, this project facilitates access to persons within and well beyond Sonoma County. In addition, the improvements are designed to be accessible to the elderly, the disabled, and with no cost of admission, the economically disadvantaged.

Trails

Laguna de Santa Rosa Wetlands Preserve has a short walking trail that adjoins the Laguna channel, looping around the City's former wastewater ponds. From late Spring to early Fall, a floating pedestrian bridge is in place that crosses the channel and connects to a longer trail that loops around Meadowlark Field. Bluebird Trail traverses the field. The City has conducted extensive native plant restoration along the perimeter trail, and more recently has begun restoration efforts in the central part of Meadowlark Field.

The Railroad Forest and bike path, completed in 2005, is a Class I facility, approximately 1/4 mile in length, which runs northerly from the Joe Rodota Trail, east of Petaluma Avenue (SR 116) to the intersection of Sebastopol Avenue (SR 12) and Morris Street. It forms part of the linkage through the Sebastopol, which connects the County's Joe Rodota and West County Trail, providing a continuous route for recreational users and bike commuters between western Sonoma County and Santa Rosa. It includes two bridges that span the lower reaches of Calder Creek and jurisdictional wetlands. The path was designed and constructed by the City, using a combination of funding sources including TDA Article 3, BAAQMD (Air District) funds and a State Recreational Trails grant.

Joe Rodota Trail is an 8.47 mile paved trail that is located between Santa Rosa and Sebastopol. The trail starts at the pedestrian/bicycle bridge intersection with the Prince Memorial Greenway (between West 3rd Street and Railroad Street), southwest of the Marriott Courtyard Hotel. The trail ends near the intersection of Mill Station Road and Highway 116 in Sebastopol. Access to the trail is located off the following public streets: Roberts Avenue, Dutton Avenue, Stony Point Road, Wright Road, Sebastopol Road, Merced Avenue, Llano Road, Petaluma Avenue, High School Road, Cleveland Avenue, Ellis Court, DuFranc Avenue, Hurlbut Avenue, and Highway 116. Sections of the trail run along an abandoned railroad line. The trail offers an opportunity for families with young children to experience an outdoor outing for walking, bicycle riding, horseback-riding, and roller-skating. The trail meanders along agricultural ranches, and the Laguna of Santa Rosa. There are signs of the historic railroad throughout the property. Three bridges are on top of the old train trestles. The trail is especially popular in the spring with a burst of color from wildflowers. The trail is an excellent place for year-round bird watching.

The West County Trail parallels Highway 116, going from Sebastopol to Forestville. The Joe Rodota and West County Regional Trails are built along land that was once the Petaluma and Santa Rosa Railway, a line that linked Petaluma and Santa Rosa with Sebastopol and Forestville. The trails are paved and total 14 miles. An unpaved equestrian trail runs parallel to the paved trail. The trail offers beautiful views of farms, vineyards, and other agricultural lands.

LIBRARIES AND OTHER COMMUNITY FACILITIES

Libraries

The Sebastopol Library is the only public library located in the City of Sebastopol. The Sebastopol Library is part of the Sonoma County Library system. This enables the relatively small Sebastopol Library to access all of the other libraries that are part of the Sonoma County Library system to obtain information not found in the Sebastopol Library, which has been requested by customers. The Sebastopol Library is located at 7140 Bodega Avenue. The library is open from 10 a.m. to 6 p.m. Tuesdays, Thursday, and Fridays, from 10 a.m. to 8 p.m. on Wednesdays, and from 10 a.m. to 4 p.m. on Saturdays. The library collection includes materials in both Spanish and English. It also offers a wide variety of media, including DVDs, CDs and audiobooks, as well as a large print collection. The library offers a number of programs for all ages, including families, children, teens, and adults.

Sebastopol Community Cultural Center

The Sebastopol Community Cultural Center, located at 390 Morris Street, is open Tuesday through Friday from 10:00 a.m. to 4:00 p.m. Tennis, American Tribal Belly Dancing, and children's dance programs are offered. The Center offers a variety of in-house programming, including Tiny Tots Preschool, Kindergym, and Jugalbandi, as well as summer camps. Collaborative programs and those sponsored by other community groups are also offered.

Sebastopol Center for the Arts

The Sebastopol Center for the Arts (Center for the Arts) is located in the Veterans Building, adjacent to Ives Park and Ives Pool, at 282 South High Street. The Center presents exhibits, performances, classes and events, in the visual, performing, literary and film arts. In 2013 the Center had 18 gallery exhibitions that displayed 825 works of art from 550 artists. The Center also presents concerts. In addition, the Center produces the acclaimed annual Sebastopol Documentary Film Festival, which in 2014 showed 52 films and drew filmmakers from Los Angeles, Pennsylvania, New York, and Ireland. In addition, the Center conducts numerous art, music, movement and writing classes for adults and children.

Ives Pool Recreation Facility

Ives Pool is located within Ives Park on City-owned land at 7400 Willow Street. The facility includes two pools. A six lane pool that measures 16 yards by 25 yards and a smaller pool that measures 16 yards by 14 yards. Ives Pool is used by both the Analy High School and El Molino High School swim teams and home to a wide variety of programs, serving a large number of users. Ives Pool is the only public pool in Sonoma County that is successfully operated by a non-profit organization. While substantially maintained by the pool non-profit organization, the City provides maintenance support for Ives Pool.

Sebastopol Area Senior Center

This facility is located at 167 High Street. It serves as a multi-use facility. Currently, activities offered include public computer use, senior social club, Mah Jong, poker, dancing, mediation, and yoga. The Council on Aging also provides lunch. Health classes and clinics are also offered at the facility. The facility includes a classroom, program room, and the Rotary room.

3.12.2 REGULATORY SETTING

FEDERAL

There are no federal regulations applicable to the environmental topics of public services and recreation.

STATE AND LOCAL

Fire Protection and Emergency Response

CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION

In accordance with California Code of Regulations Title 8 Sections 1270 "Fire Prevention" and 6773 "Fire Protection and Fire Equipment" the California Occupational Safety and Health Administration (Cal/OSHA) has established minimum standards for fire suppression and emergency medical services. The standards include, but are not limited to, guidelines on the handling of highly combustible materials, fire hose sizing requirements, restrictions on the use of compressed air, access roads, and the testing, maintenance, and use of all fire fighting and emergency medical equipment.

The State of California passed legislation authorizing the Office of Emergency Services (OES) to prepare a Standard Emergency Management System (SEMS) program, which sets forth measures by which a jurisdiction should handle emergency disasters. Non-compliance with SEMS could result in the State withholding disaster relief from the non-complying jurisdiction in the event of an emergency disaster.

EMERGENCY RESPONSE/EVACUATION PLANS

The State of California passed legislation authorizing the Office of Emergency Services (OES) to prepare a Standard Emergency Management System (SEMS) program, which sets forth measures by which a jurisdiction should handle emergency disasters. Non-compliance with SEMS could result in the State withholding disaster relief from the non-complying jurisdiction in the event of an emergency disaster.

The County of Sonoma is responsible for emergency response and evacuation plans within the county. The Sonoma County Sheriff's Department operates the County Office of Emergency Services.

FIRE PROTECTION

The California Fire Code contains regulations relating to construction and maintenance of buildings and the use of premises. Topics addressed in the Code include fire department access, fire hydrants, automatic sprinkler systems, fire alarm systems, fire and explosion hazards safety, hazardous materials storage and use, provisions to protect and assist first responders, industrial processes, and many other general and specialized fire safety requirements for new existing buildings and premises.

UNIFORM FIRE CODE

The Uniform Fire Code with the State of California Amendments contains regulations relating to construction, maintenance, and use of buildings. Topics addressed in the California Fire Code include fire department access, fire hydrants, automatic sprinkler systems, fire alarm systems, fire and explosion hazards safety, hazardous materials storage and use, provisions intended to protect and assist fire responders, industrial processes, and many other general and specialized fire-safety requirements for new and existing buildings and the surrounding premises. The Fire Code contains specialized technical regulations related to fire and life safety.

CALIFORNIA HEALTH AND SAFETY CODE

State fire regulations are set forth in Sections 13000 et seq. of the California Health and Safety Code. This includes regulations for building standards (as also set forth in the California Building Code), fire protection and notification systems, fire protection devices such as extinguishers and smoke alarms, high-rise building and childcare facility standards, and fire suppression training.

Parks

QUIMBY ACT

The Quimby Act (California Government Code Section 66477) states that "the legislative body of a city or county may, by ordinance, require the dedication of land or impose a requirement of the payment of fees in lieu thereof, or a combination of both, for park or recreational purposes as a condition to the approval of a tentative or parcel map." The Quimby Act seeks to preserve open space needed to develop parkland and recreational facilities; however, the actual development of parks and other recreational facilities is subject to discretionary approval and is evaluated on a case-by-case basis with new residential development.

Schools

CALIFORNIA CODE OF REGULATIONS

The California Code of Regulations, Chapter 4.9, Payment of Fees, Charges, Dedications, or Other Requirements Against a Development Project. *Section 65995-65998 (h)* The payment or satisfaction of a fee, charge, or other requirement levied or imposed pursuant to Section 17620 of the Education Code in the amount specified in Section 65995 and, if applicable, any amounts specified in Section 65995.5 or 65995.7 are hereby deemed to be full and complete mitigation of the impacts of any legislative or adjudicative act, or both, involving, but not limited to, the planning, use, or development of real property, or any change in governmental organization or reorganization as defined in Section 56021 or 56073, on the provision of adequate school facilities.

CALIFORNIA DEPARTMENT OF EDUCATION

The California Department of Education (CDE) School Facilities Planning Division (SFPD) prepared a School Site Selection and Approval Guide that provides criteria for locating appropriate school sites in the State of California. School site and size recommendations were changed by the CDE in 2000 to reflect various changes in educational conditions, such as lowering of class sizes and use of advanced technology. The expanded use of school buildings and grounds for community and agency joint use and concern for the safety of the students and staff members also influenced the modification of the CDE recommendations.

Specific recommendations for school size are provided in the School Site Analysis and Development Guide. This document suggests a ratio of 1:2 between buildings and land. CDE is aware that in a number of cases, primarily in urban settings, smaller sites cannot accommodate this ratio. In such cases, the SFPD may approve an amount of acreage less than the recommended gross site size and building-to-ground ratio.

Certain health and safety requirements for school site selection are governed by state regulations and the policies of the SFPD relating to:

- Proximity to airports, high-voltage power transmission lines, railroads, and major roadways;
- Presence of toxic and hazardous substances;
- Hazardous facilities and hazardous air emissions within one-quarter mile;
- Proximity to high-pressure natural gas lines, propane storage facilities, gasoline lines, pressurized sewer lines, or high-pressure water pipelines;
- Noise;
- Results of geological studies or soil analyses;
- Traffic and school bus safety issues.

THE KINDERGARTEN-UNIVERSITY PUBLIC EDUCATION FACILITIES BOND ACT OF 2002 (PROP 47)

This act was approved by California voters in November 2002 and provides for a bond issue of $13.05 billion to fund necessary education facilities to relieve overcrowding and to repair older schools. Funds will be targeted at areas of greatest need and must be spent according to strict accountability measures. Funds will also be used to upgrade and build new classrooms in the California Community Colleges, the California State University, and the University of California in order to provide adequate higher education facilities to accommodate growing student enrollment.

LEROY F. GREENE SCHOOL FACILITIES ACT OF 1998 (SB 50)

The "Leroy F. Greene School Facilities Act of 1998," also known as Senate Bill No. 50 or SB 50 (Chapter 407, Statutes of 1998), governs a school district's authority to levy school impact fees. This comprehensive legislation, together with the $9.2 billion education bond act approved by the voters in November 1998 known as "Proposition 1A", reformed methods of school construction financing

in California. SB 50 instituted a new school facility program by which school districts can apply for state construction and modernization funds. It imposed limitations on the power of cities and counties to require mitigation of school facilities impacts as a condition of approving new development and provided the authority for school districts to levy fees at three different levels:

- Level I fees are the current statutory fees allowed under Education Code 17620. This code section provides the basic authority for school districts to levy a fee against residential and commercial construction for the purpose of funding school construction or reconstruction of facilities. These fees vary by district for residential construction and commercial construction and are increased biannually.

- Level II fees are outlined in Government Code Section 65995.5, allowing school districts to impose a higher fee on residential construction if certain conditions are met. These conditions include having a substantial percentage of students on multi-track year-round scheduling, having an assumed debt equal to 15–30 percent of the district's bonding capacity (percentage is based on revenue sources for repayment), having at least 20 percent of the district's teaching stations housed in relocatable classrooms, and having placed a local bond on the ballot in the past four years which received at least 50 percent plus one of the votes cast. A Facility Needs Assessment must demonstrate the need for new school facilities for unhoused pupils is attributable to projected enrollment growth from the construction of new residential units over the next five years.

- Level III fees are outlined in Government Code Section 655995.7. If State funding becomes unavailable, this code section authorizes a school district that has been approved to collect Level II fees to collect a higher fee on residential construction. This fee is equal to twice the amount of Level II fees. However, if a district eventually receives State funding, this excess fee may be reimbursed to the developers or subtracted from the amount of state funding.

Libraries

The Sonoma County Library is an entity formed through a Joint Powers Agreement (JPA) between Sonoma County and the Cities of Cotati, Cloverdale, Healdsburg, Petaluma, Rohnert Park, Santa Rosa, Sebastopol, Windsor, and Sonoma. The Sonoma County Library is governed by the Library Commission, which is composed of seven commissioners appointed by the Member agencies. Through the JPA, the Sonoma County Library provides county-wide free public library services.

3.12.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed project will have a significant impact on public services if it would result in:

- Substantial adverse physical impacts associated with the provisions of new or physically altered government facilities, and/or the 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 following public services:

- Fire Protection
- Police Protection
- Schools
- Parks
- Other public facilities

- Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

- Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

IMPACTS AND MITIGATION MEASURES

Impact 3.12-1: Adverse Physical Impacts on the Environment Associated with Governmental Facilities and the Provision of Public Services (Less than Significant)

Development accommodated under the proposed General Plan would result in additional residents and businesses in the City, including new residential, industrial, office, and commercial uses. As described in Chapter 2.0, the General Plan is expected to accommodate approximately 750 new residential dwelling units, 341,159 square feet of new commercial space, 59,959 square feet of new industrial space, and 137,375 square feet of new office space within the City Limits.

This new growth would increase the City's population by approximately 1,658 residents. The full development of the new commercial, office, and industrial uses shown in Table 2.0-3 would increase the employment opportunities in Sebastopol by approximately 1,545 employees.

As shown in Table 2.0-4, buildout of the General Plan within the City Limits and the SOI could yield up to 1,185 new residential units, 341,159 square feet of new commercial space, 684,889 square feet of new industrial space, and 137,375 square feet of new office space within the City Limits and the Sphere of Influence.

This new growth would increase the City's population by approximately 2,619 residents. The full development of the new commercial, office, and industrial uses shown in Table 2.0-4 would increase the employment opportunities in Sebastopol by approximately 2,632 employees.

Development and growth in the City under the proposed General Plan would result in increased demand for public services, including fire protection, law enforcement, schools, parks, libraries, and other public and governmental services. The General Plan includes policies and actions to ensure that public services are provided at acceptable levels and to ensure that development and growth does not outpace the provision of public services.

As the demand for services increases, there will likely be a need to increase staffing and equipment in order to maintain acceptable service ratios, response times, and other performance standards. New or expanded service structures (e.g., offices, maintenance and administrative buildings, schools, parks, fire departments, libraries, etc.) will be needed to provide for adequate staffing, equipment, and appropriate facilities to serve growth in the City.

Existing facilities may be expanded at their current location. New facilities may also be constructed. The Community Facilities and Open Space land use designations would accommodate the majority of new public facilities necessary to provide community services. There would likely be environmental impacts associated with the construction or expansion of the facilities needed to provide public services.

As future development and infrastructure projects, including new governmental facilities, are considered by the City, each project will be evaluated for conformance with the City's General Plan, Municipal Code, and other applicable regulations. Subsequent development and infrastructure projects would also be analyzed for potential environmental impacts, consistent with the requirements of CEQA.

The General Plan includes a range of policies and actions (listed below) to ensure that public services are provided in a timely fashion, are adequately funded, are coordinated between the City and appropriate service agency, and that new development funds its fair share of services. The General Plan includes policies to ensure that fire protection and law enforcement services keep pace with new development and that school, library, and governmental services are adequately planned and provided. The General Plan also includes an action to maintain a Capital Improvement Program to defray the cost of developing public facilities.

As previously stated, increased levels of staffing and equipment will be needed to serve growth allowed under the proposed General Plan. The environmental effect of providing the public services is associated with the physical impacts of providing new and expanded facilities. The specific impacts of providing new and expanded facilities cannot be determined at this time, as the General Plan does not propose development nor does it designate specific sites for new or expanded public facilities. However, the facilities would be primarily provided on sites with land use designations that allow such uses and the environmental impacts of constructing and operating the governmental facilities would likely be similar to those associated with new development, redevelopment, and infrastructure projects under the General Plan. These impacts are described in the relevant chapters (Chapters 3.1 through 3.14, and 4.0) of this Draft EIR.

This Draft EIR addresses the potential impacts of development that may occur under the General Plan, including residential, commercial, office, industrial, public facilities, and a range of other uses that are accommodated by the project. Where potentially significant or significant impacts are identified, this EIR identifies mitigation measures to reduce the impact and discloses which impacts cannot be reduced to a less than significant impact. There are no additional environmental impacts, apart from those disclosed in the relevant chapters of this EIR that are anticipated to occur. Therefore, this impact is considered **less than significant** and no additional mitigation is necessary.

2016 GENERAL PLAN POLICIES AND ACTIONS THAT MITIGATE POTENTIAL IMPACTS

Policies

Policy CSF 1-1: Ensure that new growth and development participates in the provision and expansion of community services and facilities, and does not exceed the City's ability to provide them.

Policy CSF 1-2: Require new development to demonstrate that the City's community services and facilities can accommodate the increased demand for said services and facilities associated with the project.

Policy CSF 1-3: Require new development to offset or mitigate impacts to community services and facilities to ensure that service levels for existing users are not degraded or impaired by new development, to the satisfaction of the City.

Policy CSF 1-4: Provide adequate public infrastructure (i.e., street, sewer, water, and storm drain) to meet the needs of existing and future development.

Policy CSF 1-5: Require development, infrastructure, and long-term planning projects to be consistent with all applicable City infrastructure plans, including the Water Master Plan, the Sanitary Sewer System Utility Master Plan, Stormwater Management Plan, and the Capital Improvement Program.

Policy CSF 1-6: When appropriate, require development projects to install off-site infrastructure or pay appropriate in-lieu fees.

Policy CSF 1-7: Require the payment of impact fees for all new development.

Policy CSF 1-12: Encourage new large-scale development projects to incorporate community features such as meeting spaces/rooms that may be used by the City, community organizations, local non-profits, etc. for little to no cost.

Policy CSF 2-4: Encourage and support the development of an integrated trails network extending and connecting local and regional trails to schools, open space areas, park and recreation facilities, and residential areas to serve both recreational and utilitarian travel.

Policy CSF 2-15: Actively promote and participate in regional coordination and planning efforts to provide quality parks, trails, and recreation facilities throughout Sebastopol and the surrounding

areas. The City should emphasize regional coordination to leverage funding, maintenance, and/or resources to develop a diverse range of regional recreational opportunities.

Policy CSF 2-17: Through conditions of approval and/or development agreements, ensure that when required and feasible, the development of new parks, trails, and recreation facilities occurs during the infrastructure construction phase of new development projects so that they are open and available to the public prior to completion of the project.

Policy CSF 5-2: Provide adequate support to the Sebastopol Fire Department to maintain adequate staff, equipment, and response times to provide fire protection and emergency medical response services to existing and future residents.

Policy CSF 5-4: Ensure that new development is served with adequate water volumes and water pressure for fire protection.

Policy CSF 5-5: Encourage community support and volunteer outreach to enhance and increase volunteer interest to support the Fire Department.

Policy CSF 5-6: Ensure that the Police Department has adequate staffing and equipment to accommodate existing and future population growth.

Policy CSF 5-7: The Sebastopol Police Department shall review all development proposals and recommend measures to reduce potential for increased crime and response times.

Policy CSF 5-8: Emphasize the use of physical site planning as an effective means of enhancing safety and preventing crime. Open spaces, landscaping, parking lots, parks, play areas and other public spaces shall be designed with maximum feasible visual exposure to community residents.

Policy CSF 5-10: Support the Sebastopol Police Department in their efforts to continue to provide staff training that enhances cultural sensitivity, increases community outreach efforts, emphasizes their community service role, and maintains and enhances positive rapport with the community.

Policy CSF 6-3: Continue to work cooperatively with the local school districts in order to ensure that adequate facilities and educational opportunities for all students are provided in a timely manner in accordance with the pace of residential development.

Policy CSF 6-4: Continue to strongly support and encourage the maintenance of high quality schools and diverse educational opportunities in Sebastopol and work cooperatively with the local school districts.

Policy CSF 6-12: Support efforts to modernize and improve library facilities in the community.

Policy CSF 6-16: Support improvements to, expansion of, or replacement of the Sebastopol Community Cultural Center to address flood issues, and to improve services and facilities available to the community in order to enhance the quality of life for all City residents through the provision of quality community services and facilities.

Actions

Action CSF-1a: As part of the development review process, determine the potential impacts of development and infrastructure projects on public infrastructure, and require new development to contribute its fair share toward necessary on and off-site infrastructure, services, and facilities.

Action CSF-1b: Through development review, ensure that infrastructure is adequately sized to accommodate the proposed development and, if applicable, allow for extensions to future developments.

Action CSF-1c: Periodically review and update the various City master plans for the provision and/or extension of public services to serve existing and future development. These plans include, but are not limited to, the Water Master Plan, the Sanitary Sewer System Utility Master Plan, the Stormwater Management Plan, and the Capital Improvement Program.

Action CSF-1d: Develop and regularly update a comprehensive plan which establishes priorities and corrects existing inadequacies in the City's infrastructure system.

Action CSF-1e: Identify and apply for Federal, State, and regional funding sources to finance infrastructure costs.

Action CSF-1f: Develop and regularly update a comprehensive financing plan to accommodate the construction of master planned infrastructure.

Action CSF-1g: Continue to provide an annual Level of Service (LOS) Report to the City Council, as required by Municipal Code Section 17.350.030.A. The annual LOS report shall provide information on Planning Department projects, annual housing development totals, and a status update on City services including water, wastewater, drainage, parks, fire, police, schools, and traffic.

Action CSF-1h: Consider establishing requirements for the preparation of a Community Impact Report (CIR) as part of the development review process for new large-scale projects. The standards should consider the following:

- *Identification of criteria for projects that must comply with the requirement to prepare a CIR (as proposed housing units, commercial square footage, etc.).*
- *Fiscal impacts- assess the financial costs to provide services to the project and the benefits the project will provide the City, including tax revenue (e.g., will revenue increase, decrease, or be shifted).*
- *Employment impacts- estimate the number of jobs that will be created or eliminated by the project, and identify job quality measures including wages, benefits, and accessibility.*
- *Housing impacts- assess the project's impact on the need for both affordable and market-rate housing units, and whether the project will create additional units or eliminate existing units.*
- *Neighborhood needs impacts- assess whether the project will increase or meet demand for services and how the surrounding neighborhood might benefit from the project.*

- *Smart growth impacts- assess whether the project will make the surrounding neighborhood more livable and how the project will affect public transit and the pedestrian and bicycle network.*

Action CSF-1i: During the development review process, encourage applicants for large-scale projects to incorporate community facilities such as meetings spaces into their projects. Consider a range of incentives to encourage this, including but not limited to, expedited permit permit processing, reduced permit fees, or other concessions mutually agreeable to the City and the applicant.

Action CSF-2a: Develop and adopt a Parks and Recreation Master Plan. The plan should include and address:

- *Needs Assessment for future park locations*
- *Types of users and amenities needed*
- *Coordinated efforts to integrate plans including: the Laguna Wetlands Preserve Restoration and Management Plan, Ives Park Master Plan, and Bicycle and Pedestrian Master Plan*
- *Opportunities to enhance bicycle and pedestrian connectivity*
- *Maintenance needs and requirements for new and existing facilities*
- *Future sites and facilities development for parks acquisition*
- *Financial plan and funding sources*

Action CSF-2e: Seek joint use agreements with schools to develop neighborhood parks on school sites based on the "school-in-the-park" principle. Ensure that neighborhood parks in combined park/school sites serve the entire community and provide a broad range of recreational, and educational activities.

Action CSF-2n: Periodically review, and if necessary update, the City's Park and Traffic Impact Fees in order to ensure that new development continues to provide a fair-share contribution towards parks, trails, and recreation facilities.

Action CSF-5a: Continue to participate in mutual aid agreements with the State and County firefighting agencies.

Action CSF-5b: Periodically assess the Fire Department's staff and equipment to assure adequate levels are provided to maintain a nine-minute response time and assemble at least 15 firefighters on the scene of a structure fire for 90 percent of calls.

Action CSF-5c: Consider creating a public safety impact fee to ensure that new development addresses its public safety effects. Periodically review and revise the fee structure for the Fire Protection Fund as necessary.

Action CSF-5d: Continue to enforce the California Building Code and the California Fire Code to ensure that all construction implements fire-safe techniques, including fire resistant materials, where required.

Action CSF-5e: As part of the development review process for new projects, the City will continue to refer applications to the Sebastopol Fire Department for determination of the project's potential impacts on fire protection services.

Action CSF-5f: Maintain a public outreach campaign to generate interest in volunteer fire department opportunities.

Action CSF-5g: Continue to support and implement community education and training regarding fire prevention and emergency preparedness, including outreach to local schools and maintenance of the CERT program.

Action CSF-5h: Develop new funding sources, and pursue grant opportunities that support the volunteer Fire Department.

Action CSF-5i: As part of the development review process, consult with the Police Department in order to ensure that the project design facilitates adequate police response time and public safety and that the project addresses its impacts on police services through the incorporate of Crime Prevention through Environmental Design (CPTED) measures.

Action CSF-5j: Periodically assess the Police Department's staff and equipment to assure adequate levels are provided to maintain a three-minute response time for 70 percent of emergency calls.

Action CSF-5k: Support policies, projects, programs, and regulations that strengthen partnerships and community-based efforts to reduce crime through prevention, education and enforcement, and encourage neighborhoods to develop cooperative relationships to prevent crime, develop social ties, and solve common problems.

Action CSF-5l: Continue and expand police outreach to the public through participation at community events and distribution of crime prevention information through City publications, news media, and community organizations.

Action CSF-5m: Develop information on Neighborhood Watch Programs and actively promote such programs.

Action CSF-6a: As part of the development review process, ensure that local school districts are provided an opportunity to evaluate the impact of new development to public school facilities.

Action CSF-6b: Require new development to pay applicable school facility impact fees and work with developers and the school districts to ensure that adequate school and related facilities will be available.

Action CSF-6h: Seek opportunities and funding sources to provide a new, or expanded, Community Cultural Center to address flood concerns and improve facilities and services.

Action CSF-6j: After conducting comprehensive needs assessments, establish priorities and funding mechanisms for projects and improvements to public and community facilities and buildings. The priority-setting process should include an extensive public outreach and participation program, and should assess needs and opportunities associated with the following types of buildings and facilities: Library, Community Cultural Center, City Hall/City offices, and other community buildings and needs identified by the public and the City Council.

Impact 3.12-2: Adverse Physical Impacts Associated with the Deterioration of Existing Parks and Recreation Facilities or the Construction of New Parks and Recreation Facilities (Less than Significant)

Growth accommodated under the proposed General Plan would include a range of uses that would increase the population of the City and also attract additional workers and tourists to the City. This growth would likely also result in increased demand for parks and recreation facilities. It is anticipated that over the life of the General Plan, use of regional parks and recreation facilities may increase, due to new residents as well as tourists visiting the City. Use of neighborhood parks may also increase, but the level of increase would be less since new residential projects would be required to provide adequate parks and open space and/or in-lieu fees to ensure that adequate parks and recreation facilities are provided to serve the development. The additional demand on existing parks and recreational facilities, particularly regional facilities, would increase the need for maintenance and improvements. These improvements could have environmental impacts, although the exact impacts cannot be determined since the potential improvements are unknown.

The provision of new parks and recreation facilities would reduce the potential for adverse impacts and physical deterioration of existing parks and recreation facilities, by providing additional facilities to accommodate the demand for parks and recreation facilities. These new facilities would be provided at a pace and in locations appropriate to serve new development.

Development under the General Plan would indirectly lead to the construction of new parks and recreation facilities to serve new growth and to meet existing parks and recreation needs. The General Plan supports the creation of new parks and recreation facilities, including new trails recreation facilities to accommodate a wide range of activities for all age groups. These new parks and recreation facilities would be spread throughout areas proximate to new development in and around existing neighborhoods. As stated previously in Impact 3.12-1, Policy CSF 2-6 would allow parks to be accommodated as a permitted use in all zoning districts.

Action CSF-2l would establish minimum parks and open space standards for new development. At a minimum, the standards shall seek to maintain one acre of park and open space land per 200 residents through provision of land, improvements, or payment of in-lieu fees.

At a ratio of one acre of parkland and opens space per 200 residents, additional development during the planning horizon of the proposed General Plan would result in the need for approximately 8.29 acres of new parks and recreation facilities to serve projected buildout growth within the City limits, and 13.1 acres of new parks and recreation facilities to served projected buildout growth within the Planning Area. However, more facilities may be provided to serve existing and visitor-based needs, in addition to the needs of new development. Additionally, the city is currently deficient in developed parkland. With a 36.3 acres of developed parklands and total estimated population in 2014 of 7,454 (Department of Finance E-5 population estimate), the city currently requires an additional 0.97 acres of parklands to meet the proposed park standard.

As future parks and recreation projects are considered by the City, each project will be evaluated for conformance with the General Plan, Municipal Code, and other applicable regulations. Parks and recreation projects would also be analyzed for potential environmental impacts, consistent with the requirements of CEQA.

In addition to ensuring that new and expanded parks and recreation facilities are provided to accommodate new growth, the General Plan includes policies and actions to ensure that parks and recreation facilities are adequately maintained and improved to serve both existing and planned growth. Improvements at existing parks and recreation facilities may include regular maintenance and a range of improvements, such as new signage, new and/or expanded trails systems, new and/or expanded restrooms, picnic facilities, sports fields, and play structures, to ensure that new facilities are provided to serve new growth. These improvements to existing facilities would likely have environmental impacts similar to those associated with new development under the General Plan.

The General Plan establishes the policies and actions that would ensure that existing parks and recreation districts are improved and maintained, by providing for a range of improvements appropriate to serve growth and ensure on-going improvement and maintenance of existing facilities, and includes provisions to ensure that adequate parks and recreational facilities are provided at a pace adequate to serve new population growth. The applicable General Plan policies and actions are listed below.

This Draft EIR addresses the potential impacts of development that may occur under the General Plan, including residential, commercial, public facilities, recreation facilities, and a range of other uses that are accommodated by the General Plan. Where potentially significant or significant impacts are identified, this Draft EIR identifies mitigation measures to reduce the impact and discloses which impacts cannot be reduced to a less than significant impact. There are no additional significant adverse environmental impacts, apart from those disclosed in the relevant chapters of this Draft EIR, that are anticipated to occur associated with existing or new parks and recreation facilities. Therefore, this impact is considered **less than significant** and no mitigation is necessary.

2016 GENERAL PLAN POLICIES AND ACTIONS THAT MITIGATE POTENTIAL IMPACTS

Policies

Policy CSF 2-1: Work aggressively to achieve and maintain a park standard of a minimum of one acre per 200 residents in order to meet the City's recreation needs, with developed parkland calculated at 100% of acreage, and dedicated open space areas owned by the City or subject to a permanent open space easement calculated at 25% of acreage.

Policy CSF 2-2: Ensure park and trail facilities are accessible to various segments of the population including: specific age groups, persons with special physical requirements, and groups interested in particular activities.

Policy CSF 2-3: Provide an annual review of the status of parks, trails and open space acquisition and development by the City Council and Planning Commission.

Policy CSF 2-4: Encourage and support the development of an integrated trails network extending and connecting local and regional trails to schools, open space areas, park and recreation facilities, and residential areas to serve both recreational and utilitarian travel.

Policy CSF 2-5: Preserve and enhance public access through new and existing development to facilitate access to the local trail network.

Policy CSF 2-6: Allow parks as a permitted use in all zoning districts.

Policy CSF 2-7: Place highest priority on maintenance and improvement of existing park, open space, and trail areas.

Policy CSF 2-8: Prepare and adopt a Parks and Recreation Master Plan.

Policy CSF 2-9: The following criteria should be utilized to prioritize acquisition of parkland:

- Consideration of maintenance and improvement costs
- Equitable distribution of parks to serve existing and future residential neighborhoods
- Scenic and recreational value
- Relationship to existing parks and trail systems
- Ability to provide natural resource protection

Policy CSF 2-10: Develop new park and recreation facilities in areas that are accessible and convenient to the community, prioritizing areas lacking these facilities. Encourage and support the acquisition of additional park facilities in southern portion of the city to ensure an adequate and equitable distribution of parkland to all residents.

Policy CSF 2-11: Utilize Sebastopol's Planning Commission to provide leadership to:

- Develop and recommend parks policies to the City Council
- Recommend priorities for park-related expenditures
- Identify maintenance and improvement needs for existing parks, trails and open space areas
- Establish cooperative partnerships with private, public and educational agencies
- Increase recreational opportunities throughout the city
- Identify funding opportunities for parks and trail systems
- Explore opportunities to promote and increase park and trail use

Policy CSF 2-12: Encourage and solicit public participation in the selection, design, and facilities planning of all future trail and park sites.

Policy CSF 2-13: Require major new development to provide direct pedestrian connections, such as sidewalks, trails and other rights-of-way improvements to the existing and planned network of parks and trails, wherever feasible and appropriate. For smaller development projects, the City shall explore and pursue partnership opportunities to provide cost-effective connections.

Policy CSF 2-14: Ensure that new park development does not affect the ability of the City to maintain its current parks system.

Policy CSF 2-15: Actively promote and participate in regional coordination and planning efforts to provide quality parks, trails, and recreation facilities throughout Sebastopol and the surrounding areas. The City should emphasize regional coordination to leverage funding, maintenance, and/or resources to develop a diverse range of regional recreational opportunities.

Policy CSF 2-16: Vigorously support the implementation of the adopted Bicycle and Pedestrian Master Plan regarding trails, bicycle improvements, and other recreational improvements.

Policy CSF 2-17: Through conditions of approval and/or development agreements, ensure that when required and feasible, the development of new parks, trails, and recreation facilities occurs during the infrastructure construction phase of new development projects so that they are open and available to the public prior to completion of the project.

Policy CSF 2-18: Provide public outreach and educational programs that inform the community of available parks, trails, and recreation facilities, programs, and services available in order to increase and enhance community use of these facilities, programs, and services.

Policy CSF 2-19: Encourage community and volunteer efforts to assist in the maintenance and beautification of parks, trails, and recreation facilities in Sebastopol. Such efforts may include the creation of a local non-profit, community fundraising efforts, and City staff support in a coordination role.

Policy CSF 2-20: Support recreational activities, events, organized sports leagues, and other programs that serve broad segments of the community, including teens and youth.

Policy CSF 2-21: Continue to provide support to local non-profits providing community recreational services on City-owned land operated by the non-profits, including Ives Pool, the Sebastopol Community Cultural Center, and the Burbank Experiment Farm.

Policy CSF 2-22: Support and encourage efforts to provide unique small-scale recreational opportunities and public gathering spaces in the form of parklets and pocket parks.

Actions

Action CSF-2a: Develop and adopt a Parks and Recreation Master Plan. The plan should include and address:

- *Needs Assessment for future park locations*
- *Types of users and amenities needed*

- *Coordinated efforts to integrate plans including: the Laguna Wetlands Preserve Restoration and Management Plan, Ives Park Master Plan, and Bicycle and Pedestrian Master Plan*
- *Opportunities to enhance bicycle and pedestrian connectivity*
- *Maintenance needs and requirements for new and existing facilities*
- *Future sites and facilities development for parks acquisition*
- *Financial plan and funding sources*

Action CSF-2b: Implement the policies and actions in the Circulation Element that facilitate and promote increased walkability bicycle use, and connectivity between parks and trail systems.

Action CSF-2c: Implement Bicycle and Pedestrian Master Plan trail, bicycle, and other recreational improvements and periodically update the Bicycle and Pedestrian Master Plan to ensure safe travel opportunities for all uses and all ages, including those with mobility challenges.

Action CSF-2d: Revise the Zoning Ordinance to allow parks as a permitted use in all districts.

Action CSF-2e: Seek joint use agreements with schools to develop neighborhood parks on school sites based on the "school-in-the-park" principle. Ensure that neighborhood parks in combined park/school sites serve the entire community and provide a broad range of recreational, and educational activities.

Action CSF-2f: Coordinate with the Sonoma County Regional Parks Department, City of Santa Rosa, and Agricultural and Open Space District on active and passive parks and recreation issues and opportunities and on potential lands to purchase for open space, habitat conservation, and recreation uses.

Action CSF-2g: When developing trails and paths, consider the access needs of a variety of users, including school-age children, the elderly, and those with disabilities.

Action CSF-2h: Map the existing informal trails and paths in Sebastopol and evaluate their usefulness in an overall pedestrian path system. Support opportunities to upgrade these existing paths for use by the public.

Action CSF-2i: Consider using Transfer of Development Rights (TDR) and Conservation Easements to encourage small neighborhood parks and trail systems.

Action CSF-2j: Prepare an annual report for the City Council and the Planning Commission on the status of the acquisition and the improvement of parks and trails. Include a list of existing and proposed projects, estimated costs and sources of funding, and determine what additional actions, if any, may be necessary to implement the policies of this Element.

Action CSF-2k: Use the Capital Improvement Program to maintain parks and recreation facilities and as the basis for determining use of supplemental funds collected for parks and open space development. The City's population and acreage of parks/recreation facilities shall be tabulated periodically to ensure that parkland is developed consistent with the ratio of one acre of park land per 200 residents.

Action CSF-2l: Update the Municipal Code to establish minimum parks and open space standards for new development. At a minimum, the standards shall seek to maintain one acre of park land per 200 residents through provision of land, improvements, or payment of in-lieu fees. Additional measures may include requirements to establish assessment or tax districts to fund park maintenance, or open space requirements.

Action CSF-2m: Investigate and pursue a diverse range of funding opportunities for parks, trails, and recreation facilities, including but not limited to, grants, joint use/management strategies, user fees, private sector funding, assessment districts, homeowners' associations, non-profit organizations, funding mechanisms for the maintenance of older parks, and management assistance through Federal, State, and regional partnerships.

Action CSF-2n: Periodically review, and if necessary update, the City's Park and Traffic Impact Fees in order to ensure that new development continues to provide a fair-share contribution towards parks, trails, and recreation facilities.

Action CSF-2o: Implement a wide range of public outreach programs, including the City's website, newsletters, and other communications technologies to keep the public informed about available parks, trails, and recreation facilities, programs, and services.

Action CSF-2p: Conduct periodic public surveys to ascertain the parks, trails, and recreation needs of the community.

Action CSF-2q: Conduct review of City-owned property operated by non-profits providing community recreational services including Ives Pool, the Community Cultural Center, and the Luther Burbank Experiment Farm to assess long-term maintenance and improvement needs, and consider mechanisms to address identified needs.

Action CSF-2r: Explore the feasibility of the City purchasing the old cement plant property east of Morris Street and prioritize the establishment of a park and open space area for this site. The City should explore partnerships with private entities and other creative funding approaches that would facilitate this acquisition.

Action CSF-2s: Establish a permitting mechanism to allow private entities to create parklets on City-owned street parking spaces adjacent to pedestrian walkways. Include standards and provisions for design, maintenance, duration of operation, and removal.

Action CSF-2t: Explore opportunities to acquire vacant residential parcels in areas of the City that would benefit from the addition of small pocket parks.

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This chapter describes the potential impacts to the transportation system associated with implementation of the proposed Sebastopol General Plan. The impact analysis examines the roadway, transit, bicycle, and pedestrian components of the City's transportation system. To provide a context for the impact analysis, this chapter begins with a description of the environmental setting. The setting is a description of the existing physical and operational conditions for the transportation system. Following the setting is the regulatory framework influencing the transportation system and providing the basis for impact significance thresholds used in the impact analysis. The chapter concludes with the impact analysis findings and recommended mitigation measures, as well as a summary of proposed General Plan policies that help to reduce impacts. This section was prepared by W-Trans. During the NOP comment period, Caltrans provided comments relating to traffic impacts, impact fees, traffic impact study, multi modal planning, habitat restoration, and encroachment permitting as they relate to state transportation facilities in the Sebastopol area.

3.13.1 TRANSPORTATION SETTING

The existing physical and operational conditions for Sebastopol's transportation system are based on review of local and regional transportation plans, as well as physical review of the existing transportation system, as described below. Descriptions are organized by transportation system component beginning with roadways and intersections, and followed by the pedestrian and bicycle network, transit system, and truck routes.

EXISTING CIRCULATION NETWORK

This section describes the physical characteristics of Sebastopol's roadway network, which includes facilities ranging from narrow residential lanes to regional highways. Most of the remaining streets in the City conform to typical urban street standards. Primary regional access to Sonoma County is provided by US 101, a six-lane freeway connecting to Santa Rosa, San Francisco, and points beyond to the north and south. Two highways connect US 101 to Sebastopol. One is Gravenstein Highway (SR 116), a two-lane highway that begins at US 101 in Cotati, passes through central Sebastopol, and extends westward to communities along the Russian River. The other is SR 12, also a two-lane regional highway, which connects downtown Sebastopol to Santa Rosa and points beyond. Figure 3.13-1 shows a map of roadway classifications for Sebastopol and Figure 3.13-2 shows segment volumes for select roadway segments.

State Highways

Two highways operated and maintained by Caltrans pass through Sebastopol.

- SR 12
- SR 116

SR 12 is the primary route connecting the City of Sebastopol with Santa Rosa and the eastern Sonoma County. As SR 12 enters Sebastopol from the east, it transitions from a three-lane highway to a three-lane arterial street (Sebastopol Avenue) which then ceases as a State Highway at its intersection with SR 116 (Main Street). West of Main Street, the street is referred to as Bodega Avenue. Following is a description of Sebastopol Avenue within the City:

> **Sebastopol Avenue** is designated as an arterial by the City of Sebastopol. It connects Bodega Avenue in Sebastopol with SR 12 to the east. Existing daily traffic on the highway at the eastern City limit averages 25,400 vehicles per day.

SR 116 is a State Highway running through Sebastopol that connects with SR 1 on the Pacific coast at its north terminus near Jenner, and to SR 121 near the City of Sonoma at its southern terminus. The corridor also provides primary access to the Sonoma County communities of Forestville, Guerneville, and other unincorporated towns along the Russian River. Sections of SR 116 adjacent to and within the City of Sebastopol from north to south include:

> **Gravenstein Highway North** is designated as a Rural Principal Arterial by the County of Sonoma. North of the City, the corridor operates as a two- to three-lane highway. Within the City, Gravenstein Highway North is a three-lane facility.
>
> **Healdsburg Avenue** is designated as an arterial by the City of Sebastopol. It serves as SR 116 through the one-half mile segment south of Gravenstein Highway North and west of North Main Street. There are three lanes on this section of Healdsburg Avenue.
>
> **North Main Street** is designated as an arterial by the City of Sebastopol. It serves as SR 116 for a 0.2-mile segment east of Healdsburg Avenue and north of South Main Street/SR 12. North Main Street has one northbound lane, a center two-way left-turn lane and two southbound lanes.
>
> **South Main Street** is designated as an arterial by the City of Sebastopol. The 0.6-mile portion south of North Main Street and north of Gravenstein Highway South serves as SR 116. Currently South Main Street only carries southbound traffic including three lanes between McKinley Street and Burnett Street and two lanes between Burnett Street and Gravenstein Highway South.
>
> **McKinley Street** is designated as an arterial by the City of Sebastopol. A 260-foot portion serves as northbound SR 116 connecting Petaluma Avenue with South Main Street. The street includes two westbound lanes.
>
> **Petaluma Avenue** is designated as an arterial by the City of Sebastopol. The 0.6-mile portion south of Sebastopol Avenue and north of Gravenstein Highway South serves as SR 116. Currently Petaluma Avenue only carries northbound traffic with two lanes of traffic.
>
> **Gravenstein Highway South** is designated as a Rural Principal Arterial by the County of Sonoma. Within Sebastopol, Gravenstein Highway South includes two through lanes,

often with a two-way left-turn lane, and transitions to a two-lane highway outside the limits of Sebastopol. At its southern interface with the Sebastopol City limits, the road carries approximately 22,900 vehicles per day.

Other Local Arterials

Bodega Avenue is designated as an arterial (local) by the City of Sebastopol. It begins where SR 12 ends at South Main Street and continues west to SR 1 near the town of Bodega. Outside of Sebastopol, the facility operates as a two-lane rural highway, passing primarily through rural residential and agricultural uses. Within the City, Bodega Avenue is primarily a three-lane street or two lanes with parking. At its eastern end near South Main Street, the road carries approximately 12,600 vehicles per day.

Study Intersections

The following 18 study intersections were identified as those most critical to Sebastopol's local circulation system and its connectivity to the regional transportation network. The locations of the study intersections are shown in Figure 3.13-3.

1. Gravenstein Highway (SR 116)/Mill Station Road
2. Gravenstein Highway (SR 116)/Hurlbut Avenue
3. Healdsburg Avenue/Covert Lane
4. Healdsburg Avenue/Murphy Avenue
5. Healdsburg Avenue/Florence Avenue
6. Healdsburg Avenue/North Main Street
7. North Main Street/McKinley Street
8. McKinley Street/Laguna Park Way/Petaluma Avenue
9. Morris Street/Laguna Park Way
10. Bodega Avenue/Ragle Road-Ragle Avenue South
11. Bodega Avenue/Pleasant Hill Avenue North-Pleasant Hill Road
12. Bodega Avenue/Dutton Avenue-Jewell Avenue
13. Bodega Avenue-SR 12/North Main Street-South Main Street
14. SR 12/Petaluma Avenue
15. SR 12/Morris Street
16. SR 12/Llano Road
17. Gravenstein Highway (SR 116)/Fircrest Avenue
18. Gravenstein Highway (SR 116)/Lynch Road

Traffic volumes were obtained in January and March 2014, while schools were in session. Operating conditions during the AM and PM peak periods were evaluated to capture the highest volumes on the local transportation network. The morning peak hour occurs between 7:00 and 9:00 AM and reflects conditions during the home to work or school commute, while the PM peak hour occurs between 4:00 and 6:00 PM and typically reflects the highest level of congestion during the homeward bound commute.

The existing lane configurations for the study intersections are shown in Figure 3.13-4 and the existing peak hour traffic volumes are shown in Figure 3.13-5.

Existing Pedestrian and Bicycle Facilities

The following section describes the bicycle and pedestrian network and activities in Sebastopol. Existing and planned bicycle facilities, as well as select pedestrian facilities, are shown in the *Sebastopol Bicycle and Pedestrian Master Plan*, an excerpt of which is shown in Figure 3.13-6.

BICYCLE FACILITIES

Bicycle circulation in Sebastopol is supported by an existing network of multi-use paths, on-street bike lanes, and bicycle routes. Notable facilities include the West County Trail, which comes into Sebastopol from the north at Mill Station Road and follows the old railroad right-of-way, and the Joe Rodota Trail, which provides access to Santa Rosa and parallels SR 12; it connects to Petaluma Avenue south of SR 12. Other Class I trails include the Eddie Lane connection between North Main Street and Morris Street, the Railroad Forest Path which connects the Joe Rodota Trail to Morris Street, and the Jewell Avenue Path which connects the south terminus of Jewell Avenue to Lynch Road. The City's *Bicycle and Pedestrian Master Plan* includes important bicycle facility improvements such as connection of the northern and eastern segments of the Joe Rodota Trail with proposed Class II bike lanes on SR 116 as well as proposed Class II bike lanes or suggested shared lane markings (sharrows) on other major connector roads in the city.

Bicycle racks for short-term bicycle parking are provided at various locations in Sebastopol including the Lucky/CVS Pharmacy shopping center at SR 116/Hurlbut Avenue, the Sebastopol Community Center in the northeast corner of town, and four locations in the downtown area. There are no known existing shower or locker facilities designated for bicyclists, and none are proposed at this time. Section 17.220.050 of Sebastopol's Zoning Ordinance specifies bicycle parking requirements, including number of spaces, locations, and specifications relating to bike parking design and devices.

PEDESTRIAN FACILITIES

Pedestrian facilities include sidewalks, crosswalks, pedestrian signal infrastructure, curb ramps, and streetscape amenities. The Sebastopol *Bicycle and Pedestrian Master Plan* identifies two Pedestrian Districts in Sebastopol (areas of high activity where pedestrian improvements should be prioritized). One is the downtown pedestrian district encompassing a large portion of the city's center, including the Barlow district. The boundaries of this district are Laguna Park Way, High Street, Willow Street, and Morris Street. The other pedestrian district is the Main Street Corridor, which provides access to Analy High School, Safeway, Rite Aid, and civic destinations near the center of town. Nearly complete sidewalk coverage, accessible curb ramps, and marked crosswalks are provided along arterial streets in Sebastopol. High-visibility crosswalk markings, pedestrian refuge islands, and in-roadway pedestrian warning signs, among other treatments, are provided at several uncontrolled crosswalk locations along SR 116.

Sidewalks in Sebastopol generally range from four to ten feet in width. Wide sidewalks and a variety of pedestrian amenities are provided throughout the downtown including accessible pedestrian ramps, pedestrian phasing at traffic signals, decorative paving and crosswalk treatments, curb extensions, pedestrian scale lights, transit shelters, benches, street trees, sidewalk dining, and public art, among others. Sidewalks are also provided in most of Sebastopol's single-family residential neighborhoods, in multi-family residential developments, and in commercial developments.

While the pedestrian network is generally well-developed in Sebastopol, there are some locations where gaps in the sidewalk network can be found. The most notable gap in the identified pedestrian district includes the southern frontage of McKinley Street between Petaluma Avenue and the Barlow development. Another prominent gap is on Bodega Avenue between Golden Ridge and Pleasant Hill Avenue. Further, traditional curbs, gutters, and sidewalks are generally not provided along some residential streets in Sebastopol.

Existing Transit Service

Bus service in Sebastopol is provided by Sonoma County Transit (SCT). An exhibit showing bus routes in and surrounding the City is provided in Figure 3.13-7. SCT provides regularly-scheduled fixed-route service to major activity centers and transit hubs within the City limits. The following four Sonoma County Transit routes serve the City of Sebastopol.

Route 20 travels between the Russian River Area, Forestville, Sebastopol, and Santa Rosa. The route operates Monday through Friday between 6:00AM and 9:30 PM with approximately ninety-minute headways. Weekend service operates between 8:00 AM and 8:00 PM with approximately three-hour headways. In Sebastopol, Route 20 stops at the Post Office, the Sebastopol Hub, and Highway 12/Llano Road.

Route 22 provides services between Santa Rosa and Sebastopol Monday through Friday during peak commute hours. The route operates along Highway 12 and connects the Sebastopol Transit Hub and the Santa Rosa Transit Mall.

Route 24 is a fixed local route that serves the City of Sebastopol. Route 24 operates Monday through Friday between 9:00 AM and 3:30 PM with approximately forty-minute headways. Saturday service operates between 9:00 AM and 3:00 PM with approximately forty-minute headways.

Route 26 provides services between Sebastopol and Rohnert Park and Graton Resort. Route 26 operates Monday through Friday during peak commute hours. The route operates along SR 116 and connects the Sebastopol Transit Hub to various locations within Rohnert Park.

SCT staff indicated that all service routes in Sebastopol operate well within maximum capacity levels.

SCT maintains five shelters at Sebastopol bus stops. Front loading bicycle racks, which typically accommodate three bicycles, are provided on all fixed route transit buses that operate in Sonoma County. Bicycle rack spaces are available on a first come, first served basis. When the front-loading racks are full, drivers can accommodate bicycles inside the bus at their discretion; however, in the event that it is the last scheduled bus of the day, bicycles are permitted inside the vehicle.

PARATRANSIT

Paratransit, also known as dial-a-ride or door-to-door service, is available for those who are unable to independently use the transit system due to a physical or mental disability. Individuals must be registered and certified as ADA eligible before using the service. Paratransit operators are required by the ADA to service areas within three-quarters of a mile of their respective, public fixed-route service. Volunteer Wheels serves as the ADA paratransit operator for Sonoma County Transit and the City of Sebastopol. Service hours are Monday through Friday from 5:00 AM to 11:00 PM and Saturday and Sunday from 7:00 AM to 9:00 PM. Ride reservations can be scheduled daily.

Park and Ride Lots

Sebastopol has one park-and-ride lot at Petaluma Avenue and Burnett Street.

SMART Rail Transit

The Sonoma-Marin Area Rail Transit (SMART) commuter rail system is a 70-mile rail line that is planned to run from Cloverdale, at the north end of Sonoma County, to Larkspur, where the Golden Gate Ferry connects Marin County with San Francisco. Along the way, SMART will have stations at the major population and job centers of the North Bay. At buildout, SMART will also provide a critical north-south transportation route for bicyclists and pedestrians, with a combination of multi-use pathways and on-street facilities located along or adjacent to the right-of-way between Cloverdale and Larkspur.

The Santa Rosa Railroad Square Station is located 6.5 miles east of Sebastopol and is currently served by SCT Route 22. The operation of the SMART system will give residents in Sebastopol a new alternative to using US 101 for commuting. SMART is planning to initiate rail service in late 2016 on what is being referred to as the initial operating segment (IOS), running from the Airport Boulevard (near the Sonoma County Airport) on the north to the Downtown San Rafael Transit Center on the south.

Taxi Service

Taxi service in Sebastopol is provided by private operators that serve the greater Sonoma County area and beyond. Taxi service is available 24 hours a day, seven days a week by calling in a service request.

METHODS OF ANALYSIS

Level of Service (LOS) is used to rank traffic operation on various types of facilities based on traffic volumes and roadway capacity using a series of letter designations ranging from A to F. Generally, Level of Service A represents free flow conditions and Level of Service F represents over-capacity, stop-and-go conditions. A unit of measure that indicates a level of delay generally accompanies the LOS designation.

Intersections

The study intersections were analyzed using methodologies published in the *Highway Capacity Manual* (HCM), Transportation Research Board, 2000. This source contains methodologies for various types of intersection control, all of which are related to a measurement of delay in average number of seconds per vehicle.

TWO-WAY STOP-CONTROLLED INTERSECTIONS

The Levels of Service for the intersections with side-street stop controls, or those which are unsignalized and have one or two approaches stop controlled, were analyzed using the "Two-Way Stop-Controlled" intersection capacity method from the HCM. This methodology determines a level of service for each minor turning movement by estimating the level of average delay in seconds per vehicle. Results are presented for individual movements together with the weighted overall average delay for the intersection.

SIGNALIZED INTERSECTIONS

The study intersections that are currently controlled by a traffic signal, or may be in the future, were evaluated using the signalized methodology from the HCM. This methodology is based on factors including traffic volumes, green time for each movement, phasing, whether or not the signals are coordinated, truck traffic, and pedestrian activity. Average stopped delay per vehicle in seconds is used as the basis for evaluation in this LOS methodology.

The ranges of delay associated with the various levels of service are indicated in Table 3.13-1.

TABLE 3.13-1: INTERSECTION LEVEL OF SERVICE CRITERIA

LOS	*TWO-WAY STOP-CONTROLLED*	*SIGNALIZED*
A	Delay of 0 to 10 seconds. Gaps in traffic are readily available for drivers exiting the minor street.	Delay of 0 to 10 seconds. Most vehicles arrive during the green phase, so do not stop at all.
B	Delay of 10 to 15 seconds. Gaps in traffic are somewhat less readily available than with LOS A, but no queuing occurs on the minor street.	Delay of 10 to 20 seconds. More vehicles stop than with LOS A, but many drivers still do not have to stop.
C	Delay of 15 to 25 seconds. Acceptable gaps in traffic are less frequent, and drivers may approach while another vehicle is already waiting to exit the side street.	Delay of 20 to 35 seconds. The number of vehicles stopping is significant, although many still pass through without stopping.
D	Delay of 25 to 35 seconds. There are fewer acceptable gaps in traffic, and drivers may enter a queue of one or two vehicles on the side street.	Delay of 35 to 55 seconds. The influence of congestion is noticeable, and most vehicles have to stop.
E	Delay of 35 to 50 seconds. Few acceptable gaps in traffic are available, and longer queues may form on the side street.	Delay of 55 to 80 seconds. Most, if not all, vehicles must stop and drivers consider the delay excessive.
F	Delay of more than 50 seconds. Drivers may wait for long periods before there is an acceptable gap in traffic for exiting the side streets, creating long queues.	Delay of more than 80 seconds. Vehicles may wait through more than one cycle to clear the intersection.

REFERENCE: HIGHWAY CAPACITY MANUAL, TRANSPORTATION RESEARCH BOARD, 2000

EXISTING LEVELS OF SERVICE

Intersections

Currently, 17 of the 18 study intersections are operating acceptably at LOS D or better overall as well as on the stop-controlled approaches. The intersection at SR 12/Morris Street is operating unacceptably at LOS E during the AM peak hour. A summary of the intersection level of service calculations is contained in Table 3.13-2. LOS Calculations are included in Appendix D.

TABLE 3.13-2: SUMMARY OF EXISTING PEAK HOUR INTERSECTION LEVELS OF SERVICE

INTERSECTION APPROACH	*AM PEAK HOUR*		*PM PEAK HOUR*	
	DELAY	*LOS*	*DELAY*	*LOS*
1. Gravenstein Highway (SR 116)/Mill Station Road	14.1	B	15.4	B
2. Gravenstein Highway (SR 116)/Hurlbut Avenue	11.7	B	16.5	B
3. Healdsburg Avenue/Covert Lane	5.4	A	4.1	A
Covert Lane Approach	*21.5*	*C*	*24.9*	*C*
4. Healdsburg Avenue/Murphy Avenue	2.4	A	1.3	A
Northbound Approach	*23.7*	*C*	*20.6*	*C*
5. Healdsburg Avenue/Florence Avenue	1.0	A	1.1	A
Northbound Approach	*19.7*	*C*	*20.5*	*C*
6. Healdsburg Avenue/North Main Street	11.4	B	10.0	A
7. North Main Street/McKinley Street	8.0	A	11.3	B
8. McKinley Street/Laguna Park Way/Petaluma Avenue	3.0	A	4.0	A
Southbound Approach	*15.3*	*C*	*20.8*	*C*
Westbound Approach	*16.0*	*C*	*20.1*	*C*
9. Morris Street/Laguna Park Way	1.9	A	2.6	A
Eastbound Approach	*11.6*	*B*	*10.2*	*B*
10. Bodega Avenue/Ragle Road-Ragle Avenue South	5.0	A	3.5	A
Northbound Approach	*19.5*	*C*	*10.2*	*B*
Southbound Approach	*21.4*	*C*	*15.6*	*C*
11. Bodega Avenue/Pleasant Hill Road	18.3	B	15.6	B
12. Bodega Avenue/Dutton Avenue-Jewell Avenue	17.6	B	13.5	B
13. Bodega Avenue-SR 12/Main Street	29.7	C	24.9	C
14. SR 12/Petaluma Avenue	31.7	C	38.7	C
15. SR 12/Morris Street	**75.1**	**E**	37.9	D
16. SR 12/Llano Road	26.8	C	16.9	B
17. Gravenstein Highway (SR 116)/Fircrest Avenue	0.5	A	2.0	A
Eastbound Approach	*15.7*	*C*	*29.7*	*D*
18. Gravenstein Highway (SR 116)/Lynch Road	13.6	B	13.0	B

*NOTES: DELAY IS MEASURED IN AVERAGE SECONDS PER VEHICLE; LOS = LEVEL OF SERVICE; RESULTS FOR MINOR APPROACHES TO TWO-WAY STOP-CONTROLLED INTERSECTIONS ARE INDICATED IN ITALICS; **BOLD** = OPERATION BELOW CITY STANDARDS*

3.13.2 REGULATORY SETTING

The City of Sebastopol General Plan along with a variety of regional, state and federal plans, legislation, and policy directives provide guidelines for the safe operation of streets and transportation facilities in Sebastopol. While the City of Sebastopol has primary responsibility for the maintenance and operation of transportation facilities within the City, Sebastopol staff works on a continual basis with responsible regional, state, and federal agencies including the County of Sonoma, Sonoma County Transportation Agency (SCTA), Metropolitan Transportation Commission (MTC), California Department of Transportation (Caltrans), and Federal Highway Administration, as well as others, to maintain, improve, and balance the competing transportation needs of the community and the region.

This section describes transportation policies, laws, and regulations that would apply to the Circulation Element of the proposed General Plan Update. This information provides a context for the impact discussion related to the proposed General Plan Update's consistency with applicable regulatory conditions.

STATE

State of California Complete Streets Act

AB 1358, the California Complete Streets Act of 2008, was signed into law in September 2008. As of January 2011, AB 1358 requires any substantive revision of the circulation element of a city or county's general plan to identify how they will safely accommodate the circulation of all users of the roadway including pedestrians, bicyclists, children, seniors, individuals with disabilities, and transit riders, as well as motorists.

Caltrans

DEPUTY DIRECTIVE 64-R1: COMPLETE STREETS – INTEGRATING THE TRANSPORTATION SYSTEM

In 2001, Caltrans adopted Deputy Directive 64; a policy directive related to non-motorized travel throughout the state. In October 2008, Deputy Directive 64 was strengthened to reflect changing priorities and challenges. DD 64-R1 states:

> *The Department views all transportation improvements as opportunities to improve safety, access, and mobility for all travelers in California and recognizes bicycle, pedestrian, and transit modes as integral elements of the transportation system. Providing safe mobility for all users, including motorists, bicyclists, pedestrians and transit riders, contributes to the Department's mission/vision: "Improving Mobility across California."*

DIRECTOR'S POLICY 22 (DP-22), "DIRECTOR'S POLICY ON CONTEXT SENSITIVE SOLUTIONS"

Director's Policy 22, a policy regarding the use of "Context Sensitive Solutions" on all state highways, was adopted by Caltrans in November of 2001. The policy reads:

> *The Department uses "Context Sensitive Solutions" as an approach to plan, design, construct, maintain, and operate its transportation system. These solutions use innovative and inclusive approaches that integrate and balance community, aesthetic, historic, and environmental values with transportation safety, maintenance, and performance goals. Context sensitive solutions are reached through a collaborative, interdisciplinary approach involving all stakeholders.*
>
> *The context of all projects and activities is a key factor in reaching decisions. It is considered for all State transportation and support facilities when defining, developing, and evaluating options. When considering the context, issues such as funding feasibility, maintenance feasibility, traffic demand, impact on alternate routes, impact on safety, and relevant laws, rules, and regulations must be addressed.*

The policy recognizes that "in towns and cities across California, the State highway may be the only through street or may function as a local street," that "these communities desire that their main street be an economic, social, and cultural asset as well as provide for the safe and efficient movement of people and goods," and that "communities want transportation projects to provide opportunities for enhanced non-motorized travel and visual quality." The policy acknowledges that addressing these needs will assure that transportation solutions meet more than just traffic and operational objectives.

CALTRANS TRAFFIC IMPACT STUDY GUIDE

The Caltrans *Guide for the Preparation of Traffic Impact Studies*, 2002, includes criteria for evaluating the effects of land use development and changes to the circulation system on State highways. In Sebastopol, Caltrans oversees operation on US 101, Gravenstein Highway (SR 116), and the freeway on- and off-ramps serving these two facilities. Caltrans generally endeavors to maintain a target level of service at the transition between LOS "C" and LOS "D," though for select facilities has designated lower LOS targets.

SYSTEM PLANNING REPORTS

Caltrans prepares concept reports that identify how each of its facilities will be developed and managed over a 20-year period. There is currently no active system planning document for Gravenstein Highway (SR 116). The most recent system planning document prepared by Caltrans for the highway was a Route Concept Report (RCR) completed in 1985, now considered by Caltrans to be expired. The 1985 RCR for SR 116 indicates that the highway should be widened to a continuous four-lane expressway with bike lanes between Sebastopol and US 101.

Caltrans completed and adopted the *Transportation Concept Report State Route 12 (West)*, 2014, that includes the portion of SR 12 through Sebastopol. The report reflects Caltrans's shift toward a stronger consideration of complete streets and multimodal circulation than was evident in past decades. The TCR identifies Sebastopol as having a "Rural Town (5a)" place type, described as containing "a mix of housing, services, and public institutions in a compact form…" that will

"continue to depend on a high level of automobile use…" and where "smart mobility should focus on walkable streets with speeds suitable for their context."

The TCR notes that the one-way street system in Sebastopol make the downtown "more of a place to drive through rather than to walk or bike," and that "an eastern bypass of Sebastopol that would permit through traffic on SR 12 (and SR 116) to avoid the downtown and allow a more conventional street system to be reintroduced" should be considered. Smart mobility framework strategies for SR 12 in Sebastopol include one to, "Consider traffic calming and diversion measures (bypass, return to two-way streets)."

Given the multimodal nature of the TCR, Caltrans does not specifically call for an automobile LOS target for the highway, and does not include recommendations for widening highways within the City.

REGIONAL AND LOCAL

Metropolitan Transportation Commission

The current Regional Transportation Plan (RTP) produced by MTC and the Association of Bay Area Governments, *Plan Bay Area*, was adopted in 2013. Plan Bay Area sets forth regional transportation policy and provides capital program planning for all regional, State, and Federally funded projects. In addition, Plan Bay Area provides strategic investment recommendations to improve regional transportation system performance over the next 25 years. Investments in regional highway, transit, local roadway, bicycle, and pedestrian projects are set forth. Plan Bay Area includes no roadway improvement projects within or immediately adjacent to the City of Sebastopol, though it does include regional funding to implement Sonoma County's Safe Routes to School program, implement bicycle and pedestrian improvements countywide, and enhance bus service frequencies in the County.

Sonoma County Transportation Authority

COMPREHENSIVE TRANSPORTATION PLAN FOR SONOMA COUNTY

The SCTA acts as the countywide planning and programming agency for transportation-related issues in Sonoma County. SCTA plays a leading role in transportation by securing funds, providing project oversight, and initiating long term planning activities. Every four years the SCTA updates the Sonoma Comprehensive Transportation Plan (CTP), a multi-modal transportation plan that documents existing conditions and prioritizes regional transportation needs throughout Sonoma County for the next 25 years. The CTP establishes countywide goals, objectives, and policies for improving mobility on Sonoma County's streets, highways, transit systems, and bicycle/pedestrian facilities, as well as strategies to reduce transportation-related impacts. Major roadway projects identified in the CTP relative to Sebastopol include:

- Intersection control on SR 116 at four locations

- Bodega Avenue curb, gutter, and sidewalk improvements from Golden Ridge Avenue to Pleasant Hill Road
- SR 116 curb, gutter, and sidewalk improvements from Live Oak Avenue to Hurlbut Avenue

MEASURE M

Measure M, the Traffic Relief Act for Sonoma County, was passed by Sonoma County voters in November 2004. Measure M assesses a quarter-cent sales tax on purchases made throughout the County to provide direct funding for local transportation projects. The funds are dedicated to the specific programs and projects specified in the Traffic Relief Act including maintaining local streets, fixing potholes, widening US 101, improving interchanges, restoring and enhancing transit, supporting the development of passenger rail, and building safe bicycle and pedestrian routes. Measure M provided Sonoma County and its nine cities with a new and reliable funding source for on-going local street maintenance and public transit operational needs. This increase in funding is starting to show significant benefits, as local jurisdictions have increased spending on local road maintenance projects that have improved the quality of roads, sidewalks, and bike lanes.

Funding for Local Street Projects (LSP) from Measure M can be used for pothole repairs, maintaining traffic and directional striping and signage, removal of encroaching vegetation along roadways for safety and access, and maintaining and repairing drainage facilities along roadways to prevent flooding. Sebastopol received funding to improve crossings on local streets as part of the Street Smart Sebastopol project.

BICYCLE AND PEDESTRIAN MASTER PLAN

The 2014 Amended *Sebastopol Bicycle and Pedestrian Master Plan* was developed as a component of the Sonoma County Transportation Authority's *Countywide Bicycle and Pedestrian Master Plan*. The Countywide Plan was prepared to foster local and regional coordination, plan primary facilities that connect Sonoma County's communities, and develop long-term system planning. The Plan establishes bicycle and pedestrian policies for Sebastopol and the larger Countywide bicycle system, along with bicycle and pedestrian infrastructure projects, and programmatic improvements.

The principal goal of the *Bicycle and Pedestrian Master Plan* is "To develop and maintain a comprehensive countywide bicycle and pedestrian transportation system, which includes projects, programs, and policies that work together to provide safe and efficient opportunities for bicyclists and pedestrians to access public transportation, school, work, shopping, services, recreation and residences." A map of proposed and existing bicycle and pedestrian facilities in Sebastopol, prepared by SCTA, is shown in Figure 3.13-3.

Sebastopol General Plan

The Sebastopol General Plan is a long-range comprehensive planning document required by state law to set policy and guide future growth, development and conservation of resources. The proposed Project analyzed in this EIR is the 2016 update to the Sebastopol General Plan. Relevant

goals, objectives, policies, and actions from the General Plan update are discussed in the Impacts and Mitigation Measures section of this EIR.

3.13.3 IMPACTS AND MITIGATION MEASURES

This section describes the transportation analysis of the Draft General Plan and identifies potential impacts and mitigation measures that would be associated with adoption of the Plan. Quantitative roadway impact analysis was conducted for 2040 conditions assuming full buildout of the General Plan. A discussion of the transportation analysis methodology is included below, followed by the significance criteria, impact statements and mitigation measures.

TRANSPORTATION ANALYSIS METHODOLOGY

The quantitative transportation analysis was performed using the methodology described below. For other components of the transportation system, the policy framework and actions for the Draft General Plan were evaluated against the significance criteria.

Traffic Modeling

Future traffic volumes for the year 2040 were determined using a citywide Vistro model that performs a detailed manual assignment of traffic growth associated with the land uses contained in Sebastopol's updated General Plan. Regional growth on major roadways passing through Sebastopol is anticipated to be relatively modest, as noted in the Caltrans *Transportation Concept Report State Route 12 (West)*. The applied year 2040 projections were compared to year 2040 "screenline" volumes forecast by the SCTA regional travel demand model on major roadways entering Sebastopol. The applied volumes were found to be slightly higher overall than those obtained from the SCTA model, and should therefore be considered a conservative approximation of future traffic growth.

Land Use Assumptions

Two General Plan buildout scenarios were evaluated. The first examines the impacts associated with buildout of the General Plan within the current city limits, referred to herein as the "General Plan" analysis scenario. The second reflects impacts associated with buildout of the General Plan to the City's sphere of influence, referred to as the "General Plan Cumulative" analysis scenario. The net incremental increases in development associated with buildout of each of the two scenarios are shown in Table 3.13-3.

TABLE 3.13-3: NET INCREASE IN DEVELOPMENT BY GENERAL PLAN BUILDOUT SCENARIO

GENERAL PLAN LAND USE	*GENERAL PLAN*	*GENERAL PLAN CUMULATIVE*
Residential – Single Family	328 units	514 units
Residential – Multi-Family	422 units	671 units
Commercial	341.2 ksf	341.2 ksf
Office	137.4 ksf	137.4 ksf
Industrial	60.0 ksf	684.9 ksf
Hotel	173 rooms	173 rooms
Note: ksf = 1,000 square feet		

Trip Generation

When determining the potential amount of vehicle traffic generated by future development, transportation planners and engineers typically refer to the publication *Trip Generation Manual*, 9th Edition, 2012, by the Institute of Transportation Engineers (ITE). This publication is a standard reference used by jurisdictions throughout the country, and is based on actual trip generation studies performed at numerous locations in areas of various populations. The trip generation land use categories applied in the General Plan Update analysis are shown in Table 3.13-4.

TABLE 3.13-4: APPLIED ITE TRIP GENERATION RATES

GENERAL PLAN AND/OR ZONING DESIGNATION	*ITE LAND USE CODE AND DESCRIPTION*
Single Family Residential	210 – Single Family Detached Housing
Multi-Family Residential	220 – Apartment
Commercial	826 – Specialty Retail Center
Office	710 – General Office
Industrial	110 – General Light Industrial
Hotel	310 – Hotel

DOUBLE-COUNTING ADJUSTMENT

When using standard ITE trip generation rates at a Citywide or regional level, it is necessary to balance trips to eliminate the effects of double-counting. An example of a double-counted trip would be one made by a resident in Sebastopol to an office in Sebastopol, wherein the trip is counted once as an outgoing residential trip and then again as an inbound employment trip. Based on Census journey to work data and "peaking factors" used by MTC in regional models, it was determined that a double-counting adjustment reflecting 16.5 percent of total non-residential trips would be appropriate for each of the Sebastopol General Plan buildout scenarios.

NET TRIPS ADDED AT BUILDOUT OF GENERAL PLAN

The net vehicle trips that are projected to be added to the City and surrounding street network upon buildout of each of the two land use scenarios are shown in Table 3.13-5. The net project-added trips at the 18 study intersections are shown in Figure 3.13-8 for the General Plan scenario (buildout to the City Limits), and in Figure 3.13-9 for the General Plan Cumulative scenario (buildout to the sphere of influence).

TABLE 3.13-5: NET ADDITIONAL VEHICLE TRIPS BY GENERAL PLAN BUILDOUT SCENARIO

PERIOD	*GENERAL PLAN*	*GENERAL PLAN CUMULATIVE*
Daily	21,367	28,435
AM Peak Hour	*1,037*	*1,785*
PM Peak Hour	*1,670*	*2,517*

CUMULATIVE TRAFFIC VOLUMES

The projected cumulative intersection turning movements are shown in Figure 3.13-10 for the General Plan scenario, and Figure 3.13-11 for the General Plan Cumulative scenario.

THRESHOLDS OF SIGNIFICANCE

The following standards of significance are based on Appendix G of the CEQA Guidelines, in addition to the policies contained within the proposed General Plan. The project would result in a significant impact on transportation if it would:

1. Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit.

   The applied thresholds of significance for intersection impacts are based on those included in Policy CIR 1-6 and Policy CIR 1-7 of the proposed Sebastopol General Plan:

   Policy CIR 1-6: In evaluating circulation improvement needs, and in reviewing major development proposals, consider level of service conditions and impacts for all modes of transportation, including vehicles, transit, pedestrians and bicyclists. Utilize a motor vehicle Level of Service (LOS) level objective of LOS D at intersections to evaluate conditions and impacts, with primary focus on access and safety. The following shall be taken into consideration in analyzing LOS levels:

   - Levels of service shall be calculated using the average hourly delay for all vehicles entering the intersection, and assessed for the peak hour. Impact analysis should be evaluated for the average peak hour volume.
   - At unsignalized intersections, levels of service shall be determined for both controlled movements and for the overall intersection. Controlled movements operating below LOS D (LOS E or F) would be considered acceptable if 1) the intersection is projected to operate at LOS D or better overall, and 2) the projected traffic volume on the controlled movement is relatively low (30 vehicles or less per hour on approaches with single lanes, or on multi-lane approaches, 30 vehicles or less per hour on lanes serving left turns and through movements).
   - At signalized intersections, levels of service shall be determined for the overall intersection.
   - For intersections already operating worse than LOS objectives, development projects should not contribute substantially to further decline in LOS (causing the LOS to

decline by a level grade (from LOS E to LOS F) or by more than a 5 percent increase in delay for intersections currently operating at an unacceptable LOS.

- Intersection queuing shall be evaluated in tandem with LOS. Projected queues at signalized intersections shall not extend through upstream signalized intersections.
- In evaluating circulation improvement needs at downtown intersections, mitigations should be avoided which increase capacity by widening that causes impacts to right-of-way and/or historical structures.

Policy CIR 1-7: Intersections may be exempted from the LOS objectives established in Policy CIR 1-6 in cases where the City finds that the infrastructure improvements needed to maintain vehicle LOS (such as roadway or intersection widening or intersection control modifications) would be in conflict with goals of improving multimodal circulation; or would lead to other potentially adverse environmental impacts; or would adversely impact the character of Sebastopol; or would facilitate desirable downtown area development; or when the City finds that a project provides significant community benefits, the City may approve such a project through adoption of findings that the specific economic, social, environmental, and/or other benefits of the project to the community outweigh the project's impacts on circulation, and that all appropriate mitigation measures have been required of the project.

2. Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways.
3. 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.
4. Substantially increase hazards due to a design feature.
5. Result in inadequate emergency access.
6. Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

PROJECT TRAFFIC IMPACT ANALYSIS

Intersections

A summary of the intersection level of service calculations for buildout conditions within the City Limits is contained in Table 3.13-6, and a summary of calculations for buildout under cumulative conditions (including growth to the City's sphere of influence) is contained in Table 3.13-7.

TABLE 3.13-6: *SUMMARY OF PEAK HOUR INTERSECTION LEVELS OF SERVICE* - WITH GENERAL PLAN BUILDOUT

INTERSECTION APPROACH	*AM PEAK HOUR*		*PM PEAK HOUR*	
	DELAY	*LOS*	*DELAY*	*LOS*
1. Gravenstein Highway (SR 116)/Mill Station Road	15.1	B	18.2	B
2. Gravenstein Highway (SR 116)/Hurlbut Avenue	11.8	B	18.8	B
3. Healdsburg Avenue (SR 116)/Covert Lane	6.2	A	5.7	A
Covert Lane Approach	*27.6*	*D*	***43.7***	***E***
4. Healdsburg Avenue (SR 116)/Murphy Avenue	2.6	A	1.6	A
Northbound Approach	*27.2*	*D*	*31.0*	*D*
5. Healdsburg Avenue (SR 116)/Florence Avenue	1.1	A	1.4	A
Northbound Approach	*20.6*	*C*	*27.5*	*D*
6. Healdsburg Avenue (SR 116)/North Main Street	11.3	B	11.6	B
7. North Main Street (SR 116)/McKinley Street	9.1	A	23.4	C
8. McKinley St/Laguna Park Wy/Petaluma Ave (SR 116)	3.9	A	9.8	A
Southbound Approach	*18.6*	*C*	***51.8***	***F***
Westbound Approach	*18.3*	*C*	*33.8*	*D*
9. Morris Street/Laguna Park Way	2.2	A	3.3	A
Eastbound Approach	*9.9*	*A*	*10.0*	*A*
10. Bodega Avenue/Ragle Road-Ragle Avenue South	4.3	A	3.5	A
Northbound Approach	*17.6*	*C*	*10.5*	*B*
Southbound Approach	*18.8*	*C*	*17.9*	*C*
11. Bodega Avenue/Pleasant Hill Road	17.8	C	17.3	B
12. Bodega Avenue/Dutton Ave-Jewell Ave	16.8	B	15.0	B
13. Bodega Avenue-SR 12/Main Street	25.8	C	29.8	C
14. SR 12/Petaluma Avenue	39.9	D	**60.9**	**E**
15. SR 12/Morris Street	**109.1**	**F**	**71.1**	**E**
16. SR 12/Llano Road	29.4	C	28.2	C
17. Gravenstein Highway (SR 116)/Fircrest Avenue	0.5	A	2.5	A
Eastbound Approach	*17.1*	*C*	***42.7***	***E***
18. Gravenstein Highway (SR 116)/Lynch Road	13.3	B	14.1	B

NOTES: DELAY IS MEASURED IN AVERAGE SECONDS PER VEHICLE; LOS = LEVEL OF SERVICE; RESULTS FOR MINOR APPROACHES TO TWO-WAY STOP-CONTROLLED INTERSECTIONS ARE INDICATED IN ITALICS; ***BOLD*** *= OPERATION BELOW CITY STANDARDS*

TABLE 3.13-7: *SUMMARY OF PEAK HOUR INTERSECTION LEVELS OF SERVICE* - WITH GENERAL PLAN CUMULATIVE BUILDOUT

INTERSECTION APPROACH	*AM PEAK HOUR*		*PM PEAK HOUR*	
	DELAY	*LOS*	*DELAY*	*LOS*
1. Gravenstein Highway (SR 116)/Mill Station Road	16.2	B	19.4	B
2. Gravenstein Highway (SR 116)/Hurlbut Avenue	12.5	B	19.6	B
3. Healdsburg Avenue (SR 116)/Covert Lane	8.5	A	8.5	A
Covert Lane Approach	***39.8***	***E***	***68.2***	***F***
4. Healdsburg Avenue (SR 116)/Murphy Avenue	3.1	A	1.8	A
Northbound Approach	***36.1***	***E***	***36.5***	***E***
5. Healdsburg Avenue (SR 116)/Florence Avenue	1.3	A	1.6	A
Northbound Approach	*24.8*	*C*	*33.4*	*D*
6. Healdsburg Avenue (SR 116)/North Main Street	12.2	B	14.1	B
7. North Main Street (SR 116)/McKinley Street	10.1	B	52.5	D
8. McKinley St/Laguna Park Wy/Petaluma Ave (SR 116)	4.5	A	17.4	B
Southbound Approach	*20.6*	*C*	***108.9***	***F***
Westbound Approach	*21.0*	*C*	***62.8***	***F***
9. Morris Street/Laguna Park Way	2.2	A	3.3	A
Eastbound Approach	*9.9*	*A*	*10.0*	*B*
10. Bodega Avenue/Ragle Road-Ragle Avenue South	4.7	A	4.2	A
Northbound Approach	*19.3*	*C*	*10.7*	*B*
Southbound Approach	*22.5*	*C*	*22.8*	*C*
11. Bodega Avenue/Pleasant Hill Road	20.5	C	20.4	C
12. Bodega Avenue/Dutton Ave-Jewell Ave	18.4	B	15.7	B
13. Bodega Avenue-SR 12/Main Street	32.6	C	34.1	C
14. SR 12/Petaluma Avenue	54.4	D	**90.0**	**F**
15. SR 12/Morris Street	**150.8**	**F**	**105.6**	**F**
16. SR 12/Llano Road	38.3	D	42.9	D
17. Gravenstein Highway (SR 116)/Fircrest Avenue	0.7	A	3.1	A
Eastbound Approach	*26.5*	*D*	***68.9***	***F***
18. Gravenstein Highway (SR 116)/Lynch Road	17.0	B	24.9	C

*NOTES: DELAY IS MEASURED IN AVERAGE SECONDS PER VEHICLE; LOS = LEVEL OF SERVICE; RESULTS FOR MINOR APPROACHES TO TWO-WAY STOP-CONTROLLED INTERSECTIONS ARE INDICATED IN ITALICS; **BOLD** = OPERATION BELOW CITY STANDARDS*

With buildout of General Plan land uses, the following intersections would be expected to experience operation below City standards:

- Healdsburg Avenue/Covert Lane – LOS E on the Covert Lane approach during the PM peak hour

- McKinley Street/Laguna Park Way/Petaluma Avenue – LOS F on the Laguna Park Way approach during the PM peak hour
- SR 12/Petaluma Avenue – LOS E during the PM peak hour
- SR 12/Morris Street– LOS F during the AM peak hour and LOS E during the PM peak hour
- Gravenstein Highway (SR 116)/Fircrest Avenue– LOS E on the Fircrest Avenue approach during the PM peak hour

With buildout of General Plan Cumulative land uses, the same five intersection identified as operating unacceptably in the General Plan buildout scenario would continue to operate unacceptably, with further increases in delay. Levels of Service at these five intersections are projected to be as follows:

- Healdsburg Avenue/Covert Lane – LOS E on the Covert Lane approach during the AM peak hour and LOS F during the PM peak hour.
- McKinley Street/Laguna Park Way/Petaluma Avenue – LOS F on the McKinley Street and Laguna Park Way approaches during the PM peak hour.
- SR 12/Petaluma Avenue – LOS F during the PM peak hour
- SR 12/Morris Street– LOS F during the AM and PM peak hour
- Gravenstein Highway (SR 116)/Fircrest Avenue– LOS F on the Fircrest Avenue approach during the PM peak hour.

Buildout of General Plan Cumulative land uses is anticipated to create one additional impact at the following intersection.

- Healdsburg Avenue/Murphy Avenue – LOS E on the Murphy Avenue approach during the AM and PM peak hours.

IMPACTS AND MITIGATION MEASURES

Impact 3.13-1: Implementation of the proposed General Plan would result in acceptable traffic operation at study intersections controlled by the City of Sebastopol. (Less than Significant)

All local street intersections controlled by the City of Sebastopol (in other words, those not on SR 116 or SR 12), would be expected to operate with acceptable levels of service according to the standards set in the Circulation Element. The impact is therefore considered to be **less than significant**.

Impact 3.13-2: General Plan buildout as well as regional growth would require improvements on Caltrans facilities (SR 12 and SR 116). (Significant and Unavoidable)

Development allowed under buildout of the Sebastopol General Plan would result in increased use of SR 12 and SR 116, regional highway facilities owned and operated by Caltrans that also serve local traffic within Sebastopol. Caltrans has established a standard of LOS D for intersections in the study area that are on the State highway system, consistent with the City of Sebastopol's standard.

Intersections Requiring Traffic Control

The following unsignalized intersections are projected to operate unacceptably in the future, with future delays and volumes meeting warrants for installation of traffic controls such as a signal or roundabout.

- Healdsburg Avenue (SR116) at Covert Lane
- Healdsburg Avenue (SR116) at Murphy Avenue
- Gravenstein Highway South (SR116) at Fircrest Avenue

For the purposes of this analysis, operation of these intersections assuming installation of a traffic signal is shown below in Table 3.13-8 for General Plan Buildout conditions, and in Table 3.13-9 for General Plan Cumulative Buildout Conditions.

TABLE 3.13-8: *SUMMARY OF PEAK HOUR INTERSECTION LEVELS OF SERVICE* - WITH GENERAL PLAN BUILDOUT – MITIGATED CONDITIONS

INTERSECTION APPROACH	*AM PEAK HOUR*		*PM PEAK HOUR*	
	DELAY	*LOS*	*DELAY*	*LOS*
3. Healdsburg Avenue (SR 116)/Covert Lane	16.5	B	34.5	C
4. Healdsburg Avenue (SR 116)/Murphy Avenue	6.4	A	12.3	B
17. Gravenstein Highway (SR 116)/Fircrest Avenue	6.1	A	33.3	C

TABLE 3.13-9: *SUMMARY OF PEAK HOUR INTERSECTION LEVELS OF SERVICE* - WITH GENERAL PLAN CUMULATIVE BUILDOUT – MITIGATED CONDITIONS

INTERSECTION APPROACH	*AM PEAK HOUR*		*PM PEAK HOUR*	
	DELAY	*LOS*	*DELAY*	*LOS*
3. Healdsburg Avenue (SR 116)/Covert Lane	26.7	C	30.9	C
4. Healdsburg Avenue (SR 116)/Murphy Avenue	16.0	B	15.4	B
17. Gravenstein Highway (SR 116)/Fircrest Avenue	21.7	C	54.5	D

With the installation of traffic controls at these intersections, impacts would be reduced to a less than significant level. However, because the City does not control the funding or timing of these improvements, the City cannot determine that the improvements will be made in time to

accommodate regional and local growth, this impact would remain **significant and unavoidable** and no alternative mitigation is available.

McKinley Street/Laguna Park Way/Petaluma Avenue

The intersection of McKinley Street/Laguna Park Way/Petaluma Avenue would operate at LOS F on the Laguna Park Way and McKinley Street stop-controlled approaches. These volumes meet peak hour traffic signal warrants during the PM peak hour under both the General Plan Buildout and General Plan Cumulative Buildout scenarios. Of primary concern is the volume of pedestrian crossings on the south leg of the intersection and the potential increase to these crossings with continued development to the east in the Barlow area. It is recommended that a HAWK (High-Intensity Activated Crosswalk) beacon be installed at the south leg crossing while also narrowing the northbound approach to one lane. The inside lane is generally only used by traffic as a passing lane since the majority of traffic on this approach turns right onto North Main Street. The HAWK will allow for protected pedestrian crossings, stopping traffic only as needed. When activated, the break in traffic will provide gaps for traffic on the southbound approach of Laguna Park Way and the westbound approach of McKinley Street to proceed from the stop-controlled approach.

Since there is no identified funding source for this improvement and the intersection is controlled by Caltrans, outside the control of the City of Sebastopol, this would be considered a **significant and unavoidable** impact.

Through Traffic Impacts

The intersections of Sebastopol Avenue (SR 12)/Petaluma Avenue (SR 116) and Sebastopol Avenue (SR 12)/Morris Street would be expected to experience unacceptable LOS E to LOS F conditions during peak hours under General Plan growth conditions. Both of these intersections serve through traffic movements which utilize the Sebastopol downtown core area to gain access to other areas of West Sonoma County and the deficient level of service is primarily a result of the high volume of through traffic. These impacts could be mitigated in one of two ways:

1) **Pursue a bypass route with the County** – The use of Occidental Road with modifications as a parallel high vehicle capacity route could have the potential of relieving through traffic demand in the City's core. In addition to improved shoulders and turn lanes between Fulton Road and SR 116, the route would require a more direct and convenient connection in the area of the SR 12/Fulton Road intersection. This action has been identified as a desired policy in the City's new Circulation Element, and is referred to in the 2014 Caltrans Transportation Concept Report for SR 12. However, Occidental Road is maintained by the County of Sonoma, no funding source has been identified for this bypass route and it is unknown if this option is feasible. Therefore, the impacts to Sebastopol Avenue (SR 12)/ Petaluma Avenue (SR 116) and Sebastopol Avenue (SR 12)/Morris Street would be considered **significant and unavoidable**.
2) **Expand the capacity of the intersections** – From a traffic engineering and operations standpoint, these intersections could be modified to serve the projected traffic demand by

adding through lanes and adding turn lanes. These types of improvements would undoubtedly require additional right-of-way and removal of existing structures. The City's **Policy CIR 1-7** states that cases where the City finds that the infrastructure improvements needed to maintain vehicle LOS (such as roadway or intersection widening or intersection control modifications) would be in conflict with goals of improving multimodal circulation; or would lead to other potentially adverse environmental impacts; or would adversely impact the character of Sebastopol, may be exempted from the LOS objective. Until such time that the City makes such a finding and gains concurrence from Caltrans, the impact would be considered **significant and unavoidable**.

2016 GENERAL PLAN POLICIES AND ACTIONS THAT MITIGATE POTENTIAL IMPACTS

The following policies and actions are excerpts from the 2016 General Plan update that would help to reduce Impacts 3.13-1 and 3.13-2.

Policies

Policy CIR 1-1: Ensure that the City's circulation network is maintained and improved over time to support buildout of the General Plan in a manner that is consistent with the General Plan Circulation Map.

Policy CIR 1-6: In evaluating circulation improvement needs, and in reviewing major development proposals, consider level of service conditions and impacts for all modes of transportation, including vehicles, transit, pedestrians and bicyclists. Utilize a motor vehicle Level of Service (LOS) level objective of LOS D at intersections to evaluate conditions and impacts, with primary focus on access and safety. The following shall be taken into consideration in analyzing LOS levels:

- Levels of service shall be calculated using the average hourly delay for all vehicles entering the intersection, and assessed for the peak hour. Impact analysis should be evaluated for the average peak hour volume.
- At unsignalized intersections, levels of service shall be determined for both controlled movements and for the overall intersection. Controlled movements operating below LOS D (LOS E or F) would be considered acceptable if 1) the intersection is projected to operate at LOS D or better overall, and 2) the projected traffic volume on the controlled movement is relatively low (30 vehicles or less per hour on approaches with single lanes, or on multi-lane approaches, 30 vehicles or less per hour on lanes serving left turns and through movements).
- At signalized intersections, levels of service shall be determined for the overall intersection.
- For intersections already operating worse than LOS objectives, development projects should not contribute substantially to further decline in LOS (causing the LOS to decline by a level grade (from LOS E to LOS F) or by more than a 5 percent increase in delay for intersections currently operating at an unacceptable LOS.

- Intersection queuing shall be evaluated in tandem with LOS. Projected queues at signalized intersections shall not extend through upstream signalized intersections.
- In evaluating circulation improvement needs at downtown intersections, mitigations should be avoided which increase capacity by widening that causes impacts to right-of-way and/or historical structures.

Policy CIR 1-7: Intersections may be exempted from the LOS objectives established in Policy CIR 1-6 in cases where the City finds that the infrastructure improvements needed to maintain vehicle LOS (such as roadway or intersection widening or intersection control modifications) would be in conflict with goals of improving multimodal circulation; or would lead to other potentially adverse environmental impacts; or would adversely impact the character of Sebastopol; or would facilitate desirable downtown area development; or when the City finds that a project provides significant community benefits, the City may approve such a project through adoption of findings that the specific economic, social, environmental, and/or other benefits of the project to the community outweigh the project's impacts on circulation, and that all appropriate mitigation measures have been required of the project.

Policy CIR 1-9: Through the development review process, CEQA process, and through long-range infrastructure planning efforts, identify circulation network improvements and mitigation measures necessary to maintain the City's vehicle, transit, bicycle and pedestrian objectives.

Policy CIR 1-14: Consider roundabouts in lieu of traffic signals where adequate right of way is available and appropriate conditions exist to maximize intersection efficiency, maintain continuous but moderate traffic flow, reduce pollution emissions, reduce accident severity, and enhance pedestrian and cyclist circulation.

Policy CIR 1-16: Continue to evaluate the benefits and feasibility of a two-way street system on some or all of SR 116 between McKinley Street and just south of Palm Avenue. The two-way street system should focus on slower vehicle speeds and enhancements to pedestrian and bicycle travel.

Policy CIR 1-17: Identify potential for bypass route(s) or "beltway connector" route(s) which minimize impacts to the Laguna, and provide regional travel options with the intention of providing traffic with an optional route away from downtown Sebastopol.

Policy CIR 1-19: Consider the impacts of traffic and land use growth on the road network, especially in downtown Sebastopol, when evaluating proposals for new development.

Policy CIR 3-6: Encourage local access connections between neighborhood parks and commercial areas by walking and biking as an alternative to short-distance driving.

Policy CIR 5-2: Ensure that the City's Trip Reduction Program (Municipal Code Section 8.16) is implemented. The purpose of the City's Trip Reduction ordinance is to reduce traffic and improve air quality within the City of Sebastopol by promoting the development of Trip Reduction Programs (also referred to as Transportation Demand Management Programs, or TDM) at existing and future work sites. Examples of TDM programs may include (but are not limited to) subsidized transit passes, guaranteed ride home, carpool matching, telecommuting, alternative work schedules, car sharing, employer-sponsored vanpools, priced workplace parking, preferential

parking for carpools and/or low-emission vehicles, and shower facilities at workplaces to support bike riding.

Actions

Action CIR 1a: The City shall cooperate with other jurisdictions in Sonoma County to reduce transportation congestion through the following actions:

- *Staff should participate in the SCTA's technical advisory groups in pursuing funding opportunities.*
- *Encourage public input into SCTA's congestion management planning process.*
- *Participate in future updates to the Comprehensive Transportation Plan.*
- *Coordinate with the County of Sonoma, including the Parks & Recreation Department, in efforts to expand regional bicycle and pedestrian networks to meet anticipated demands.*

Action CIR 1b: Coordinate with the County of Sonoma and Caltrans to determine feasible alternative routes, bypasses or "beltway connector" routes (e.g. Llano Road extension from SR 12 to Occidental Road, or measures to divert some Hwy. 116 traffic at the southern terminus of Llano Road, or diversion of some Hwy. 12 traffic to Occidental Road at Fulton Road, or improving Ragle Road) and evaluate benefits provided by these routes. If appropriate, work collaboratively with the County of Sonoma and Caltrans to determine the extent of roadway improvements needed to support these bypass routes, add the project to future CIPs or seek County or other agencies plan improvements, encourage proactive participation and coordination by the SCTA and support funding through the SCTA or other sources, and as appropriate, update both City and County General Plan Circulation Elements to include these routes.

Action CIR 1c: In collaboration with Caltrans, complete a comprehensive 2-way street analysis for SR 116 (South Main Street, Petaluma Avenue and McKinley Street) including traffic operational analysis, concept designs, urban design/landscaping improvements, economic benefits and identification of potential funding sources. As appropriate, work with SCTA, Caltrans, and other affected agencies to update policy objectives based on the results of the analysis. As interim roadway improvements to the SR 116 corridor are proposed, they shall be evaluated by City staff for compatibility with a future conversion to 2-way streets, in order to foster informed decision making.

Action CIR 1d: Complete the following roadway improvements to maintain the safety and efficiency of the current circulation system, and to support buildout of the General Plan.

- *Healdsburg Avenue (SR 116)/Covert Lane intersection – install a traffic signal or roundabout*
- *Healdsburg Avenue (SR 116)/Murphy Avenue intersection – install a traffic signal or roundabout*
- *Gravenstein Highway South (SR 116)/Fircrest Avenue intersection – install a traffic signal or roundabout*
- *McKinley Street/Laguna Park Way/Petaluma Avenue intersection – install a HAWK beacon (also referred to as a Pedestrian Hybrid Beacon) on the southern leg pedestrian crossing*

- *Willow Street – extend the street through the City parking lot from Main Street to Petaluma Avenue to enhance grid connectivity*
- *Abbot Avenue – change route to parallel Sebastopol Avenue, with a potential connection to Morris Street*

Action CIR 1g: Update the City's Traffic Impact Fee (TIF) to include, as appropriate, the roadway improvements necessary to support buildout of the General Plan.

Action CIR 1i: Routinely monitor the performance of the circulation network, optimizing traffic signals and utilizing Intelligent Transportation Systems (ITS) measures where beneficial to maximize efficiency of the existing network on a regular basis.

Action CIR 1j: Provide staff support/liaison to regional agencies such as SCTA and Caltrans in the implementation of ITS measures that improve the efficiency of roadway and transit networks in western Sonoma County.

Action CIR 1m: Establish specific Transportation Demand Management (TDM) requirements for new development projects and consider making requirements sector-based (e.g., residential, commercial, industrial).

Action CIR 1n: Create incentives for proposed development to incorporate measures to reduce vehicle trips, such as mixed use projects and including bicycle and pedestrian facilities in the development plans and connections to existing bicycle and pedestrian facilities.

Action CIR 1o: Ensure that future development provides roadway improvements and/or fees contributing towards transportation improvements consistent with the Circulation Diagram and Circulation Element system-wide mobility goals and improvements identified as part of the City's Traffic Impact Fee (TIF) to improve the safety, efficiency and connectivity of the current circulation system for all modes of transportation, and to support buildout of the General Plan.

Action CIR 3e: The City shall develop and implement a way-finding signage program that differentiates Downtown route options and rural route options that bypass the Downtown area. The intent of this program is to assist travelers in the identification of route options that may help alleviate Downtown traffic congestion.

Action CIR 5b: Establish specific TDM requirements that is consistent with the City's Trip Reduction Program for projects and consider making requirements sector-based (e.g., residential, commercial, industrial).

Impact 3.13-3: The proposed General Plan would not conflict with an applicable congestion management program (No Impact)

The Sonoma County Transportation Authority relinquished its position as the County's Congestion Management Agency (CMA) in 1997, and as a result, does not maintain or enforce an applicable congestion management program or level of service standards on roadway facilities within Sonoma County including within the City of Sebastopol. Therefore, there is **no impact**.

Impact 3.13-4: The proposed General Plan would not result in a change in air traffic patterns (No Impact)

The City has no existing or planned airport facilities and is not located near any airports, or their approach or departure zones. Development attributable to the General Plan would be expected to have **no impact** to air traffic.

Impact 3.13-5: Implementation of the proposed General Plan would not substantially increase hazards due to a design feature (Less than Significant)

The City maintains improvement standards that guide the construction of new transportation facilities to minimize design hazards for all users of the system. Through the environmental review process, land use proposals that would add traffic to streets not designed to current standards are carefully evaluated. If needed, mitigations are identified and the project is conditioned to construct or provide funding for an improvement that would minimize or eliminate the hazard. Typical improvements include shoulder widening, adding turn pockets, adding sidewalks or crosswalks, realigning sharp curves, prohibiting certain turning movements, and signalizing intersections. New and upgraded roadways needed to accommodate new development will be designed according to applicable federal, state, and local design standards.

Development and infrastructure projects in Sebastopol would be required to comply with the General Plan, Land Use Code, and applicable state and local regulations. The General Plan also establishes several policies and actions that are intended to result in roadway designs that safely accommodate all users and reinforce lower driving speeds where appropriate to enhance safety. Specifically, General Plan Policies CIR 1-11 and CIR 3-9 address the need to design circulation facilities to provide safe access for all users. Action CIR 1k requires the City to monitor collision reports and operation in order to prioritize implementation of safety improvements, and Action CIR 3c requires the City to review its adopted street standards and update as necessary to maintain safety for all users. Further, the General Plan update does not contain any provisions that would increase hazards due to design features of incompatible uses. Therefore, this impact is **less than significant**.

2016 GENERAL PLAN POLICIES AND ACTIONS THAT MITIGATE POTENTIAL IMPACTS

The following policies and actions are excerpts from the 2016 General Plan update that are relevant to Impact 3.13-5.

Policies

Policy CIR 1-11: Consider all transportation improvements as opportunities to improve safety, access, and mobility for all roadway users.

Policy CIR 3-9: Design intersections to provide adequate and safe access for all users including pedestrians, bicyclists, and motorists of all ages and abilities.

Policy CIR 3-11: Review Subdivision Ordinance standards for new streets and driveways to maintain safe access while minimizing area devoted to vehicle traffic.

Actions

Action CIR 1k: Ensure regular monitoring of traffic accidents, traffic levels of service, and intersection capacity to update base data and respond to safety problems and changing conditions. Prioritize locations with high collision rates for safety improvements.

Action CIR 3b: The Public Works Department shall review plans for new or modified intersections to ensure that the number of vehicle lanes is limited where possible to provide for moderate speeds and pedestrian and bicyclist safety, and that curb extensions are installed where appropriate to reduce driving speeds and shorten pedestrian crossing distances.

Action CIR 3c: The Public Works Department shall review its adopted street standards, including those specified in the Subdivision Ordinance, and update as necessary to achieve balanced roadway configurations that serve all users, and through design help to reinforce appropriate vehicle speeds for the surrounding land use context.

Impact 3.13-6: Emergency Access (Less than Significant)

Implementation of the proposed General Plan update would result in increased development densities and intensities and would increase the number of users on the City's transportation system. There will be a need to ensure that adequate emergency access provisions are made to accommodate increased population and growth. With the circulation improvements and policies included in the General Plan, adequate traffic flow is projected to be maintained. Policy CIR 1-15 indicates that key transportation facilities for emergency vehicle access shall be maintained and improved, and Policy CIR 3-7 requires the City's adopted street standards to accommodate emergency vehicles. Action CIR 1f requires developers to provide adequate emergency vehicle access. As a result, the Plan's impacts to emergency circulation and access are considered to be **less than significant**.

2016 GENERAL PLAN POLICIES AND ACTIONS THAT MITIGATE POTENTIAL IMPACTS

The following policies and actions are excerpts from the 2016 General Plan update that are relevant to Impact 3.13-6.

Policies

Policy CIR 1-15: Maintain and improve critical transportation facilities for emergency vehicle access and emergency evacuation needs.

Policy CIR 3-7: Ensure that the City's adopted street standards reflect a multi-modal focus, including vehicular lane widths that are no wider than necessary to serve the surrounding land use context and accommodate emergency vehicles.

Actions

Action CIR 1f: As part of the development review process, the Planning Department and the Public Works Department shall review development projects to ensure that developers:

- *Construct transportation improvements along property frontages when appropriate*
- *Address the project's proportional-share of impacts to the City's circulation network through payment of traffic mitigation fees*
- *Provide for complete streets to the extent feasible; facilitating walking, biking, and transit modes*
- *Provide appropriate on-site pedestrian and bicycle features*
- *Fund traffic impact studies that identify on-site and off-site project effects and mitigation measures*
- *Provide adequate emergency vehicle access*
- *Minimize driveway cuts consistent with access and site planning considerations*

Impact 3.13-7: The proposed General Plan would accommodate increased demand for public transit and supports a shift in trips from automobile to transit modes (Less than Significant)

Implementation of the Sebastopol General Plan could lead to increases in the City's population and employment that would increase the demand for transit services offered by Sonoma County Transit. While established standards regarding transit levels of service have not been adopted by the City or transit agencies, the General Plan includes policies that support transit-oriented development patterns, strengthen ties between the pedestrian and bicycle networks to transit, promote enhancements to transit facilities, and support increased transit coverage and frequencies in Sebastopol.

Policies CIR 2-17 and CIR 2-20 indicate that the City shall seek funding for bus shelters and ensure that adequate lighting is provided at bus stops. Policy CIR 2-19 calls for continued coordination with Sonoma County Transit to educate the public about using the transit system, and Policies CIR 2-21 through CIR 2-24 focus on improving park-and-ride facilities at major transit stops and

continuing to monitor the need and locations for additional park-and-ride lots. Policy CIR 2-18 and Action CIR 2h state that the City of Sebastopol shall work with SCT to pursue improvements and funding to increase transit frequencies, hours of transit operation, and transit service areas in Sebastopol. Policy CIR-22 and Action CIR 2j call for the City to ensure that effective connections between Sebastopol and SMART commuter rail stations in Santa Rosa and Cotati are in place. Given the General Plan's emphasis on increasing transit usage, improving transit facilities, and desire to fund future improvements to transit service, any potential impacts to transit are considered to be **less than significant**.

2016 GENERAL PLAN POLICIES AND ACTIONS THAT MITIGATE POTENTIAL IMPACTS

The following policies and actions are excerpts from the 2016 General Plan update that are relevant to Impact 3.13-7.

Policies

Policy CIR 2-17: Through a Capital Improvement Program and joint funding from Sonoma County Transit, the City shall maintain and, where feasible, continue to build lighted and sheltered seating facilities at bus stops where appropriate.

Policy CIR 2-18: Pursue improvements and funding to increase transit ridership, increase transit frequencies on key corridors, increase the hours of transit operation, and expand regular transit service in portions of Sebastopol that currently have no public transit.

Policy CIR 2-19: Continue to work with Sonoma County Transit to create an effective Rider Awareness Program that will educate the public on the existing transit systems.

Policy CIR 2-20: Ensure that adequate lighting and trash disposal is provided at all bus stops.

Policy CIR 2-21: Work with SCT to identify the need for and locations of additional park-and-ride lots in Sebastopol in order to increase the number and length of trips made by transit and carpooling.

Policy CIR 2-22: Ensure that effective linkages are in place between the SMART commuter rail stations in Santa Rosa and Cotati and the city's primary activity centers.

Policy CIR 2-23: Encourage the use of park-and-ride lots and other transit incentives for Sebastopol commuters.

Policy CIR 2-24: Provide safe and continuous pedestrian, vehicular, and bicycle access at all transit park-and-ride facilities.

Policy CIR 3-3: Prioritize high-density and mixed land use patterns that promote transit and pedestrian travel along transit corridors.

Policy CIR 3-4: Design developments to include features that encourage walking, bicycling, and transit use. Design features shall include bus turnouts, transit shelters and benches, and pedestrian access points between subdivisions and between adjacent related land uses.

Actions

Action CIR 1j: Provide staff support/liaison to regional agencies such as SCTA and Caltrans in the implementation of ITS measures that improve the efficiency of roadway and transit networks in western Sonoma County.

Action CIR 2h: As funding becomes available, the City shall encourage Sonoma County Transit to provide more frequent headways, extend service hours, and serve a greater portion of the City.

- *Bus headways of 45 minutes or less are desirable on routes serving Sebastopol.*
- *Local bus service operating until 10 PM would be desirable.*
- *Saturday and Sunday bus services with expanded weekend hours are desired.*

Action CIR 2i: Compile a list of bus stops with inadequate lighting, and through the CIP, install street lights at those stops as funding is available.

Action CIR 2j: Study the feasibility of establishing a public or private shuttle system to serve the SMART commuter rail station.

Impact 3.13-8: The proposed General Plan is consistent with adopted bicycle and pedestrian plans, and supports enhancements that emphasize bicycle and pedestrian circulation (Less than Significant)

Implementation of the Sebastopol General Plan would improve the existing bicycle and pedestrian circulation infrastructure and require future development to provide multimodal circulation improvements. The General Plan includes a comprehensive list of policies and actions aimed at prioritizing multimodal circulation. Examples include Policies CIR 2-1 through 2-4 and Actions 2a and 2g, which call for the City of Sebastopol to establish, maintain, and implement a network of pedestrian and bicycle facilities that are consistent with the City's *Bicycle and Pedestrian Master Plan* and its future updates. Policies CIR 2-4, CIR 2-5, and CIR 3-10, as well as Actions 1f and 2a, require development projects to construct pedestrian and bicycle improvements on- and off-site, consistent with the *Bicycle and Pedestrian Master Plan*. Policy CIR 1-10 and Action CIR 1f indicate that the City shall assess circulation impact fees that support facilities shown in the *Bicycle and Pedestrian Master Plan*. Given the proposed General Plan's focus on enhancing Sebastopol's multimodal circulation system; consistency with the *Bicycle and Pedestrian Master Plan* and any future updates of that Plan; requirements for future development to construct multimodal improvements; and commitment to fund larger bicycle and pedestrian improvement projects through impact fees, the potential impacts to pedestrian and bicycle circulation are considered to be **less than significant**.

2016 GENERAL PLAN POLICIES AND ACTIONS THAT MITIGATE POTENTIAL IMPACTS

The following policies and actions are excerpts from the 2016 General Plan update that are relevant to Impact 3.13-8.

Policies

Policy CIR 1-2: Ensure that the City's circulation network is a well-connected system of streets, roads, sidewalks, and paths that effectively accommodates vehicular and non-vehicular traffic in a manner that considers the context of surrounding land uses and the needs of all roadway users.

Policy CIR 1-3: Regard the quality of life in Sebastopol, maintaining its special small-town character, and providing a safety network of pedestrian and bicycle facilities as more important than accommodating vehicle circulation.

Policy CIR 1-5: When analyzing impacts to the circulation network created by new development or roadway improvements, consider the needs of all users, including those with disabilities, ensuring that pedestrians, bicyclists, and transit riders are considered preeminent to automobile drivers.

Policy CIR 1-8: Establish multi-modal level of service objectives that would facilitate review of transit, bicycle and pedestrian impacts, in addition to motor vehicles when these methods are more available and useful.

Policy CIR 1-9: Through the development review process, CEQA process, and through long-range infrastructure planning efforts, identify circulation network improvements and mitigation measures necessary to maintain the City's vehicle, transit, bicycle and pedestrian objectives.

Policy CIR 1-10: During the development review process, for those locations where the City allows a reduced motor vehicle LOS or queuing standard (see Policy CIR 1-6) the City may choose to require either additional multimodal improvements or other system-wide transportation network improvements in lieu of requiring mitigations to the impacted road or intersection in order to reduce the impacts to mobility. This approach could apply to the use of traffic impact fees collected from developments as well.

Policy CIR 2-1: Establish and maintain a system of interconnected bicycle and pedestrian facilities that facilitate commuter and recreational travel, and that are consistent with the City's parks, trails, and recreation goals and policies in this General Plan and the Sebastopol Bicycle and Pedestrian Master Plan (Amended November 2011) or future updates of the plan.

Policy CIR 2-2: Routinely incorporate sidewalks and enhanced pedestrian crossing facilities as part of new street construction or enhancements to existing streets.

Policy CIR 2-3: Incorporate bicycle facilities according to the Sebastopol Bicycle and Pedestrian Master Plan (including bicycle lanes, pavement markings, pavement treatments, bicycle route and destination signs, and bicycle detection at traffic signals).

Policy CIR 2-4: Require development projects to construct frontage sidewalks, missing sidewalk sections, paths, and nearby enhanced crosswalks in a manner that is consistent with the City's goals and policies in this General Plan and the Sebastopol Bicycle and Pedestrian Plan, and as dictated by the location of other activity centers, transit stops and common pedestrian destinations.

Policy CIR 2-5: Evaluate opportunities for pedestrian or other circulation and mobility connections to the circulation network in review of major development projects, and require appropriate improvements.

Policy CIR 2-6: Explore opportunities to better connect existing development to the bicycle/ pedestrian network.

Policy CIR 2-7: Create an accessible circulation network that is consistent with guidelines established by the Americans with Disabilities Act (ADA), allowing mobility-impaired users such as the disabled and elderly to safely and effectively travel within and beyond the city.

Policy CIR 2-9: Increase connectivity between trip attractors and trip generators, including a complete sidewalk network, marked and enhanced crossings, and well-lit paths.

Policy CIR 2-10: Increase the safety of popular bicycle and pedestrian routes to schools, downtown, and other destinations in the City that don't involve riding on SR 116, SR 12 and/or Bodega Avenue including enhanced crossings of SR 116, SR 12 and/or Bodega Avenue.

Policy CIR 2-11: Work with utility providers to reduce or eliminate barriers to pedestrian and bicyclist mobility created by utility infrastructure (such as utility poles that obstruct accessibility).

Policy CIR 2-12: Establish and maintain bicycle facilities that are consistent with the network depicted in the City's Bicycle and Pedestrian Master Plan.

Policy CIR 2-13: Public road construction projects shall incorporate facilities identified in the Bicycle and Pedestrian Master Plan to the greatest extent feasible.

Policy CIR 2-14: Provide secure bicycle racks in places such as the Downtown, at commercial areas, park and ride transit facilities, schools, multiple-unit residential developments, and other locations where there is a concentration of residents, visitors, students, or employees.

Policy CIR 2-15: Ensure that all crossings where trails and roads meet include enhanced, high visibility crossing design.

Policy CIR 2-16: Promote public education to help create an atmosphere of respect for bicycles and pedestrians.

Policy CIR 2-24: Provide safe and continuous pedestrian, vehicular, and bicycle access at all transit park-and-ride facilities.

Policy CIR 2-25: Prioritize bicycle and pedestrian safety for students traveling to and from school.

Policy CIR 2-26: Support regional efforts to develop Safe Routes to School Programs for schools that serve Sebastopol's population.

Policy CIR 2-27: Prioritize the improvement of roadway pedestrian crossings throughout the community, particularly in accident-prone areas.

Policy CIR 3-1: Recognize the role of streets not only as vehicle routes but also as parts of a system of public spaces, with quality landscaping, street trees, and bicycle and pedestrian paths.

Policy CIR 3-9: Design intersections to provide adequate and safe access for all users including pedestrians, bicyclists, and motorists of all ages and abilities.

Policy CIR 3-10: Require new development to include effective linkages to the surrounding circulation system for all modes of travel, to the extent feasible.

Actions

Action CIR 1e: The Public Works Department shall maintain a systematic pavement management program and identify and prioritize maintenance projects in the City's Capital Improvement Plan (CIP).

- *Street maintenance should include upkeep and regular cleaning of bicycle routes to remove debris and repair poor pavement conditions that discourage bicycle riding.*
- *The pavement management program data system should address signage and pavement quality throughout the city.*

Action CIR 1f: As part of the development review process, the Planning Department and the Public Works Department shall review development projects to ensure that developers:

- *Construct transportation improvements along property frontages when appropriate*
- *Address the project's proportional-share of impacts to the City's circulation network through payment of traffic mitigation fees*
- *Provide for complete streets to the extent feasible; facilitating walking, biking, and transit modes*
- *Provide appropriate on-site pedestrian and bicycle features*
- *Fund traffic impact studies that identify on-site and off-site project effects and mitigation measures*
- *Provide adequate emergency vehicle access*
- *Minimize driveway cuts consistent with access and site planning considerations*

Action CIR 1r: Coordinate with Caltrans to implement traffic calming, vehicle safety, and bicycle/pedestrian network improvements throughout Sebastopol.

Action CIR 2a: As part of the development process, review development applications to ensure compliance with the Sebastopol Bicycle and Pedestrian Master Plan.

Action CIR 2b: Review traffic signal timing plans or work with Caltrans to ensure adequate crossing times for all users at signalized intersections.

Action CIR 2c: Ensure that bicycle loop detectors are present at traffic signals and clearly identified with stencils.

Action CIR 2d: Review all transportation improvements to ensure installation in accordance with current accessibility standards.

Action CIR 2e: Regularly review transportation corridors to identify barriers encountered by persons with disabilities, including locations where there are not ADA-compliant curb cuts and ramps, and address such obstacles in the Capital Improvement Program, to the extent that funding for such activities is available.

Action CIR 2f: Continue to include construction of bicycle and pathway facilities, including pedestrian road crossings and pedestrian pathways, in the City's CIP, prioritizing areas where gaps in the current network need to be filled.

Action CIR 2g: Focus on the identification of more Class I trails and Class IV separated bike facilities. In particular, pursue Class I or Class IV alternatives to SR 116, SR 12 and Bodega Avenue, Class II Bike lanes, and sharrow markings to create viable north-south and east-west mobility opportunities for bicyclists and pedestrians of all ages, as identified in the Sebastopol Bicycle and Pedestrian Master Plan.

Action CIR 2k: Review all transportation improvements to ensure installation in accordance with current accessibility standards.

Action CIR 2m: As part of the development review process, ensure that new development projects provide bicycle and pedestrian improvements to facilitate the implementation of a Safe Routes to School plan for Sebastopol schools.

Action CIR 2n: Coordinate with the SCTA, Sonoma County Health Services, Sebastopol Union School District, and Sonoma County Bicycle Coalition to continue the Safe Routes to School Program in Sebastopol.

Action CIR 2o: Routinely review and update the Safe Routes to School plan, to reflect the current circulation infrastructure, student travel patterns, identified hazards, and school operations.

Action CIR 2r: Issue guidelines and incorporate assessment of multimodal LOS as a routine component of transportation impact analyses once the Public Works Department determines a multimodal LOS methodology that is deemed suitable for application in Sebastopol.

Action CIR 2t: Coordinate with SCTA to include City staff and a citizen representative on the Countywide Bicycle and Pedestrian Advisory Committee to ensure City representation in reviewing projects and funding sources.

Action CIR 3a: During the development review process, the Planning Department shall review plans to ensure that projects include an interconnected network of streets and paths that facilitate non-auto modes for shorter trips, and disperse rather than concentrate traffic in residential neighborhoods.

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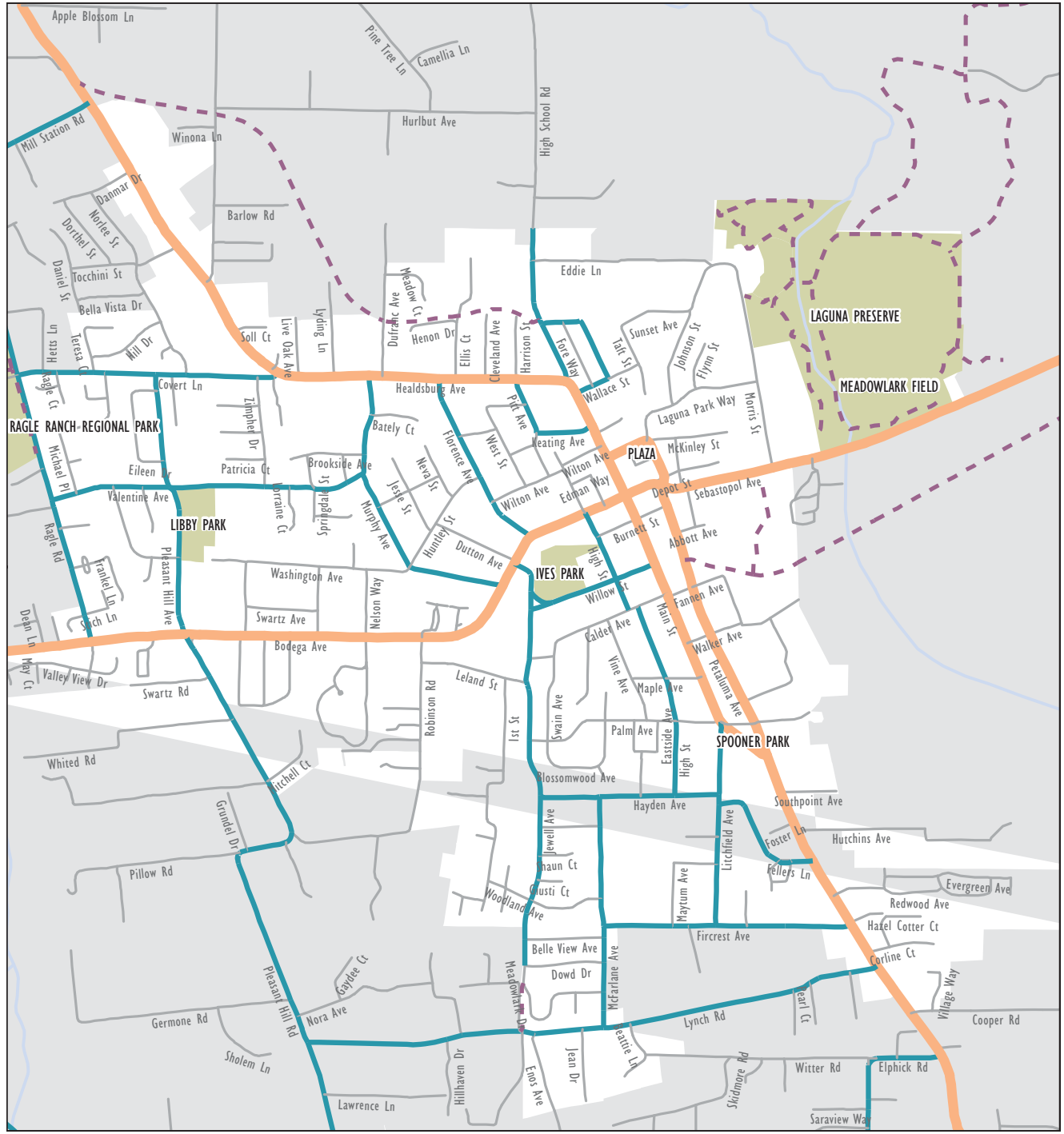
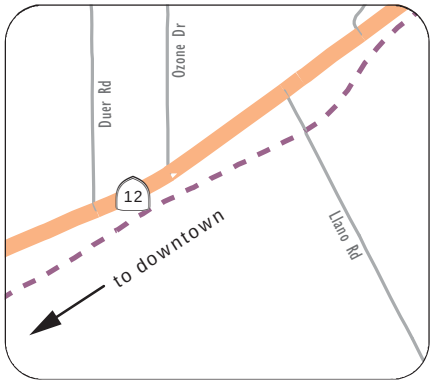
Sebastopol General Plan Update

Figure 3.13-1
Roadway Classification



LEGEND

- Arterial
- Collector
- Trail
- Local



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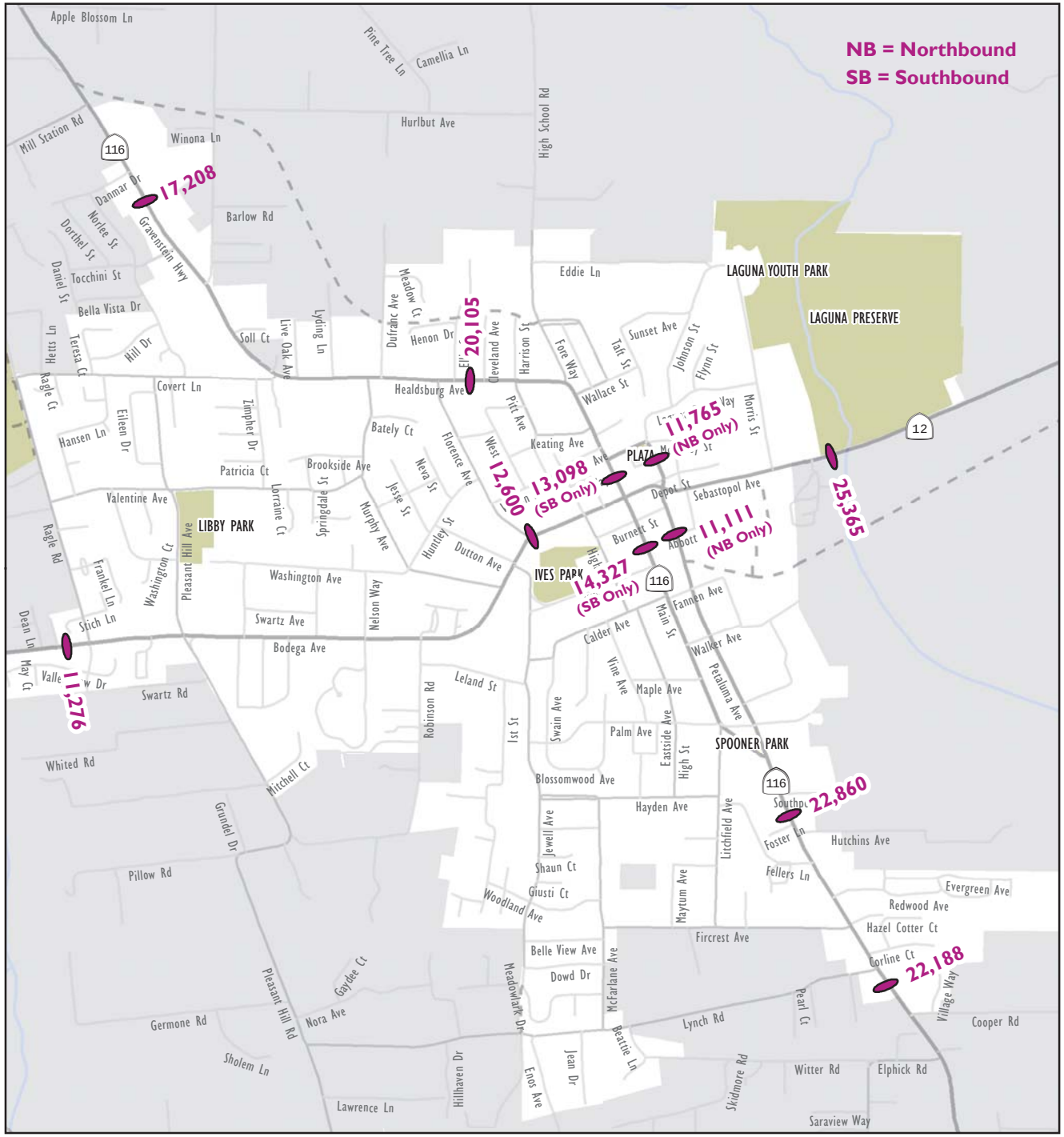
Sebastopol General Plan Update

Figure 3.13-2
Existing Segment Volumes



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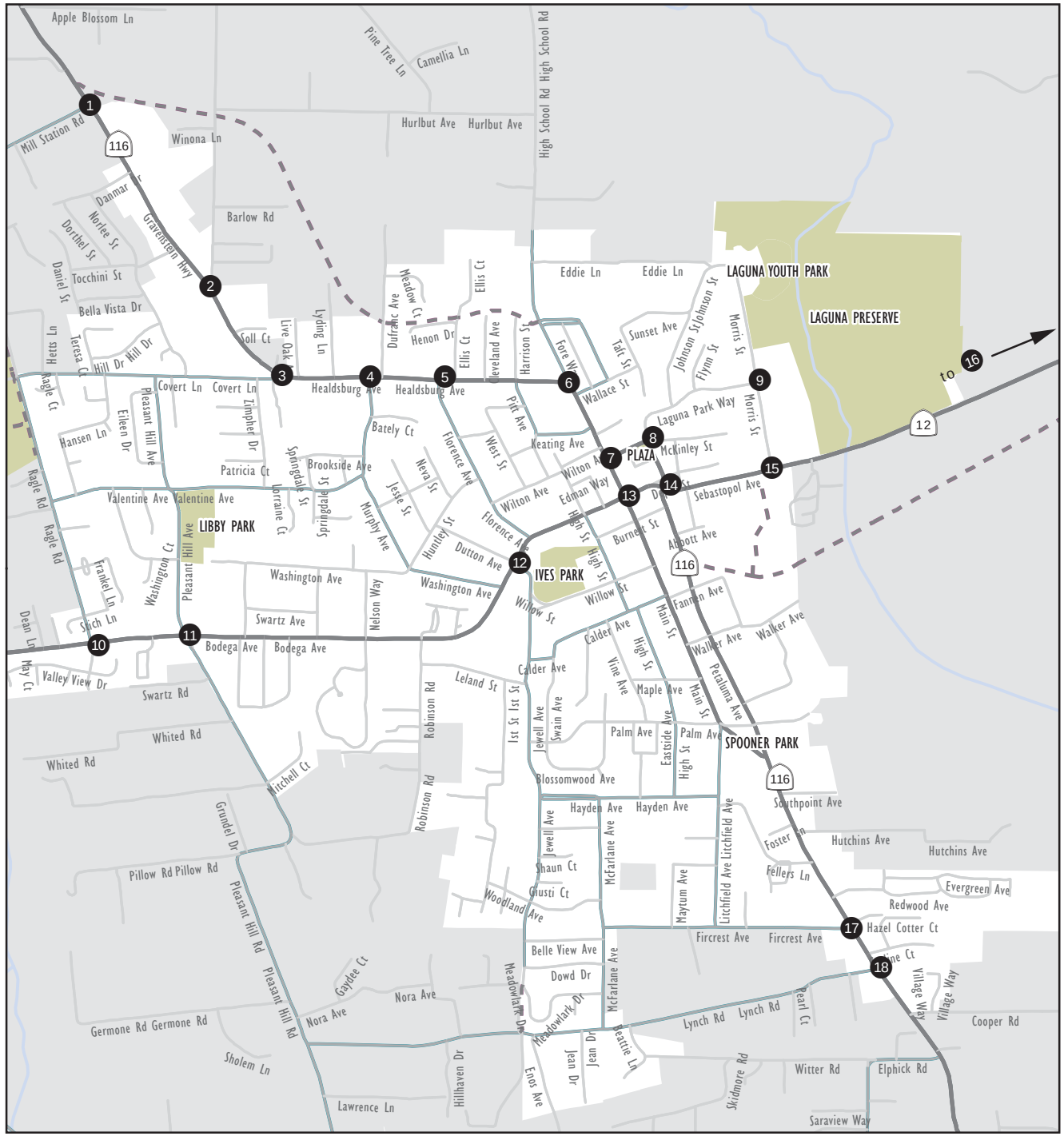
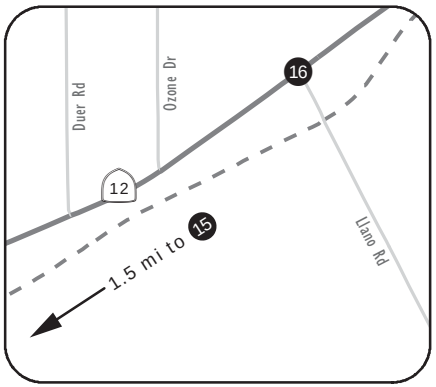
Sebastopol General Plan Update

Figure 3.13-3
Study Intersections





Study Intersection

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Sebastopol General Plan Update

Figure 3.13-4
Lane Configurations

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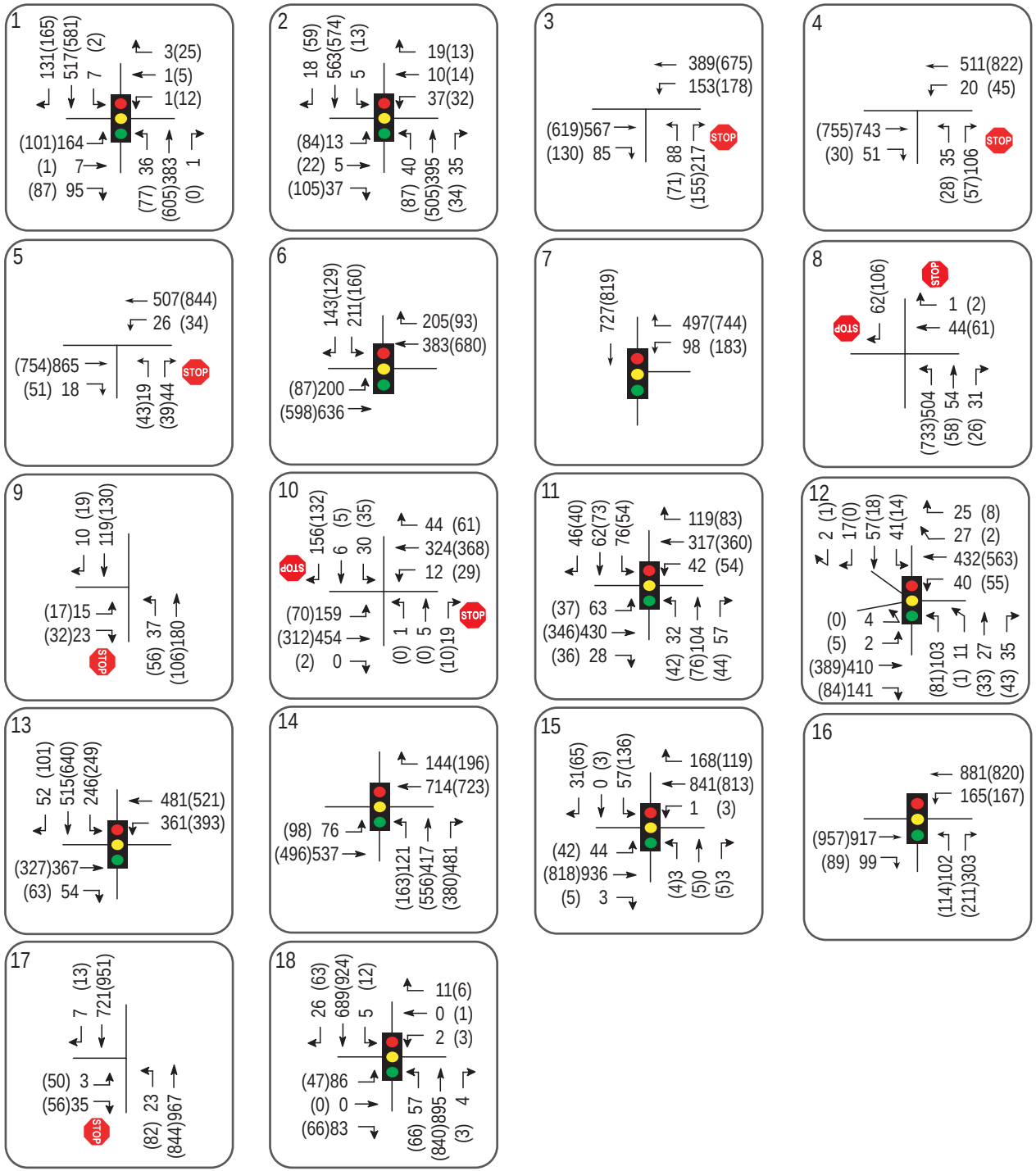

Sebastopol General Plan Update

Figure 3.13-5
Existing Traffic Volumes

xx A.M. Peak Hour Volume
(xx) P.M. Peak Hour Volume

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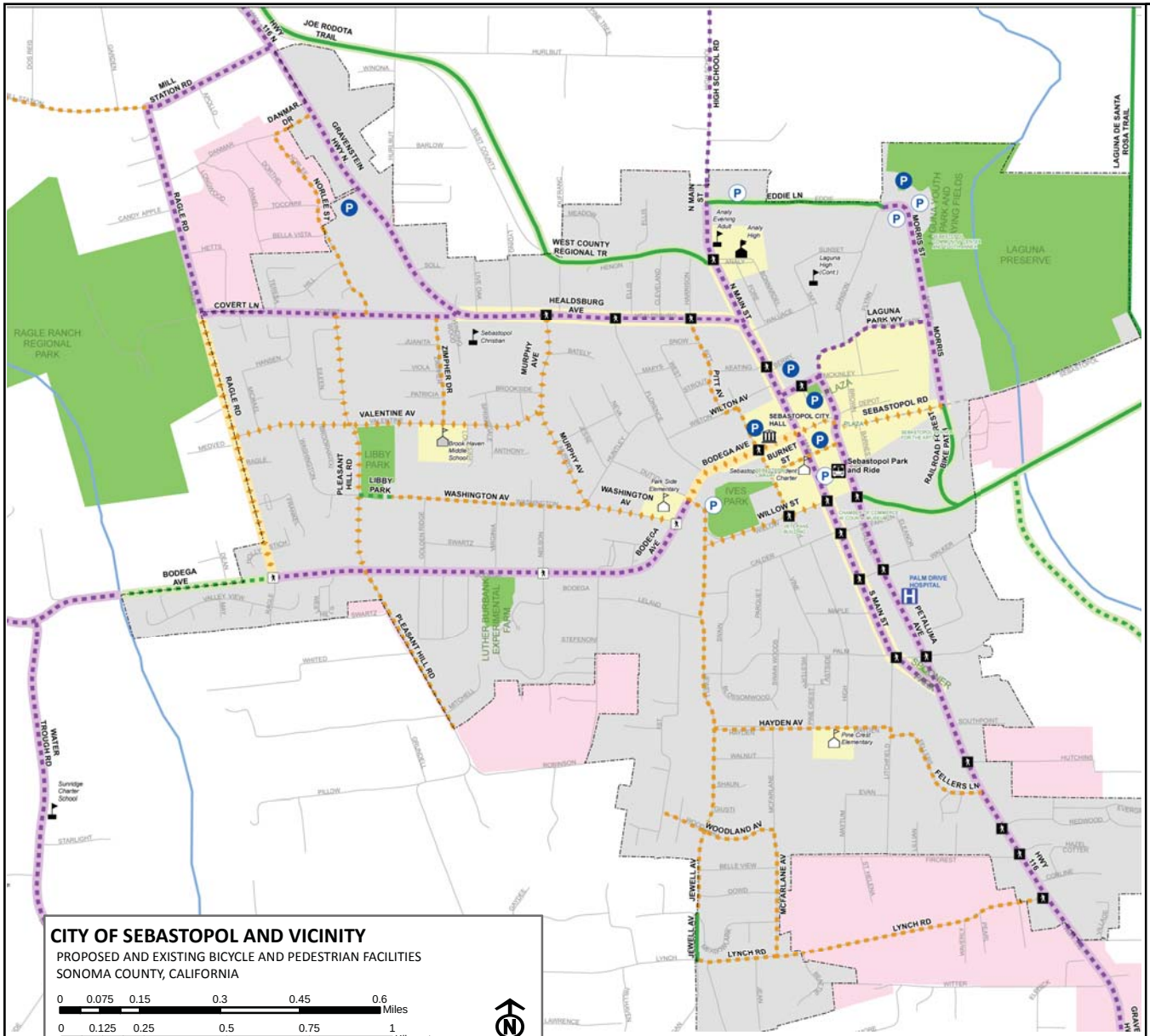
Sebastopol General Plan Update

Figure 3.13-6
Bicycle and Pedestrian Master Plan



CITY OF SEBASTOPOL AND VICINITY

PROPOSED AND EXISTING BICYCLE AND PEDESTRIAN FACILITIES
SONOMA COUNTY, CALIFORNIA

0 0.075 0.15 0.3 0.45 0.6 Miles

0 0.125 0.25 0.5 0.75 1 Kilometers

Author: Sonoma County Transportation Authority
Date: April 20, 2006
Revised: March 3, 2014
Projection & Coordinate System: CA State Plane, Zone 11, NAD 83, US Survey Feet, Lambert Conformal Conic Projection.
Project Source:S:\SCTA\SCTA Modeling Program\PROJECTS\bikeplan\2014_Update\sebastopol_2014.mxd
Sources: SCTA Countywide Bicycle and Pedestrian Advisory Committee, Sonoma County GIS, City of Sebastopol

This map is for illustrative purposes only, and though care has been taken to ensure that data is accurate, maps and represented data are provided without warranty of any kind.

Bike Routes
- CLASS I, EXISTING
- CLASS I, PROPOSED
- Highlighted Route on the Regional Network
- CLASS II, EXISTING
- CLASS II, PROPOSED
- Highlighted Route on the Regional Network
- CLASS III, EXISTING
- CLASS III, PROPOSED
- Highlighted Route on the Regional Network
- SHARROWS, RECOMMENDED

Bicycle Amenities
- Bike Parking - Existing
- Bike Parking - Proposed
- Showers/Lockers - Existing
- Showers/Lockers - Proposed

Pedestrian Crossing Enhancements
- EXISTING
- PROPOSED

Pedestrian Oriented Areas
- Pedestrian Districts
- Pedestrian Corridors

Multimodal Connections
- EXISTING
- PROPOSED

Transportation Features
- Street or Road
- Highway
- Freeway
- Railroad

Geographic Elements
- City Sphere of Influence
- Sebastopol City Limits
- Other City Limits
- Public Places/Parks
- City Halls
- Hospitals
- Waterway

Schools
- OTHER
- ELEMENTARY
- MIDDLE
- HIGH SCHOOL

SCTA
sonoma county transportation authority

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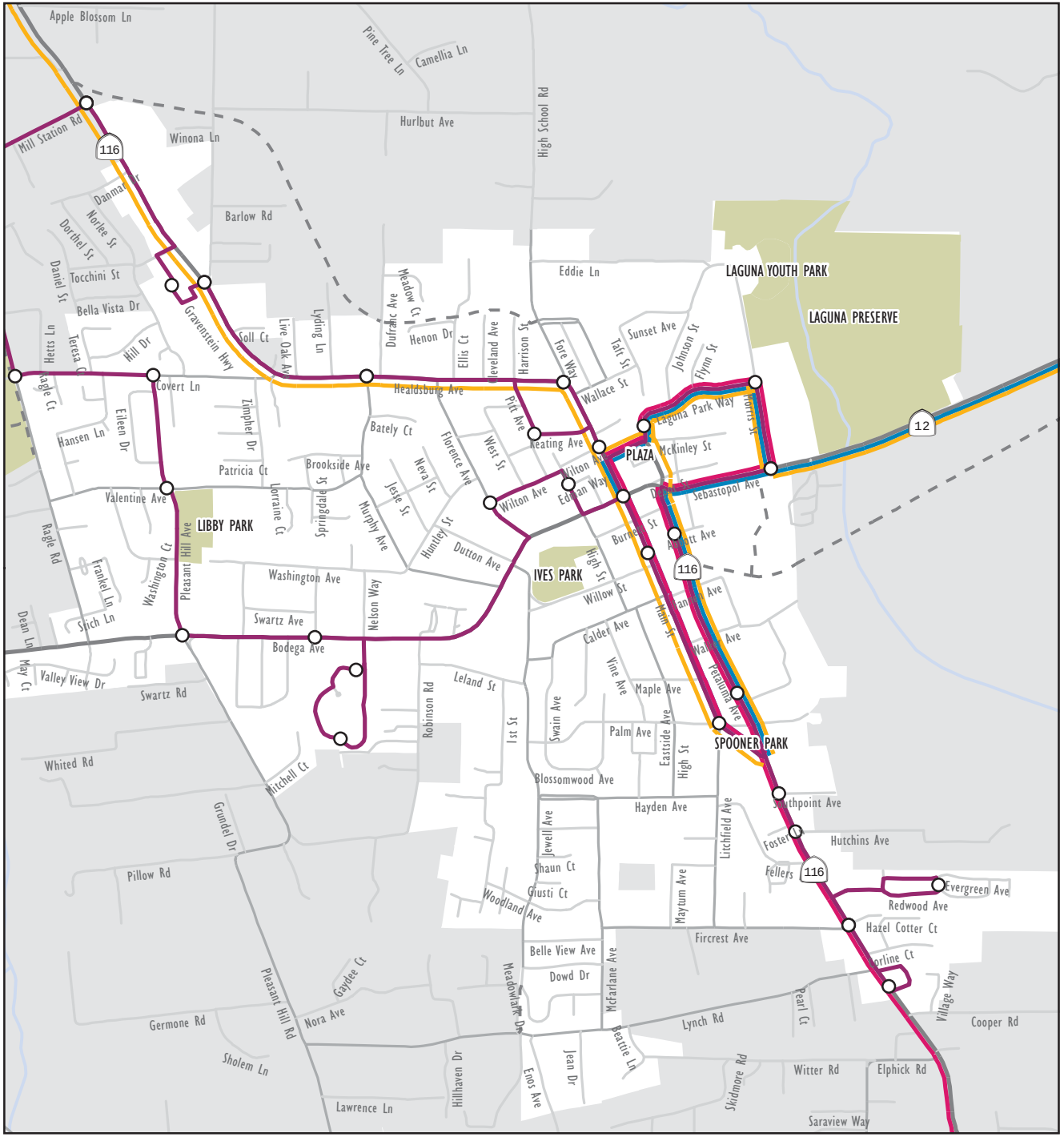

Sebastopol General Plan Update

Figure 3.13-7
Transit Routes

Sonoma County Transit (SCT)

- Bus Stops
- SCT Route 20
- SCT Route 22
- SCT Route 24
- SCT Route 26

0 ½ miles

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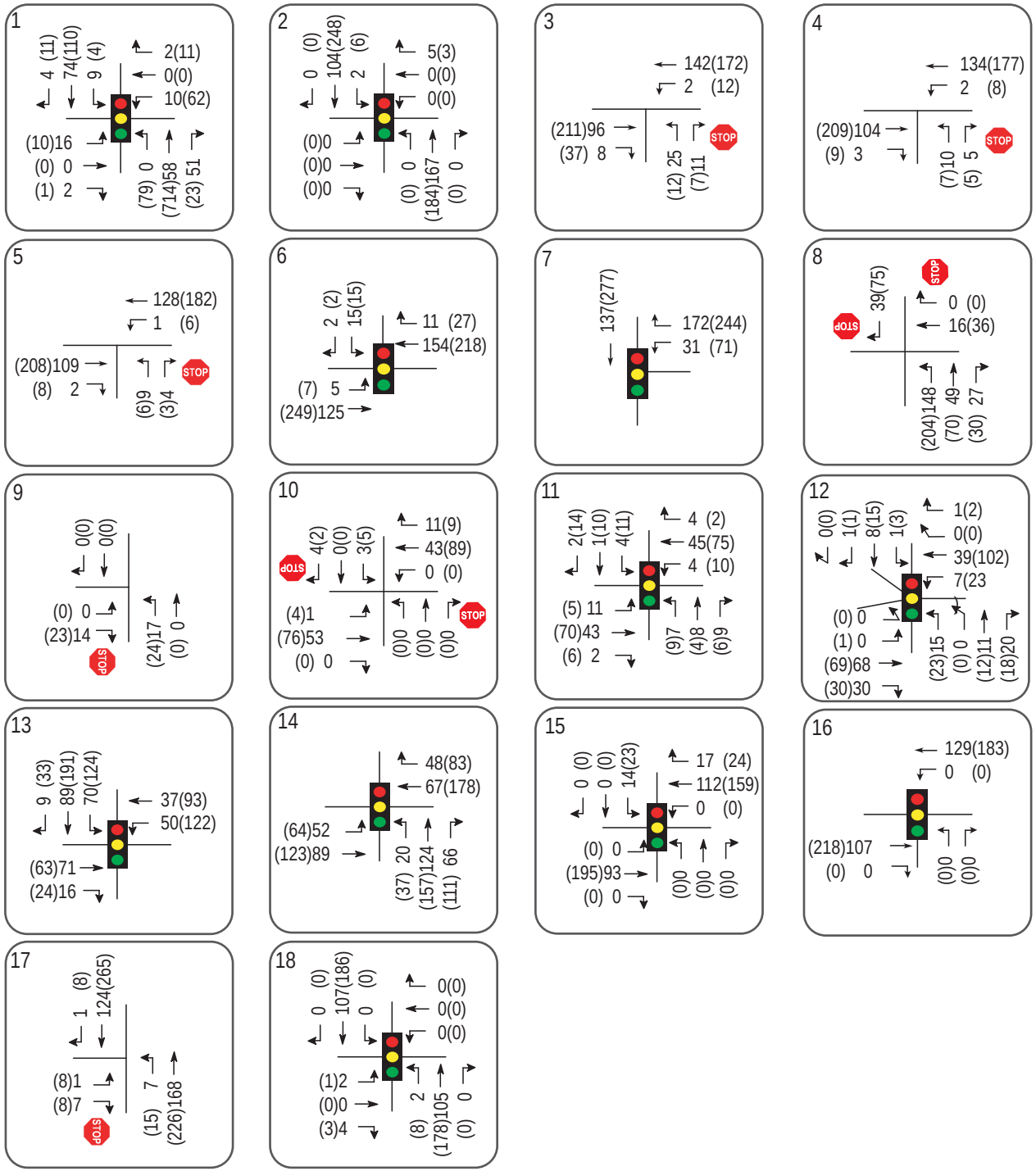

Sebastopol General Plan Update

Figure 3.13-8
General Plan Buildout
Net Project Trips

xx A.M. Peak Hour Volume
(xx) P.M. Peak Hour Volume

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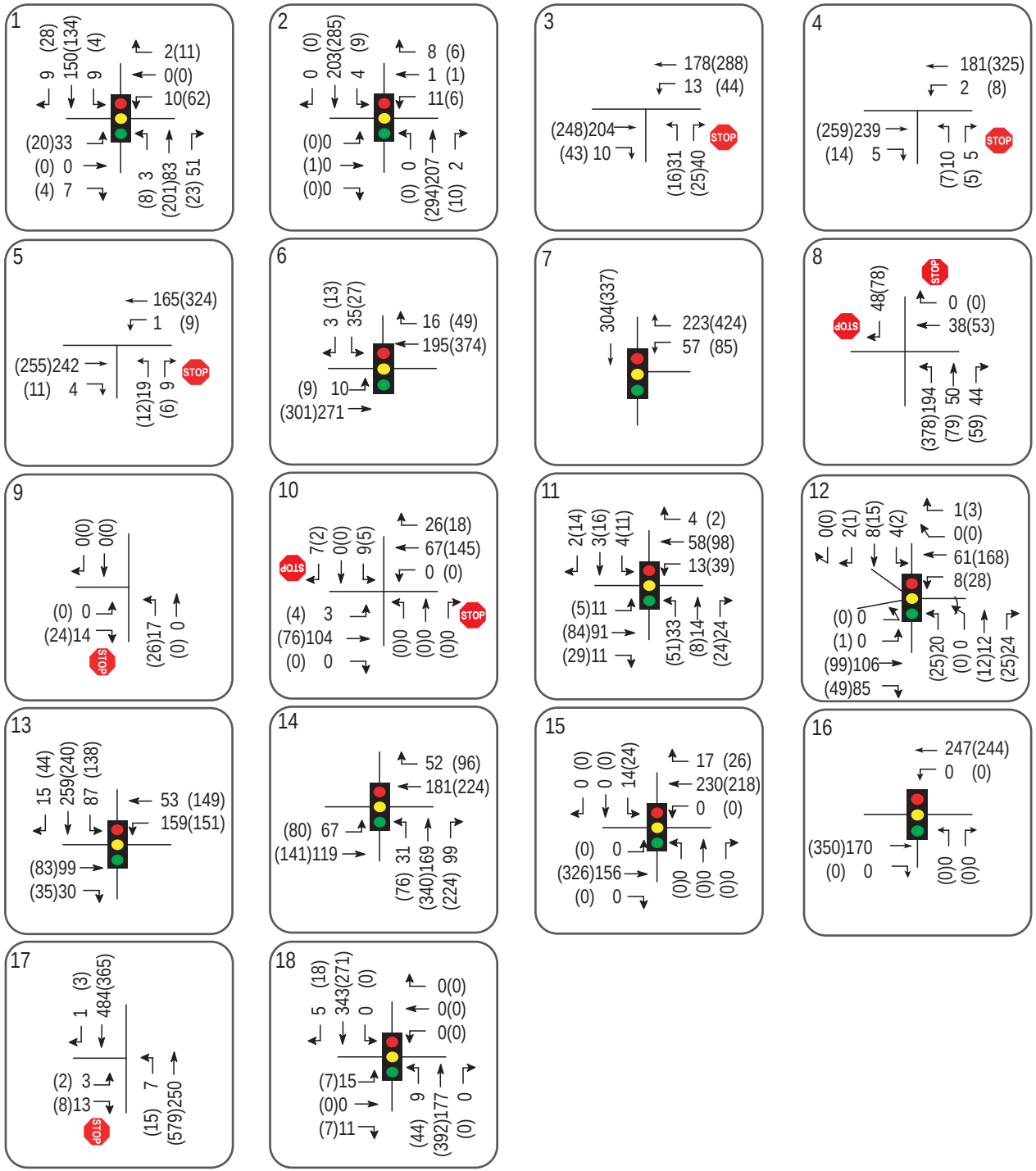

Sebastopol General Plan Update

Figure 3.13-9
Gen. Plan Cumulative Buildout
Net Project Trips

xx A.M. Peak Hour Volume

(xx) P.M. Peak Hour Volume

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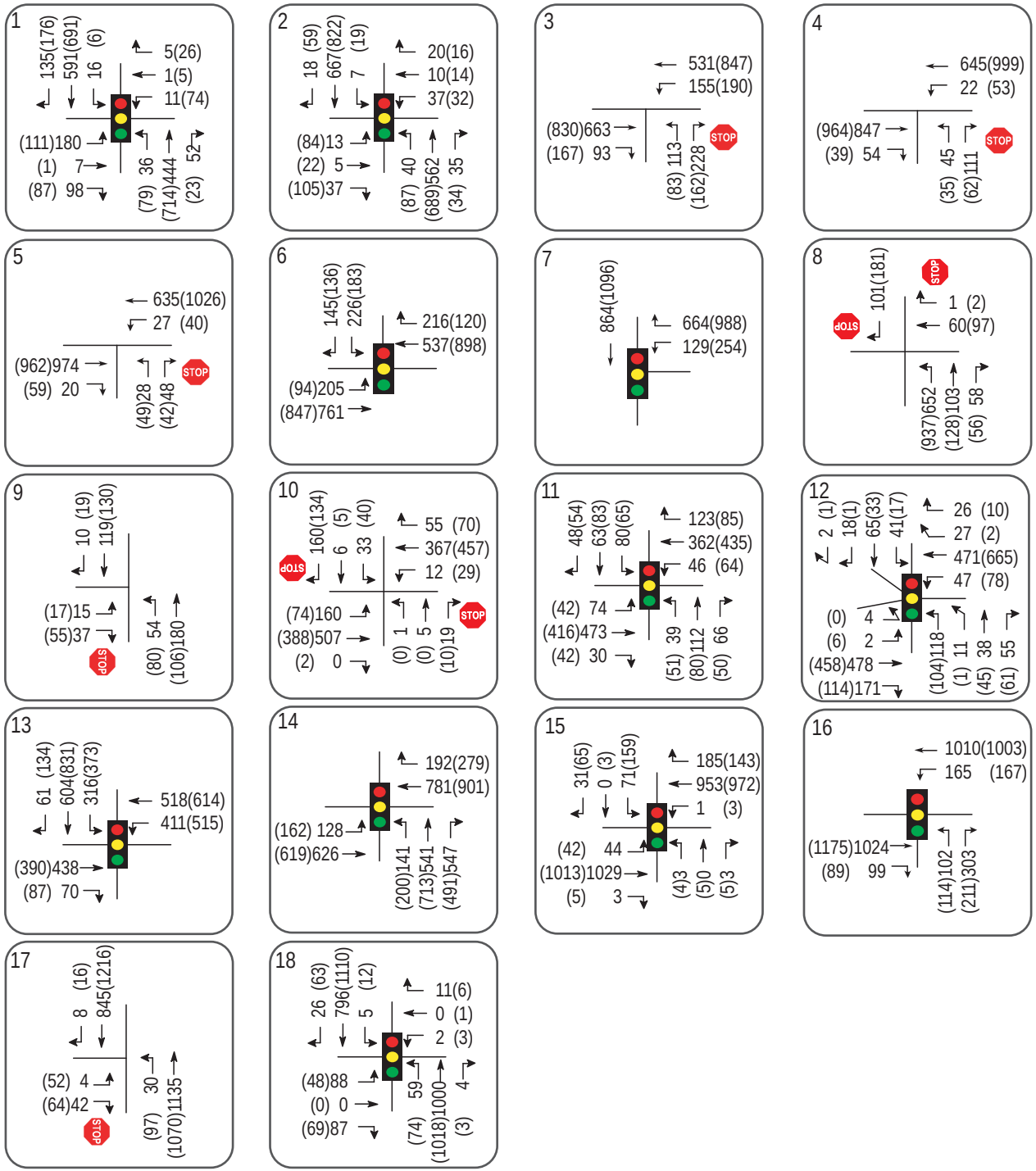

Sebastopol General Plan Update

Figure 3.13-10
General Plan Buildout Volumes

xx A.M. Peak Hour Volume
(xx) P.M. Peak Hour Volume

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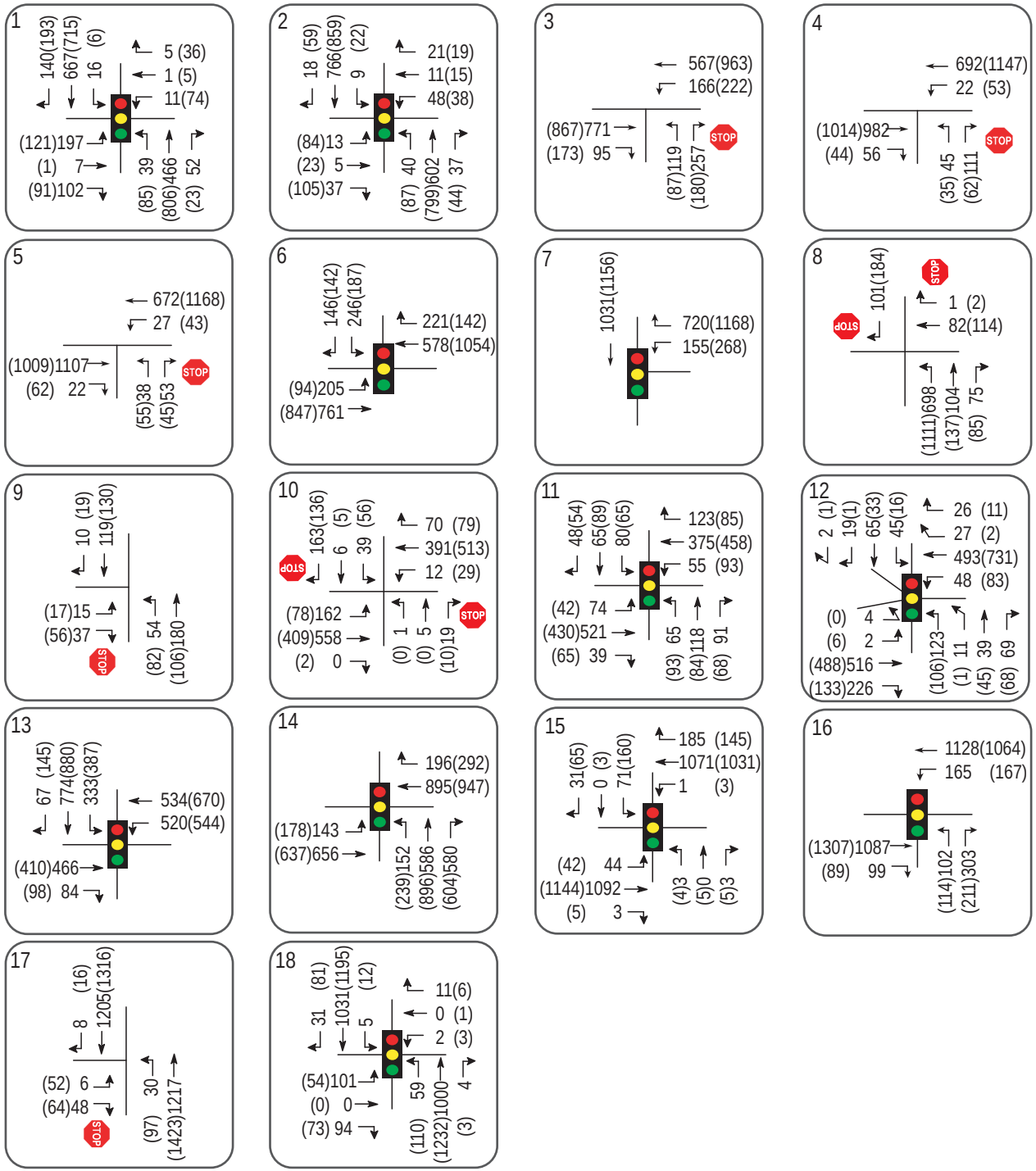

Sebastopol General Plan Update

Figure 3.13-11
General Plan
Cumulative Buildout Volumes

xx A.M. Peak Hour Volume

(xx) P.M. Peak Hour Volume

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Utilities are critical to providing safe drinking water, disposal and treatment of wastewater, and solid waste disposal. This section provides a background discussion of the utility systems in Sebastopol including water supplies, wastewater, and solid waste. This section is organized with an existing setting, regulatory setting, and impact analysis. No comments were received during the public review period or scoping meeting for the Notice of Preparation regarding this topic.

3.14.1 WATER SUPPLIES

The City of Sebastopol owns and operates a water supply and distribution system that supplies potable water to residences and businesses within the City limits. The City's potable water supply relies exclusively on groundwater as a water supply source.

KEY TERMS

Acre feet: The volume of one acre of water to a depth of one foot. Each acre-foot of water is equal to approximately 325,851.4 gallons.

BGS: Below ground surface.

GPD: Gallons per day.

GPM: Gallons per minute.

Groundwater: Water that is underground and below the water table, as opposed to surface water, which flows across the ground surface. Water beneath the earth's surface fills the spaces in soil, gravel, or rock formations. Pockets of groundwater are often called "aquifers" and are the source of drinking water for a large percentage of the population in the United States. Groundwater is often extracted using wells which pump the water out of the ground and up to the surface. Groundwater is naturally replenished by surface water from precipitation, streams, and rivers when this recharge reaches the water table.

MG: Million gallons

MGD: Million gallons per day

Surface water: Water collected on the ground or from a stream, river, lake, wetland, or ocean. Surface water is replenished naturally through precipitation, but is lost naturally through evaporation and seepage into soil.

WATER SUPPLIES

The City relies exclusively on groundwater as a water supply source. The City of Sebastopol has five permitted wells, four of which are currently active for potable water uses, non-potable water uses, irrigation, and industrial uses. All of the City's available water is groundwater from these active wells.

Currently the City's water supply comes from Wells No. 4, 6, 7, and 8. Well No. 8 was designed to produce water from zones with lower concentrations of arsenic and Well No. 4 tends to have lower

overall arsenic concentrations. Consequently, their combined effect has been to reduce the concentrations of arsenic in in water supply.

Groundwater Active City Well Information

This section provides information on active City wells (4, 6 & 8) including: site conditions, well construction, impacts, contaminates of concern, and treatment options.

Well No. 4

Well 4 Site Conditions

Well 4 is located on Petaluma Avenue in Sebastopol at the intersection of Gravenstein Highway and Palm Avenue. Located on the site is a well and pump house, two vertical granular activated carbon (GAC) filter vessels including process piping valving, sand removal equipment, and a filter backwash storage buffer tank. The GAC system became operational in late 2006. The site is large enough to support vehicle parking and equipment removal and maintenance.

Well 4 Pump and Well Construction

Well 4 was drilled in 1953 to a depth of 530 feet. The well has a 14-inch steel casing, and is screened between 237 and 468 feet. The well pump is a 100 horsepower (HP) vertical turbine pump enclosed within a pump house, and rated for 900 gpm capacity.

Well 4 Impacts

The California State Water Quality Control Board (CSWRCB) lists sites with contamination through its Geotracker application. The resource contains copies of reports from open and closed sites in the last 10 years. The following open cases were identified near the Well 4 site as of 2012:

1. Valero (former Alliance Station), 720 South Main Street;

2. Sebastopol Shell, 778 South Gravenstein Highway;

3. Exxon, 840 Gravenstein Highway;

4. Old Dry CIeaners/Talmadge Wood, 250 South Main Street; and

5. Frees Development Co. Bldg, 501 South Main Street.

Of these sites, the Valero station has impacted the City's Well 4 at Spooner Park, some 200 feet east, with 1,2-Dichloroethane (1 ,2-DCA). According to the Third Quarterly Monitoring Report for Valera prepared in 2011, the site has an open North Coast Water Quality Control Board (NCRWQCB) case that indicates total petroleum hydrocarbons as gasoline (TPH-G), benzene, toluene, ethyl benzene and xylenes (BTEX), as well as 1,2-DCA are all potential contaminants of concern at 80 to 100 feet deep. In 2006, a soil vapor extraction/air sparge system was installed, but was inadequate for the concentrations of gasoline. An additional vapor extraction well was installed and is currently being permitted to be added to the current extraction system. Shallow monitoring wells are installed at the edge of the park, between the City's well and the Valero station, but none of the monitoring wells have been impacted.

Tetrachloroethylene (also known as perchloroethylene (PCE)) which is used commercially as industrial degreasers, spot removers, and in dry cleaning, has also been steadily climbing at low levels in the groundwater at Well 4. The source of the PCE contamination is the Old Dry Cleaners site at 250 S. Main Street. The NCRWQCB has instructed the owners at the Old Dry Cleaners site to begin response to interim remedial action to abate the contamination moving into the radius of influence of Well 4.

Well 4 Contaminants of Concern

Historically, the contaminant of concern has been 1, 2-DCA, but TPH-G and BTEX are also potential contaminants of concern that are in the nearby Valero station. Recent data is also indicating a rise in concentrations of PCE from the Old Dry Cleaners site.

Well 4 Treatment Discussion

Well 4 is fitted with a granular activated carbon (GAC) treatment system to address groundwater contamination from 1, 2-DCA. Since its installation, levels of contamination have steadily and continually dropped below the Maximum Contaminant Level (MCL). TPH-G and BTEX are still potential contaminants of concern, but have not been detected in the groundwater from City Well 4. While the water is still processed through the GAC, the water quality at this point sufficiently meets drinking water standards, such that filtration of GAG may no longer be necessary for treating the 1,2 DCA. However, with the contaminant levels of nearby plumes and if the concentration of PCE continues to rise, the GAC is necessary as it is an effective method for the removal of PCE and other Volatile organic compounds (VOCs).

Well No. 6

Well 6 Site Conditions

Well 6 is located on Gravenstein Highway near Hazel Cotter Court to the south and Redwood Avenue to the north. This well replaced Well 1 and 3. The large, triangular property contains a pump house, well, booster/blending pumps, a cyclone type sand separator, and electrical gear. A significant portion of the site is unpaved and unimproved.

Well 6 Pump and Well Construction

The well was installed in 1968 to 572 feet deep and screened between 172 to 552 feet. The well has a 125 HP submersible pump and has a capacity to pump 750 gpm. The City has installed a booster pump/blending station that blends groundwater from Well 6 with water in the City's distribution system from Well 4 at an approximate ratio of 1:3 to reduce Arsenic that appears to be naturally occurring.

Well 6 Impacts

Arsenic has been steadily increasing in well 6. In a Spinner Test completed in December 2004, indicated that Arsenic appears to be elevated in the shallower aquifer zones above MCL levels in the upper aquifer, with Arsenic below the MCL in the lower aquifer. In 2008, the City installed an

inflatable packer to attempt to isolate the shallow elevated Arsenic zones, but it did not work as intended.

A test from 2008/2009 for Title 22 constituents detected elevated Aluminum and Manganese above the Secondary MCL. However, subsequent tests reported concentrations well below the Secondary MCL and therefore do not appear at this time to be contaminants of concern.

A review of the GeoTracker indicated there are no open cases near Well 6, but it is approximately 2,000 feet south of Well 4, which is impacted with VOCs. Although down-gradient. However, it is not expected that the comingled plumes affecting Well 4 would reach Well 6.

Well 6 Contaminants of Concern

Groundwater collected from Well 6 contains elevated, naturally occurring Arsenic above the MCL. Arsenic has been detected in the groundwater around the Santa Rosa Basin and has been linked to naturally occurring Arsenic of the Glen Ellen Formation.

Well 6 Treatment Discussion

Well 6 has recently been fitted with a booster pump/blending station which blends water supplied from Zone 1 tanks with water supplied from Well 6 before supplying the blended water to Zone 2. This method has been successful in lowering the concentration of Arsenic, but current blended water quality remains close to the MCL concentration for Arsenic. Should levels continue to rise, the blending of Zone 1 water with Well 6 water will become less effective for the same production volume. Well 6 would then require a reduction in production volume prior to blending or will require a treatment step at the well head to maintain concentrations at or below the MCL.

Well No. 7

Well 7 Site Conditions

Well 7 is located at 1157 Village Way, Sebastopol, on a small parcel located on the corner of Cooper Road and Village Way. The site is completely built upon and contains a pump house.

Well 7 Pump and Well Construction

Well 7 was installed in 1996 with multiple screen intervals between 270 and 670 feet deep. The well pump is a 100 HP submersible pump, set at 420 feet deep with a capacity of 800 gpm. An inflatable packer is installed at 395-400 feet.

Well 7 Contaminants of Concern

Well 7 water has not been active in recent years due to water Arsenic concentrations over the MCL.

Well 7 Treatment Discussion

A well head treatment system has recently been constructed at the site to reduce the arsenic concentration in the finished water entering the City's distribution system to acceptable levels. The continuous operation of Well 7 is not practical according to the City, due to other water system needs and reduced water use by customers in response to water conservation measures. However

it is expected that Well 7 can be operated at 450 gpm for approximately 8 hours per day. The well is currently operational and provides potable water.

Well No. 8

Well 8 Site Conditions

Well 8 is located at the comer of Jewell and Calder Avenues, on the same site as the former Well 2. The decommissioned Well 2 resided inside the pump house. Well 8 is outside the pump house located in a precast concrete structure located 50 feet from the former Well 2. Also located in the pump house is a booster pump station to facilitate inter-zone water transfers.

Well 8 Pump and Well Construction

Installed in 2007, Well 8 is the most recently constructed municipal well in the City. It has a 125 HP submersible pump, and is screened between 320 and 560 to avoid the naturally occurring Arsenic observed in the shallower zones (<350 feet) seen in other wells.

Well 8 Impacts

A GeoTracker review indicated there are no sites with contamination that affect the Well 8 site, but it is approximately 1,500 to 2,000 feet away from Main Street where the comingled VOC/TPH-G/MTBE plume is being investigated near Well 4. It appears that Well 8 is up-gradient and has not pulled these contaminants into its radius of influence.

Well 8 Contaminants of Concern

Water quality data for well indicates that there are currently no constituents measured at concentrations that would be the cause of concern. It should be noted that the decommissioned Well 2 did indicate elevated Arsenic concentrations in shallower screened zones (<350 feet) while in operation, but not in the deeper zones.

Well 8 Treatment Discussion

With no contaminants of concern indicated in Well 8, water treatment is not required. Should Arsenic become a constituent of concern, there is sufficient land at the site to support a treatment system and the well house does contain booster pumps that could be used as a blending station.

Groundwater Inactive City Well Information

This section provides information on inactive city wells (5 & 7) including: site conditions, well construction, impacts, contaminates of concern, and treatment options.

Well No. 5

Well 5 Site Conditions

Well 5 is located on a small triangular parcel one block east of Gravenstein Highway on Fannen Avenue in Sebastopol. At the site there is a small pump house and a large, baffled settling tank for the removal of sand.

Well 5 Pump and well Construction

Well 5 was constructed in 1960. The pump is a vertical turbine fitted with a 60 HP motor, and pump control equipment housed in the pump house. The pump has a capacity to pump 900 gpm and is set at 250 feet below the ground, and is screened between 138 and 528 feet.

Well 5 Impacts

In 1987, PCE was discovered in Well 5. it was determined that the PCE originated from the Em's Chevron/Old Dry CIeaners/Talmadge Wood Site area located to the northwest of Well 5. In 1987, Well #5 was taken out of service. Since cessation of pumping at City Well 5, the natural groundwater flow from the Site has consistently been to the south-southeast instead of towards southeast, towards Well 5. Since then, the PCE in Well 5 has decreased to the point that the City has been considering options to reactivate the well. Nearby sites that could potentially impact this well include:

1. Em's Chevron, 280 Main Street;

2, Old Dry Cleaner/Talmadge Wood; 250 Main Street, South;

3. Angelo Giusti Class III Disposal Site, East of Highway 12, between Burnett and Bodega Ave;

4. Foreign Auto Repair, 401 Main Street, South;

5. Nelson Site, 327 Petaluma Avenue; and

6. Wyatt's Tire Service, 100 Brown Street.

Well 5 Contaminants of Concern

Well 5 has been out of service since 1987 due to PCE contamination in concentrations exceeding MCL standards resulting from the Old Dry Cleaners site up-gradient of the site. However, there are several potential sources of contamination that could affect Well 5. VOCs: TPH-G, BTEX, MTBE and 1, 2 DCA are all potential sources of contamination. Currently, the City Well 5 is inactive but the City has continued monitoring the contamination. At present time PCE concentrations are below the MCL, and the City would like to consider placing the well back into active status. The treatment for this well should consider all the V0Cs and MTBE as potential contaminants of concern.

Well 5 Treatment Discussion

No treatment currently exists at the well site. While the PCE concentrations are currently below the MCL, it is likely that contaminant concentrations will increase when actively pumping on the aquifer and may bring in the other VOCs, and it should be assumed that the concentration has the potential to increase and should therefore be treated prior to entering the distribution system. Similar to Well 4, the process by which PCE and the other VOCs are typically and effectively removed is adsorption employing GAC.

HYDROGEOLOGY

United States Geological Survey Santa Rosa Plain Groundwater Study

As part of a technical study program intended to enhance the current knowledge regarding groundwater resources within Sonoma County, the USGS initiated a multi-year cooperative study of groundwater resources within the Santa Rosa Plain Groundwater Basin in 2005. The cooperative study is being conducted by the USGS in partnership with the Sonoma County Water Agency, County of Sonoma, City of Santa Rosa, City of Rohnert Park, City of Sebastopol, City of Cotati, Town of Windsor, and California-American Water Company.

The study has four principal elements: (1) a comprehensive geographic information system (GIS) to compile, analyze and visualize hydrologic and related data; (2) collection of new data, with a focus of water-quality sampling; (3) data interpretation and hydrogeologic characterization – including refining hydrologic budgets, and updating conceptual models of the groundwater flow system based on the new data and the results of ongoing USGS geologic and geophysical studies in the basin; and (4) the development of a fully-coupled numerical surface water/groundwater flow model for Santa Rosa Plain. Results from the study will provide stakeholders with tools to assist in evaluating the hydrologic impacts of future climate-change scenarios and alternative groundwater management strategies for the basin. Additionally, the study could potentially form the technical foundation for a local non-regulatory groundwater management planning process.

In summer 2013, the U.S. Geological Survey (USGS) completed the first portion of a seven-year study of groundwater resources of the Santa Rosa Plain Watershed.

In most groundwater management scenarios, the connection between surface water and groundwater has been largely overlooked. Unless surface water is available to recharge the aquifers, groundwater levels will decline. Alternatively, groundwater helps recharge surface water so any overdraft of groundwater means less water in creeks and streams.

In spring 2014, the USGS has recently finalized a second component of the study – a computer model – which couples surface water and groundwater flow and includes a comprehensive summary of the water budget for the study area, as well as future climate change projections. The cutting edge, science-based data is an integral component of groundwater management planning will allow the community to make decisions that will improve groundwater management.

Santa Rosa Plain Setting and Geology

The 167,410-acre Santa Rosa Plain watershed includes the Santa Rosa Plain and Rincon Valley groundwater subbasins, as well as parts of the Wilson Grove Formation Highlands groundwater basin, Kenwood Valley groundwater basin, Healdsburg area groundwater subbasin, and Alexander Valley groundwater subbasin. The Santa Rosa Plain drains northwest toward the Russian River, and is thus part of the North Coast Hydrologic Region. The groundwater system beneath the Santa Rosa Plain provides water to residents and municipal systems, irrigation water for agriculture, and baseflow to streams, surface water bodies and associated ecosystems. An estimated 10,500 permitted water-supply wells are located within the Santa Rosa Plain.

The groundwater system is large and geologically complex, with multiple aquifers that exhibit wide variations in well yields and groundwater quality. In addition, the groundwater system is subdivided into several compartments that are separated by fault zones, including the Rodgers Creek Fault, the

Sebastopol Fault, and the Trenton Fault. Groundwater flows through and is stored in sedimentary and volcanic formations, which include recent Alluvium/Glen Ellen, Wilson Grove, Petaluma, and the Sonoma Volcanics.

Important hydrologic characteristics of the Santa Rosa Plain watershed groundwater-flow system include those that determine the ability of the groundwater system to transmit water, to store and release water, and to allow for vertical passage of water between layers, as well as those that control the flow of water across geologic or hydrologic boundaries. The movement of infiltrated recharge through the saturated groundwater system is controlled by topography, aquifer and aquitard properties, the magnitude of natural discharge, and pumping. Aquifer and aquitard properties depend on the type of sediments and rocks composing the hydrogeologic system. Groundwater is contained in the pore spaces of the Quaternary alluvial materials and Tertiary sedimentary rocks, including the Glen Ellen Formation, the Wilson Grove Formation, the Petaluma Formation, and Sonoma Volcanics. These units, although lithologically heterogeneous, generally form a continuous body of saturated material. The most permeable formations are the Glen Ellen and Wilson Grove formations. The Petaluma Formation has low productivity but is widely distributed.

Water-bearing strata is found only within the Cenozoic sedimentary formations, and not within Tertiary volcanic rocks, which are primarily the Sonoma Volcanics. However, the volcanic rocks provide substantial quantities of water to wells on the valley floor and in the mountains along the eastern side of the valley. The groundwater-storage capacity of the SRP groundwater subbasin within the depth range of 10 to 200 feet is estimated to be about 950,000 acre feet. The storage capacity over an average thickness of 400 feet is estimated to be about 4,300,000 acre feet. Neither of these estimates includes the amount of groundwater contained in the Sonoma Volcanics. The Sonoma Volcanics, however, contain discontinuous aquifers that in some of the more porous and permeable lithologic packages can yield several hundred to several thousand gallons of water per minute to wells. The sustainable yield of the basin is less than then storage capacity because of potential negative effects of withdrawing all groundwater in storage.

Most of the City of Sebastopol is located within the Wilson Grove Formation Highlands (WGFH) groundwater basin. The basin straddles southern Sonoma and northern Marin Counties, and is located within an upland area between Santa Rosa Valley and the Pacific Ocean

Basin-wide Groundwater Levels 2001-2007

Knowledge of groundwater levels and how they vary spatially and temporally is fundamental to understanding and managing water resources. The shape of the water-table and potentiometric surfaces, and combinations thereof, can reveal important hydrogeological characteristics of the watershed, such as the locations of key areas of recharge and discharge, and geologic effects on groundwater flow. Declining long-term hydrographs can indicate that an aquifer is being pumped in excess of recharge.

A comparison of groundwater contours between spring and fall 2007 revealed a similarity in the general shape and distribution of contours. Groundwater-level contours for spring 2007 indicated that water levels were higher than the spring 2001 levels and the southern pumping depression had disappeared, indicating that long-term reductions in pumping in the Rohnert Park-Cotati area allowed recovery of groundwater levels to altitudes typical of the early 1970s. The 2007 water level contours also indicate that Santa Rosa Creek was gaining water east of the Rodgers Creek fault zone (USGS, 2013).

Water-Level Monitoring Wilson Grove Storage Unit

As described in the 2013 USGS study, wells 6N/9W-02C1, 7N/9W-15K1, and 35D2 are in the Wilson Grove storage unit and all are perforated in the Wilson Grove Formation. Well 02C1 is a production well that is perforated between 332 and 600 ft below land surface (bls), well 15K1 is perforated between 59 and 69 ft bls, and well 35D2 is perforated between 55 and 167 ft bls. The water levels in well 2C1 showed 20–40 ft of seasonal variability (80 ft maximum), which could be in response to pumping, and no long-term trend. The water levels in well 15K1 showed a net increase of about 5 ft between 1980 and 2011. The water levels in well 35D2 showed no net change between 1970 and 2005 (USGS, 2013).

Long-Term Basin-Wide Groundwater Trends

Water-level contour maps show that groundwater levels in the Winsor Basin storage unit were fairly steady with some seasonal variability, and some hydrographs showed the effects of the 1976–77 and 1986–92 droughts. In the Cotati Basin storage unit, water levels from wells in the area near Rohnert Park recovered to 1974 conditions by 2007 as a result of a large reduction in municipal pumping that began in 2000. In the Valley storage unit, water levels were fairly steady with some seasonal variability in the Bennett and Rincon valleys; however, water levels increased in the Kenwood Valley. In the Wilson Grove storage unit, water levels showed seasonal variability but, generally, had no long-term trends. In the Upland storage unit, the water levels in the deeper well showed a long-term decline, while the water levels in the shallow well were steady. Sparse vertical profile data indicated that shallower wells have limited hydraulic communication with deeper aquifer material; this could be caused by the extensive clays in the Petaluma Formation and indicate confined aquifer conditions at depth (USGS, 2013).

Groundwater Water Production and Usage LOS Reporting

The following discussion of the groundwater production and usage is derived from the most recent 2015 *City of Sebastopol annual LOS reporting*.

Total Annual Production from all wells dropped from 333 million gallons in 2014 to 296 million gallons in 2015, a decrease of about 21%. This is the lowest total water production in the Sebastopol system since 1983. The prolonged dry weather conditions statewide led the State to declare a drought emergency, and Sebastopol implemented emergency voluntary water conservation requirements in August, 2014. Water demand remains significantly lower than when production peaked at 500 million gallons in 2004.

Overall Per Capita Production is a calculated average of all water produced divided by population. Per Capita Production decreased 12% from 123 gallons/person/day in 2014 to 108 gallons/person/day in 2015.

Together, single-family and multi-family residential usage account for 67% of all water used in Sebastopol in 2015. Though water produced in 2015 for all uses averaged 98 gallons/person/day, actual billing records show that residential customers in Sebastopol use substantially less water on a per capita basis. Per capita residential usage was 68 gallons per day in 2014, down from 77 gallons per day in 2014.

Commercial and Institutional water accounted for approximately 22% of water sold in 2015 (churches, schools, government buildings, etc.). Usage in this customer class remained about the same as a percentage of total use.

Irrigation meters are required for all new multi-family and commercial uses, government and institutional buildings and City parks. Beginning in the summer of 2006 upgrades to billing software allowed Sebastopol to begin tabulating irrigation meters separately from their associated domestic meters. In 2015, separately metered irrigation usage was 27.4 million gallons. This represents about 10% of all water sold. This amount decreased 11% from 2014, presumably in part due to the emergency water conservation requirements and rate increases.

The City maintains a potable water-filling stand at the Corporation Yard. Customers for water dispensed at the stand include private contractors and water haulers, and individuals. By far the vast majority of water sold at the Corporation Yard, over 80% is purchased by potable water haulers to provide potable water to rural-residential customers in County areas around Sebastopol. The remainder is sold to haulers for dust control on construction projects inside and out of town, including Sonoma County Farm Trails for performing dust control at the annual Gravenstein Apple Fair. About 5% is purchased by individual self-haul customers for refilling of storage tanks, and for irrigation on rural properties. Historically, sales of water at the Corp Yard ranges from about 0.3% to a little over 1% of all water sold. In 2015, about 3.7 million gallons were sold from the Corp Yard stand, or about 1.25% of all water produced. This was about 20% higher than in 2014.

Groundwater Monitoring

During Fiscal Year 2013/14, the City budgeted funds to replace data-loggers (transducers) in all of our City wells. The project was completed in spring of 2014. The City has retained the services of PES consultants at to oversee the monitoring of ground water levels, maintain the monitoring equipment, supplement it with hand measurements when needed, and to prepare quarterly reports.

The City received four reports during 2015, for the first, second, third and fourth quarters. The reports include groundwater level hydrographs that show pressure-head measurements to depth of groundwater levels for each of the 5 city wells (wells 4-8). Below is a summary of groundwater measurement trends during 2015. For full hydrograph results see Appendix E.

First quarter 2015 results show observed groundwater levels generally exhibit a trend of recovery and relative stability. These observations appear to correlate with the seasonal precipitation and associated groundwater recharge during the monitoring period (January through March).

Second quarter 2015 results show observed groundwater levels generally exhibit a trend of relative stability in wells 4, 5, 6, and 7, and a slight declining trend in well 8. These observations appear to correlate with seasonal precipitation and associated groundwater recharge during the monitoring period (April through June).

Third quarter 2015 results show observed groundwater levels during the monitoring period (July through September) generally exhibit a slight declining trend, which appear to correlate with the low seasonal precipitation totals and regional drought conditions.

Fourth quarter 2015 results show observed groundwater levels during the monitoring period (October through December)

1. Exhibit a slight declining trend in wells 6 and 7, which appear to correlate with the resumption of pumping at well 7;

2. Exhibit a slight recovery trend in wells 4, 5, and 8, which appear to correlate with the onset of seasonal precipitation and less frequent pumping of wells 4 and 8.

WATER DISTRIBUTION INFRASTRUCTURE

The Sebastopol Municipal Water System (SMWS) distribution system network is comprised of over 37 miles of pipe in sizes up to 24 inches in diameter. Pipe types include asbestos cement, ductile iron, cast iron, and polyvinyl chloride (PVC).

In 1968, the SMWS pipeline system was separated into two pressure zones. Pressure Zone 1 customers are located in the eastern portion of the City and consist mostly of commercial users. Zone 2 customers reside at elevations exceeding approximately 130 feet above sea level. Four pressure-regulating valves separate the two distribution systems; these valves serve as inter-ties between the two zones. In addition, there is one direct valve connection at Bodega and Washington. These valves usually remain closed unless it becomes necessary to divert water from one zone to another. Three storage reservoirs serve the City's two pressure zones. The reservoirs provide water storage for emergencies, to meet peak demand during maximum demand periods, and to maintain hydraulic stability. The total capacity of these tanks is 7.5 Mgal. The First Street reservoir was constructed in 1918 and is an epoxy-coated, steel-welded tank, with a concrete slab-on grade foundation and a capacity of 1.5 Mgal. The Pleasant Hill reservoirs are located southwest of the city and were installed in 1979 and 1987; combined they have a maximum capacity of 6 Mgal. They are both steel-welded tanks. The older reservoirs have a tar-coated interior and the newer is epoxy-coated. (City of Sebastopol Water Master Plan 2005). Based on existing land use and population densities, the reservoirs' storage capacities exceed storage requirements for both pressure zones. Moreover, according to the 2005 Water Master Plan, at build-out, the City will still have sufficient storage for the combined pressure zones.

REGULATORY SETTING – WATER SUPPLIES

STATE

California Department of Health Services

The Department of Health Services, Division of Drinking Water and Environmental Management, oversees the Drinking Water Program. The Drinking Water Program regulates public water systems and certifies drinking water treatment and distribution operators. It provides support for small water systems and for improving their technical, managerial, and financial capacity. It provides

subsidized funding for water system improvements under the State Revolving Fund ("SRF") and Proposition 50 programs. The Drinking Water Program also oversees water recycling projects, permits water treatment devices, supports and promotes water system security, and oversees the Drinking Water Treatment and Research Fund for MTBE and other oxygenates.

California Code of Regulations

California Code of Regulations (CCR) Title 22, Chapter 15, Article 20 requires all public water systems to prepare a Consumer Confidence Report for distribution to its customers and to the Department of Health Services. The Consumer Confidence Report provides information regarding the quality of potable water provided by the water system. It includes information on the sources of the water, any detected contaminants in the water, the maximum contaminants levels set by regulation, violations and actions taken to correct them, and opportunities for public participation in decisions that may affect the quality of the water provided.

Urban Water Management Planning Act

The Urban Water Management Planning Act has as its objectives the management of urban water demands and the efficient use of urban water. Under its provisions, every urban water supplier is required to prepare and adopt an urban water management plan. An "urban water supplier" is a public or private water supplier that provides water for municipal purposes either directly or indirectly to more than 3,000 customers (connections), or supplying more than 3,000 acre-feet of water annually. The plan must identify and quantify the existing and planned sources of water available to the supplier, quantify the projected water use for a period of 20 years, and describe the supplier's water demand management measures. The urban water supplier should make every effort to ensure the appropriate level of reliability in its water service sufficient to meet the needs of its various categories of customers during normal, dry, and multiple dry years. The Department of Water Resources must receive a copy of an adopted urban water management plan. The City of Sebastopol currently includes fewer than 3,000 connections and supplies fewer than 3,000 acre-feet of water annually. As such, the City is not required to prepare an Urban Water Management Plan (UWMP).

Senate Bill (SB) 610 and Assembly Bill (AB) 901

The State Legislature passed SB 610 and AB 901 in 2001. Both measures modified the Urban Water Management Planning Act.

SB 610 requires additional information in an urban water management plan if groundwater is identified as a source of water available to an urban water supplier. It also requires that the plan include a description of all water supply projects and programs that may be undertaken to meet total projected water use. SB 610 requires a city or county that determines a project is subject to CEQA to identify any public water system that may supply water to the project and to request identified public water systems to prepare a specified water supply assessment. The assessment must include, among other information, an identification of existing water supply entitlements, water rights, or water service contracts relevant to the identified water supply for the proposed project, and water received in prior years pursuant to these entitlements, rights and contracts.

AB 901 requires an urban water management plan to include information, to the extent practicable, relating to the quality of existing sources of water available to an urban water supplier over given time periods. AB 901 also requires information on the manner in which water quality affects water management strategies and supply reliability. The bill requires a plan to describe plans to supplement a water source that may not be available at a consistent level of use, to the extent practicable. Additional findings and declarations relating to water quality are required.

Senate Bill (SB) 221

SB 221 adds Government Code Section 66455.3, requiring that the local water agency be sent a copy of any proposed residential subdivision of more than 500 dwelling units within five days of the subdivision application being accepted as complete for processing by the city or county. It also adds Government Code Section 66473.7, establishing detailed requirements for establishing whether a "sufficient water supply" exists to support any proposed residential subdivisions of more than 500 dwellings, including any such subdivision involving a development agreement. When approving a qualifying subdivision tentative map, the city or county must include a condition requiring availability of a sufficient water supply. The applicable public water system must provide proof of availability. If there is no public water system, the city or county must undertake the analysis described in Government Code Section 66473.7. The analysis must include consideration of effects on other users of water and groundwater.

LOCAL

City of Sebastopol Water Master Plan (2005)

The City's 2005 Water Master Plan evaluates the water supply sources, storage capabilities and distribution capacity of the water system that the City owns and maintains for domestic use, commercial use, and firefighting. The study identifies system deficiencies and outlines existing and future system improvements necessary to meet projected demands.

SCWA Santa Rosa Plain Groundwater Management Plan

The Basin Advisory Panel has been developing a Groundwater Management Plan in accordance with state water code to locally and voluntarily manage groundwater resources. The Panel is comprised of almost 30 technical experts, residential well users, businesses, agricultural groups, environmental organizations, governmental agencies, tribal groups, natural resource managers, and members of the general public. After nearly two years in development, the Plan is nearing completion. Four main elements guide the Plan:

- Groundwater management and land use planning
- Urban Water Management Plans tracking and integration
- Multi-agency and organization integration
- Climate change planning
- Multi-benefit actions and activities

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed project may have a significant impact on the environment associated with Utilities if it would:

1. Require or result in the construction of new water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects; or

2. Have insufficient water supplies available to serve the project from existing entitlements and resources, or if new or expanded entitlements are needed.

IMPACTS AND MITIGATION MEASURES

Impact 3.14-1: Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed (Less than Significant)

Implementation of the proposed General Plan would result in increased population and employment growth within the City's Planning Area, and a corresponding increase in the demand for additional water supplies.

As described in Chapter 2.0, buildout of the General Plan could yield up to 750 new residential units, 341,159 square feet of new commercial space, 59,959 square feet of new industrial space, and 137,375 square feet of new office space within the City Limits.

This new growth would increase the City's population by approximately 1,658 residents. [1] The full development of the new commercial, office, and industrial uses shown in Table 2.0-3 would increase the employment opportunities in Sebastopol by approximately 1,545 employees. [2]

As described in Chapter 2.0, cumulative buildout of the General Plan within the City Limits and the SOI/UGB could yield up to 1,185 new residential units, 341,159 square feet of new commercial space, 684,889 square feet of new industrial space, and 137,375 square feet of new office space within the City Limits and the Sphere of Influence.

This new growth would increase the City's population by approximately 2,619 residents. The full development of the new commercial, office, and industrial uses shown in Table 2.0-4 would increase the employment opportunities in Sebastopol by approximately 2,632 employees.

The City of Sebastopol provides water services to users within the City, and would provide water services to future development that may occur following implementation of the General Plan. In order to project future water demands associated with General Plan buildout, water demand is tied

[1] Based on the 2015 California Department of Finance estimate of 2.21 persons per household in Sebastopol.
[2] Assumes one employee generated for: every 350 square feet of commercial space, every 295 square feet of office space, and every 575 square feet of industrial space.

to population growth, and the average per capita water demand generated by that new population growth, as well as increases in the commercial and industrial uses.

The average total per capita water production between 2006 and 2015, as shown in Table 3.14-1, was 129 gallons per person per day,[3] equaling approximately 29.2 percent of maximum production. The proposed General Plan would accommodate a broad range of uses, so the use of a per capita figure is intended to provide an average figure that approximates the average water demand associated with the broad range of uses that could occur in the Planning Area upon full buildout of the General Plan.

TABLE 3.14-1 WATER PRODUCTION

PRODUCTION	*10-YEAR AVERAGE*
Total Annual Production (mg)	361
Maximum Production (mg)	1,237
Average Production Per Capita Per Day (gallons)	129
% Total Production to Max Production	29.18%

SOURCE: CITY OF SEBASTOPOL ANNUAL LOS REPORTING

According to the California Department of Finance's population estimates, the 2015 population of the City of Sebastopol was 7,507. As described above, buildout of the General Plan within the City limits could increase population growth in the City by up to 1,658 residents, resulting in a total population within the City limits at buildout of 9,165 residents. Within the entire Planning Area, the total population may reach up to 10,126 residents.

Utilizing the water usage rate of 129 gallons per capita per day, at General Plan buildout within the existing City limits, the total water demand would be 431.5 mg (9,165 x 129 X 365), or 34.9 % of maximum production. Full buildout of the Planning Area would result in a water demand of 476.8 mg (10,126 x 129 x 365), or 38.5 % of maximum production. The projected water supply currently available for production by the City of Sebastopol exceeds the projected water demand associated with full buildout of the General Plan, including the Planning Area. So while the proposed General Plan would increase water demand throughout the Planning Area, the projected water demand associated within buildout of the General Plan would not exceed the City's available water production capabilities.

Additionally, the General Plan includes policies and actions designed to ensure an adequate water supply for development and to minimize the potential adverse effects of increased water use. Policy CSF 3-1 requires that prior to the approval of development, infrastructure, Specific Plans, or other projects that would result in increased demand for public water conveyance and treatment, projects must demonstrate proof of adequate water supply (e.g., that existing services are adequate to accommodate the increased demand, or improvements to the capacity of the system to meet increased demand will be made prior to project implementation) and that potential cumulative

[3] This metric accounts for water uses for a variety of uses within the City including residential single-family, multi-family, commercial, institutional, landscape and irrigation water uses, and corporate yard water sales.

impacts to water users and the environment will be addressed. Policy CSF 3-4 ensures the water system and supply is adequate to match the rate of growth and future development.

The proposed General Plan also includes a range of policies and actions that call for continued and ongoing water conservation measures, measures to increase the availability and use of recycled water in order to decrease water supply demands from existing sources, and measures to increase groundwater recharge capabilities (as described in Section 3.9 Hydrology and Water Quality).

Given that projected water demands associated with General Plan buildout would not exceed the projected water supplies, as described previously, and that the General Plan includes a comprehensive set of goals, policies and actions to ensure an adequate and reliable source of clean potable water, impacts associated with water supplies are **less than significant.** The policies and actions listed below would ensure that adequate water supplies are available to serve new growth projected under the General Plan.

2016 GENERAL PLAN POLICIES AND ACTIONS THAT MITIGATE POTENTIAL IMPACTS

Policies

Policy CSF 3-1: Prior to the approval of major new development, Specific Plans, major infrastructure improvements, or other projects that would result in increased demand for public water conveyance and treatment, such projects must demonstrate proof of adequate water supply (e.g., that existing services are adequate to accommodate the increased demand, or improvements to the capacity of the system to meet increased demand will be made prior to project implementation) and that potential cumulative impacts to water users and the environment will be addressed.

Policy CSF 3-2: Continue to implement a comprehensive water strategy that balances the need to supply water to all users served by the City with potable water use reduction measures.

Policy CSF 3-3: Routinely assess the City's ability to meet the demand for potable water by periodically updating the Water Master Plan.

Policy CSF 3-4: Ensure the water system and supply is adequate to match the rate of growth and future development.

Policy CSF 3-5: Priority shall be given to serving existing water uses over new water uses.

Policy CSF 3-6: Maintain and ensure adequate emergency water supplies.

Policy CSF 3-7: Continue to implement the City's water conservation requirements established in the Municipal Code.

Policy CSF 3-8: Ensure safe drinking water standards are met throughout the community.

Policy CSF 3-9: The Public Works Department shall continue to test potable water on schedules dictated by the State and the U.S. Environmental Protection Agency (EPA) for chemical residues resulting from pesticides and groundwater contamination.

Policy CSF 3-10: If a supply is available, use recycled water for landscape irrigation within City roadways, parks, and facilities to the greatest extent feasible.

Actions

Action CSF-3a: Work with the County Permit and Resource Management Department, the Public Health Officer and Agricultural Commissioner to identify the impacts of agricultural operations and the use of herbicides, pesticides, and fertilizers on the City's domestic water supply if issues are identified

Action CSF-3b: Continue to regularly monitor Sebastopol's potable water supply for trace chemicals and other potential contaminants. Utilize updated industry-wide standards for evaluating potable water quality. Alert the County Public Health Officer, City Council and the public if water quality hazards are identified.

Action CSF-3c: Coordinate water supply and conservation planning efforts with the Santa Rosa Plain Groundwater Management Plan to ensure sustainable and reliable groundwater use practices.

Action CSF-3d: Regularly review and update the City's water conservation strategy to be consistent with current best management practices for water conservation, considering measures recommended by the State Department of Water Resources, and the California Urban Water Conservation Council.

Action CSF-3e: Explore opportunities to develop mechanisms and infrastructure to deliver recycled water to city water users from the Santa Rosa Subregional Treatment and Reclamation System.

Action CSF-3f: Develop a public outreach and incentive program to expand and promote the use of recycled water if delivery infrastructure becomes available.

Action CSF-3g: Update the City's water waste and conservation strategy established in Chapter 13.06 of the Municipal Code to be consistent with the most current BMPs for water conservation.

Action CSF-3h: Utilize standards for minimum water volume and flow established by Title 24 of the California Building Standards Code.

Action CSF-3i: Maintain and update the City's Capital Improvement Plan (CIP) to clearly identify and prioritize water delivery improvements.

Action CSF-3j: Commission the preparation of a study that accurately establishes the groundwater recharge area for Sebastopol.

Impact 3.14-2: Require or result in the construction of new water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects (Less than Significant)

Development and growth in the City under the proposed General Plan would result in increased demand for water supplies, including water conveyance and treatment infrastructure. The General Plan includes policies and actions to ensure that water supplies are provided at acceptable levels and to ensure that development and growth does not outpace the provision of available water supplies.

As described under Impact 3.13-1, above, the projected water supplies are adequate to meet demand that would be generated by buildout of the General Plan. As such, implementation and buildout of the General Plan would not result in the need to construct or expand water supply and treatment facilities that have not already been described and accounted for the in the City's relevant water master plans.

As future development and infrastructure projects are considered by the City, each project will be evaluated for conformance with the City's General Plan, and other applicable regulations. Subsequent development and infrastructure projects would also be analyzed for potential environmental impacts, consistent with the requirements of CEQA.

The General Plan includes a range of policies and actions (listed above) to ensure that water supplies are provided in a timely fashion, are adequately funded, that new development funds its fair share of services, and that the provision of water supplies to new projects does not adversely affect the supply and reliability of supplies to existing customers.

Future development in the Planning Area would be required to connect to existing water distribution infrastructure in the vicinity of each site, pay the applicable water system connection fees, and pay the applicable water usage rates. Future projects may be required to implement site specific and limited offsite improvements to the water distribution system in order to connect new project sites to the City's existing water infrastructure network. The specific impacts of providing new and expanded waster distribution infrastructure cannot be determined at this time, as the General Plan does not propose any specific development projects or include details on any future development projects. However, any future improvements to the existing water distribution infrastructure would be primarily provided on sites with land use designations that allow for urbanized land uses, and the environmental impacts of constructing and operating the new water distribution infrastructure would likely be similar to those associated with new development, redevelopment, and infrastructure projects under the General Plan. These impacts are described in the relevant chapters (Chapters 3.1 through 3.14, and 4.0) of this Draft EIR.

This Draft EIR addresses the potential impacts of development that may occur under the General Plan, including residential, commercial, office, industrial, public facilities, and a range of other uses that are accommodated by the project. Where potentially significant or significant impacts are identified, this EIR identifies mitigation measures to reduce the impact and discloses which impacts

cannot be reduced to a less than significant impact. There are no additional environmental impacts, apart from those disclosed in the relevant chapters of this EIR that are anticipated to occur. Therefore, this impact is considered **less than significant** and no additional mitigation is necessary.

3.14.2 WASTEWATER

This section describes the City of Sebastopol's wastewater infrastructure, wastewater flows, treatment plant permit requirements, and previous infrastructure planning. The City provides wastewater collection services for its residents and businesses. City facilities include a collection system with gravity sewers and lift stations. Wastewater treatment occurs at the Subregional Water Reclamation System Treatment Plant, operated by the City of Santa Rosa on Llano Road (Laguna Treatment Plant).

KEY TERMS

Effluent: Effluent is an outflowing of water from a natural body of water, or from a man-made structure. Effluent in the man-made sense is generally considered to be water pollution, such as the outflow from a sewage treatment facility or the wastewater discharge from industrial facilities. In the context of waste water treatment plants, effluent that has been treated is sometimes called secondary effluent, or treated effluent.

NPDES: Water pollution degrades surface waters making them unsafe for drinking, fishing, swimming, and other activities. As authorized by the Clean Water Act, the National Pollutant Discharge Elimination System (NPDES) permit program controls water pollution by regulating point sources that discharge pollutants into waters of the United States. Point sources are discrete conveyances such as pipes or man-made ditches. Individual homes that are connected to a municipal system, use a septic system, or do not have a surface discharge do not need an NPDES permit; however, industrial, municipal, and other facilities must obtain permits if their discharges go directly to surface waters.

WWTP: Wastewater treatment plant. Treatment of wastewater may include the following processes: screening to remove large waste items; grit removal to allow sand, gravel, and sediment to settle out; primary sedimentation where sludge can settle out of the wastewater; secondary treatment to substantially degrade the biological content of the sewage; tertiary treatment to raise the quality of the effluent before it is discharged; and, discharge.

SEBASTOPOL WASTEWATER COLLECTION SYSTEM

The City's wastewater collection system consists of approximately 152,000 linear feet of pipe, ranging from 6 inches to 22 inches in diameter, and two lift stations, the Morris Street Lift Station and the Green Valley Vista Lift Station. From the stations the wastewater is pumped to the Laguna Treatment Plant though a 14-inch diameter force main.

Sanitary sewer systems must be sized and designed to convey the peak hour wet weather flow (PHWWF) to prevent sanitary sewer overflows. A computer model is used to simulate peak flows, based on an estimate of average dry weather flows, peaking factors, and estimates of infiltration and inflow. Average dry weather flows in the collection system are computed using metered

wastewater flows through the Morris Street Lift Station during the dry-weather months with the lowest rainfall of each year (Annual Water and Sewer Usage Report 2012).

WASTEWATER FLOWS

Wastewater flows are typically evaluated for several conditions, including:

- Average Dry Weather Flow (ADWF) – This is the flow rate that is considered to be the actual wastewater flow from homes and businesses in the community (although it may include some flow resulting from groundwater entering the sewer system). It is measured during the summer, when the weather is dry and there is minimal infiltration and no inflow. This flow is dependent on the number of residents and number and type of businesses within the community. It varies throughout the day, with the peak diurnal flow typically occurring in the morning as the community residents wake up and prepare for the day.

- Infiltration and Inflow (I&I) – This is flow that enters the sewer system from rainfall and from increased levels of groundwater caused by the rainfall or by seasonal variation of groundwater levels.

- Peak Hour Wet Weather Flow (PHWWF) – This is the sum of the peak WWF and the peak I&I. The PHWWF is the peak flow rate that is expected to occur during large storm events.

The City's average dry weather flow to the Laguna WWTP in 2012 was .474 mgd, about 56% of the City's treatment entitlement. The 2005 Sewer Master Plan indicates that the City's existing wastewater collection and conveyance system is adequately designed to accommodate current collection and conveyance demands. The Plan also identifies areas where sewer lines require replacement. Additionally, assuming recommended repairs are made, the collection and conveyance system should be adequate to accommodate projected future growth within the City limits. However, the system may not be adequate to accommodate future projected growth within the City's sphere of influence (SOI).

The City's ability to accommodate future development is limited by the entitlement in the Subregional Water Reclamation System. To estimate the treatment capacity available for future development, the estimated flows were calculated based on 2012 flow rates. Projected sewer demand for approved projects is 0.020 mgd, and projected demand for pending applications is 0.021 mgd. Combining these figures with the 2012 ADDWF of 0.474 and the existing General Plan requirement to reserve treatment capacity of 5% (0.042 mgd), the ADDWF for all current and planned future commitments is 0.557 mgd. This rate leaves 0.283 mgd available for future projects under the current entitlement of 0.840 mgd. (Water Production and Usage, and Wastewater statistics for Annual Level of Service Report 2012).

WASTEWATER TREATMENT

The City maintains a sanitary sewer collection system as well as pumping stations that transfer wastewater from Sebastopol to the Subregional Water Reclamation System Treatment Plant operated by the City of Santa Rosa on Llano Road.

As a partner in the Subregional system, Sebastopol has an entitlement for treatment capacity up to 840,000 gallons, or 0.84 million gpd Average Daily Dry Weather Flow (ADDWF) (Annual Water and Sewer Usage Report 2012).

The wastewater treatment plant began operating in 1968 and has increased its capacity from 2 Mgpd to 21 Mgpd. According to the City of Santa Rosa Department of Utilities, the plant incorporates the following processes:

Primary Treatment

Sewage arrives at the treatment plant by passing through large bar screens that remove wood, plastics, and paper from the water. Sand and gravel settle in the grit tank and are removed. Clarification tanks allow lighter material to float to the surface and be skimmed off; heavier materials, biosolids, fall to the bottom and are pumped to anaerobic digesters. Bacteria in the digesters break down solids and create methane.

Methane-powered generators serve as the energy source for 16% of the treatment process. Solids are digested for up to 30 days, and their volume is reduced by 50%. Following a dewatering process, biosolids are blended with green-waste material to create compost, or they are applied directly to farming fields as fertilizer. A small amount is sent to the landfill.

Secondary Treatment

After the majority of solids have been removed, water flows into aeration basins. The aeration basins are tanks injected with oxygen to stimulate the growth of microorganisms and their consumption of dissolved wastes. These microorganisms modify pollutants to reduce their impact on the environment.

As the water moves toward the next treatment phase, the microorganisms are removed in clarification tanks. As they settle to the bottom of the clarifiers, they are returned to the aeration basins to re-supply the self-sustaining population of microorganisms. Clean water continues on to further treatment.

Tertiary Treatment and Disinfection

The water flows through a four-foot bed of coal. This small, black, granular coal (like the type used in some fish aquariums) acts as a filter to trap fine suspended solids and some potential pathogens, or disease-causing organisms. Finally, ultraviolet light (UV) removes bacteria and viruses by destroying their DNA, the genetic material needed to reproduce. The reclaimed water then leaves the plant, and is clean enough for many approved reuse purposes.

The microorganisms making up the biological treatment require protection from toxins. Environmental Compliance staff protects the system by monitoring, inspecting, and issuing permits to ensure all dischargers meet federal, state and local regulations. The state-accredited environmental laboratory located at the treatment facility analyzes drinking water, sewage, and industrial waste, monitoring regulatory and environmental compliance.

Redundancy of equipment allows staff to conduct preventative maintenance. Diesel generators provide power if electricity is interrupted. Flow equalization basins accommodate fluctuation in flow. After primary treatment, water can be temporarily diverted to these basins when volumes are higher than average, and is later returned to the system to complete treatment when the flow has reduced.

After completing less than 24 hours of treatment, the recycled water is ready for reuse. Water is sent to many holding ponds, storing 1.5 billion gallons, or a three-month supply. These ponds are rich with Sonoma County wildlife, including a wide variety of waterfowl.

Laguna Plant Wastewater Treatment Capacity

According to the City of Santa Rosa's 2007 Update to the Recycled Water Master Plan, the City of Santa Rosa's current National Pollutant Discharge Elimination System (NPDES) permit allows the City to treat, reuse, and discharge the annual flow resulting from receiving a daily average dry weather flow (ADWF) of 21.34 million gallons per day (mgd) at the Laguna Plant. According to the City of Santa Rosa Utility Department website (accessed 8/11/14), the Laguna Plant has an average daily dry weather flow of 17.5 million gallons per day, which represents approximately 82 percent of the permitted capacity of the plant.

Table 3.14-2 shows the sources and volume of the ADWF treated at the Laguna Plant in 2000, which is the most recent data available in the City of Santa Rosa's 2007 Update to the Recycled Water Master Plan.

TABLE 3.14-2: LAGUNA WASTEWATER TREATMENT PLANT ADWF

MEMBER ENTITY	*ADWF (MGD)*	*PERCENT*
Rohnert Park and Sonoma State University	3.60	20.11
Santa Rosa and South Park County Sanitation District	13.17	73.51
Sebastopol	0.63	3.54
Cotati	0.51	2.84
Total	**17.91**	**100.00**

SOURCE: CITY OF SANTA ROSA'S 2007 UPDATE TO THE RECYCLED WATER MASTER PLAN, TABLE 1.

As shown in the table above, the wastewater generated by the City of Sebastopol represented approximately 3.54 percent of the total wastewater treated at the Laguna Wastewater Treatment Plant in the year 2000. In 2012-2013 this percentage had fallen to 2.8 percent.

City of Santa Rosa's 2007 update to the Recycled Water Master Plan estimates that in 2020, total ADWF to the Laguna Plant will be approximately 25.89 mgd, which exceeds the current NPDES permit capacity of the plant. The City of Santa Rosa is currently in the process of updating these future treatment volume projections.

PLANNED FUTURE INFRASTRUCTURE

As the City of Sebastopol continues to develop, there will be an increased need for wastewater services. These needs have been addressed in the City's Sewer Master Plan and will require that the City develop plans to accommodate future development (Sebastopol Sewer Master Plan, 2005).

Wastewater infrastructure improvements recommended to meet build-out capacity include the upsizing of several wastewater system collection pipelines within Gravenstein Highway between Cooper Road and Redwood Avenue to accommodate the projected development of the Gravenstein South Study Area. The increases are only required, however, as a result of increased flow in the SOI, and increases predicted within the current City boundaries do not require increasing pipe capacities (Sebastopol Sewer Master Plan 2005).

REGULATORY SETTING - WASTEWATER

STATE

State Water Resources Control Board/Regional Water Quality Control Board

In California, all wastewater treatment and disposal systems fall under the overall regulatory authority of the State Water Resources Control Board (SWRCB) and the nine California Regional Water Quality Control Boards (RWQCBs), who are charged with the responsibility of protecting beneficial uses of state waters (ground and surface) from a variety of waste discharges, including wastewater from individual and municipal systems. The City of Sebastopol falls within the jurisdiction of the North Coast RWQCB.

The RWQCB's regulatory role often involves the formation and implementation of basic water protection policies. These are reflected in the individual RWQCB's Basin Plan, generally in the form of guidelines, criteria and/or prohibitions related to the siting, design, construction, and maintenance of on-site sewage disposal systems. The SWRCB's role has historically been one of providing overall policy direction, organizational and technical assistance, and a communications link to the state legislature.

The RWQCBs may waive or delegate regulatory authority for on-site sewage disposal systems to counties, cities or special districts. Although not mandatory, it is commonly done and has proven to be administratively efficient. In some cases this is accomplished through a Memorandum of Understanding (MOU), whereby the local agency commits to enforcing the Basin Plan requirements or other specified standards that may be more restrictive. The RWQCBs generally elect to retain permitting authority over large and/or commercial or industrial on-site sewage disposal systems, depending on the volume and character of the wastewater.

Individual On-site Sewage Disposal System Regulations

Regulation of individual on-site sewage disposal systems in and around the City of Sebastopol occurs at a variety of levels, including by the SWRCB, through the North Coast RWQCB, and locally, by the Sonoma County Permit and Resources Management Department. Recently, the State of California

enacted legislation that will require the establishment of statewide standards for on-site sewage disposal systems. The following sections describe the primary regulatory mechanisms in place for on-site sewage disposal systems.

Regional Water Quality Control Board Basin Plan for the North Coast Region

The North Coast RWQCB has adopted policies and requirements pertaining to on-site sewage disposal systems, commonly referred to as the Basin Plan. The most recent North Coast RWQCB Basin Plan was adopted in March 2011.

The on-site sewage disposal systems element of the Basin Plan sets forth various objectives, guidelines, general principles and recommendations for the use of on-site sewage disposal systems that cover a variety of topics. Mandatory requirements for the siting and design of on-site sewage disposal systems are reflected in the Basin Plan. Included for all on-site sewage disposal systems are specific criteria related to separation distances to groundwater, setbacks to water features, soil conditions, percolation rates, special design systems, and leachfield replacement area.

Assembly Bill 885 (AB 885)

AB 885 was passed by the California Legislature in September 2000, and mandates the establishment of statewide standards to regulate the placement and use of on-site wastewater treatment systems (OWTS). The SWRCB has been charged with developing this critical set of uniform statewide standards for on-site sewage disposal systems that are required to be incorporated into all RWQCB Basin Plans in the near future. For the past several years the SWRCB has been in the process of developing statewide regulations for on-site wastewater treatment systems per AB 885. The key aspects of the proposed regulations include:

Site Evaluation Practices. The proposed regulations will mandate more thorough and consistent soil and site evaluation practices for all new and repair/replacement OWTS for verification of soil depth and groundwater levels. Current practices focus primarily on attaining minimum horizontal setbacks and determination of groundwater separation, not on determination of soil texture, structure or depth. Proposed definitions for soil (especially rock content and weathered bedrock) will require more thorough and extensive soil profile evaluations and stricter interpretations of suitability than under current practices.

Operation and Maintenance (O&M) Manuals. The proposed AB 885 regulations require the preparation of an O&M manual for all new and repair/replacement OWTS.

Septic Tank Risers and Effluent Filters. Access risers to "near" grade and the use of effluent filters will be required under the proposed regulations. These requirements will apply to new standard systems as well as supplemental treatment systems, and for any tank replacements.

Supplemental Treatment Systems. The proposed regulations have minimum vertical separation requirements that will lead to increased use of supplemental treatment systems. Minimum vertical separation is the depth of continuous unsaturated, undisturbed earthen material between the

bottom of the dispersal system and the top of the seasonal high groundwater level, impermeable strata, or bedrock.

Dispersal System Siting and Design Criteria. The proposed dispersal system siting and design requirements are generally consistent with and/or less restrictive than the current RWQCB Basin Plan. Many of the requirements are structured to allow for more latitude in the use of supplemental treatment to overcome soil depth/suitability constraints for OWTS. Based on the soil definitions in the proposed regulations, there is likely to be an increased need to specify supplemental treatment systems and shallow dispersal designs (including mounds) for sites that may have been permitted for conventional trench designs under current practices.

Groundwater Quality and Septic Tank Monitoring. The proposed AB 885 regulations will mandate new groundwater sampling and septic tank inspections requirements for new and existing OWTS. The proposed regulations do not explicitly require the City to enforce this requirement or to collect and maintain any of the results from sampling that is performed. However, as the local agency responsible for implementing the regulations, at a minimum, Sonoma County would be obligated to provide some level of oversight for these activities.

Record Keeping. The proposed requirements specify only that system owners maintain copies of the Record Plan and the O&M Manual for the OWTS.

LOCAL

City of Sebastopol Sanitary Sewer System Utility Master Plan (2005)

The City's 2005 Sanitary Sewer System Utility Master Plan includes a description and maps of the City's wastewater collection system, system-wide flow projections, hydraulic models of system flows, an analysis of the system's capacity, a summary of system capacity improvements that are needed, and estimated costs for wastewater system improvements.

City of Sebastopol Sewer System Management Plan

In May 2006, the State Water Resources Control Board (SWRCB) implemented Order No. 2006-0003-DWQ. Any municipality that owns or operates a sanitary sewer system greater than 1.0 mile in length and that collects and/or conveys untreated or partially treated wastewater to publicly-owned treatment plants in the State of California is required to comply with the terms of this order. This order requires the development and implementation of a system-specific Sanitary Sewer Management Plan (SSMP). The City's SSMP facilitates the overall management of the City of Sebastopol's sewer system.

The SSMP is intended to meet the requirements of the Statewide General Waste Discharge Requirements (GWDR). The SSMP includes eleven elements, as listed below:

1. Goals
2. Organization
3. Legal Authority
4. Operation and Maintenance Program

5. Design and Performance Provisions
6. Overflow Emergency Response Plan
7. Fats, Oils and Grease (FOG) Control Program
8. System Evaluation and Capacity Assurance Plan
9. Monitoring, Measurement, and Program Modification
10. SSMP Audits
11. Communication Plan

Sebastopol Municipal Code

Chapter 13.08 of the Sebastopol Municipal Code includes detailed regulations for sewer services. Section 13.08.050 of the Sebastopol Municipal Code regulates private sewage disposal systems in order to protect public health and environmental quality.

Santa Rosa Recycled Water Master Plan

The purpose of the Santa Rosa Recycled Water Master Plan is to assist the City in deciding how to manage additional wastewater flows into the Subregional Water Reclamation System resulting from updates to the general plans of partner cities within the subregional system. It also must describe methods for managing current and future flows that are discharged and which are affected by new regulations, including the California Toxics Rule (CTR). The sum of these flows is the incremental flow to be addressed by the Incremental Recycled Water Program (IRWP). The City of Santa Rosa (City) is the managing partner for the Subregional System. The Master Plan formulates a course of actions for implementing facilities under the IRWP to manage the incremental flow. All areas where these facilities would be implemented are within Sonoma County, except for a small portion of the Geysers Steamfield, which is located in Lake County.

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed project will have a significant impact on the environment associated with Utilities if it will:

- Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board.
- Require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.
- Result in a determination by the wastewater treatment provider which serves or may serve the project that is has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.

IMPACTS AND MITIGATION MEASURES

Impact 3.14-3: Potential to exceed wastewater treatment capacity or the requirements of the RWQCB (Significant and Unavoidable)

The City of Santa Rosa Utilities Department is responsible for managing the Subregional Wastewater Treatment and Reclamation system, which handles the wastewater treatment for the City of Sebastopol. In 1975, the City of Santa Rosa executed an Agreement with the Cities of Rohnert Park, Sebastopol and the South Park County Sanitation District for treatment of wastewater at the Laguna Treatment Plant.

Sebastopol maintains a sanitary sewer collection system and pumping stations that transfer wastewater from Sebastopol to the Sub-regional Water Reclamation System Treatment Plant operated by the City of Santa Rosa on Llano Road. Sebastopol has an entitlement to treatment capacity up to 840,000 gallons, or 0.84 million gallons per day (mgd) Average Daily Dry Weather Flow. Average Daily Dry Weather Flow (ADDWF) is computed using metered wastewater flows through the Morris Street Lift Station during the dry-weather months of each year (typically between May and September) with the lowest rainfall.

Sebastopol's ability to accommodate future development is limited by the City's entitlement in the Sub-regional Water Reclamation System. To estimate the treatment capacity available for future development, the 2015 Sebastopol LOS Report calculated flows from current project commitments. Table 3.14-3 provides information about ADDWF, estimated future water and sewer demand attributable to currently Approved Projects, and Projects Pending in the planning process.

TABLE 3.14-3: WASTEWATER TREATMENT CAPACITY (2015)

	MGD
Average Daily Dry Weather Flow	0.413
Treatment Capacity Reserve per General Plan (5% of entitlement)	0.042
Estimated Flows from Approved Projects	+0.008
Subtotal–Treatment Capacity Used, Reserved and Committed	0.473
Current Capacity Entitlement in Sub-regional Treatment System	0.840
Less Treatment Capacity Used, Reserved and Committed	-0.473
Remaining Treatment Capacity Available for future Growth	0.367
Less Treatment Capacity Demand from Pending Applications (Table 2B)	-0.028
Remainder Available for New Projects	0.339

SOURCE: CITY OF SEBASTOPOL LOS REPORTING 2015.

As shown in table 3.14-3, projected sewer demand (ADDWF) for Approved Projects is 0.008 mgd. Projected sewer demand (ADDWF) for Applications Pending is 0.028 mgd. Based on existing and pending projects, estimated future flows relating to treatment capacity is 0.339 mgd, representing

approximately 40% of the total treatment capacity, and would be equivalent to the projected flows from approximately 2,140 new single-family homes. [4]

As described in section 2.0, cumulative buildout of the General Plan within the City Limits and the SOI/UGB could yield up to 1,185 new residential units, 341,159 square feet of new commercial space, 684,889 square feet of new industrial space, and 137,375 square feet of new office space within the City Limits and the Sphere of Influence.

Upon full buildout of the General Plan within the City limits, total ADWF is projected to increase by 0.44 mgd. Within the entire Planning Area, the ADWF would be approximately 0.853 mgd upon full buildout of the General Plan. These ADWF projections exceed the Current Capacity Entitlement allocation under the existing Sub-regional Treatment System agreement terms.[5]

The Laguna Wastewater Treatment Plant is a tertiary-level treatment facility with the capacity to process 21.34 million gallons per day (mgd).[6] The Laguna Plant operates under National Pollutant Discharge Elimination System (NPDES) permit No. CA0022764, which sets Waste Discharge Requirements (WDRs) for the Laguna Plant, along with the remainder of the Santa Rosa Subregional Water Reclamation System. The Laguna Plant had an average daily dry weather flow (ADWF) of 15.05 million gallons per day (mgd) in 2013. Projects under Santa Rosa's Subregional Water Reuse System Incremental Recycled Water Program (IRWP), which was originally undertaken in 2001, will be implemented as growth occurs, eventually increasing the plant's capacity to 25.79 mgd, 18.25 mgd of which would be allocated to Santa Rosa. However, according to the 2007 Update to the Incremental Recycled Water Plan, the Laguna Treatment Plants 2020 projected flow demand will be 25.89 mgd.[7]

Future Subregional Partner wastewater treatment allocations for the Laguna Treatment Plant will be based on approved General Plans or General Plan updates (including the Sebastopol General Plan). At the time of preparation of this EIR, Sebastopol's capacity allocation remains at 0.84 mgd. In order to meet projected flows under cumulative General Plan buildout conditions, the City's allocation would need to be increased to at least 0.895 mgd.

The City of Santa Rosa's 2007 Update to the Recycled Water Master Plan estimates that in 2020, total ADWF to the Laguna Plant will be approximately 25.89 mgd, which exceeds the current NPDES permit capacity of the plant. While the City of Sebastopol is projected to contribute approximately 3.5% of the wastewater treated at the Laguna Plant, under buildout conditions, the existing permitted capacity of the Plant would be exceeded if all other partners contribute their projected flows.

The Sebastopol General Plan includes policies and actions to ensure wastewater treatment capacity is available to serve existing and future development. General Plan Policy CSF 4-1 requires the city

[4] Assumes sewer flow from a typical single-family residential unit is 157 gpd (Sebastopol LOS Report 2015).
[5] Assumes Generation of 0.16 gpd per sq-ft office/commercial/institutional, and 0.26 gpd per sq-ft Industrial (Sebastopol Wastewater Master Plan).
[6] City of Santa Rosa 2007 Update to the Recycled Water Master Plan, p. S-2.
[7] City of Santa Rosa, 2007 Update to the Recycled Water Master Plan, p. 1-11.

maintains adequate sewage conveyance infrastructure to meet existing and projected demand throughout the buildout of the General Plan. Policy CSF 4-2 ensures sewage system capacity is adequate to match the rate of development. Policy CSF 4-5 ensures compliance with the current Statewide General Waste Discharge Requirements concerning the operation and maintenance of the City's sanitary sewer collection system. Policy CSF 4-6 requires projects to demonstrate that existing services are adequate to accommodate the increased demand or that improvements to the capacity of the system to meet increased demand will be made prior to project implementation.

The following General Plan policies and actions would assist in reducing wastewater generation flows to the greatest extent feasible, and would ensure that new development is not approved until it can be demonstrated that adequate wastewater treatment capacity exists to serve new and existing development demands.

2016 GENERAL PLAN POLICIES AND ACTIONS THAT MITIGATE POTENTIAL IMPACTS

Policies

Policy CSF 4-1: Maintain adequate sewage conveyance infrastructure to meet existing and projected demand throughout the buildout of the General Plan.

Policy CSF 4-2: Ensure sewage system capacity is adequate to match the rate of development.

Policy CSF 4-3: Work with the Santa Rosa Subregional Wastewater System to assist in the maintenance of an adequate sewage treatment and disposal system.

Policy CSF 4-4: Ensure adequate funding is available for needed improvements to the wastewater conveyance infrastructure, and to reduce stormwater infiltration to the greatest extent feasible.

Policy CSF 4-5: Comply with the current Statewide General Waste Discharge Requirements concerning the operation and maintenance of the City's sanitary sewer collection system.

Policy CSF 4-6: Prior to the approval of development that would result in substantial increased demand for municipal sewage conveyance and treatment, require projects to demonstrate that existing services are adequate to accommodate the increased demand or that improvements to the capacity of the system to meet increased demand will be made prior to project implementation.

Policy CSF 4-7: Review new development for consistency with the Sewer Collection System Master Plan and require new development to pay fair-share payments towards implementation of system improvements identified in the Sewer Collection System Master Plan.

Policy CSF 4-8: Prioritize sewer service improvements to areas within the City that pose a threat to public health and the environment as a result of deficiencies in existing sewer or septic systems.

Policy CSF 4-9: Ensure future sewer and septic systems are designed to meet or exceed all applicable water quality standards and are located to protect waterways and groundwater resources.

Policy CSF 4-10: Periodically review and update the Sanitary Sewer System Utility Master Plan.

Actions

Action CSF-4a: Work with the Santa Rosa Subregional Wastewater System to assist in the maintenance of an adequate sewage treatment and disposal system.

Action CSF-4b: Coordinate with neighboring municipalities to bring about efficient and effective solutions for wastewater issues that affect the region.

Action CSF-4c: Develop programs and incentives to reduce sewer usage whenever possible. Continue to implement programs such as the low flow toilet retrofit program.

Action CSF-4d: Continue to participate in the Santa Rosa Subregional Sewage System efforts to expand capacity and locate appropriate uses for the treated wastewater.

Action CSF-4e: The City Engineer shall continue to monitor on a regular basis Sebastopol's sewer capacity. The City Engineer will review all development project proposals to ensure adequate sewer capacity is available to serve existing and planning development.

Action CSF-4f: Continue to monitor wastewater flow generation rates within the City's service area and apply to the subregional partners for an incremental increase in wastewater flow allocation to meet projected demand prior to any exceedance of the City's wastewater flow allocation under the Subregional Partnership.

Action CSF-4g: Perform regular cleaning and inspection to help eliminate sanitary sewer backups and overflows.

Action CSF-4h: Maintain and update the City's Capital Improvement Plan (CIP) to clearly identify and prioritize sewer system improvements.

Implementation of the policies and actions identified above would assist in ensuring that adequate treatment plant capacity and permitted capacity is available prior to the approval of new development, including wastewater demands generated by the City of Sebastopol and the rest of the Regional Partners. The Proposed General Plan Policies and Actions listed above would reduce this impact to the greatest extent feasible. However, at the time of preparation of this EIR, an increase in permitted capacity cannot be guaranteed. As such, this impact is considered **significant and unavoidable** under cumulative buildout conditions.

Impact 3.14-4: Require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects (Less than Significant)

Development under the General Plan would result in increased wastewater flows, resulting in the need for additional wastewater treatment facilities and conveyance infrastructure, as described above.

The infrastructure and facilities necessary to serve new growth would involve development of some facilities on-site, some facilities off-site on appropriately designated land, and may also involve improvements to existing facilities and disturbance of existing rights-of-way. The specific impacts of

providing new and expanded facilities cannot be determined at this time, as the General Plan does not propose development nor does it designate specific sites for new or expanded public facilities.

Wastewater treatment and conveyance facilities would be evaluated at the project-level in association with subsequent development projects. However, the facilities would be primarily provided on sites with land use designations that allow such uses and the environmental impacts of constructing and operating the facilities would likely be similar to those associated with new development, redevelopment, and infrastructure projects under the General Plan, such as impacts associated with construction activities including air quality, drainage, and noise, and impacts associated with operation including traffic, noise, air quality, hazards, and land stability. These impacts would generally occur as described in the relevant chapters (Chapters 3.1 through 3.13, and 4.0) of this Draft EIR. Other impacts that may occur include short-term direct visual impacts associated with construction activities; potential direct impacts on a variety of biological resources, including wetlands and riparian resources; loss of trees and other sensitive habitats; and loss or disturbance of special status plant and animal species. Additionally, air quality emissions of particulate matter, greenhouse gases, oxides of nitrogen, and reactive organic gases may be generated. Where potentially significant or significant impacts are identified, this Draft EIR identifies mitigation measures in the relevant chapter of this Draft EIR to reduce the impact and discloses which impacts cannot be reduced to a less than significant impact.

As future development and infrastructure projects are considered by the City, each project will be evaluated for conformance with the City's General Plan, Municipal Code, and other applicable regulations. Subsequent development and infrastructure projects would also be analyzed for potential environmental impacts, consistent with the requirements of CEQA.

The General Plan includes policies and actions designed to ensure adequate wastewater treatment capacity is available to serve development, to minimize the potential adverse effects of wastewater treatment, and to ensure that development does not move forward until adequate wastewater capacity exists. Policy CSF 4-2 ensures sewage system capacity is adequate to match the rate of development. Policy CSF 4-6 requires projects to demonstrate that existing services are adequate to accommodate the increased demand or that improvements to the capacity of the system to meet increased demand will be made prior to project implementation. Policy CSF 4-4 and CSF 4-7 ensures adequate funding is available for needed improvements to the wastewater conveyance infrastructure to provide necessary improvements and ensure coordination with wastewater treatment providers to plan for necessary improvements to accommodate growth. This is a **less than significant** impact.

2016 GENERAL PLAN POLICIES AND ACTIONS THAT MITIGATE POTENTIAL IMPACTS

Policies

Policy CSF 4-2: Ensure sewage system capacity is adequate to match the rate of development.

Policy CSF 4-3: Work with the Santa Rosa Subregional Wastewater System to assist in the maintenance of an adequate sewage treatment and disposal system.

Policy CSF 4-4: Ensure adequate funding is available for needed improvements to the wastewater conveyance infrastructure, and to reduce stormwater infiltration to the greatest extent feasible.

Policy CSF 4-6: Prior to the approval of development that would result in substantial increased demand for municipal sewage conveyance and treatment, require projects to demonstrate that existing services are adequate to accommodate the increased demand or that improvements to the capacity of the system to meet increased demand will be made prior to project implementation.

Policy CSF 4-7: Review new development for consistency with the Sewer Collection System Master Plan and require new development to pay fair-share payments towards implementation of system improvements identified in the Sewer Collection System Master Plan.

Policy CSF 4-8: Prioritize sewer service improvements to areas within the City that pose a threat to public health and the environment as a result of deficiencies in existing sewer or septic systems.

Actions

Action CSF-4a: Work with the Santa Rosa Subregional Wastewater System to assist in the maintenance of an adequate sewage treatment and disposal system.

Action CSF-4b: Coordinate with neighboring municipalities to bring about efficient and effective solutions for wastewater issues that affect the region.

Action CSF-4c: Develop programs and incentives to reduce sewer usage whenever possible. Continue to implement programs such as the low flow toilet retrofit program.

Action CSF-4d: Continue to participate in the Santa Rosa Subregional Sewage System efforts to expand capacity and locate appropriate uses for the treated wastewater.

Action CSF-4e: The City Engineer shall continue to monitor on a regular basis Sebastopol's sewer capacity. The City Engineer will review all development project proposals to ensure adequate sewer capacity is available to serve existing and planning development.

Action CSF-4f: Continue to monitor wastewater flow generation rates within the City's service area and apply to the subregional partners for an incremental increase in wastewater flow allocation to meet projected demand prior to any exceedance of the City's wastewater flow allocation under the Subregional Partnership.

Action CSF-4h: Maintain and update the City's Capital Improvement Plan (CIP) to clearly identify and prioritize sewer system improvements.

3.14.3 SOLID WASTE

The City of Sebastopol contracts with Redwood Empire Disposal, Inc. for solid waste, recyclable, and compostable materials collections as well as street sweeping services. The current contract was approved December 5, 2008. The contract took effect January 1, 2009 and will end December 31, 2023. The City is also a member of the Sonoma County Waste Management Agency, comprised of the County and the nine cities within the County, which is responsible for the development, operation, and management of the County's diversion and recycling programs.

KEY TERMS

Transfer station: A facility for the temporary deposition of some wastes. Transfer stations are often used as places where local waste collection vehicles will deposit their waste cargo prior to loading into larger vehicles. These larger vehicles will transport the waste to the end point of disposal or treatment.

Class I landfill: A landfill that accepts for disposal 20 tons or more of municipal solid waste daily (based on an annual average); or one that does not qualify as a Class II or Class III municipal solid waste landfill. A Class I landfill is authorized to accept hazardous waste.

Class II landfill: A landfill that (1) accepts less than 20 tons daily of municipal solid waste (based on an annual average); (2) is located on a site where there is no evidence of groundwater pollution caused or contributed by the landfill; (3) is not connected by road to a Class I municipal solid waste landfill, or, if connected by road, is located more than 50 miles from a Class I municipal solid waste landfill; and (4) serves a community that experiences (for at least three months each year) an interruption in access to surface transportation, preventing access to a Class I landfill, or a community with no practicable waste management alternative. A Class II landfill is not authorized to accept hazardous waste.

Class III landfill: A landfill that is not connected by road to a Class I landfill or a landfill that is located at least 50 miles from a Class I landfill. Class III landfills can accept no more than an average of one ton daily of ash from incinerated municipal solid waste or less than five tons daily of municipal solid waste. A Class III landfill is not authorized to accept hazardous waste.

Waste Management Plan: A Waste Management Plan (WMP) is a completed WMP form, approved by the City for the purpose of compliance with Chapter 8.40 of the Sebastopol Municipal Code, submitted by the applicant for any covered project. Prior to project start, the WMP shall identify the types of construction and demolition (C&D) debris materials that will be generated for disposal and recycling. A completed WMP contains actual weight or volume of the material disposed recycled receipts.

WASTE COLLECTION SERVICES

The City of Sebastopol contracts with Redwood Empire Disposal, Inc. for solid waste, recyclable, and compostable materials collections as well as street sweeping services in the City.

Residential garbage, recycling, and compostable materials are collected on the same day once per week. Residential solid waste collection fees are based on the garbage cart size selected by the customer (20- gallon, 30-gallon, 60-gallon, or 90-gallon). Additional carts may be provided for an additional fee. Each residential customer is provided with a single stream recyclable materials cart, as well as a 90-gallon cart for the collection of compostable material.

Commercial customers can establish a customized garbage collection schedule that includes a range of container sizes and collection frequencies, to be collected not less than once per week. Small commercial generators can select from multiple cart sizes (30-gallon, 60-gallon, or 90-gallon) and additional carts may be provided for an additional fee. Commercial bin service generators have a

choice of front-load bins ranging in size from 1 cubic yard to 6 cubic yards. They also have the choice between a roll-off container or compactor for collection of refuse. Each commercial business is supplied with a container for recyclable materials ranging in size from 1 cubic yard to 6 cubic yards.

WASTE DISPOSAL FACILITIES

Sonoma County Refuse Disposal Sites

The Sonoma County Department of Transportation and Public Works owns five County refuse disposal sites for the disposal of garbage from Sonoma County residents and businesses.

The County allows the disposal of large household appliances when dropped off at transfer stations, and appropriately handles any hazardous and potentially hazardous materials, such as Freon. The transfer stations are not used to collect, store, or process household hazardous waste. Contractor collection crews have primary responsibility for inspecting loads prior to transferring into collection trucks.

Central Disposal Site

Sonoma County's Central Disposal Site features a full spectrum of waste management programs to serve the 467,000 residents and thousands of businesses in Sonoma County. The 398-acre Central Disposal Site integrates reuse & recycling, household hazardous waste management services, yard debris and food waste composting, solid waste disposal, along with production of electrical energy and vehicle fuel from landfill gas in a coordinated system at a single location.

The Central Disposal Site has a permitted daily capacity of 2,500 tons. Its 172-acre waste disposal area has a total permitted capacity of 19,779,250 cubic yards, with a remaining capacity of 9,470,629 cubic yards (47.9 percent). The Central Disposal Site was closed in 2005 following the discovery that a damaged dump protective liner might lead to ground water contamination. The liner was repaired, and the facility re-opened in September 2010.

Sonoma County and the cities within the SCWMA entered into a Master Operations Agreement (MOA) with Republic Services, a private waste services company, to develop and implement a long-term strategy for solid waste disposal and recycling. Under the MOA, the County would retain ownership of the Central Disposal Site and enter into a long-term operations contract with Republic Services. The County and the cities within Sonoma County would commit their waste flow to Republic Services for a 25-year term. In exchange for the 25-year waste flow commitment, each city receives indemnification in perpetuity against liabilities and costs associated with facility closures and remediation. The MOA provides a funding mechanism to implement future facility expansions at the Central Disposal Site in order to meet future waste generation demand.

Diversion Facilities

The SCWMA's primary diversion facility is located at the Central Disposal Site, and SCWMA also maintains transfer stations in Annapolis, Sonoma, Healdsburg, and Guerneville. At all these disposal sites, the SCWMA receives both source-separated recyclables and refuse. Large transfer trailers haul refuse from the transfer stations to the Central Disposal Site for landfilling. Other transfer trailers

haul wood waste and yard debris from three of the transfer stations (Sonoma, Guerneville, and Healdsburg) to several out of County compostable materials processing sites.

COMPOSTING

The Sonoma Compost/SCWMA compost facility on the Central Landfill property was closed and ceased operating in September 2015. Currently all organic compostable materials are still collected, and aggregated at the several transfer stations (including Central). However the transfer trailers with the same materials now haul to several out of County permitted processing facilities. SCWMA has contracts reserving capacity and for hauling of materials in place through the end of SCWMA's original charter which currently is February 2017. Meanwhile SCWMA is working to develop a means to re-establish regional composting locally.

RECYCLING

Most of Sonoma County's single-stream recycling is sorted and baled for shipping at North Bay Corporation's Materials Recovery Facility in Santa Rosa.

The process starts when giant mounds of recycling are sorted daily in a process which incorporates both mechanical and human sorting. The first sort is done by hand where large pieces of cardboard, rigid plastics, garbage, and plastic bags are removed.

Next, the material is pushed up a large conveyor belt with a row of rods that contain series of offset lobes (similar to a cam shaft) which "float" the lighter material, such as paper, to an upper belt which feeds directly to the baler where paper and other fiber products are collected and prepared for shipping.

Beverage/food/household containers and smaller bits of paper fall through the first set of cams onto another belt. These are fed up a second incline conveyor containing a smaller set of offset lobes to capture the smaller pieces of paper. That belt feeds to a baler for processing.

The beverage/food/household containers which fall through to the container line pass under a strong magnet which removes all steel cans and other magnetic materials. Remaining plastic containers are sorted into different grades by hand, and an "eddy" current pushes aluminum cans into a collection hopper.

HAZARDOUS WASTE DISPOSAL

Hazardous waste disposal is offered by the Sonoma County Waste Management Agency. The household hazardous waste facility is located at the Sonoma County Central Disposal Site, and is available to residents of Sonoma County. Household hazardous waste generated in Sebastopol can be taken to the site. State regulations limit the transportation of HHW to 15 gallons or 125 pounds per vehicle per visit. Individual containers are limited to a 5-gallon capacity. There are no limitations on the number of trips per day.

The following types of hazardous waste are not accepted at the facility: infectious or biologically active materials (other than syringes), radioactive materials, tires greater than 24 inch wheel size, explosives, or ammunition.

The SCWMA conducts Community Toxics Collections all around Sonoma County weekly 50 times per year, in a typical year at least 3 of these weekly events will occur in Sebastopol. There is also the "Toxic Rover" program where HHW is picked up at citizens' homes by appointment and for a fee.

SOLID WASTE GENERATION RATES AND VOLUMES

In 2012, the Sonoma County Central Disposal Site averaged approximately 1,250 tons per day of materials received, which is significantly below the facility's permitted capacity of 2,500 tons per day. The facility has enough capacity to serve the City of Sebastopol through the general plan horizon. The two most prevalent material classes for the County's disposed waste stream as a whole are organics 36.3 percent and construction and demolition materials 27.4 percent. The single most prevalent material is food, which comprises approximately 21 percent of the County's disposed waste stream.

The California Department of Resources Recycling and Recovery (CalRecycle) tracks and monitors solid waste generation rates on a per capita basis. Table 3.14-4 shows solid waste generation rates for Sonoma County West Management Agency.

TABLE 3.14-4: SOLID WASTE GENERATION RATES

YEAR	*WASTE GENERATION RATE (LBS/PERSON/DAY)*	*TOTAL DISPOSAL TONNAGE (TONS/YEAR)*
2007	5.00	439,293
2008	4.50	393,830
2009	3.90	345,209
2010	4.10	357,944
2011	3.60	322,057
2012	3.40	306,078

SOURCE: CALRECYCLE, 2014.

As shown in the table above, both the per capita waste generation rate and the total annual disposal tonnage for the Sonoma County Waste Management Agency has been trending downward consistently from 2007 through 2012.

In accordance with AB 939, which required municipalities to aggressively pursue MSW source reduction and recycling, the County met all AB 939 goals. As of 2006, the County achieved a waste diversion rate of approximately 61 percent.

As of 2007, jurisdictions' diversion rates were no longer calculated by CalRecycle to determine compliance with AB 939. Instead, a per capita disposal rate was used as a benchmark of program effectiveness. The statutory change was instituted by SB 1016 (2008).

FUNDING

Residential and commercial customers pay service fees directly to Redwood Empire Disposal.

REGULATORY SETTING – SOLID WASTE

FEDERAL

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (RCRA) was enacted in 1976 to address the huge volumes of municipal and industrial solid waste generated nationwide. After several amendments, the Act as it stands today governs the management of solid and hazardous waste and underground storage tanks (USTs). RCRA, enacted in 1976, is an amendment to the Solid Waste Disposal Act of 1965. RCRA has been amended several times, most significantly by the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRA is a combination of the first solid waste statutes and all subsequent amendments. RCRA authorizes the Environmental Protection Agency (EPA) to regulate waste management activities. RCRA authorizes states to develop and enforce their own waste management programs, in lieu of the federal program, if a state's waste management program is substantially equivalent to, consistent with, and no less stringent than the federal program.

STATE

California Integrated Waste Management Act (AB 939 and SB 1322)

The California Integrated Waste Management Act of 1989 (AB 939 and SB 1322) requires every city and county in the state to prepare a Source Reduction and Recycling Element to its Solid Waste Management Plan that identifies how each jurisdiction will meet the mandatory state waste diversion goals of 25% by 1995 and 50% by 2000. The purpose of AB 939 and SB 1322 is to "reduce, recycle, and re-use solid waste generated in the state to the maximum extent feasible." The term "integrated waste management" refers to the use of a variety of waste management practices to safely and effectively handle the municipal solid waste stream with the least adverse impact on human health and the environment. The Act has established a waste management hierarchy, as follows: Source Reduction, Recycling, Composting, Transformation, and Disposal.

California Integrated Waste Management Board Model Ordinance

Subsequent to the Integrated Waste Management Act, additional legislation was passed to assist local jurisdictions in accomplishing the goals of AB 939. The California Solid Waste Re-use and Recycling Access Act of 1991 (§42900-42911 of the Public Resources Code) directs the California Integrated Waste Management Board (CIWMB) to draft a "model ordinance" relating to adequate areas for collecting and loading recyclable materials in development projects. The model ordinance requires that any new development project, for which an application is submitted on or after September 1, 1994, include "adequate, accessible, and convenient areas for collecting and loading recyclable materials." For subdivisions of single family detached homes, recycling areas are required to serve only the needs of the homes within that subdivision.

California AB 341 Solid Waste: Diversion

AB 341 took effect July 1, 2012, and requires that not less than 75% of solid waste generated be source reduced, recycled, or composted by the year 2020. To this end AB 341 requires local agencies to update all information required to be included in the nondisposal facility element. The updates are not subject to approval by the department or comment and review by a local task force. AB 341 requires jurisdictions to implement a commercial solid waste recycling program meeting specified elements but does not require the jurisdiction to revise its source reduction and recycling element if the jurisdiction adds or expands a commercial solid waste recycling program to meet this requirement. AB 341 authorizes agencies to charge and collect a fee from a commercial waste generator to recover the local agency's costs incurred in complying with the commercial solid waste recycling program requirements.

LOCAL

Sonoma County Integrated Waste Management Plan

The Sonoma County Integrated Waste Management Plan is the primary local solid waste management planning document that demonstrates reduction of the amount of solid waste landfilled, long-term ability to ensure the implementation of countywide diversion programs, and provision of adequate disposal capacity for local jurisdictions through the siting of disposal and transformation facilities. This planning document is known as the Countywide Integrated Waste Management Plan (CoIWMP), and includes the Source Reduction and Recycling Element (SRRE), Household Hazardous Waste Element (HHWE), Non-Disposal Facility Element (NDFE), and the Siting Element. The CoIWMP recently received its 5-year review.

SCWMA Waste Reduction Program for Carryout Bags

To address the growing problem of carryout bag waste, on February 19, 2014 the cities and the County members of the Sonoma County Waste Management Agency passed Ordinance No. 2014-2 establishing a Waste Reduction Program for Carryout Bags. The ordinance, which goes into effect on September 1, 2014, applies to all grocery stores and retail establishments. The ordinance does not apply to eating establishments (stand-alone restaurants, delis, etc.) and non-profit charitable reusers. The ordinance prohibits all singlesing-use plastic carryout bags, and requires a minimum 10-cent charge on compliant recycled paper bags.

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed project will have a significant impact on the environment associated with Utilities if it will:

1. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs.

2. Comply with federal, State, and local statutes and regulations related to solid waste.

IMPACTS AND MITIGATION MEASURES

Impact 3.14-5: The project would be served by a landfill for solid waste disposal needs and will require compliance with various laws and regulations (Less than Significant)

Development under the proposed General Plan will generate a population increase within the Sebastopol Planning Area of approximately 2,619 persons and an increase in employment of approximately 2,632 jobs upon cumulative general plan buildout.

CalRecycle has established a per resident disposal target rate of 7.1 pounds per day (PPD) and a per employee disposal rate of 18.3 PPD for the SCWMA. The SCWMA has met and exceeded these targets in recent years, achieving a disposal rate of 3.6 PPD per resident and 9.4 PPD per employee in 2014.

In 2014, SCWMA completed a study to characterize the municipal solid waste disposed by single-family residential, commercial (including multifamily) and self-hauled sources. Since the Agency's last waste characterization study in 2007, the composition of the waste stream has changed, including a 30 percent decrease in the quantity of material disposed.

Currently, of the approximate 262,500 tons disposed of in Sonoma County annually, approximately two-thirds (66%), can be classified as divertible, potentially divertible, or compostable. The most prevalent waste from both residential and commercial sources is organics.

As described above, the SCWMA has achieved a disposal rate of 3.6 PPD per resident, and 9.4 PPDS per employee. Assuming these disposal rates remain constant throughout the life of the General Plan, the cumulative growth under General Plan buildout would result in an increase of approximately 34,169 pounds per day of solid waste (2,619 x 3.6) + (2,632 x 9.4), which equals 17.08 tons per day or 6,235.9 tons of solid waste per year.

The City's annual increase in solid waste generation is well within the permitted capacity of the Central Disposal Site serving the City and does not exceed the daily permitted capacity of any of the landfill. The Central Disposal Site has a permitted daily capacity of 2,500 tons. The Central Landfill waste disposal area has a total permitted capacity of 23.25 million tons, with a remaining capacity of 13.95 million tons. The facility has enough capacity to serve the City through the general plan horizon.

Sonoma County and the cities within the SCWMA recently entered into a Master Operations Agreement (MOA) with Republic Services, a private waste services company, to develop and implement a long-term strategy for solid waste disposal and recycling. Under the MOA, the County would retain ownership of the Central Disposal Site and enter into a long-term operations contract with Republic Services. The County and the cities within Sonoma County would commit their waste flow to Republic Services for a 25-year term. In exchange for the 25-year waste flow commitment, each city receives indemnification in perpetuity against liabilities and costs associated with facility

closures and remediation. The MOA provides a funding mechanism to implement future facility expansions at the Central Disposal Site in order to meet future waste generation demand.

While there is adequate permitted landfill capacity to accommodate future growth, the General Plan includes policies and actions to further reduce the project's impact on solid waste services, as identified below. The General Plan would not exceed the permitted capacity of the landfill serving the City and the proposed General Plan will comply with regulations related to solid waste. Therefore, impacts to solid waste are **less than significant** and no mitigation is necessary.

GENERAL PLAN POLICIES AND ACTIONS THAT MITIGATE POTENTIAL IMPACTS

Policies

Policy COS 9-12: Continue the citywide recycling program, actively encourage recycling citywide, including the recycling/composting of food waste, and advocate for a regional composting facility.

Policy COS 9-13: Continue efforts to reduce solid waste generation throughout the life of the General Plan.

Actions

Action COS-9h: Explore opportunities to work with waste haulers and waste disposers to re-use and recycle discarded hazardous materials.

Action COS-9i: Promote and support community hazardous materials collection events.

Action COS-9j: Encourage waste haulers to increase recycling efforts.

CEQA requires an EIR to evaluate a project's effects in relationship to broader changes occurring, or that are foreseeable to occur, in the surrounding environment. Accordingly, this chapter presents discussion of CEQA-mandated analysis for cumulative impacts, irreversible impacts, and growth inducement associated with the proposed General Plan.

4.1 CUMULATIVE SETTING AND IMPACT ANALYSIS

CUMULATIVE SETTING

Under CEQA, the discussion of cumulative impacts should focus on the severity of the impacts and the likelihood of their occurrence. The geographic scope for the cumulative analysis covers the entire Sebastopol Planning Area, which includes the City limits, Sphere of Influence, and Urban Growth Boundary. The cumulative analysis area also includes portions of unincorporated Sonoma County surrounding the Sebastopol Planning Area.

Population Growth

The population of Sebastopol has increased steadily over the years, growing from 5,595 persons in 1980 to 7,440 in 2014; growth has slowed in this decade with the City increasing by 61 persons from 2010 to 2014. Historical population growth in Sebastopol and the County as a whole is shown in Table 4.0-1.

TABLE 4.0-1: POPULATION GROWTH

	1980	*1990*	*2000*	*2010*	*2014*
Sebastopol					
Population	5,595	7,004	7,774	7,379	7,440
Percent Change	-	25%	11%	-5%	<1%
Sonoma County					
Population	299,681	388,222	458,614	483,878	490,486
Percent Change	-	30%	18%	6%	1%

SOURCE: CALIFORNIA DEPARTMENT OF FINANCE, 2000; US CENSUS, 2000; US CENSUS, 2010; CALIFORNIA DEPARTMENT OF FINANCE, 2014.

Population in the cumulative analysis area has steadily grown over the last several decades as shown by Table 4.0-1. The population in Sonoma County has increased by approximately 64 percent since 1980, while the population in the City of Sebastopol has increased by approximately 33 percent since 1980. Since 2000, the population in Sonoma County increased from 458,614 to 490,486 persons, an increase of 7 percent, while the population of Sebastopol has decreased from 7,774 in year 2000 to 7,310 in 2014, resulting in a decrease of 6 percent. In recent decades, the largest population growth occurred between 1980 and 1990, with Sonoma County's population growing by 30 percent, and Sebastopol's population growing by 25 percent.

The Association of Bay Area Governments (ABAG) projects population growth in the San Francisco Bay area. The adopted Plan Bay Area does not include population projections at the local level, but

rather presents regional projections. Plan Bay Area states that by 2040 the San Francisco Bay Area is projected to add 2.1 million people, increasing total regional population from 7.2 million to 9.3 million, an increase of 30 percent or roughly 1 percent per year. Additionally, the California Department of Finance projects that the population of Sonoma County will increase to 551,621 by 2035, which is an increase of 12.5 percent.

Land Use

Existing land uses in the Sebastopol Planning are shown in Table 4.0-2. The predominant land uses within the City are residential uses, ranging from the low to high density ranges. Within the SOI/UGB, the predominant land uses are residential from very-low to medium densities, and light industrial uses.

TABLE 4.0-2: EXISTING GENERAL PLAN LAND USE DESIGNATIONS

LAND USE DESIGNATION	EXISTING GENERAL PLAN (ACRES)	
	CITY	SOI
Very Low Density Residential	7.4	69.0
Low Density Residential	89.9	18.3
Medium Density Residential	369.7	67.0
High Density Residential	134.5	0
Downtown Core	44.8	0
General Commercial	66.4	0
Commercial Office	--	--
Office / Light Industrial	13.3	0
Office	35.8	0
Light Industrial	32.7	44.8
Open Space	90.7	0
Parkland	34.4	0
Community Facilities	96.3	0
Right of Way	172.5	15.5
No Label	0	12.6
TOTAL	**1,188.4**	**227.2**

*Denotes areas where Land Use Classifications have been updated or combined with other designation.
** Denotes areas where parklands have been reduced due to re-classification as open space, or to existing uses.

Existing Assessed Uses

Table 4.0-3 below summarizes the existing land uses in the City of Sebastopol based on Sonoma County Assessor's data.

TABLE 4.0-3: EXISTING LAND USES –CITY OF SEBASTOPOL

USE DESCRIPTION[1]	ACRES	RESIDENTIAL UNITS	SQUARE FEET[2]
Residential	*561.3*	*3,446*	*4,488,381*
Commercial	*119.24*	*49*	*1,393,557*
Industrial	*27*	*0*	*342,334*
Agriculture	*7.1*	*0*	*0*
Governmental	*174.8*	0	*63,245*
Institutional	*54.4*	1	*145,770*
Miscellaneous	*185.3*	*87*	*0*
Vacant	*59.2*	0	*11,273*
TOTALS	***1,188.3***	***3,583***	***6,444,560***

[1]USE DESCRIPTION BASED PRIMARILY ON ASSESSOR USE CODES

[2]SQUARE FOOTAGE REPRESENTS THE PRIMARY AND SECONDARY SQUARE FOOTAGES. SQUARE FOOTAGE OF MIXED USE BUILDINGS INCLUDES BOTH RESIDENTIAL AND NON-RESIDENTIAL USES.

SOURCE: SONOMA COUNTY ASSESSOR'S OFFICE, 2014; DE NOVO PLANNING GROUP, 2014

CUMULATIVE EFFECTS OF THE PROJECT

Method of Analysis

Although the environmental effects of an individual project may not be significant when that project is considered separately, the combined effects of several projects may be significant when considered collectively. State CEQA Guidelines 15130 requires a reasonable analysis of a project's cumulative impacts, which are defined as "two or more individual effects which, when considered together are considerable or which compound or increase other environmental impacts." The cumulative impact that results from several closely related projects is: the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonable foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time (State CEQA Guidelines 15355[b]). Cumulative impact analysis may be less detailed than the analysis of the Project's individual effects (State CEQA Guidelines 15130[b]).

There are two approaches to identifying cumulative projects and the associated impacts. The list approach identifies individual projects known to be occurring or proposed in the surrounding area in order to identify potential cumulative impacts. The projection approach uses a summary of projections in adopted General Plans or related planning documents to identify potential cumulative impacts. Because of the programmatic nature of the proposed General Plan, this Draft EIR uses the projection approach for the cumulative analysis and considers buildout of the 2016 General Plan.

Cumulative Impacts

Cumulative impacts for most issue areas are not quantifiable and are therefore discussed in general qualitative terms as they pertain to development patterns in the surrounding region. In consideration of the cumulative scenario described above, the proposed project may contribute to the following cumulative impacts.

AESTHETICS

Impact 4.1: Cumulative Degradation of the Existing Visual Character of the Region (Considerable Contribution and Significant and Unavoidable)

Buildout of the proposed 2016 General Plan would allow for new development to occur in areas that have historically been used for open space and/or agricultural operations in areas that have been previously undeveloped. The introduction of new development into previously undisturbed areas or areas that have been historically used for agricultural operations may result in potentially significant impacts to scenic resources or result in the degradation of the Planning Area's visual character.

Buildout under the proposed General Plan and implementation of the General Plan Land Use Map has the potential to result in new and expanded development along highway corridors with high scenic values, even though these corridors are not officially designated as State Scenic Highways. Highway 12 and State Route 116 are the principal highway corridors through the Sebastopol Planning Area. Development under the General Plan and the land use designations identified on the Land Use Map would allow primarily for infill commercial and industrial land uses along these highway corridors, primarily in areas that are currently urbanized, but also in areas that are currently very rural, agricultural or undeveloped, including the State Route 116 corridor. New development along the State Route 116 corridor would occur as a combination of infill development, urban revitalization, and new development in previously undeveloped areas. There are a range of existing industrial land uses located along the State Route 116 corridor that are aging and in need of repair and rehabilitation. New development in this area has the potential to improve upon the existing urban aesthetic through the replacement and rehabilitation of existing structures. There are limited areas of undeveloped land along the State Route 116 corridor that may experience new urban development as a result of General Plan implementation.

The General Plan has been developed to preserve expansive areas of open space and to ensure that new development is located in and around existing urbanized areas, thus ensuring that new development is an extension of the existing urban landscape and minimizes interruption of views of agricultural land, grassland, chaparral, woodlands, riverine, wetlands, and public art.

Future development would be required to be consistent with the General Plan, the Municipal Code, including hillside development limitations and the Zoning Ordinance, as well as other applicable City regulations. A central theme of the General Plan is to preserve and protect the City's rural and small town character by concentrating new growth in and around existing urbanized areas, and protecting the existing visual character of the Planning Area. This is expressed in Policies LU-2 and LU-3 in the Land Use Element, which avoid urban sprawl by concentrating development within the City limits,

and favoring infill development over annexation. The General Plan Community Design Element includes Goal CD 1, which calls on the City to preserve and enhance Sebastopol's unique character, design and sense of place as a small, compact town. Goal CD 1 is supported by Policies CD 1-1 through CD 1-14. Policy CD 1-12 requires the design of new residential development to be consistent with the City's design guidelines, to ensure new development contributes to the small town character of Sebastopol. Future development would be required to be consistent with the 2016 General Plan and the General Plan Land Use Map.

In addition to the Land Use and Community Design Element Goals and Policies identified above, a range of Goals, Policies, and Actions contained in the Conservation and Open Space Element, are intended to maintain and enhance the overall visual character of the Planning Area, and to avoid the installation of structures or features that conflict with the character of the surrounding area. Goal COS 11 calls for the preservation and enhancement of scenic views of the Laguna de Santa Rosa, Atascadero Creek, the hills to the west of Sebastopol, and other natural resources within the Sebastopol Planning Area. Policies COS 11-1 through COS 11-8 call for the protection of scenic resources, ridgelines, and view corridors, and regulate development on hillsides. Action COS-11a requires an assessment of public views and ridgelines as part of the project review process to assure that projects protect natural resources through proper site planning, building design, and landscaping.

The implementation of the policies and programs contained in the Land Use, Community Design, and Conservation and Open Space Elements would ensure that new urban residential and commercial development in the Sebastopol Planning Area is located in and around existing urbanized areas and developed to be visually compatible with nearby open space resources, which would limit impacts to scenic resources and limit visual degradation by preserving extensive areas of open space, agricultural lands and undisturbed areas surrounding the Planning Area. This holistic land use approach would reduce impacts to visual resources by concentrating new development around existing development, and maximizing opportunities for open space preservation and continued agricultural use of lands outside of established urban areas. Implementation of the policies and programs items contained in the Land Use, Community Design, and Conservation and Open Space Elements would further ensure that new development is designed in a way that enhances the visual quality of the community, complements the rural character of the city, and that adverse effects on public views are minimized.

However, even with the implementation of the policies and actions in the proposed General Plan, the potential for new development to interrupt scenic views, particularly new industrial and commercial development on agricultural or undeveloped lands, would remain. Existing visual character may be diminished or obscured. While the General Plan policies and programs would ensure that impacts are reduced to the greatest extent feasible, the only method to completely avoid impacts to scenic resources would be to severely limit the development potential on all undeveloped lands, including development of jobs-generating uses along the State Route 116 corridor. This type of mitigation is not consistent with the objective of the General Plan to support local employment opportunities to expand the local jobs base, and increase housing opportunities

within the city. Therefore, the impact would be **significant and unavoidable** and **cumulatively considerable**.

AGRICULTURAL RESOURCES

Impact 4.2: Cumulative Impacts on Agricultural Lands (Less than Considerable Contribution)

As described previously in Section 3.2, Sebastopol does not have any prime farmlands, unique farmlands, or farmlands of statewide importance within the City's Planning area, as designated by the department of Conservation Farmland Mapping and Monitoring Program. Within the city limits and SOI 222.37 acres, and 17.83 acres of farmland of local importance are found respectively within the Planning Area. Portions of these locally important farmlands would be converted to accommodate additional residential and industrial uses through buildout of the General Plan.

Although Sebastopol does not have any prime farmlands, unique farmlands, or farmlands of statewide importance within the City's Planning area, the Sebastopol General Plan has taken a proactive approach towards focusing new growth and development towards infill locations, and protecting open space areas and agricultural lands throughout the Planning Area to the greatest extent feasible through the applicable policies and actions (contained in Section 3.2) that provide protection and preservation of agricultural lands.

Future development in Sonoma County, outside of the Sebastopol Planning Area may result in cumulative impacts related to agricultural land conversion. However, given the agricultural protection policies contained in the proposed General Plan, coupled with the General Plan's proactive approach towards focusing new growth and development towards infill locations, and protecting open space areas throughout the Sphere of Influence and Urban Growth Boundary, the proposed project would have a **less than significant**, and **less than cumulatively considerable** contribution to this impact.

AIR QUALITY

Impact 4.3: Cumulative Impact on the Region's Air Quality (Less than Cumulatively Considerable)

CEQA requires lead agencies to determine whether a project is consistent with all applicable air quality plans. The Bay Area Air Quality District's most current plan is the 2010 Clean Air Plan. The 2010 Clean Air Plan (CAP) is the primary tool used to protect air quality within the jurisdictional boundaries of the BAAQMD. The BAAQMD CEQA Guidelines recommends that lead agencies consider the following questions relative to this consistency determination:

1. Does the project support the primary goals of the 2010 Clean Air Plan?
2. Does the project include applicable control measures from the 2010 Clean Air Plan?
3. Does the project disrupt or hinder implementation of any 2010 Clean Air Plan control measures?

The primary goals of the 2010 Clean Air Plan are to:

- Attain air quality standards;
- Reduce population exposure and protect public health in the Bay Area; and
- Reduce greenhouse gas emissions and protect the climate.

The 2010 Clean Air Plan's first primary goal is to protect air quality. The 2010 Clean Air Plan contains 55 control measures aimed at reducing air pollution in the Bay Area. Along with the traditional stationary, area, mobile source and transportation control measures, the 2010 Clean Air Plan contains a number of new control measures designed to protect the climate and promote mixed use, compact development to reduce vehicle emissions and exposure to pollutants from stationary and mobile sources. The BAAQMD encourages lead agencies to incorporate these Land Use and Local Impact (LUM) measures and Energy and Climate measures (ECM) into proposed project designs and plan elements.

The 2016 Sebastopol General Plan Conservation and Open Space Element includes an extensive list of policies and action measures that are specifically aimed at improving air quality. These policies and action measures, which are presented below, are consistent with the intent of the BAAQMD's control measures. Additionally, the General Plan Land Use Element and Land Use Map provides further implementation of the BAAQMD's control measures by promoting a compact urban development form, emphasizing infill development, and ensuring that land use patterns to not expose sensitive receptors to pollutant concentrations.

Additionally, the Circulation Element includes a wide range of policies and action items that would effectively reduce vehicle miles travelled throughout the Planning Area, through the use of complete streets and multi-modal transportation systems. These applicable policies and actions items are described in greater detail in Section 3.13, Transportation and Circulation.

The policies and action items included throughout the 2016 Sebastopol General Plan, most specifically within the Conservation and Open Space, Land Use, and Circulation Elements, cover the full breadth of air quality issues as recommended in the 2010 Clean Air Plan. The 2010 Clean Air Plan's second primary goal is to address public health. The 2010 Clean Air Plan addresses public health through identifying control measures to maximize the reduction in population exposure to air pollutants and by including a category titled Land Use and Local Impacts Measures that is intended to address localized impacts of air pollution and to help local jurisdictions to pursue transit-oriented infill development in priority areas.

The 2010 Clean Air Plan's final primary goal of protecting the climate is to reduce greenhouse gases to protect the climate. The General Plan Conservation and Natural Resources Element includes an extensive list of policies and action measures that are specifically aimed at reducing greenhouse gas emissions/climate change. These policies and action measures are presented below and discussed in more detail in Section 3.8, Greenhouse Gas Emissions.

If approval of the General Plan would not cause the disruption, delay or otherwise hinder the implementation of any air quality plan control measure, it may be considered consistent with the 2010 CAP. The General Plan does not cause the disruption, delay or otherwise hinder the

implementation of any air quality plan control measure; therefore, it is consistent with the 2010 CAP. Implementation of the General Plan, with the following policies and action items, would have a **less than significant** impact and **less than cumulatively considerable** impact relative to this topic.

BIOLOGICAL RESOURCES

Impact 4.4: Cumulative Loss of Biological Resources Including Habitats and Special Status Species (Less than Cumulatively Considerable)

Cumulative development anticipated in the cumulative analysis area may result in impacts to biological resources, including the permanent loss of habitat for special-status species, corridor fragmentation, direct and indirect to special-status species, and reduction and degradation of sensitive habitat. Significant impacts on special-status species associated with individual subsequent projects could include:

- increased mortality caused by higher numbers of automobiles in new areas of development;
- direct mortality from the collapse of underground burrows, resulting from soil compaction;
- direct mortality resulting from the movement of equipment and vehicles through construction areas;
- direct mortality or loss of suitable habitat resulting from the trimming or removal of obligate host plants;
- loss of breeding and foraging habitat resulting from the filling of seasonal or perennial wetlands;
- loss of breeding, foraging, and refuge habitat resulting from the permanent removal of riparian vegetation;
- loss of suitable habitat for vernal pool invertebrates resulting from the destruction or degradation of vernal pools or seasonal wetlands;
- abandoned eggs or young and subsequent nest failure for special-status nesting birds, including raptors, and other non-special status migratory birds resulting from construction-related noises;
- loss or disturbance of rookeries and other colonial nests;
- loss of suitable foraging habitat for special-status raptor species;
- loss of migration corridors resulting from the construction of permanent structures or features; and
- impacts to fisheries/species associated with waterways.

Subsequent development projects will be required to comply with the General Plan and adopted state, federal, and local regulations for the protection of special-status species. Policy COS 2-1 defines sensitive habitats to include, wetlands, vernal pools, riparian areas, wildlife and fish migration corridors, native plant nursery sites, waters of the U.S., sensitive natural communities,

and other habitats designated by state and federal agencies and laws. Policy COS 2-2, requires preservation and enhancement of those biological communities that contribute to the City's and the region's rich biodiversity including, but not limited to, annual grasslands, freshwater marshes, wetlands, vernal pools, riparian areas, aquatic habitat, and agricultural lands.

Policy CON 2-4 directs the City to attempt to resolve conflicts between sensitive habitat areas and adjoining urbanized lands in a manner which recognizes the public interests in both resource protection and the need to provide for residential and job-generating land uses. Policy COS 1-2 Considers the effects of planning decisions on the overall health and wellbeing of the natural environment and regional ecosystems.

Policy COS 3-1 requires the protection and enhancement of streams, channels, seasonal and permanent marshland, wetlands, sloughs, riparian habitat, and vernal pools through sound land use planning, community design, and site planning.

Action COS 2a requires the city maintain its Zoning Ordinance provisions to require development project proposals, infrastructure projects, long-range planning projects, and other projects that may potentially impact special-status species and sensitive resources to submit a resources analysis as part of the project application, and requires projects to be designed to avoid impacts to sensitive resources, and directs the City to consult with all resource agencies during the review process for proposed developments.

Policy COS 3-1 requires the conservation of riparian habitat along local creeks, including but not limited to the Laguna de Santa Rosa. Policy COS 3-3, and 3-4 requires the City to support restoration of existing channelized waterways to a more natural condition. Restoration efforts should provide for naturalized hydraulic functioning. Restoration should also promote the growth of riparian vegetation to effectively stabilize banks, screen pollutants from runoff entering the channel, enhance fisheries, and provide other opportunities for natural habitat restoration.

Policy COS 3-6 requires the use and site design integration of natural features such as bioswales, vegetation, retention ponds, and other measures to remove surface water pollutants prior to discharge into surface waters. Policy COS 3-5 requires discretionary projects, as well as new flood control and stormwater conveyance projects, to integrate best management practices (BMPs) and natural features to the greatest extent feasible, while ensuring that these features adequately convey and control stormwater to protect human health, safety, and welfare. New flood control projects should utilize the natural benefits of slowing and spreading surface water runoff through natural features in order to promote groundwater infiltration, natural removal of contaminants, and enhancing riparian habitat health. Policy COS 3-8 requires new development to include maintained and managed setbacks and buffers along creeks, wetlands, riparian corridors, and adjacent to sensitive habitat.

Subsequent development projects will be required to comply with the General Plan and adopted state, federal, and local regulations for the protection of special status plants and wildlife, including habitat. While future development has the potential to result in significant impacts to special status

plants and wildlife, including habitat, the implementation of the policies and action measures provided in Section 3.4, as well as federal and state regulations, would reduce impacts to these resources to a **less than significant** level. While cumulative development throughout the region may result in impacts to sensitive natural habitat, the proposed project's contribution to this impact would **be less than cumulatively considerable**.

CULTURAL RESOURCES

Impact 4.5: Cumulative Impacts on Known and Undiscovered Cultural Resources (Less than Cumulatively Considerable)

Construction of the individual development projects allowed under the land use designations of the proposed General Plan may result in the discovery and removal of cultural resources, including archaeological, paleontological, historical, and Native American resources and human remains. The General Plan policies and actions, as well as state and federal regulations, will reduce the risk to people in the region. As discussed in Section 3.5, each project would require project-specific surveys for potential resources and to evaluate any resources discovered during construction activities. Adherence to these policies, actions and regulations will avoid and/or minimize a cumulative loss of these important resources if they are found during project-specific surveys or construction. Therefore, the proposed General Plan's incremental contribution to cumulative cultural resource impacts would be **less than significant**, and **less than cumulatively considerable**.

GEOLOGY, SOILS, AND MINERALS

Impact 4.6: Cumulative Impacts related to Geology and Soils (Less than Cumulatively Considerable)

Construction of the individual development projects allowed under the land use designations of the proposed General Plan will result in risks associated with geology and soils. For example, there will always be a chance that a fault located anywhere in the state (or region) could rupture and cause seismic ground shaking. Additionally, grading, excavation, removal of vegetation cover, and loading activities associated with construction activities could temporarily increase runoff, erosion, and sedimentation. Other geologic risk such as liquefaction, landsliding, lateral spreading, and soil expansion are also geologic risks that are present.

While some cumulative impacts will occur in the region as individual projects are constructed, the General Plan policies and actions, as well as state and federal regulations, will reduce the risk to people in the region. Considering the protection granted by local, state, and federal agencies and their requirements for the seismic design, as discussed in Section 3.6, the overall cumulative impact would be **less than significant**. By the same token, the General Plan's incremental contribution to cumulative geologic and soil impacts would be **less than cumulatively considerable**.

GREENHOUSE GASES AND CLIMATE CHANGE

Impact 4.7: Increased Greenhouse Gas Emissions May Contribute to Climate Change (Less than Cumulatively Considerable)

The proposed General Plan was developed to maximize the preservation of open space lands, and to concentrate new urban development around and within existing established communities inside the Sebastopol City limits. The Land Use Element places an emphasis on concentrating new urban development around and within existing established urbanized areas of the City. The General Plan includes numerous policies that promote and encourage infill development, increased residential densities, and permanent preservation of open space through the use of clustered development patterns. The Circulation Element includes policies that require and promote the development of "complete streets", which provide opportunities for multimodal transportation and reduced VMT. The Circulation Element also promotes the development and expansion of several forms of alternative transit, including bicycle transportation, rail, bus routes, and pedestrian connectivity. The Conservation and Open Space Element includes several policies that require water and energy conservation measures in new and existing development, and promotes the use of green building practices. This element also includes policies and actions that require the preservation of open space lands and the maintenance of open space buffers around urbanized areas.

Policies and actions identified within the Conservation, Land Use and Circulation elements would encourage the development of a compact urban community, while preserving open space resources in the Planning Area. The City's comprehensive approach to this issue in the proposed General Plan would result in increased local employment opportunities, increased transportation and transit options, and the incorporation of conservation and energy efficiency into new development.

The proposed 2016 General Plan is consistent with the policy guidance provided by CAPCOA and the BAAQMD, and would assist the state in meeting the GHG reduction goals established by AB 32. Therefore, this impact is considered **less than significant**, and a **less than cumulatively considerable.**

HAZARDS

Impact 4.8: Cumulative impacts from hazardous materials and human health risks. (Less than Cumulatively Considerable)

Construction of the individual development projects allowed under the land use designations of the proposed General Plan may involve the transportation, use, and/or disposal of hazardous materials, which may involve the use of equipment that contains hazardous materials (e.g., solvents and fuels, diesel-fueled equipment), or the transportation of excavated soil and/or groundwater containing contaminants from areas that are identified as being contaminated. Furthermore, because of the regional nature of the General Plan, some will inevitably transport or use hazardous materials within ¼ mile of a school, or other sensitive receptors such as hospitals and residences.

While some cumulative impacts will occur in the region as individual projects are constructed, the proposed General Plan policies and actions, as well as state and federal regulations, will reduce the risk to people in the region. Considering the protection granted by local, state, and federal agencies and their requirements for the use of hazardous materials in the region, as discussed in Section 3.8,

the overall cumulative impact would be **less than significant**. By the same token, the General Plan's incremental contribution to cumulative hazards and human health impacts would be **less than cumulatively considerable**.

HYDROLOGY AND WATER QUALITY

Impact 4.9: Cumulative impacts to Hydrology and Water Quality. (Less than Cumulatively Considerable)

Construction of the individual development projects allowed under the land use designations of the proposed General Plan has the potential to have construction water quality impacts, impacts to groundwater recharge, and cause flooding, erosion, or siltation from the alteration of drainage patterns.

While some cumulative impacts will occur in the region as individual projects are constructed, the General Plan policies and actions, as well as state and federal regulations, will substantially reduce the impacts. Compliance with the Clean Water Act and regulations enforced by the Regional Water Quality Control Board would ensure that construction-related impacts to water quality are minimized and future projects comply with all applicable laws and regulations. The City requires both mitigation of stormwater quantity and stormwater quality. The Santa Rosa Storm Water Low Impact Development Technical Design Manual (LID Manual) provides specific guidance for post-construction stormwater control measures (as required under Action COS-3d). Implementation of the requirements of the NPDES permit, the LID Manual requirements (or any successor documents), as well as the various General Plan policies and action measures discussed in Section 3.9 would further ensure that future development projects under the General Plan do not result in significant adverse effects to water quality. Considering the protection granted by local, state, and federal agencies and their permit and monitoring requirements, as discussed in Section 3.9, and general plan policies specifically related to the protection of local hydrologic resources and water quality, the overall cumulative impact would be **less than significant**. By the same token, the General Plan's incremental contribution to cumulative hydrology impacts would be **less than cumulatively considerable**.

LAND USE, AGRICULTURE, AND POPULATION

Impact 4.10: Cumulative Impact on Communities and Local Land Uses (Less than Considerable Contribution)

Cumulative land use and planning impacts, such as the potential for conflicts with adjacent land uses and consistency with adopted plans and regulations, are typically site- and project-specific. It may be determined in the project-specific design phase of a development project that an individual project may require removal of homes and result in the displacement of people and housing; however, these effects are not cumulatively considerable because there is adequate replacement housing available under the proposed General Plan. Additionally, any removal of homes would require adequate compensation to the homeowner in accordance with federal and state laws.

The land uses allowed under the proposed General Plan provide opportunities for cohesive new growth at in-fill locations within existing urbanized areas, as well as limited new growth within the

SOI/UGB, but would not create physical division within existing communities. New development and redevelopment projects would be designed to complement the character of existing neighborhoods and provide connectivity between existing development and new development within the cumulative analysis area. The General Plan does not include any new roadways, infrastructure, or other features that would divide existing communities. The General Plan's incremental contribution to cumulative land use and population impacts would be **less than significant** and **less than cumulatively considerable**.

NOISE

Impact 4.11: Cumulative Exposure of Noise-Sensitive Land Uses to Noise in Excess of Normally Acceptable Noise Levels or to Substantial Increases in Noise (Considerable Contribution and Significant and Unavoidable)

Development in the cumulative analysis area would cause some areas to experience greater construction and operational noise disturbances relative to others. This would result as noise sensitive development becomes more clustered near noise producing land uses, including roadways. The proposed General Plan indirectly increases noise levels by accommodating additional growth and ultimately allowing more traffic on roadways.

Tables 3.11-10 and 3.11-11 show the existing and cumulative noise levels associated with traffic on the local roadway network, including projects within the City and within the City's Planning Area. Cumulative conditions include traffic due to buildout of the General Plan in addition to pass through traffic from other jurisdictions. The table also shows the estimated noise level increases which may occur under cumulative conditions.

Cumulative conditions would contribute to an exceedance of the City's transportation noise standards and result in significant increases in traffic noise levels at existing sensitive receptors. The General Plan includes policies and actions that are intended to reduce noise increases associated with traffic. Specifically, as stated in Section 3.11, policies N 1-1 through N 1-10, N 2-2, N2-4 and Actions N-1a, N-1c through N-1e, would reduce noise increases associated with traffic, as described in Impact 3.11-1. As described in Impact 3.11-1, some traffic noise impacts cannot be mitigated to a less-than-significant level due the proximity of sensitive receivers to major roadways, and because noise attenuation may not be feasible in all circumstances. As a result, this is a ***significant and unavoidable*** and **cumulatively considerable** impact.

PUBLIC SERVICES AND RECREATION

Impact 4.12: Cumulative Impact on Public Services and Recreation (Less than Cumulatively Considerable)

Cumulative growth that would occur within the cumulative analysis area over the life of the proposed General Plan will result in increased demand for public services, including fire protection, law enforcement, schools, parks, libraries, and other public and governmental services. As the demand for public services and recreation increases, there will likely be a need to increase staffing and equipment in order to maintain acceptable service ratios, response times, and other performance standards. New or expanded service structures (e.g., offices, maintenance and

administrative buildings, schools, parks, fire departments, libraries, etc.) will be needed to provide for adequate staffing, equipment, and appropriate facilities to serve growth within the cumulative analysis area.

The proposed General Plan includes a range of policies and actions that would ensure that public services are provided in a timely fashion, are adequately funded, are coordinated between the City and appropriate service agency, and that new development funds its fair share of services. The General Plan includes policies to ensure that fire protection and law enforcement services keep pace with new development and that school, library, and governmental services are adequately planned and provided. The General Plan also includes an action to maintain a Capital Improvement Program to defray the cost of developing public facilities. The General Plan's incremental contribution to cumulative public services and recreation impacts would be **less than significant,** and less **than cumulatively considerable**.

TRANSPORTATION AND CIRCULATION

Impact 4.13: Cumulative Impact on the Transportation Network (Considerable Contribution and Significant and Unavoidable)

As described in greater detail in Section 3.13, development allowed under buildout of the Sebastopol General Plan would result in increased use of SR 12 and SR 116, regional highway facilities owned and operated by Caltrans that also serve local traffic within Sebastopol. Caltrans has established a standard of LOS D for intersections in the study area that are on the State highway system, consistent with the City of Sebastopol's standard.

Intersections Requiring Traffic Control

The following unsignalized intersections are projected to operate unacceptably in the future, with future delays and volumes meeting warrants for installation of traffic controls such as a signal or roundabout.

- Healdsburg Avenue (SR116) at Covert Lane
- Healdsburg Avenue (SR116) at Murphy Avenue
- Gravenstein Highway South (SR116) at Fircrest Avenue

For the purposes of this analysis, operation of these intersections assuming installation of a traffic signal is shown below in Table 4.0-4 for General Plan Buildout conditions, and in Table 4.0-5 for General Plan Cumulative Buildout Conditions.

TABLE 4.0-4: WITH GENERAL PLAN BUILDOUT – MITIGATED CONDITIONS

INTERSECTION APPROACH	AM PEAK HOUR		PM PEAK HOUR	
	DELAY	LOS	DELAY	LOS
3. Healdsburg Avenue (SR 116)/Covert Lane	16.5	B	34.5	C
4. Healdsburg Avenue (SR 116)/Murphy Avenue	6.4	A	12.3	B
17. Gravenstein Highway (SR 116)/Fircrest Avenue	6.1	A	33.3	C

TABLE 4.0-5: WITH GENERAL PLAN CUMULATIVE BUILDOUT – MITIGATED CONDITIONS

INTERSECTION APPROACH	AM PEAK HOUR		PM PEAK HOUR	
	DELAY	LOS	DELAY	LOS
3. Healdsburg Avenue (SR 116)/Covert Lane	26.7	C	30.9	C
4. Healdsburg Avenue (SR 116)/Murphy Avenue	16.0	B	15.4	B
17. Gravenstein Highway (SR 116)/Fircrest Avenue	21.7	C	54.5	D

With the installation of traffic controls at these intersections, impacts would be reduced to a less than significant level. However, because the City does not control the funding or timing of these improvements, the City cannot determine that the improvements will be made in time to accommodate regional and local growth, this impact would remain **significant and unavoidable** and **cumulatively considerable,** and no alternative mitigation is available.

UTILITIES AND SERVICE SYSTEMS

Impact 4.14: Cumulative Impact on Utilities (Considerable Contribution and Significant and Unavoidable)

Cumulative growth that would occur within the cumulative analysis area over the life of the proposed General Plan will result increased demand for water service, sewer service, and solid waste disposal services.

Water: Implementation of the proposed General Plan would result in increased population and employment growth within the City's Planning Area, and a corresponding increase in the demand for additional water supplies.

The City of Sebastopol provides water services to users within the City, and would provide water services to future development that may occur following implementation of the General Plan. In order to project future water demands associated with General Plan buildout, water demand is tied to population growth, and the average per capita water demand generated by that new population growth, as well as increases in the commercial and industrial uses.

The average total per capita water production between 2006 and 2015 was 129 gallons per person per day,[1] equaling approximately 29.2 percent of maximum production. The proposed General Plan would accommodate a broad range of uses, so the use of a per capita figure is intended to provide an average figure that approximates the average water demand associated with the broad range of uses that could occur in the Planning Area upon full buildout of the General Plan.

According to the California Department of Finance's population estimates, the 2015 population of the City of Sebastopol was 7,507. As described above, buildout of the General Plan within the City limits could increase population growth in the City by up to 1,658 residents, resulting in a total

[1] This metric accounts for water uses for a variety of uses within the City including residential single-family, multi-family, commercial, institutional, landscape and irrigation water uses, and corporate yard water sales.

population within the City limits at buildout of 9,165 residents. Within the entire Planning Area, the total population may reach up to 10,126 residents.

Utilizing the water usage rate of 129 gallons per capita per day, at General Plan buildout within the existing City limits, the total water demand would be 431.5 mg (9,165 x 129 X 365), or 34.9 % of maximum production. Full buildout of the Planning Area would result in a water demand of 476.8 mg (10,126 x 129 x 365), or 38.5 % of maximum production. The projected water supply currently available for production by the City of Sebastopol exceeds the projected water demand associated with full buildout of the General Plan, including the Planning Area. So while the proposed General Plan would increase water demand throughout the Planning Area, the projected water demand associated within buildout of the General Plan would not exceed the City's available water production capabilities.

Additionally, the General Plan includes policies and actions designed to ensure an adequate water supply for development and to minimize the potential adverse effects of increased water use. Policy CSF 3-1 requires that prior to the approval of development, infrastructure, Specific Plans, or other projects that would result in increased demand for public water conveyance and treatment, projects must demonstrate proof of adequate water supply (e.g., that existing services are adequate to accommodate the increased demand, or improvements to the capacity of the system to meet increased demand will be made prior to project implementation) and that potential cumulative impacts to water users and the environment will be addressed. Policy CSF 3-4 ensures the water system and supply is adequate to match the rate of growth and future development.

The proposed General Plan also includes a range of policies and actions that call for continued and ongoing water conservation measures, measures to increase the availability and use of recycled water in order to decrease water supply demands from existing sources, and measures to increase groundwater recharge capabilities (as described in Section 3.9 Hydrology and Water Quality).

Given that projected water demands associated with General Plan buildout would not exceed the projected water supplies, as described previously, and that the General Plan includes a comprehensive set of goals, policies and actions to ensure an adequate and reliable source of clean potable water, impacts associated with water supplies are **less than significant,** and **less than cumulatively considerable.**

Wastewater: As described in greater detail in Section 3.14, Sebastopol's ability to accommodate future development is limited by the City's entitlement in the Sub-regional Water Reclamation System. To estimate the treatment capacity available for future development, the 2015 Sebastopol LOS Report calculated flows from current project commitments. Table 3.14-3 in Section 3.14 provides information about ADDWF, estimated future water and sewer demand attributable to currently Approved Projects, and Projects Pending in the planning process.

Projected sewer demand (ADDWF) for Approved Projects is 0.008 mgd. Projected sewer demand (ADDWF) for Applications Pending is 0.028 mgd. Based on existing and pending projects, estimated future flows relating to treatment capacity is 0.339 mgd, representing approximately 40% of the

total treatment capacity, and would be equivalent to the projected flows from approximately 2,140 new single-family homes.

As described in section 2.0, cumulative buildout of the General Plan within the City Limits and the SOI/UGB could yield up to 1,185 new residential units, 341,159 square feet of new commercial space, 684,889 square feet of new industrial space, and 137,375 square feet of new office space within the City Limits and the Sphere of Influence.

Upon full buildout of the General Plan within the City limits, total ADWF is projected to increase by 0.44 mgd. Within the entire Planning Area, the ADWF would be approximately 0.853 mgd upon full buildout of the General Plan. These ADWF projections exceed the Current Capacity Entitlement allocation under the existing Sub-regional Treatment System agreement terms.

The Laguna Wastewater Treatment Plant is a tertiary-level treatment facility with the capacity to process 21.34 million gallons per day (mgd). The Laguna Plant operates under National Pollutant Discharge Elimination System (NPDES) permit No. CA0022764, which sets Waste Discharge Requirements (WDRs) for the Laguna Plant, along with the remainder of the Santa Rosa Subregional Water Reclamation System. The Laguna Plant had an average daily dry weather flow (ADWF) of 15.05 million gallons per day (mgd) in 2013. Projects under Santa Rosa's Subregional Water Reuse System Incremental Recycled Water Program (IRWP), which was originally undertaken in 2001, will be implemented as growth occurs, eventually increasing the plant's capacity to 25.79 mgd, 18.25 mgd of which would be allocated to Santa Rosa. However, according to the 2007 Update to the Incremental Recycled Water Plan, the Laguna Treatment Plants 2020 projected flow demand will be 25.89 mgd.

Future Subregional Partner wastewater treatment allocations for the Laguna Treatment Plant will be based on approved General Plans or General Plan updates (including the Sebastopol General Plan). At the time of preparation of this EIR, Sebastopol's capacity allocation remains at 0.84 mgd. In order to meet projected flows under cumulative General Plan buildout conditions, the City's allocation would need to be increased to at least 0.895 mgd.

The City of Santa Rosa's 2007 Update to the Recycled Water Master Plan estimates that in 2020, total ADWF to the Laguna Plant will be approximately 25.89 mgd, which exceeds the current NPDES permit capacity of the plant. While the City of Sebastopol is projected to contribute approximately 3.5% of the wastewater treated at the Laguna Plant, under buildout conditions, the existing permitted capacity of the Plant would be exceeded if all other partners contribute their projected flows.

The Sebastopol General Plan includes policies and actions to ensure wastewater treatment capacity is available to serve existing and future development. The General Plan policies and actions would assist in reducing wastewater generation flows to the greatest extent feasible, and would ensure that new development is not approved until it can be demonstrated that adequate wastewater treatment capacity exists to serve new and existing development demands. Implementation of the policies and actions identified in greater detail in Section 3.14 would assist in ensuring that adequate

treatment plant capacity and permitted capacity is available to meet buildout conditions, including wastewater demands generated by the City of Sebastopol and the rest of the Regional Partners. However, at the time of preparation of this EIR, an increase in permitted capacity cannot be guaranteed. As such, this impact is considered **significant and unavoidable,** and **cumulatively considerable.**

Solid Waste: Development under the proposed General Plan within the city limits and SOI will generate a population increase within the Sebastopol Planning Area of approximately 2,619 persons and an increase in employment of approximately 2,632 jobs upon cumulative general plan buildout.

As described in Section 3.14, CalRecycle has established a per resident disposal target rate of 7.1 pounds per day (PPD) and a per employee disposal rate of 18.3 PPD for the SCWMA. The SCWMA has met and exceeded these targets in recent years, achieving a disposal rate of 3.6 PPD per resident and 9.4 PPD per employee in 2014.

In 2014, SCWMA completed a study to characterize the municipal solid waste disposed by single-family residential, commercial (including multifamily) and self-hauled sources. Since the Agency's last waste characterization study in 2007, the composition of the waste stream has changed, including a 30 percent decrease in the quantity of material disposed.

The SCWMA has achieved a disposal rate of 3.6 PPD per resident, and 9.4 PPDS per employee. Assuming these disposal rates remain constant throughout the life of the General Plan, the cumulative growth under General Plan buildout would result in an increase of approximately 34,169 pounds per day of solid waste (2,619 x 3.6) + (2,632 x 9.4), which equals 17.08 tons per day or 6,235.9 tons of solid waste per year.

The City's annual increase in solid waste generation is well within the permitted capacity of the Central Disposal Site serving the City and does not exceed the daily permitted capacity of any of the landfill. The Central Disposal Site has a permitted daily capacity of 2,500 tons. The Central Landfill waste disposal area has a total permitted capacity of 23.25 million tons, with a remaining capacity of 13.95 million tons. The facility has enough capacity to serve the City through the general plan horizon.

Sonoma County and the cities within the SCWMA recently entered into a Master Operations Agreement (MOA) with Republic Services, a private waste services company, to develop and implement a long-term strategy for solid waste disposal and recycling. Under the MOA, the County would retain ownership of the Central Disposal Site and enter into a long-term operations contract with Republic Services. The County and the cities within Sonoma County would commit their waste flow to Republic Services for a 20-year term. In exchange for the 20-year waste flow commitment, each city receives indemnification in perpetuity against liabilities and costs associated with facility closures and remediation. The MOA provides a funding mechanism to implement future facility expansions at the Central Disposal Site in order to meet future waste generation demand.

While there is adequate permitted landfill capacity to accommodate future growth, the General Plan includes policies and actions to further reduce the project's impact on solid waste services, as

identified in Section 3.14. The General Plan would not exceed the permitted capacity of the landfill serving the City and the proposed General Plan will comply with regulations related to solid waste. Therefore, impacts to solid waste are **less than significant** and **less than cumulatively considerable.**

4.2 GROWTH-INDUCING EFFECTS

INTRODUCTION

Section 15126.2(d) of the CEQA Guidelines requires that an EIR evaluate the growth-inducing impacts of a proposed action. A growth-inducing impact is defined by the CEQA Guidelines as:

> *The way in which a proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects which would remove obstacles to population growth…It is not assumed that growth in an area is necessarily beneficial, detrimental, or of little significance to the environment.*

Based on the CEQA Guidelines, growth inducement is any growth that exceeds planned growth of an area and results in new development that would not have taken place without implementation of the project. A project can have direct and/or indirect growth inducement potential. Direct growth inducement would result if a project, for example, involved construction of new housing. A project would have indirect growth inducement potential if it established substantial new permanent employment opportunities (e.g., commercial, industrial, or governmental enterprises) or if it would involve a construction effort with substantial short-term employment opportunities that would indirectly stimulate the need for additional housing and services to support the new employment demand *(Napa Citizens for Honest Government v. Napa County Board of Supervisors)*. Similarly, a project would indirectly induce growth if it would remove an obstacle to additional growth and development, such as removing a constraint on a required public service. A project providing an increased water supply in an area where water service historically limited growth could be considered growth-inducing.

The State CEQA Guidelines further explain that the environmental effects of induced growth are considered indirect impacts of the proposed action. These indirect impacts or secondary effects of growth may result in significant, adverse environmental impacts. Potential secondary effects of growth include increased demand on other community and public services and infrastructure, increased traffic and noise, and adverse environmental impacts such as degradation of air and water quality, degradation or loss of plant and animal habitat, and conversion of agricultural and open space land to developed uses.

Growth inducement may constitute an adverse impact if the growth is not consistent with or accommodated by the land use plans and growth management plans and policies for the area affected. Local land use plans provide for land use development patterns and growth policies that allow for the orderly expansion of urban development supported by adequate urban public services, such as water supply, roadway infrastructure, sewer service, and solid waste service.

The Proposed General Plan is a long term plan intended to accommodate projected population, housing and employment growth, including the appropriate balance among these factors with the necessary public services and infrastructure. The General Plan would serve as a comprehensive, long-term plan for the physical development of Sebastopol. Projected growth is described in Sections 2.0 (Project Description), and 3.10 (Land Use, and Population), and the environmental consequences related to the potential growth are fully assessed in each topical section. By definition, the General Plan is intended to provide for and address future growth in the City.

Because the General Plan provides a framework for development through its land use map, land use designations, goals, policies, and actions it would directly induce population and employment growth in the Sebastopol Planning Area by designating land for development that is more intense, in some instances, than current designations allow. The analysis of the indirect growth-inducing impacts for the proposed General Plan focuses on the following factors: inducement of unanticipated population growth; encouragement of economic growth that leads to jobs and housing growth; elimination of obstacles to population growth; and result in service, facility, or infrastructure demand in excess of existing and planned growth.

The General Plan accommodates future growth in Sebastopol, including new businesses, expansion of existing businesses, and new residential uses. Infrastructure and services would need to accommodate future growth. The General Plan is oriented toward the economic growth of the City, with emphasis given to increasing local employment opportunities, and providing residential development as necessary to provided increased housing opportunities through the City. As described in Chapter 2.0, cumulative buildout of the General Plan within the City Limits and the SOI/UGB could yield up to 1,185 new residential units, 341,159 square feet of new commercial space, 684,889 square feet of new industrial space, and 137,375 square feet of new office space within the City Limits and the Sphere of Influence. This new growth would increase the City's population by approximately 2,619 residents. The full development of the new commercial, office, and industrial uses would increase the employment opportunities in Sebastopol by approximately 2,632 employees.

The primary factors that account for population growth are natural increase and net migration. The average annual birth rate for California is expected to be 20 births per 1,000 population. Additionally, California is expected to attract more than one third of the Country's immigrants. Other factors that affect growth include the cost of housing, the location of jobs, the economy, the climate, and also, transportation. While these factors would likely result in growth in Sebastopol during the planning period of the proposed General Plan, growth will continue to occur based primarily on the demand of the housing market and demand for new commercial, industrial, and other non-residential uses. As future development occurs under the proposed General Plan, new roads, infrastructure, and services would be necessary to serve the development and this infrastructure would accommodate planned growth. However, growth under the proposed General Plan would remain within the general growth levels projected statewide and would not be anticipated to exceed any applicable growth projections or limitations that have been adopted to avoid an environmental effect. The Association of Bay Area Governments (ABAG) projects population growth in the San

Francisco Bay area. The adopted Plan Bay Area does not include population projections at the local level, but rather presents regional projections. Plan Bay Area states that by 2040 the San Francisco Bay Area is projected to add 2.1 million people, increasing total regional population from 7.2 million to 9.3 million, an increase of 30 percent or roughly 1 percent per year.

The proposed General Plan is intended to accommodate the City's fair share of statewide housing needs, which are allocated by the Association of Bay Area Governments, based on regional numbers provided by the California Department of Housing and Community Development, on a regular basis (every five to eight years).

The proposed General Plan includes policies and actions that mitigate environmental impacts associated with growth, such as air quality, noise, traffic, water supply, and water quality effects. Section 3.1 through 3.14 and 4.0 of the DEIR provide a discussion of environmental effects associated with development allowed under the proposed General Plan.

With implementation of General Plan policies and actions intended to guide growth to appropriate areas and provide services necessary to accommodate growth, the land uses allowed under the proposed General Plan, the infrastructure anticipated to accommodate proposed land uses, and the goal and policy framework would not induce growth that would exceed adopted thresholds. Therefore, population and housing growth associated with the proposed General Plan would result a **less than significant** impact.

4.3 SIGNIFICANT IRREVERSIBLE EFFECTS

CEQA requires that EIRs prepared for the adoption of a plan, policy, or ordinance of a public agency must include a discussion of significant irreversible environmental changes of project implementation. CEQA Guidelines Section 15126.2(c) describes irreversible environmental changes as:

> *Uses of nonrenewable resources during the initial and continued phases of the project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as highway improvement which provides access to a previously inaccessible area) generally commit future generations to similar uses. Also irreversible damage can result from environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified.*

Consumption of Nonrenewable Resources

Consumption of nonrenewable resources refers to the loss of physical features within the natural environment, including the conversion of agricultural lands, loss of access to mining reserves, and nonrenewable energy use. The Planning Area has multiple nonrenewable resources including agricultural resources, biological resources, water resources, and energy resources.

One of the objectives of the proposed General Plan is to conserve open spaces and other natural resources within the SOI/UGB. As such, the proposed General Plan focuses most new development to infill areas, and areas surrounding existing neighborhoods and urbanized areas. As a result of this design, the General Plan will minimize the potential for impacts to the nonrenewable resources in the Planning Area, including agricultural resources, biological resources, water resources, and energy resources.

Non-renewable energy resources such as electricity, natural gas, propane, gasoline, and diesel would be consumed during the construction and operation of development projects allowed under the General Plan. The General Plan includes a variety of policies that seek conserve, protect, and enhance energy resources. These policies focus on energy efficiency in the design, materials, construction, and use of buildings, the use of alternative energy systems, and alternative transportation modes.

Irretrievable Commitments/Irreversible Physical Changes

The General Plan would result in a commitment of land uses designated for the foreseeable future. Land use and development consistent with the General Plan would result in irretrievable commitments by introducing development onto sites that are presently undeveloped. The conversion of agricultural lands to urban uses would result in an irretrievable loss of agricultural land, wildlife habitats, and open space. Additionally, development will physically change the environment in terms of aesthetics, air emissions, noise, traffic, open space, and natural resources. These physical changes are irreversible after development occurs. Therefore, the General Plan would result in changes in land use within the Planning Area that would commit future generations to these uses.

Impact 4.15: Irreversible Effects (Significant and Unavoidable)

In summary, the proposed General Plan includes an extensive policy framework that is designed to address land use and environmental issues to the greatest extent feasible while allowing growth and economic prosperity for the City. However, even with the policies and actions that will serve to reduce potential significant impacts, the proposed General Plan will result in significant irreversible changes associated with additional development and increases in population. This impact is considered a **significant and unavoidable** impact under CEQA.

4.4 SIGNIFICANT AND UNAVOIDABLE IMPACTS

CEQA Guidelines Section 15126.2(b) requires an EIR to discuss unavoidable significant environmental effects, including those that can be mitigated but not reduced to a level of insignificance. The following significant and unavoidable impacts of the proposed General Plan are discussed in Chapter 3 and previously in this chapter (cumulative-level). Refer to those discussions for further details and analysis of the significant and unavoidable impact identified below:

SIGNIFICANT AND UNAVOIDABLE PROJECT-LEVEL IMPACTS

- Impact 3.1-1: General Plan Implementation could result in Substantial Adverse Effects on Visual Character, including Scenic Vistas or Scenic Resources (significant and unavoidable)
- Impact 3.9-5 General Plan implementation could place housing and structures 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 (significant and unavoidable)
- Impact 3.13-2: General Plan buildout would require improvements to Caltrans facilities (SR 12 and SR 116) (Significant and Unavoidable)
- Impact 3.14-3: Potential to exceed wastewater treatment capacity or the requirements of the RWQCB (Significant and Unavoidable)

SIGNIFICANT AND UNAVOIDABLE CUMULATIVE IMPACTS

- Impact 4.1: Cumulative Degradation of the Existing Visual Character of the Region (Considerable Contribution and Significant and Unavoidable)
- Impact 4.11: Cumulative Exposure of Noise-Sensitive Land Uses to Noise in Excess of Normally Acceptable Noise Levels or to Substantial Increases in Noise (Considerable Contribution and Significant and Unavoidable)
- Impact 4.13: Cumulative Impact on the Transportation Network (Considerable Contribution and Significant and Unavoidable)
- Impact 4.14: Cumulative Impact on Utilities (Considerable Contribution and Significant and Unavoidable)
- Impact 4.15: Irreversible Effects (Significant and Unavoidable)

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5.1 CEQA REQUIREMENTS

CEQA requires that an EIR analyze a reasonable range of feasible alternatives that meet most or all of the project objectives while reducing or avoiding one or more significant environmental effects of the project. The range of alternatives required in an EIR is governed by a "rule of reason" that requires an EIR to set forth only those alternatives necessary to permit a reasoned choice (CEQA Guidelines Section 15126.6[f]). Where a potential alternative was examined but not chosen as one of the range of alternatives, the CEQA Guidelines require that the EIR briefly discuss the reasons the alternative was dismissed.

A Notice of Preparation was circulated to the public to solicit recommendations for a reasonable range of alternatives to the General Plan. No specific alternatives were recommended by commenting agencies or the general public during the NOP public review process.

5.2 ALTERNATIVES CONSIDERED IN THIS EIR

FACTORS GUIDING SELECTION OF ALTERNATIVES

The alternatives to the General Plan Update selected for analysis in the EIR were developed to minimize significant environmental impacts while fulfilling the basic objectives of the project. The significant environmental impacts associated with the project relate to aesthetic and visual resources, flood hazards, traffic noise, roadway impacts to Caltrans facilities, increased demand for wastewater treatment, and cumulative effects associated with aesthetics and visual resources, noise, circulation, and utilities. Significant impacts are summarized in Chapter 4 and described in greater detail in Chapters 3.1 through 3.14.

As described in Chapter 2.0, Project Description, the following objectives have been identified for the proposed project.

- Protect Sebastopol's small-town charm, unique character, and strong sense of community.
- Support and enhance local businesses to sustain a vibrant Downtown core and strong community identity.
- Improve traffic conditions in Downtown through reduced congestion, reduced speeds, and expanded facilities for bicycles and pedestrians.
- Emphasize sustainability and environmental stewardship in future planning decisions.
- Provide opportunities for extensive community input and participation in the General Plan Update process.

SIGNIFICANT AND UNAVOIDABLE IMPACTS

The proposed General Plan Update would result in the following significant and unavoidable impacts, which are described in Sections 3.1 through 4.0:

SIGNIFICANT AND UNAVOIDABLE PROJECT-LEVEL IMPACTS

- Impact 3.1-1: General Plan Implementation could result in substantial adverse effects on visual character, including scenic vistas or scenic resources (Significant and Unavoidable)
- Impact 3.9-5: General Plan implementation could place housing and structures within a 100-year flood hazard area as mapped on a Federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map, or impede or redirect flood flows (Significant and Unavoidable)
- Impact 3.11-1: Traffic Noise Sources (Significant and Unavoidable)
- Impact 3.13-2: General Plan buildout as well as regional growth would require improvements on Caltrans facilities (SR 12 and SR 116) (Significant and Unavoidable)
- Impact 3.14-3: Potential to exceed wastewater treatment capacity or the requirements of the RWQCB (Significant and Unavoidable)

SIGNIFICANT AND UNAVOIDABLE CUMULATIVE IMPACTS

- Impact 4.1: Cumulative Degradation of the Existing Visual Character of the Region (Considerable Contribution and Significant and Unavoidable)
- Impact 4.11: Cumulative Exposure of Noise-Sensitive Land Uses to Noise in Excess of Normally Acceptable Noise Levels or to Substantial Increases in Noise (Considerable Contribution and Significant and Unavoidable)
- Impact 4.13: Cumulative Impact on the Transportation Network (Considerable Contribution and Significant and Unavoidable)
- Impact 4.14: Cumulative Impact on Utilities (Considerable Contribution and Significant and Unavoidable)
- Impact 4.15: Irreversible Effects (Significant and Unavoidable)

ALTERNATIVES TO THE GENERAL PLAN UPDATE

Three alternatives to the General Plan Update were considered based on the analysis performed to identify the environmental effects of the proposed project. Because the General Plan Update was prepared with the intent to be a self-mitigating document, project alternatives focused on amending land uses to address significant impacts. The alternatives analyzed in this EIR include the following:

- Alternative 1: No Project Alternative. Under Alternative 1, the City would not adopt the General Plan Update. The 1994 General Plan would continue to be implemented and no changes to the General Plan, including the Land Use Map (see Figure 3.10-1), Economic Vitality Element, Community Health and Wellness Element, Circulation Diagram, goals, policies, or actions would occur.

- Alternative 2: Increased Open Space Alternative. As shown on Figure 5.0-1, Alternative 2 would revise the proposed General Plan Land Use Map to include expanded areas of Open Space and Very Low Density Residential Uses around the periphery of the City, primarily within the Sphere of Influence (SOI) and Urban Growth Boundary (UGB). Under Alternative 2, all of the proposed General Plan goals, policies, and action items would be adopted, but development levels and intensities under Cumulative General Plan Buildout Conditions would decrease.

- Alternative 3: Downtown Intensification Alternative. Under Alternative 3, development potential within the Downtown Core would be intensified, and residential uses would not be permitted in non-residential land use designations outside of the Downtown Core (precluding residential development in the Commercial/Office, Office/Light Industrial, and Office designations). The minimum FAR in the Downtown Core designation would increase from 1.0 under the Proposed General Plan to 1.5 under Alternative 3. Additionally, all new development within the Downtown Core designation would be required to provide on-site residential uses at a density of 44 dwelling units/acre above ground-floor commercial or office uses. This alternative further assumes that a downtown parking district would be created, and that the majority of on-site parking requirements for structures in the Downtown Core would be accommodated via an in-lieu fee payment towards the construction of a new parking structure.

5.3 ENVIRONMENTAL ANALYSIS

The alternatives analysis provides a summary of the relative impact level of significance associated with each alternative for each of the environmental issue areas analyzed in this EIR. Following the analysis of each alternative, Table 5.0-8 summarizes the comparative effects of each alternative.

ALTERNATIVE 1 - NO PROJECT

Under Alternative 1, the City would continue to implement the adopted 1994 General Plan and no changes would be made to address the requirements of state law. Since adoption of the 1994 General Plan, state legislation has been passed requiring the City to address new safety and circulation requirements in the General Plan and to address greenhouse gas emissions. These requirements of state law would not be addressed.

The General Plan goals, objectives, policies, and actions as well as the Land Use Map would not be updated to address the vision and concerns of the City's residents, property owners, decision-makers, and other stakeholders that actively participated in the Visioning and goal and policy development process.

Alternative 1 would not result in the updates to the Economic Vitality Element that focus on business retention and attraction, increasing high-quality employment opportunities for Sebastopol residents, and diversifying the local economy with a range of sustainable local industries.

The Community Health and Wellness Element would not be adopted under Alternative 1. Therefore, the goals, policies, and actions associated with improving public health would not be implemented.

The Circulation Element would not be updated to include policies and actions addressing complete streets, including safety, access, and mobility for all roadway users.

The Conservation and Open Space Elements would not be updated to include comprehensive programs and actions to address protection of natural resources and open space, conservation of habitat for special-status species, protection of air quality, reduction of greenhouse gas emissions, and protection of cultural and historic resources.

Alternative 1 would result in the continuation of existing conditions and development levels, as described in Chapter 2.0, Land Use, and shown in Table 2.0-5. New growth would be allowed as envisioned under the 1994 General Plan, with land uses required to be consistent with the 1994 General Plan Land Use Map, as shown on Figure 5.0-1. As shown in Figure 5.0-1, Alternative 1 would not combine the General Commercial and Office Land Use designations into a single Commercial Office designation.

Alternative 1 would also provide for a decrease in allowable residential density within the residential land use designations and the Commercial/Office and Light Industrial land use designations, when compared to the proposed project, as shown in Table 5.0-1 below.

TABLE 5.0-1: ALTERNATIVE 1 V. PROPOSED GENERAL PLAN ALLOWED RESIDENTIAL DENSITIES

LAND USE DESIGNATION	*PROPOSED PROJECT - GENERAL PLAN UPDATE ALLOWED DENSITY (UNITS PER ACRE)*	*ALTERNATIVE 1 - NO PROJECT ALLOWED DENSITY (UNITS PER ACRE)*
Low Density SFR	1.1 – 2.5	1.1 - 2.0
Medium Density SFR	2.6 – 12.0	2.1 – 6.0
High Density SFR	12.1 – 25	6.1 – 22
Commercial/Office	12.1 – 25	General Comm.: 6.1 – 22 Office: 2.1 – 15
Downtown Core	15.1 – 44	15 – 44
Light Industrial	12.1 – 25	6.1 – 22

Table 5.0-2 shows the maximum level of new development that may occur within the existing City limits under Alternative 1, while taking into account growth restrictions identified under the existing General Plan. As shown in the table, when accounting for the growth restrictions, Alternative 1 would result in 266 single family units, 68 multi-family units, 392,068 square feet (s.f.) of commercial uses, 123,867 s.f. of office uses, 59,959 s.f. of industrial uses, and 173 hotel rooms.

Table 5.0-3 shows the maximum level of new development that may occur within the existing City limits and the City's SOI and UGB under Alternative 1, if every single parcel in the City and the SOI/UGB developed at or near the higher end of densities and intensities allowed under the alternative. As shown in the table, when accounting for the growth restrictions, Alternative 1 would result in 378 single family units, 544 multi-family units, 392,068 s.f. of commercial uses, 123,867 s.f. of office uses, 691,335 s.f. of industrial uses, and 173 hotel rooms.

TABLE 5.0-2: FUTURE GROWTH UNDER THE PROPOSED PROJECT AND ALTERNATIVE 1 – CITY LIMITS BUILDOUT

	SINGLE FAMILY (UNITS)	*MULTI FAMILY (UNITS)*	*COMMERCIAL (S.F.)*	*OFFICE (S.F.)*	*INDUSTRIAL (S.F.)*	*HOTEL (ROOMS)*
Proposed Project	328	422	341,159	137,375	59,959	173
Alternative 1	266	354	392,068	123,867	59,959	173
Difference	***(62)***	***(68)***	***50,909***	***(13,508)***	***0***	***0***

SOURCE: DE NOVO PLANNING GROUP, 2016

TABLE 5.0-3: FUTURE GROWTH UNDER THE PROPOSED PROJECT AND ALTERNATIVE 1 – CUMULATIVE BUILDOUT

	SINGLE FAMILY (UNITS)	*MULTI FAMILY (UNITS)*	*COMMERCIAL (S.F.)*	*OFFICE (S.F.)*	*INDUSTRIAL (S.F.)*	*HOTEL (ROOMS)*
Proposed Project	514	671	341,159	137,375	684,889	173
Alternative 1	378	544	392,068	123,867	691,335	173
Difference	***(136)***	***(127)***	***50,909***	***(13,508)***	***6,446***	***0***

SOURCE: DE NOVO PLANNING GROUP, 2016

As shown in Table 5.0-2, under Alternative 1, there would be a reduction in residential growth (-130 units), a decrease in office uses (-13,508 s.f.), and an increase in commercial uses (50,909 s.f.) within the City limits, when compared to the proposed General Plan.

Under cumulative conditions, development in the SOI under Alternative 1 would result in a decrease in residential units (-263 units), an increase in commercial uses (+50,909 s.f.), a decrease in office uses (-13,508 s.f.), and an increase in industrial uses (+6,446 s.f.).

Under Alternative 1, the 1994 General Plan policy framework would still be in effect, which would constitute a business-as-usual approach to land use regulation in the City. The policy framework proposed by the General Plan Update that encourages a mix and balance of uses to provide an improved ratio of local jobs to population, would ensure that development pays its fair-share of necessary roadway, public service, and other infrastructure improvements, and provides for protection of natural resources would not occur. This alternative would not include safety policies, particularly those related to flooding, required by State law. This alternative would not include various policies provided to ensure protection of environmental resources, both at the project level and under cumulative conditions, consistent with the objectives of CEQA.

Further, this alternative would not prevent all potential impacts associated with increased development, because development would continue to occur. The land disturbance associated

with this alternative is expected to be less than the proposed project under project-level conditions and slightly less than the proposed project under cumulative conditions. The reduction in land disturbance would result in a reduction in associated impacts to aesthetics, biological resources, cultural resources, geology and soils, hazards and hazardous materials, and hydrology and water quality compared to the proposed project.

At the project level, development within the City limits would result in a slight increase in the amount of trip generation (approximately 14 more trips), resulting in comparable traffic and associated air quality and noise impact increases. Under cumulative conditions, this alternative would result in a slight increase of approximately 91 trips generated within the SOI compared with the Project and would result in a slight increase in associated traffic-related impacts, particularly along SR 12 and SR 116. There would be less demand for public services and utilities, resulting in a reduction in environmental impacts associated with facilities improvements to provide public services and utilities.

This alternative fails to meet two of the basic project objectives, which are: 1) to improve traffic conditions in Downtown through reduced congestion, reduced speeds, and expanded facilities for bicycles and pedestrians, and 2) to provide opportunities for extensive community input and participation in the General Plan Update process. Therefore, Alternative 1 (No Project) was rejected from further consideration as a CEQA alternative. However, the environmental effects associated with Alternative 1 are summarized in Table 5.0-8 to provide a general comparison between the adopted 1994 General Plan (Alternative 1), the proposed project, and Alternatives 2 and 3.

ALTERNATIVE 2 – INCREASED OPEN SPACE ALTERNATIVE

Under Alternative 2, the City would adopt and implement the Proposed General Plan, but the Land Use Map would be revised to include expanded areas of Open Space and Very Low Density Residential Uses around the periphery of the City, primarily within the SOI and UGB, as shown on Figure 5.0-2.

Under Alternative 2, all of the proposed General Plan goals, policies, and action items would be adopted, but development levels and intensities under Cumulative General Plan Buildout Conditions would decrease.

Table 5.0-4 shows the maximum level of new development that may occur within the existing City limits under Alternative 2, while taking into account growth restrictions identified under the proposed General Plan. As shown in the table, when accounting for the growth restrictions, Alternative 2 would result in 328 single family units, 422 multi-family units, 341,159 s.f. of commercial uses, 137,375 s.f. of office uses, 59,959 s.f. of industrial uses, and 173 hotel rooms.

Table 5.0-5 shows the maximum level of new development that may occur within the existing City limits and the City's SOI and UGB under Alternative 2, if every single parcel in the City and the SOI/UGB developed at or near the higher end of densities and intensities allowed under the alternative. As shown in the table, when accounting for the growth restrictions, Alternative 2

would result in 330 single family units, 628 multi-family units, 341,159 s.f. of commercial uses, 137,375 s.f. of office uses, 560,429 s.f. of industrial uses, and 173 hotel rooms.

TABLE 5.0-4: FUTURE GROWTH UNDER THE PROPOSED PROJECT AND ALTERNATIVE 2 – CITY LIMITS BUILDOUT

	SINGLE FAMILY (UNITS)	MULTI FAMILY (UNITS)	COMMERCIAL (S.F.)	OFFICE (S.F.)	INDUSTRIAL (S.F.)	HOTEL (ROOMS)
Proposed Project	328	422	341,159	137,375	59,959	173
Alternative 2	328	422	341,159	137,375	59,959	173
Difference	***0***	***0***	***0***	***0***	***0***	***0***

SOURCE: DE NOVO PLANNING GROUP, 2016

TABLE 5.0-5: FUTURE GROWTH UNDER THE PROPOSED PROJECT AND ALTERNATIVE 2 – CUMULATIVE BUILDOUT

	SINGLE FAMILY (UNITS)	MULTI FAMILY (UNITS)	COMMERCIAL (S.F.)	OFFICE (S.F.)	INDUSTRIAL (S.F.)	HOTEL (ROOMS)
Proposed Project	514	671	341,159	137,375	684,889	173
Alternative 2	330	628	341,159	137,375	560,429	173
Difference	***(184)***	***(43)***	***0***	***0***	***(124,460)***	***0***

SOURCE: DE NOVO PLANNING GROUP, 2016

As shown in Table 5.0-4, under Alternative 2, there would be an equal amount of residential growth, an equal amount of office uses, and an equal amount of commercial uses within the City limits.

Under cumulative conditions, development in the SOI under Alternative 2 would result in a decrease in residential units (-227 units), an equal amount of commercial uses, an equal amount of office uses, and a decrease in industrial uses (-124,460 s.f.).

Potentially significant impacts that would be reduced to less than significant as described in Sections 3.1 through 4.0 would also be reduced to less than significant with implementation of the proposed General Plan policies and actions described in Sections 3.1 through 4.0. Alternative 2 would not result in an increase in the significance of any impacts or new environmental impacts in comparison to the proposed project. The potential for Alternative 2 to reduce or avoid significant and unavoidable impacts that would occur under the proposed project is discussed below.

Adverse Effects on Visual Character

The proposed project would result in significant and unavoidable impacts associated with adverse effects on visual character, including scenic resources, as described under Impact 3.1-1 in Section 3.1. Under Alternative 2, development patterns within the City would be generally comparable to the proposed project, with expanded areas of Open Space and Very Low Density Residential Uses around the periphery of the City, primarily within the SOI and UGB. While development in the SOI under Alternative 2 would result in a decrease in residential units (-227 units) and a decrease in

industrial uses (-124,460 s.f.), the potential for commercial, office, and residential development along the periphery of the City could result in significant changes in visual character. Therefore, impacts associated with Alternative 2 would be reduced but not avoided in comparison to the proposed project.

Flood Hazard Impacts

The proposed project would result in significant and unavoidable impacts associated with placing housing and structures within a 100-year flood hazard area, as described under Impact 3.9-5 in Section 3.9. As noted in Impact 3.9-5, approximately 15.6 percent of the land within the City limits is located within an area subject to 100-year flooding. Under Alternative 2, development patterns within the City would be generally comparable to the proposed project, with expanded areas of Open Space and Very Low Density Residential Uses around the periphery of the City, primarily within the SOI and UGB. While development in the SOI under Alternative 2 would result in a decrease in housing and structures placed within a 100-year flood hazard area, the alternative would place housing and structures within areas prone to flooding. Therefore, impacts associated with Alternative 2 would be reduced but not avoided in comparison to the proposed project.

Traffic Noise Sources

The proposed project would result in significant and unavoidable impacts associated with the increases in traffic noise levels, as described under Impact 3.11-1 in Chapter 3.11, with increases of 1.5 to 1.9 dB along Gravenstein Highway South (SR 116) / Main Street, from McKinley Avenue to Bodega Avenue, SR 116 North / Petaluma Avenue, from Main Street to Sebastopol Avenue, SR 116 North / Petaluma Avenue, from Sebastopol to 116 South, and along SR 116 south of Lynch Road. This alternative would result in decreased growth in the City's SOI/UGB (227-unit decrease in residential development and 124,460 s.f. decrease in industrial development) and is anticipated to have reduced traffic noise levels, but would not avoid significant impacts associated with traffic noise. Therefore, Alternative 2 would result in less of an impact than the proposed project, though those impacts would still remain significant and unavoidable.

Traffic Operations on Caltrans Facilities (SR 12 and SR 116)

The proposed project would result in significant and unavoidable impacts associated with traffic operations on Caltrans facilities (State Route [SR] 12 and SR 116), as described under Impact 3.13-2 in Chapter 3.13. Alternative 2 would result in an equal number of daily trips (21,367) within the City, and a reduction of 331 trips within the SOI, a 1.2% reduction compared to the proposed project, under cumulative conditions. Under Alternative 2, the SR 12 and SR 116 facilities would remain under the jurisdiction of Caltrans and improvements to the facilities would be outside of the City's control as described under Impact 3.13-2. Therefore, while Alternative 2 would result in less traffic on SR 12 and SR 116 and associated intersections in comparison to the proposed project, implementation of measures to reduce impacts associated with facilities under the jurisdiction of Caltrans would remain outside of the control of the County, as described in Chapter 3.13. This impact would remain significant and unavoidable.

Potential to Exceed Wastewater Treatment Capacity

The proposed project would result in increased demand for wastewater treatment in excess of the permitted capacity available to the City as described under Impact 3.14-3 in Chapter 3.14. Under Alternative 2 and the proposed project, development within the City would require treatment of approximately 0.44 mgd of wastewater and would not remain within the treatment capacity available. Under cumulative conditions, development within the City and SOI would require treatment of approximately 67,999 fewer gallons of wastewater per day compared to the proposed project and would also not remain within the City's permitted treatment capacity. Therefore, although the alternative would reduce demand for wastewater treatment as compared to the proposed project, Alternative 2 would not avoid the significant and unavoidable impact associated with wastewater treatment that would occur with the proposed project.

Cumulative: Visual Character

The proposed project would have a considerable contribution to significant cumulative impacts associated with visual character as described under Impact 4.1. Under cumulative conditions, Alternative 2 would result in a reduced growth and development pattern in the SOI/UGB. Alternative 2 would provide for increased areas of recreational and open space uses and would result in aesthetic improvements in comparison to the proposed project. Alternative 2 would also result in substantial visual changes to the City and surrounding area and would have a considerable contribution to significant and unavoidable impacts associated with visual character. However alternative 2 would provide additional visual relief and lessen this impact when compared to the proposed General Plan.

Cumulative Noise Impacts

The proposed project would have a considerable contribution to noise impacts that would be in significant and unavoidable under cumulative conditions, as described under Impact 3.11-5 in Chapter 3.11, with increases of 1.5 to 1.9 dB along SR 116 / Main Street, from McKinley Avenue to Bodega Avenue, SR 116 North / Petaluma Avenue, from Main Street to Sebastopol Avenue, SR 116 North / Petaluma Avenue, from Sebastopol to 116 South, and along SR 116 south of Lynch Road. This alternative would result in decreased growth in the City and SOI and would result in a reduction in noise levels. However, Alternative 2 is anticipated to considerably contribute to noise increases under cumulative conditions and, thus, would not fully avoid the impact. Alternative 2 would have a reduced contribution to cumulative traffic noise and would result in a reduction in impacts compared to the proposed project, though those impacts would still remain significant and unavoidable.

Cumulative: Transportation

The proposed project would have a considerable contribution to significant cumulative impacts on the transportation network, associated with increased traffic levels and the need for additional circulation facilities, as described under Impact 4.13. Alternative 2 would result in an equal number of daily trips (21,367) within the City, and a reduction of 331 trips within the SOI, a 1.2% reduction compared to the proposed project, under cumulative conditions. Under Alternative 2,

the SR 12 and SR 116 facilities would remain under the jurisdiction of Caltrans and improvements to the facilities would be outside of the City's control as described under Impact 3.13-2. Therefore, while Alternative 2 would result in less traffic on SR 12 and SR 116 and associated intersections in comparison to the proposed project, implementation of measures to reduce impacts associated with facilities under the jurisdiction of Caltrans would remain outside of the control of the County, as described in Chapter 3.13. This impact would remain significant and unavoidable. Therefore, although Alternative 2 would result in a reduction in impacts compared to the proposed project, the contribution to cumulative traffic would remain cumulatively considerable.

Cumulative: Utilities

The proposed project would result in increased demand for wastewater treatment in excess of the permitted capacity available to the City as described under Impact 4.14.

Under Alternative 2 and the proposed project, development within the City would require treatment of approximately 0.44 mgd of wastewater and would not remain within the treatment capacity available. Under cumulative conditions, development within the City and SOI under Alternative 2 would require treatment of approximately 67,999 fewer gallons of wastewater per day compared to the proposed project and would also not remain within the City's permitted treatment capacity. Therefore, although the alternative would reduce demand for wastewater treatment as compared to the proposed project, Alternative 2 would not avoid the significant and unavoidable impact associated with wastewater treatment that would occur with the proposed project.

Irreversible Effects

The proposed project would have a significant and unavoidable impact associated with irreversible environmental effects as described under Impact 4.15. During the planning horizon, development under Alternative 2 would be similar to the proposed project, as described above. Under cumulative conditions, Alternative 2 would result in less residential development and less industrial development (see Table 5.0-5). Alternative 2 would result in the permanent development of up to 958 new residential units and approximately 1.0 million square feet of industrial, commercial, and office uses. Alternative 2 would use non-renewable resources, including metals, stone, and other materials, related to construction and result in on-going demand for fossil fuels and other resources associated with energy production at levels comparable to the proposed project. The associated irretrievable commitment of non-renewable resources and permanent conversion of agricultural, open space, and other undeveloped lands under Alternative 2 would be a significant impact. Therefore, while Alternative 2 would have a reduced impact in comparison to the proposed project, the irreversible effects would remain significant and unavoidable.

ALTERNATIVE 3 – DOWNTOWN INTENSIFICATION ALTERNATIVE

Under Alternative 3, development potential within the Downtown Core would be intensified, and residential uses would not be permitted in non-residential land use designations outside of the Downtown Core (precluding residential development in the Commercial/Office, Office/Light

Industrial, and Office designations). The minimum FAR in the Downtown Core designation would increase from 1.0 under the Proposed General Plan to 1.5 under Alternative 3. Additionally, all new development within the Downtown Core designation would be required to provide on-site residential uses at a density of 44 dwelling units/acre above ground-floor commercial or office uses. This alternative further assumes that a downtown parking district would be created, and that the majority of on-site parking requirements for structures in the Downtown Core would be accommodated via an in-lieu fee payment towards the construction of a new parking structure.

Under Alternative 3, the FAR in the Commercial/Office Land Use Designation would decrease from 0.7 (under the proposed project) to 0.5. Additionally, the FAR in the Office/Light Industrial and the Light Industrial Land Use Designations would decrease from 0.5 (under the proposed project) to 0.4. Under Alternative 3 development intensities within the Downtown Core would increase, while development intensities throughout other areas of the City would decrease.

Table 5.0-6 shows the maximum level of new development that may occur within the existing City limits under Alternative 3, while taking into account growth restrictions identified under the proposed General Plan. As shown in the table, when accounting for the growth restrictions, Alternative 3 would result in 328 single family units, 481 multi-family units, 424,037 s.f. of commercial uses, 157,654 s.f. of office uses, 50,041 s.f. of industrial uses, and 173 hotel rooms.

Table 5.0-7 shows the maximum level of new development that may occur within the existing City limits and the City's SOI and UGB under Alternative 3, if every single parcel in the City and the SOI/UGB developed at or near the higher end of densities and intensities allowed under the alternative. As shown in the table, when accounting for the growth restrictions, Alternative 3 would result in 514 single family units, 594 multi-family units, 424,037 s.f. of commercial uses, 157,654 s.f. of office uses, 674,970 s.f. of industrial uses, and 173 hotel rooms.

TABLE 5.0-6: FUTURE GROWTH UNDER THE PROPOSED PROJECT AND ALTERNATIVE 3 – CITY LIMITS BUILDOUT

	SINGLE FAMILY (UNITS)	*MULTI FAMILY (UNITS)*	*COMMERCIAL (S.F.)*	*OFFICE (S.F.)*	*INDUSTRIAL (S.F.)*	*HOTEL (ROOMS)*
Proposed Project	328	422	341,159	137,375	59,959	173
Alternative 3	328	481	424,037	157,654	50,041	173
Difference	***0***	***59***	***82,878***	***20,279***	***(9,918)***	***0***

SOURCE: DE NOVO PLANNING GROUP, 2016

TABLE 5.0-7: FUTURE GROWTH UNDER THE PROPOSED PROJECT AND ALTERNATIVE 3 – CUMULATIVE BUILDOUT

	SINGLE FAMILY (UNITS)	*MULTI FAMILY (UNITS)*	*COMMERCIAL (S.F.)*	*OFFICE (S.F.)*	*INDUSTRIAL (S.F.)*	*HOTEL (ROOMS)*
Proposed Project	514	671	341,159	137,375	684,889	173
Alternative 3	514	594	424,037	157,654	674,970	173
Difference	***0***	***(77)***	***82,878***	***20,279***	***(9,919)***	***0***

SOURCE: DE NOVO PLANNING GROUP, 2016

As shown in Table 5.0-6, under Alternative 3, there would be an increase in residential growth (+59 units), an increase in office uses (+20,279 s.f.), and an increase in commercial uses (+82,878 s.f.) within the City limits.

Under cumulative conditions, development under Alternative 3 would result in a decrease in residential units (-77 units), an increase in commercial uses (+82,878 s.f.), an increase in office uses (+20,279s.f.), and a decrease in industrial uses (-9,919 s.f.).

Adverse Effects on Visual Character

The proposed project would result in significant and unavoidable impacts associated with adverse effects on visual character, including scenic resources, as described under Impact 3.1-1 in Section 3.1. Under Alternative 3, potential development within the Downtown Core would be intensified, and residential uses would not be permitted in non-residential land use designations outside of the Downtown Core (precluding residential development in the Commercial/Office, Office/Light Industrial, and Office designations). Development under Alternative 3 would result in an increase in residential units (+59 units) an increase in commercial uses (+82,878 s.f.), an increase in office uses (+20,279s.f.), and a decrease in industrial uses (-9,919 s.f.) within the city limits. The potential for additional commercial, and office development within the City could result in significant changes in visual character, however, this increase in development intensity would be focused within the already-urbanized area of the Downtown Core, and would limit the amount of new development in the more rural and suburban areas of the Planning Area outside of the Downtown Core. Therefore, although the alternative would increase development in the downtown area and decrease development on the periphery of the City, impacts associated with Alternative 3 would be reduced but not avoided in comparison to the proposed project.

Traffic Noise Sources

The proposed project would result in significant and unavoidable impacts associated with the increases in traffic noise levels, as described under Impact 3.11-1 in Chapter 3.11, with increases of 1.5 to 1.9 dB along Gravenstein Highway South (SR 116) / Main Street, from McKinley Avenue to Bodega Avenue, SR 116 North / Petaluma Avenue, from Main Street to Sebastopol Avenue, SR 116 North / Petaluma Avenue, from Sebastopol to 116 South, and along SR 116 south of Lynch Road. Although this alternative would decrease the number of multi-family units by 77 units under cumulative buildout, Alternative 3 would result in a slight increase in growth within the City limits (increase in multifamily residential units by 59, commercial uses by 82,878 s.f. and an increase in office uses by 20,279s.f.) and is anticipated to have increased traffic noise levels associated with commercial and industrial development within the within the city limits, and increased noise levels particularly in the downtown area due to increased densities. This alternative would also place a larger number of sensitive receptors (multifamily housing units) in the Downtown Core, which is where the highest levels of traffic noise exposure would occur. Alternative 3 would not avoid significant impacts associated with traffic noise. Alternative 3 would result in slightly greater impacts than the proposed project within the downtown area, and slightly decreased impacts within the peripheral areas of the city.

Flood Hazard Impacts

The proposed project would result in significant and unavoidable impacts associated with placing housing and structures within a 100-year flood hazard area, as described under Impact 3.9-5 in Section 3.9. As noted in Impact 3.9-5, approximately 15.6 percent of the land within the City limits is located within an area subject to 100-year flooding. Under Alternative 3, development potential within the Downtown Core would be intensified, and residential uses would not be permitted in non-residential land use designations outside of the Downtown Core (precluding residential development in the Commercial/Office, Office/Light Industrial, and Office designations). While development in the SOI under Alternative 3 would result in a slight decrease in housing placed within a 100-year flood hazard area, the alternative would place housing and structures within areas prone to flooding. Additionally, the Downtown Core contains areas within the 100- and 500-year flood hazard areas. Therefore, impacts associated with Alternative 3 would be reduced but not avoided in comparison to the proposed project.

Traffic Operations on Caltrans Facilities (SR 12 and SR 116)

The proposed project would result in significant and unavoidable impacts associated with traffic operations on Caltrans facilities (State Route [SR] 12 and SR 116), as described under Impact 3.13-2 in Chapter 3.13. Alternative 3 would result in an increase of approximately 282 daily trips within the City, a 1.3% increase compared to the proposed project, and an increase of 198 trips within the City and SOI, a 0.7% increase compared to the proposed project, under cumulative conditions. By intensifying development in the downtown area, this alternative could potentially provide for enhanced pedestrian and bicycle travel options. This could decrease automobile trips in the downtown area. However, intensification of development in the downtown area would not likely result in a reduction in long-term, regional trips along Caltrans facilities, including SR 12 and SR

116. Additionally, under Alternative 3, the SR 12 and SR 116 facilities would remain under the jurisdiction of Caltrans and improvements to the facilities would be outside of the City's control as described under Impact 3.13-2. Therefore, implementation of measures to reduce impacts associated with facilities under the jurisdiction of Caltrans would remain outside of the control of the County, as described in Chapter 3.13. This impact would remain significant and unavoidable.

Potential to Exceed Wastewater Treatment Capacity

The proposed project would result in increased demand for wastewater treatment in excess of the permitted capacity available to the City as described under Impact 3.14-3 in Chapter 3.14. Under Alternative 3, development within the City would require treatment of an additional approximately 23,189 gallons of wastewater per day compared to the proposed project and would not remain within the treatment capacity available. Under cumulative conditions, development within the City and SOI would require treatment of an additional approximately 1,837 gallons of wastewater per day compared to the proposed project and would also not remain within the City's permitted treatment capacity. Therefore, Alternative 3 would not avoid the significant and unavoidable impact associated with wastewater treatment that would occur with the proposed project.

Cumulative: Visual Character

The proposed project would have a considerable contribution to significant cumulative impacts associated with visual character as described under Impact 4.1. Under cumulative conditions, Alternative 3 would result in less overall residential and industrial development, and more commercial and office development (see Table 5.0-7).

Alternative 3 would provide for increased areas of commercial, and office development within the city limits resulting in significant changes in visual character. Although this alternative would increase development intensities in the downtown area and decrease development on the periphery of the City, impacts associated with Alternative 3 would be reduced but not avoided in comparison to the proposed project. Alternative 3, as with the proposed General Plan would also result in substantial visual changes to the City and surrounding area and would have a considerable contribution to significant and unavoidable impacts associated with visual character.

Cumulative: Noise

The proposed project would have a considerable contribution to significant cumulative impacts associated with noise as described under Impact 4.11. This alternative would increase development in the downtown area and decrease development on the periphery of the City, resulting in a subsequent increase in noise levels in the downtown area and a decrease in noise levels along the periphery. However, Alternative 3 is anticipated to considerably contribute to noise increases under cumulative conditions and, thus, would not fully avoid the impact. Alternative 3 would have a reduced contribution to cumulative traffic noise and would result in a reduction in impacts compared to the proposed project, though those impacts would still remain significant and unavoidable.

Cumulative: Transportation

The proposed project would have a considerable contribution to significant cumulative impacts on the transportation network, associated with increased traffic levels and the need for additional circulation facilities, as described under Impact 4.13.

Alternative 3 would result in an increase of approximately 282 daily trips within the City, a 1.3% increase compared to the proposed project, and an increase of 198 trips within the City and SOI, a 0.7% increase compared to the proposed project, under cumulative conditions. By intensifying development in the downtown area, this alternative could potentially provide for enhanced pedestrian and bicycle travel options. This could decrease automobile trips in the downtown area. However, intensification of development in the downtown area would not likely result in a reduction in long-term, regional trips. Therefore, although Alternative 3 may result in a reduction in impacts due to possible trip reductions in the downtown area compared to the proposed project, the contribution to cumulative traffic would remain considerable.

Cumulative: Utilities

The proposed project would result in increased demand for wastewater treatment in excess of the permitted capacity available to the City as described under Impact 4.14. Under Alternative 3, development within the City and SOI would require additional treatment capacity compared to the proposed project and would not remain within the treatment capacity available. Therefore, Alternative 3 would not avoid the significant and unavoidable impact associated with wastewater treatment that would occur with the proposed project.

Irreversible Effects

The proposed project would have a significant and unavoidable impact associated with irreversible environmental effects as described under Impact 4.15. During the planning horizon, development under Alternative 3 would be similar to the proposed project, as described above. Under cumulative conditions, Alternative 3 would result in less residential and industrial development and more commercial and office development (see Table 5.0-7). Alternative 3 would result in the permanent development of up to 1,108 new residential units and approximately 1.26 million square feet of industrial, commercial, and office uses. Alternative 3 would use non-renewable resources, including metals, stone, and other materials, related to construction and result in on-going demand for fossil fuels and other resources associated with energy production at levels comparable to the proposed project. The associated irretrievable commitment of non-renewable resources and permanent conversion of agricultural, open space, and other undeveloped lands under Alternative 3 would be a significant impact. Therefore, while Alternative 3 would have a reduced impact in comparison to the proposed project, the irreversible effects would remain significant and unavoidable.

ENVIRONMENTALLY SUPERIOR ALTERNATIVE

CEQA requires that an environmentally superior alternative be identified among the alternatives that are analyzed in the EIR. If the No Project Alternative is the environmentally superior alternative, an EIR must also identify an environmentally superior alternative among the other alternatives (CEQA Guidelines Section 15126.6(e)(2)). The environmentally superior alternative is that alternative with the least adverse environmental impacts when compared to the proposed project.

As summarized in Table 5.0-8 below, Alternative 2 (Increased Open Space) is the environmentally superior alternative because it provides the greatest reduction of potential impacts in comparison to the other alternatives. Alternatives 3 (Downtown Intensification) and 1 (No Project) would have reduced environmental impacts compared to the proposed project.

TABLE 5.0-8: COMPARISON OF ALTERNATIVES TO THE PROPOSED PROJECT

ENVIRONMENTAL ISSUE	*PROPOSED PROJECT*	*ALTERNATIVE 1*	*ALTERNATIVE 2*	*ALTERNATIVE 3*
Aesthetics	3 – Same	2 – Better	1 – Best	2 – Better
Agriculture	3 – Same	2 – Better	1 – Best	2 – Better
Air Quality	3 – Same	4 – Worse	1 – Best	2 – Better
Biological Resources	3 – Same	2 – Better	1 – Best	2 – Better
Cultural Resources	3 – Same	2 – Better	1 – Best	2 – Better
Geology and Soils	3 – Same	2 – Better	1 – Best	2 – Better
Greenhouse Gases and Climate Change	3 – Same	2 – Better	1 – Best	2 – Better
Hazards and Hazardous Materials	3 – Same	2 – Better	1 – Best	2 – Better
Hydrology and Water Quality	3 – Same	4 – Worse	1 – Best	2 – Better
Land Use, Population, and Housing	3 – Same	4 – Worse	1 – Best	2 – Better
Noise	3 – Same	4 – Worse	1 – Best	2 – Better
Public Services / Recreation	3 – Same	4 – Worse	1 – Best	2 – Better
Circulation	3 – Same	4 – Worse	1 – Best	2 – Better
Utilities	3 – Same	2 – Better	1 – Best	2 – Better
Cumulative Impacts	3 – Same	2 – Better	1 – Best	2 – Better
Irreversible Effects	3 – Same	2 – Better	1 – Best	2 – Better
SUMMARY	**48 - Same**	**44 - Better**	**16 - Best**	**32 - Better**

SEBASTOPOL GENERAL PLAN UPDATE

Figure 5.0-1.

Alternative 1: Existing General Plan Land Use Map

Land Use Desingation

- VDR - Very Low Density Residential
- LDR - Low Density Residential
- MDR -Medium Density Residential
- HDR - High Density Residential
- CD- Downton Core
- CG - General Commercial
- LI - Light Industrial
- OLI - Office/Light Industrial
- O - Office
- CF - Community Facility
- OS - Open Space
- PA - Park

Planning Boundaries

- City of Sebastopol
- Sphere of Influence
- Urban Growth Boundary

0 500 1,000 2,000 Feet

1:14,000

De Novo Planning Group

A Land Use Planning, Design, and Environmental Firm

Data sources: City of Santa Rosa GIS, Sonoma County GIS, USGS National Hydrography Data Set. Map date: April 23, 2014. Retitled May 3, 2016.

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SEBASTOPOL GENERAL PLAN UPDATE

Figure 5.0-2.

Alternative 2: Increased Open Space Alternative

Land Use Designation

- VDR - Very Low Density Residential
- LDR - Low Density Residential
- MDR -Medium Density Residential
- HDR - High Density Residential
- CD- Downton Core
- CO - Commercial/Office
- LI - Light Industrial
- OLI - Office/Light Industrial
- CF - Community Facility
- OS - Open Space
- PA - Park
- Area of Land Use Designation Change

Planning Boundaries

- City of Sebastopol
- Sphere of Influence
- Urban Growth Boundary
- Proposed Sphere of Influence/Urban Growth Boundary Expansion

0 500 1,000 2,000
Feet

1:14,000

De Novo Planning Group
A Land Use Planning, Design, and Environmental Firm

Data sources: Sebas_Parcels06/s_151217; City of Santa Rosa GIS; Sonoma County GIS; USGS National Hydrography Data Set. Map date: May 3, 2016. Document Name: Sebas_Fig5-0-2_Alt2_160503

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