DRAFT ENVIRONMENTAL IMPACT REPORT

SONOMA COUNTY REGIONAL CLIMATE PROTECTION AUTHORITY

CLIMATE ACTION 2020: COMMUNITY CLIMATE ACTION PLAN

STATE CLEARINGHOUSE #2015092072

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<td>level of service</td>
</tr>
<tr>
<td>LUFT</td>
<td>Leaking underground fuel tank</td>
</tr>
<tr>
<td>L&lt;sub&gt;px&lt;/sub&gt;</td>
<td>percentile-exceeded sound level</td>
</tr>
<tr>
<td>MAA</td>
<td>Management Agency Agreement</td>
</tr>
<tr>
<td>MBTA</td>
<td>Migratory Bird Treaty Act</td>
</tr>
<tr>
<td>mgd</td>
<td>million gallons per day</td>
</tr>
<tr>
<td>MkWh/y</td>
<td>mega kilowatt-hour per year</td>
</tr>
<tr>
<td>mpg</td>
<td>miles per gallon</td>
</tr>
<tr>
<td>mph</td>
<td>mile per hour</td>
</tr>
<tr>
<td>MPO</td>
<td>Metropolitan Planning Organization</td>
</tr>
<tr>
<td>MS4</td>
<td>NPDES General Permit for Municipal Separate Storm Sewer Systems</td>
</tr>
<tr>
<td>MTA</td>
<td>Mendocino Transit Authority</td>
</tr>
<tr>
<td>MTC</td>
<td>Metropolitan Transportation Commission</td>
</tr>
<tr>
<td>MTCO&lt;sub&gt;2e&lt;/sub&gt;</td>
<td>metric tons of carbon dioxide equivalent</td>
</tr>
<tr>
<td>N&lt;sub&gt;2&lt;/sub&gt;O</td>
<td>nitrous oxide</td>
</tr>
<tr>
<td>NAHC</td>
<td>Native American Heritage Commission</td>
</tr>
<tr>
<td>NCAB</td>
<td>North Coast Air Basin</td>
</tr>
<tr>
<td>NCCP</td>
<td>natural community conservation plan</td>
</tr>
<tr>
<td>NCP</td>
<td>National Contingency Plan</td>
</tr>
<tr>
<td>NFIP</td>
<td>National Flood Insurance Act</td>
</tr>
<tr>
<td>NHTSA</td>
<td>National Highway Traffic Safety Administration</td>
</tr>
<tr>
<td>NMFS</td>
<td>National Marine Fisheries Service</td>
</tr>
<tr>
<td>NO&lt;sub&gt;2&lt;/sub&gt;</td>
<td>nitrogen dioxide</td>
</tr>
<tr>
<td>NOP</td>
<td>notice of preparation</td>
</tr>
<tr>
<td>NO&lt;sub&gt;x&lt;/sub&gt;</td>
<td>nitrogen oxides</td>
</tr>
<tr>
<td>Acronym</td>
<td>Definition</td>
</tr>
<tr>
<td>---------</td>
<td>------------</td>
</tr>
<tr>
<td>NPDES</td>
<td>National Pollutant Discharge Elimination System</td>
</tr>
<tr>
<td>NRHP</td>
<td>National Register of Historic Places</td>
</tr>
<tr>
<td>NSCAPCD</td>
<td>Northern Sonoma County Air Pollution Control District</td>
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<tr>
<td>NWP</td>
<td>Northwestern Pacific</td>
</tr>
<tr>
<td>ODS</td>
<td>ozone-depleting substance</td>
</tr>
<tr>
<td>OGV</td>
<td>Ocean-Going Vessel</td>
</tr>
<tr>
<td>OHWM</td>
<td>ordinary high water mark</td>
</tr>
<tr>
<td>OSHA</td>
<td>Occupational Safety and Health Administration</td>
</tr>
<tr>
<td>PACE</td>
<td>Property Assessed Clean Energy</td>
</tr>
<tr>
<td>PAYS</td>
<td>Pay As You Save</td>
</tr>
<tr>
<td>Pb</td>
<td>lead</td>
</tr>
<tr>
<td>PCB</td>
<td>polychlorinated biphenyls</td>
</tr>
<tr>
<td>PCI</td>
<td>Pavement Condition Index</td>
</tr>
<tr>
<td>PDA</td>
<td>Priority Development Area</td>
</tr>
<tr>
<td>PFC</td>
<td>perfluorocarbons</td>
</tr>
<tr>
<td>PG&amp;E</td>
<td>Pacific Gas and Electric Company</td>
</tr>
<tr>
<td>PM10</td>
<td>particulate matter 10 microns or less in diameter</td>
</tr>
<tr>
<td>PM2.5</td>
<td>particulate matter 2.5 microns or less in diameter</td>
</tr>
<tr>
<td>ppb</td>
<td>parts per billion</td>
</tr>
<tr>
<td>ppm</td>
<td>parts per million</td>
</tr>
<tr>
<td>ppt</td>
<td>parts per trillion</td>
</tr>
<tr>
<td>PPV</td>
<td>peak particle velocity</td>
</tr>
<tr>
<td>PRC</td>
<td>Public Resources Code</td>
</tr>
<tr>
<td>PRMD</td>
<td>Permit and Resource Management Department</td>
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<tr>
<td>Project</td>
<td>Climate Action 2020: Community Climate Action Plan Project</td>
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<tr>
<td>RCPA</td>
<td>Regional Climate Protection Authority</td>
</tr>
<tr>
<td>RCRA</td>
<td>Resource Conservation and Recovery Act</td>
</tr>
<tr>
<td>RHNA</td>
<td>Regional Housing Needs Assessment</td>
</tr>
<tr>
<td>RMS</td>
<td>root-mean-square</td>
</tr>
<tr>
<td>ROG</td>
<td>reactive organic gas</td>
</tr>
</tbody>
</table>
RPS | Renewables Portfolio Standard
RTP | regional transportation plan
RWD | Report of Waste Discharge
RWQCB | Regional Water Quality Control Board
SAFETEA-LU | Safe, Accountable, Flexible, Efficient, Transportation Equity Act – A Legacy for Users
SB | Senate Bill
SCP | Sonoma Clean Power
SCS | sustainable communities strategy
SCT | Sonoma County Transit
SCTA | Sonoma County Transportation Authority
SCWA | Sonoma County Water Agency
SCWMA | Sonoma County Waste Management Agency
sf | square foot
SF₆ | sulfur hexafluoride
SFBAAB | San Francisco Bay Area Air Basin
SIP | State Implementation Plan
SMART | Sonoma-Marin Area Rail Transit
SO₂ | sulfur dioxide
SO₄ | sulfate
SOI | sphere of influence
SPCCP | spill prevention, control, and countermeasure program
SR | State Route
State Water Board | State Water Resources Control Board
STIP | State Transportation Improvement Program
SWG | Staff Working Group
SWMP | Stormwater Management Plan
SWPPP | Storm Water Pollution Prevention Plan
TAC | toxic air contaminant
TMDL | total maximum daily load
<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOD</td>
<td>transit-oriented development</td>
</tr>
<tr>
<td>TSCA</td>
<td>Toxic Substances Control Act</td>
</tr>
<tr>
<td>U.S. 101</td>
<td>U.S. Highway 101</td>
</tr>
<tr>
<td>Unified Program</td>
<td>Unified Hazardous Waste and Hazardous Materials Management Regulatory Program</td>
</tr>
<tr>
<td>USACE</td>
<td>United States Army Corps of Engineers</td>
</tr>
<tr>
<td>USC</td>
<td>United States Code</td>
</tr>
<tr>
<td>USDA NRCS</td>
<td>U.S. Department of Agriculture Natural Resources Conservation Service</td>
</tr>
<tr>
<td>USFWS</td>
<td>U.S. Fish and Wildlife Service</td>
</tr>
<tr>
<td>USGS</td>
<td>U.S. Geological Survey</td>
</tr>
<tr>
<td>UST</td>
<td>underground storage tank</td>
</tr>
<tr>
<td>V/C</td>
<td>volume to capacity</td>
</tr>
<tr>
<td>VdB</td>
<td>vibration decibel unit</td>
</tr>
<tr>
<td>VMT</td>
<td>vehicle miles traveled</td>
</tr>
<tr>
<td>WDR</td>
<td>Waste Discharge Requirement</td>
</tr>
<tr>
<td>WSA</td>
<td>water supply assessment</td>
</tr>
<tr>
<td>ZNE</td>
<td>zero net energy</td>
</tr>
</tbody>
</table>
Executive Summary

This draft environmental impact report (draft EIR) has been prepared in accordance with the provisions of the California Environmental Quality Act (CEQA) to evaluate the potential impacts of the proposed Climate Action 2020: Community Climate Action Plan (CAP). As required by Section 15123 of the State CEQA Guidelines, this executive summary contains the following.

- Project Overview
- Project Objectives
- Project Impacts and Mitigation Measures
- Project Alternatives
- Potential Areas of Controversy and Issues to be Resolved

Project Overview

In 2009, the Sonoma County Regional Climate Protection Authority (RCPA) was formed to coordinate countywide climate change protection efforts among Sonoma County’s multiple agencies and nine incorporated jurisdictions to establish a clearinghouse for greenhouse gas (GHG) emission reduction efforts throughout the County. The RCPA is composed of 10 jurisdictions—Sonoma County, the Town of Windsor, and the following incorporated cities: Cloverdale, Cotati, Healdsburg, Petaluma, Rohnert Park, Santa Rosa, Sebastopol, and the City of Sonoma.

The RCPA and participating jurisdictions are proposing to adopt the CAP in order to implement measures to reduce GHGs and adapt to climate change within the eight incorporated jurisdictions and the unincorporated areas within Sonoma County. As part of the CAP, the RCPA is estimating GHG emissions for 1990 and 2010 and forecasting future emissions for 2020 and beyond. The community inventory includes GHG emissions occurring in association with the land uses within a jurisdictional boundary, and it consists of sources of emissions that a community can more readily influence or control. Emissions sectors analyzed in the CAP include: building energy, land use and transportation, off-road transportation and equipment, solid waste generation, wastewater treatment, water conveyance, and agriculture.

The draft CAP will be released before or during the public review period for this draft EIR. The draft CAP may be revised in response to public input throughout the public review process prior to consideration for adoption by the RCPA and by the participating jurisdictions.

1 The City of Santa Rosa (Santa Rosa) has completed a separate CAP (Santa Rosa Climate Action Plan, adopted June 5, 2012). This draft EIR will not analyze the impacts of the GHG-reduction measures developed by Santa Rosa under the Santa Rosa Climate Action Plan. Santa Rosa adopted an EIR for their 2012 CAP prior to CAP approval.
Project Objectives

The proposed CAP would include both regional measures (to be implemented by the RCPA and other regional agencies with local government support) and local measures (to be implemented by local governments with RCPA and regional agency support and on their own) to reduce GHG emissions. The proposed objectives of the CAP are to:

- Identify specific actions that the RCPA, other regional agencies, each participating jurisdiction, and individual residents and businesses can implement to reduce GHG emissions consistent with and even exceeding the goals established in Assembly Bill 32 (AB 32); specifically, the CAP target is to reduce countywide GHG emissions by 25% below 1990 levels by 2020.
- Promote consistency with the land use policy direction and growth anticipated in local general plans.
- Allow for continued economic growth to provide opportunities for businesses and residents.

Project Impacts and Mitigation Measures

Summary of Project Impacts

The project impacts are summarized in Table ES-1 (presented at the end of this summary). For potentially significant impacts, mitigation measures are identified, where feasible, to reduce the impact on environmental resources to a less-than-significant level. Refer to Chapter 3, Environmental Setting, Impacts, and Mitigation Measures, for a detailed discussion of project impacts and detailed descriptions of the mitigation measures.

Significant and Unavoidable Impacts

Impacts related to the following topic would remain significant with the implementation of mitigation.

- Cultural Resources: Implementation of CAP-promoted rooftop solar facilities could substantially change the character-defining features of historic buildings.

Project Alternatives

State CEQA Guidelines Section 15126.6 require the EIR to evaluate the No Project Alternative and a reasonable range of alternatives to the project that would feasibly attain most of the project’s basic objectives but that would avoid or substantially reduce any identified significant environmental impacts of the project. The project alternatives present options that could reduce a significant impact to a less-than-significant level.

The following alternatives to the project were analyzed in Chapter 5, Alternatives Analysis.

- Alternative 1: No Project. The County will not adopt and implement a countywide CAP. The statewide measures for reducing GHG emissions related to building energy and transportation and already-adopted plans and programs related to reducing GHG emissions would remain in
effect as part of the No Project Alternative. This alternative would result in 2020 GHG emissions approximately 20 percent below 1990 levels instead of 25 percent below 1990 levels.

- **Alternative 2: Zero Net Energy Buildings Alternative.** The County would adopt an updated green building ordinance, requiring zero net energy (ZNE) for all new commercial and residential buildings in the County beginning in 2017. With increased GHG emission reductions from ZNE, CAP measures incentivizing rooftop photovoltaic solar panels on existing residential and non-residential buildings would be modified to not include installation on historic buildings. While it is technically feasible to construct ZNE buildings using current technology, the cost of constructing such buildings will be substantially higher than current new buildings; therefore, it is uncertain whether it would be financially feasible. This alternative would result in the same GHG emissions as the proposed project.

- **Alternative 3: Carbon Offset Alternative.** The County would reduce GHG emissions through the purchase of valid carbon offsets. With increased reliance on carbon offsets, CAP measures incentivizing rooftop photovoltaic solar panels on existing residential and non-residential buildings would be modified to not include installation on historic buildings. This alternative would result in the same GHG emissions as the proposed project.

Table ES-2 (presented at the end of this summary, after Table ES-1) provides a comparison of the potential impacts among alternatives to the project by resource topic. When considering the full range of potential environmental impacts, the Zero Net Energy Buildings Alternative is considered the environmentally superior alternative because it would have lower impacts on historical resources compared with the project and greater benefits related to energy, compared with the other alternatives. Further, the co-benefits of GHG emissions reduction would be realized locally (compared to the Carbon Offset Alternative).

### Scoping

On September 24, 2015, the RCPA filed a notice of preparation (NOP) with the Governor’s Office of Planning and Research. One organization and one member of the public submitted written comments during the 30-day comment period (which ended October 28, 2015). All written comments received during the comment period session were considered in the preparation of this draft EIR. A copy of the NOP and all comments are provided in Appendix A. Following is a summary of the comments received.

- **Edward Kinney** provided comments related to the CAP and GHG reduction efforts in the County. The comments advised the CAP should address the following issues: traffic management plans in the County, job-housing imbalance in the County, emissions from the wine fermentation industry, and drought impacts on air quality.

- **Sonoma County Conservation Action** provided comments suggesting modifications to the CAP measures. These include the following: increasing the use of solar power, streamlining the permitting process for electric vehicle measures, addressing the County’s green waste/compost issue, and increasing residential density and infill.
Potential Areas of Controversy and Issues to Be Resolved

The scoping comments described above express interest in the CAP covering certain topics, but they do not specifically identify areas of controversy related to the environmental effects of the CAP.

Based on public and stakeholder outreach conducted during preparation of the CAP, the RCPA has identified the following areas of controversy:

- **CAP Targets**: Some members of the public desire that the CAP include a more aggressive GHG reduction target that would put the County on an even lower emissions trajectory than proposed in the CAP. Some members of the public desire that the County only adopt a target that matches, but does not exceed the AB 32 target for 2020. The CAP explains the rationale for the proposed reduction target for 2020 and the long-term targets for 2030 and 2050.

- **Lifecycle GHG Emissions**: Some members of the public desire that the CAP address so-called “lifecycle” GHG emissions related to activities within Sonoma County. These emissions include the upstream GHG emissions elsewhere associated with the consumption of goods, products, and services in Sonoma County as well as the downstream GHG emissions associated with goods, products, and services produced in Sonoma County but consumed elsewhere. The CAP explains that the current climate action planning practice for cities and counties, states, and nations is to focus on the production-side GHG emissions most directly within the control of a jurisdiction.

- **Including or Excluding Specific GHG Reduction Measures in the CAP**: Some members of the public desire certain GHG reduction measures to be included or excluded from the CAP. For example, members of the building industry expressed concern that measures requiring mandatory retrofits for existing development not be included in the CAP.

- **Resolving Ongoing Land Use Issues through the CAP**: Some members of the public desire that the CAP address ongoing land use issues through the CAP, such as resolving issues surrounding green waste/composting, jobs-housing balances, limitation on new wineries or vineyard expansion, or issues concerning community separators. As explained in the CAP and the EIR, one of the key objectives of the CAP is that it be consistent with and supportive of current land use plans and policies.

The following issues are yet to be resolved:

- **Selection of Local CAP Measures**: Each local jurisdiction must ultimately determine the measures that it will implement. Each local jurisdiction has selected the measures included for its community within the draft CAP.

- **Specific Implementing Details of Local CAP Measures**: Certain CAP measures include some flexibility in implementation that will require choices by individual jurisdictions as they implement the individual reduction measures they select.
## Table ES-1. Summary of Project Impacts and Mitigation Measures

<table>
<thead>
<tr>
<th>Impact</th>
<th>Significance before Mitigation</th>
<th>Mitigation Measures</th>
<th>Significance after Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Aesthetics</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Impact AES-1: Implementation of the CAP could result in substantial adverse effects on scenic views or vistas, substantially damage scenic resources within a state scenic highway, or substantially degrade the existing visual character of the County</td>
<td>Less than significant</td>
<td>None required</td>
<td>--</td>
</tr>
<tr>
<td>Impact AES-2: Implementation of the CAP could result in an increase of daytime glare and/or nighttime lighting</td>
<td>Significant</td>
<td>Mitigation Measure AES-1: Design guidelines for photovoltaic solar energy panels on rooftops regarding glare and safety</td>
<td>Less than significant</td>
</tr>
<tr>
<td>Impact C-AES-1: Implementation of the CAP, in combination with other foreseeable development in the surrounding area, could have a significant cumulative impact on aesthetics</td>
<td>Significant</td>
<td>Mitigation Measure AES-1</td>
<td>Less than considerable contribution</td>
</tr>
<tr>
<td><strong>Agricultural and Forest Resources</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Impact AG-1: Implementation of the CAP could convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) to non-agricultural use</td>
<td>Less than significant</td>
<td>None required</td>
<td>--</td>
</tr>
<tr>
<td>Impact AG-2: Implementation of the CAP could conflict with existing zoning for agricultural use or a Williamson Act contract</td>
<td>Less than significant</td>
<td>None required</td>
<td>--</td>
</tr>
<tr>
<td>Impact AG-3: Implementation of the CAP could conflict with zoning for or cause rezoning of forestland or timberland or result in the loss of forestland or conversion of forestland to non-forest use</td>
<td>Less than significant</td>
<td>None required</td>
<td>--</td>
</tr>
<tr>
<td>Impact AG-4: Implementation of the CAP could involve other changes in the existing environment that could result in the conversion of Farmland to non-agricultural use or forestland to non-forest use</td>
<td>Less than significant</td>
<td>None required</td>
<td>--</td>
</tr>
<tr>
<td>Impact C-AG-1: Implementation of the CAP, in combination with other foreseeable development in the surrounding area, could have a significant cumulative impact on agricultural and forest resources</td>
<td>Less than considerable contribution</td>
<td>None required</td>
<td>--</td>
</tr>
<tr>
<td><strong>Air Quality</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Impact AQ-1: Implementation of the CAP would not conflict with or obstruct implementation of the applicable air quality plan</td>
<td>Beneficial</td>
<td>None required</td>
<td>--</td>
</tr>
</tbody>
</table>
### Impact AQ-2a: Implementation of the CAP could violate any air quality standard or contribute to an existing long-standing air quality violation during construction activities

**Significance before Mitigation:** Significant  
**Mitigation Measures:** Mitigation Measure AQ-1: Implement basic construction mitigation measures to reduce construction emissions  
**Significance after Mitigation:** Less than significant

### Impact AQ-2b: Implementation of the CAP could violate any air quality standard or contribute to an existing long-standing air quality violation during operation

**Significance before Mitigation:** Less than significant  
**Mitigation Measures:** None required

### Impact AQ-3: Implementation of the CAP could result in a cumulatively considerable net increase of any criteria pollutant

**Significance before Mitigation:** Less than significant  
**Mitigation Measures:** None required

### Impact AQ-4: Implementation of the CAP could expose sensitive receptors to toxic air contaminants

**Significance before Mitigation:** Less than significant  
**Mitigation Measures:** None required

### Impact AQ-5: Implementation of the CAP could create objectionable odors affecting a substantial number of people

**Significance before Mitigation:** Less than significant  
**Mitigation Measures:** None required

### Impact C-AQ-1: Implementation of the CAP, in combination with other foreseeable development in the surrounding area, could have a significant cumulative impact on air quality

**Significance before Mitigation:** Significant  
**Mitigation Measures:** Mitigation Measure AQ-1

### Biological Resources

#### Impact BIO-1: Implementation of the CAP could impact sensitive and special-status species and their associated habitat or migratory corridors

**Significance:** Significant  
**Mitigation Measures:** Mitigation Measure BIO-1a: Project-level biological surveys and avoidance, minimizations, and compensation for impacts on CEQA-defined special-status species, sensitive natural communities, state- and federally protected waters/wetlands, and riparian habitat  
**Mitigation Measure BIO-1b:** Replacement of removed trees  
**Mitigation Measure BIO-1c:** Preconstruction surveys

#### Impact BIO-2: Implementation of the CAP could impact wetland and riparian habitat in some areas of the County

**Significance:** Significant  
**Mitigation Measures:** Mitigation Measure BIO-1a  
**Mitigation Measure BIO-1b**  
**Mitigation Measure BIO-1c**

#### Impact BIO-3: Implementation of the CAP could conflict with local policies or ordinances protecting biological resources or the provisions of an adopted habitat conservation plan/natural community conservation plan

**Mitigation Measures:** Mitigation Measure BIO-1b

**Significance:** Less than significant
### Executive Summary

<table>
<thead>
<tr>
<th>Impact</th>
<th>Significance before Mitigation</th>
<th>Mitigation Measures</th>
<th>Significance after Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impact C-BIO-1: Implementation of the CAP, in combination with other foreseeable development in the surrounding area, could have a significant cumulative impact on biological resources</td>
<td>Significant</td>
<td>Mitigation Measure BIO-1a</td>
<td>Less than considerable contribution</td>
</tr>
<tr>
<td>Impact CUL-1: Implementation of the CAP could result in the potential disturbance of historical resources</td>
<td>Significant</td>
<td>Mitigation Measure CUL-1a: Review of alternatives for solar roofs on historic buildings; Mitigation Measure CUL-1b: Studies documenting the presence/absence of historical resources; Mitigation Measure CUL-1c: Historical resources investigations</td>
<td>Significant and unavoidable for CAP solar roofs on historic buildings; less than significant for all other CAP facilities</td>
</tr>
<tr>
<td>Impact CUL-2: Implementation of the CAP could result in the potential disturbance of known or undiscovered archaeological resources and human remains</td>
<td>Significant</td>
<td>Mitigation Measure CUL-2a: Cultural resource investigations and protection and recovery of significant resources; Mitigation Measure CUL-2b: Work stoppage if cultural resources are encountered during ground-disturbing activities; Mitigation Measure CUL-2c: Work stoppage if human remains are encountered during ground-disturbing activities</td>
<td>Less than significant</td>
</tr>
<tr>
<td>Impact CUL-3: Implementation of the CAP could result in the potential disturbance of paleontological resources within the County</td>
<td>Significant</td>
<td>Mitigation Measure CUL-3: Avoidance of encountered paleontological resources until resources have been evaluated and recorded, and treatment has been determined</td>
<td>Less than significant</td>
</tr>
<tr>
<td>Impact C-CUL-1: Implementation of the CAP, in combination with other foreseeable development in the surrounding area, could have a significant cumulative impact on cultural resources</td>
<td>Significant</td>
<td>Mitigation Measure CUL-1a; Mitigation Measure CUL-1b; Mitigation Measure CUL-1c; Mitigation Measure CUL-2a; Mitigation Measure CUL-2b; Mitigation Measure CUL-2c; Mitigation Measure CUL-3</td>
<td>Considerable contribution</td>
</tr>
</tbody>
</table>

#### Cultural Resources

**Impact CUL-1: Implementation of the CAP could result in the potential disturbance of historical resources**

- Significant mitigation measures:
  - Mitigation Measure CUL-1a: Review of alternatives for solar roofs on historic buildings
  - Mitigation Measure CUL-1b: Studies documenting the presence/absence of historical resources
  - Mitigation Measure CUL-1c: Historical resources investigations

**Impact CUL-2: Implementation of the CAP could result in the potential disturbance of known or undiscovered archaeological resources and human remains**

- Significant mitigation measures:
  - Mitigation Measure CUL-2a: Cultural resource investigations and protection and recovery of significant resources
  - Mitigation Measure CUL-2b: Work stoppage if cultural resources are encountered during ground-disturbing activities
  - Mitigation Measure CUL-2c: Work stoppage if human remains are encountered during ground-disturbing activities

**Impact CUL-3: Implementation of the CAP could result in the potential disturbance of paleontological resources within the County**

- Significant mitigation measures:
  - Mitigation Measure CUL-3: Avoidance of encountered paleontological resources until resources have been evaluated and recorded, and treatment has been determined

#### Geology and Soils

**Impact GEO-1: Implementation of the CAP could expose people or structures to risks involving earthquake induced seismic hazards, such as surface fault ruptures, ground shaking, ground failures including liquefaction, and landslides**

- Less than significant mitigation: None required

**Impact GEO-2: Implementation of the CAP could result in substantial soil erosion or loss of topsoil**

- Less than significant mitigation: None required
## Impact GEO-3: Facilities promoted by the CAP could be located on an unstable geological unit/soil or expansive soil, potentially resulting in increased risks of geologic and soil hazards or damage to project structures

- **Significance before Mitigation**: Less than significant
- **Mitigation Measures**: None required
- **Significance after Mitigation**: --

## Impact GEO-4: Implementation of the CAP would not involve the use of septic tanks or alternate wastewater disposal systems that would result in soil impacts

- **Significance before Mitigation**: No impact
- **Mitigation Measures**: None required
- **Significance after Mitigation**: --

## Impact C-GEO-1: Implementation of the CAP, in combination with other foreseeable development in the surrounding area, could have a significant cumulative impact to geology and soils

- **Significance before Mitigation**: Less than considerable contribution
- **Mitigation Measures**: None required
- **Significance after Mitigation**: --

## Greenhouse Gas Emissions

### Impact GHG-1: Implementation of the CAP would be consistent with and would support applicable plan, policy, and regulation adopted for the purpose of reducing GHG emissions

- **Significance**: Beneficial
- **Mitigation Measures**: None required
- **Significance after Mitigation**: --

### Impact GHG-2: Implementation of the CAP would help Sonoma County to be more resilient to the future effects of climate change on Sonoma County

- **Significance**: Disclosure item only; not a CEQA impact
- **Mitigation Measures**: None required
- **Significance after Mitigation**: --

## Hazards and Hazardous Materials

### Impact HAZ-1a: Implementation of the CAP could cause a significant hazard to the public or environment through the routine transport, use, or disposal of hazardous materials and accident conditions involving the release of hazardous materials into the environment during construction

- **Significance**: Significant
- **Mitigation Measure**: Mitigation Measure HAZ-1: Spill prevention, control, and countermeasure program for construction activities
- **Significance after Mitigation**: Less than significant

### Impact HAZ-1b: Implementation of the CAP could cause a significant hazard to the public or environment through the routine transport, use, or disposal of hazardous materials and accident conditions involving the release of hazardous materials into the environment during operation

- **Significance before Mitigation**: Less than significant
- **Mitigation Measures**: None required
- **Significance after Mitigation**: --
<table>
<thead>
<tr>
<th>Impact</th>
<th>Significance before Mitigation</th>
<th>Mitigation Measures</th>
<th>Significance after Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impact HAZ-2: Implementation of the CAP could emit or involve handling hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school</td>
<td>Significant</td>
<td>Mitigation Measure HAZ-1</td>
<td>Less than significant</td>
</tr>
<tr>
<td>Impact HAZ-3: Implementation of the CAP could be located on a site that is included on a list of hazardous materials sites and, as a result, would create a significant hazard to the public or the environment</td>
<td>Less than significant</td>
<td>None required</td>
<td>--</td>
</tr>
<tr>
<td>Impact HAZ-4: Implementation of the CAP could be located within an airport land use plan area, within two miles of a public airport, or within the vicinity of a private airstrip and result in a safety hazard for people residing or working in the project area</td>
<td>Less than significant</td>
<td>None required</td>
<td>--</td>
</tr>
<tr>
<td>Impact HAZ-5: Implementation of the CAP could interfere with an adopted emergency response plan or emergency evacuation plan</td>
<td>Less than significant</td>
<td>None required</td>
<td>--</td>
</tr>
<tr>
<td>Impact HAZ-6: Implementation of the CAP could expose people or structures to a significant risk of loss, injury, or death involving wildland fires</td>
<td>Less than significant</td>
<td>None required</td>
<td>--</td>
</tr>
<tr>
<td>Impact C-HAZ-1: Implementation of the CAP, in combination with other foreseeable development in the surrounding area, could have a significant cumulative impact from hazards and hazardous materials</td>
<td>Significant</td>
<td>Mitigation Measure HAZ-1</td>
<td>Less than considerable contribution</td>
</tr>
</tbody>
</table>

**Hydrology and Water Quality**

<table>
<thead>
<tr>
<th>Impact</th>
<th>Significance before Mitigation</th>
<th>Mitigation Measures</th>
<th>Significance after Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impact HYD-1a: Implementation of the CAP could violate water quality standards and waste discharge requirements, or could otherwise substantially degrade water quality during construction</td>
<td>Less than significant</td>
<td>None required</td>
<td>--</td>
</tr>
<tr>
<td>Impact HYD-1b: Implementation of the CAP could violate water quality standards and waste discharge requirements, or could otherwise substantially degrade water quality during operation</td>
<td>Less than significant</td>
<td>None required</td>
<td>--</td>
</tr>
<tr>
<td>Impact HYD-2: Implementation of the CAP could substantially deplete groundwater supplies or interfere substantially with groundwater recharge in the County</td>
<td>Less than significant</td>
<td>None required</td>
<td>--</td>
</tr>
</tbody>
</table>
### Climate Action 2020: Community Climate Action Plan

#### Draft EIR

**Impact HYD-3:** Implementation of the CAP could alter existing drainage patterns in the County that would result in substantial erosion or siltation onsite or offsite, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding onsite or offsite

- **Significance before Mitigation:** Less than significant
- **Mitigation Measures:** None required
- **Significance after Mitigation:** --

#### Impact HYD-4:

- Implementation of the CAP could create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff

- **Significance before Mitigation:** Less than significant
- **Mitigation Measures:** None required
- **Significance after Mitigation:** --

#### Impact HYD-5:

- Implementation of the CAP could place housing within flood hazard areas or could place structures within flood hazard areas that would impede or redirect flood flows

- **Significance before Mitigation:** Less than significant
- **Mitigation Measures:** None required
- **Significance after Mitigation:** --

#### Impact HYD-6:

- Implementation of the CAP could expose people or structures to significant risk involving flooding a result of levee or dam failures

- **Significance before Mitigation:** Less than significant
- **Mitigation Measures:** None required
- **Significance after Mitigation:** --

#### Impact HYD-7:

- Implementation of the CAP could contribute to inundation by seiche, tsunami, or mudflow

- **Significance before Mitigation:** Less than significant
- **Mitigation Measures:** None required
- **Significance after Mitigation:** --

#### Impact C-HYD-1:

- Implementation of the CAP, in combination with other foreseeable development in the surrounding area, could have a significant cumulative impact to hydrology and water quality

- **Significance before Mitigation:** Less than considerable contribution
- **Mitigation Measures:** None required
- **Significance after Mitigation:** --

#### Land Use and Recreation

##### Impact LU-1:

- Implementation of the CAP could physically divide an established community

- **Significance before Mitigation:** Less than significant
- **Mitigation Measures:** None required
- **Significance after Mitigation:** --

##### Impact LU-2:

- Implementation of the CAP could conflict with applicable land use plans, policies, or regulations

- **Significance before Mitigation:** Less than significant
- **Mitigation Measures:** None required
- **Significance after Mitigation:** --

##### Impact LU-3:

- Implementation of the CAP would not conflict with any applicable habitat conservation plan or natural community conservation plan

- **Significance before Mitigation:** No impact
- **Mitigation Measures:** None required
- **Significance after Mitigation:** --
<table>
<thead>
<tr>
<th>Impact</th>
<th>Significance before Mitigation</th>
<th>Mitigation Measures</th>
<th>Significance after Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impact LU-4: Implementation of the CAP could temporarily disrupt recreational facilities during construction but would not increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facilities would occur or be accelerated</td>
<td>Less than significant</td>
<td>None required</td>
<td>--</td>
</tr>
<tr>
<td>Impact LU-5: Implementation of the CAP would include recreational facilities or require the construction or expansion of recreational facilities that could have an adverse physical effect on the environment</td>
<td>Significant</td>
<td>Mitigation to be identified during project-level review, as appropriate</td>
<td>Less than significant</td>
</tr>
<tr>
<td>Impact C-LU-1: Implementation of the CAP, in combination with other foreseeable development in the surrounding area, could have a significant cumulative impact on land use and recreation</td>
<td>Less than considerable contribution</td>
<td>None required</td>
<td>--</td>
</tr>
</tbody>
</table>

**Noise**

<table>
<thead>
<tr>
<th>Impact</th>
<th>Significance before Mitigation</th>
<th>Mitigation Measures</th>
<th>Significance after Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impact NOI-1a: Implementation of the CAP could generate noise levels in excess of local standards or result in a substantial temporary increase in ambient noise levels during construction</td>
<td>Less than significant</td>
<td>None required</td>
<td>--</td>
</tr>
<tr>
<td>Impact NOI-1b: Implementation of the CAP could generate noise levels in excess of local standards or result in a substantial permanent increase in ambient noise levels during operation</td>
<td>Less than significant</td>
<td>None required</td>
<td>--</td>
</tr>
<tr>
<td>Impact NOI-2: Implementation of the CAP could expose people to or generate excessive groundborne vibration or groundborne noise levels</td>
<td>Less than significant</td>
<td>None required</td>
<td>--</td>
</tr>
<tr>
<td>Impact NOI-3: New development promoted by the CAP could be located within airport land use plan areas, within 2 miles of a public airport, or within the vicinity of a private airstrip and expose people residing or working in the project area to excessive noise levels</td>
<td>Less than significant</td>
<td>None required</td>
<td>--</td>
</tr>
<tr>
<td>Impact C-NOI-1: Implementation of the CAP, in combination with other foreseeable development in the surrounding area, could have a significant cumulative impact from noise</td>
<td>Less than considerable contribution</td>
<td>None required</td>
<td>--</td>
</tr>
</tbody>
</table>
### Public Services, Utilities, and Energy

<table>
<thead>
<tr>
<th>Impact</th>
<th>Significance before Mitigation</th>
<th>Mitigation Measures</th>
<th>Significance after Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impact PSU-1: Implementation of the CAP could reduce service ratios or response times for fire protection or police protection services or require new or physically altered governmental facilities to maintain acceptable service ratios and response times</td>
<td>Less than significant</td>
<td>None required</td>
<td>--</td>
</tr>
<tr>
<td>Impact PSU-2: Implementation of the CAP could increase student enrollment at schools or increase level of service required at other public facilities resulting in an adverse physical impact to these facilities</td>
<td>Less than significant</td>
<td>None required</td>
<td>--</td>
</tr>
<tr>
<td>Impact PSU-3: Implementation of the CAP could decrease the demand for water supply and thus would decrease the demand for additional water supplies but would increase demand for water facilities infrastructure related to water efficiency, renewable energy, recycled water and greywater use</td>
<td>Less than significant</td>
<td>None required</td>
<td>--</td>
</tr>
<tr>
<td>Impact PSU-4: Implementation of the CAP could decrease wastewater generation and thus would not exceed wastewater treatment requirements, but would require the expansion or modification of existing wastewater facilities</td>
<td>Less than significant</td>
<td>None required</td>
<td>--</td>
</tr>
<tr>
<td>Impact PSU-5: Implementation of the CAP could require the construction of new storm water drainage facilities or expansion of existing facilities</td>
<td>Less than significant</td>
<td>None required</td>
<td>--</td>
</tr>
<tr>
<td>Impact PSU-6: Implementation of the CAP would reduce solid waste generation and would not conflict with federal, state, and local statutes and regulations related to solid waste diversion</td>
<td>Beneficial</td>
<td>None required</td>
<td>--</td>
</tr>
<tr>
<td>Impact PSU-7: Implementation of the CAP would not result in land use locations and patterns causing wasteful, inefficient, and unnecessary consumption of energy</td>
<td>Beneficial</td>
<td>None required</td>
<td>--</td>
</tr>
<tr>
<td>Impact PSU-8: Implementation of the CAP would not result in the construction of new or retrofitted buildings that would have excessive energy requirements for daily operation</td>
<td>Beneficial</td>
<td>None required</td>
<td>--</td>
</tr>
<tr>
<td>Impact</td>
<td>Significance before Mitigation</td>
<td>Mitigation Measures</td>
<td>Significance after Mitigation</td>
</tr>
<tr>
<td>--------</td>
<td>-----------------------------</td>
<td>---------------------</td>
<td>-----------------------------</td>
</tr>
<tr>
<td>Impact PSU-9: Implementation of the CAP would not result in increased energy demand and the need for additional energy resources overall</td>
<td>Beneficial</td>
<td>None required</td>
<td>--</td>
</tr>
<tr>
<td>Impact C-PSU-1: Implementation of the CAP, in combination with other foreseeable development in the surrounding area, could have a significant cumulative impact on public services, utilities, and energy</td>
<td>Less than considerable contribution, usually beneficial</td>
<td>None required</td>
<td>--</td>
</tr>
</tbody>
</table>

### Transportation and Traffic

<table>
<thead>
<tr>
<th>Impact</th>
<th>Significance before Mitigation</th>
<th>Mitigation Measures</th>
<th>Significance after Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impact TR-1a: Implementation of the CAP could conflict with applicable plans, ordinances, or policies related to the transportation circulation system during construction</td>
<td>Significant</td>
<td>Mitigation Measure TR-1: Traffic control plan implementation during construction activities</td>
<td>Less than significant</td>
</tr>
<tr>
<td>Impact TR-1b: Implementation of the CAP could conflict with applicable plans, ordinances, or policies related to the transportation circulation system during operation</td>
<td>Less than significant</td>
<td>None required</td>
<td>--</td>
</tr>
<tr>
<td>Impact TR-2: Implementation of the CAP could conflict with an applicable congestion management program established by the Sonoma County Transportation Authority for designated roads or highways</td>
<td>Less than significant</td>
<td>None required</td>
<td>--</td>
</tr>
<tr>
<td>Impact TR-3: Implementation of the CAP could change air traffic patterns resulting in substantial safety risks</td>
<td>Less than significant</td>
<td>None required</td>
<td>--</td>
</tr>
<tr>
<td>Impact TR-4a: Implementation of the CAP could substantially increase hazards due to design features or incompatible uses during construction</td>
<td>Significant</td>
<td>Mitigation Measure TR-1</td>
<td>Less than significant</td>
</tr>
<tr>
<td>Impact TR-4b: Implementation of the CAP could substantially increase hazards due to design features or incompatible uses during operation</td>
<td>Less than significant</td>
<td>None required</td>
<td>--</td>
</tr>
<tr>
<td>Impact TR-5a: Implementation of the CAP could result in inadequate emergency access during construction</td>
<td>Significant</td>
<td>Mitigation Measure TR-1</td>
<td>Less than significant</td>
</tr>
<tr>
<td>Impact TR-5b: Implementation of the CAP could result in inadequate emergency access during operation</td>
<td>Less than significant</td>
<td>None required</td>
<td>--</td>
</tr>
</tbody>
</table>
Impact TR-6: Implementation of the CAP could conflict with adopted policies, plans, or programs related to public transit, bicycle, or pedestrian facilities or could otherwise decrease the performance or safety of such facilities

Significance before Mitigation: Beneficial
Mitigation Measures: None required
Significance after Mitigation: --

Impact C-TR-1: Implementation of the CAP, in combination with other foreseeable development in the surrounding area, could have a significant cumulative impact to transportation and traffic

Significance before Mitigation: Significant
Mitigation Measure TR-1: Less than considerable contribution

Table ES-2. Comparison of Project Alternatives to the Project

<table>
<thead>
<tr>
<th>Impact</th>
<th>Alternative 1: No Project</th>
<th>Alternative 2: Zero Net Energy Buildings</th>
<th>Alternative 3: Carbon Offset (Due to CAP measures/Due to offset projects) (1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aesthetics</td>
<td>Lower</td>
<td>Same</td>
<td>Same/Unknown</td>
</tr>
<tr>
<td>Agriculture and Forest Resources</td>
<td>Similar</td>
<td>Same</td>
<td>Same/Unknown</td>
</tr>
<tr>
<td>Air Quality</td>
<td>Greater</td>
<td>Same</td>
<td>Same/Unknown</td>
</tr>
<tr>
<td>Biological Resources</td>
<td>Greater</td>
<td>Similar</td>
<td>Same/Unknown</td>
</tr>
<tr>
<td>Cultural Resources</td>
<td>Lower</td>
<td>Lower</td>
<td>Lower/Unknown</td>
</tr>
<tr>
<td>Geology and Soils</td>
<td>Lower</td>
<td>Same</td>
<td>Same/Unknown</td>
</tr>
<tr>
<td>Greenhouse Gas Emissions</td>
<td>Greater</td>
<td>Same</td>
<td>Same/Unknown</td>
</tr>
<tr>
<td>Hazards and Hazardous Materials</td>
<td>Greater</td>
<td>Same</td>
<td>Same/Unknown</td>
</tr>
<tr>
<td>Hydrology and Water Quality</td>
<td>Greater</td>
<td>Same</td>
<td>Same/Unknown</td>
</tr>
<tr>
<td>Land Use and Recreation</td>
<td>Lower</td>
<td>Same</td>
<td>Same/Unknown</td>
</tr>
<tr>
<td>Noise</td>
<td>Greater</td>
<td>Same</td>
<td>Same/Unknown</td>
</tr>
<tr>
<td>Public Services, Utilities, and Energy</td>
<td>Less for public services;</td>
<td>Same for public services and utilities;</td>
<td>Same for Energy and Public services</td>
</tr>
<tr>
<td></td>
<td>Higher for public utilities and energy</td>
<td>Lower for energy</td>
<td>Same/Unknown for utilities</td>
</tr>
<tr>
<td>Transportation and Traffic</td>
<td>Greater</td>
<td>Same</td>
<td>Same/Unknown</td>
</tr>
</tbody>
</table>

(1) As discussed in text, the offset alternative would allow elimination of CAP measures with secondary environmental effects. The analysis uses the example of excluding solar installation on historic buildings. The impact comparisons above are presented separately for the CAP measures vs. offset projects. As offset measures are not known at this time, many of the impacts cannot be determined.
Chapter 1
Introduction

1.1 Project Overview and Background

In 2009, the Sonoma County Regional Climate Protection Authority (RCPA) was formed to coordinate countywide climate change protection efforts among Sonoma County's (County’s) multiple agencies and nine incorporated jurisdictions to establish a clearinghouse for greenhouse gas (GHG) emission reduction efforts throughout the County. The RCPA is composed of 10 jurisdictions, including Sonoma County, the Town of Windsor, and the following incorporated cities: Cloverdale, Cotati, Healdsburg, Petaluma, Rohnert Park, Santa Rosa, Sebastopol, and the City of Sonoma.

The RCPA and participating jurisdictions are proposing to adopt the Climate Action 2020: Community Climate Action Plan (CAP) in order to implement measures to reduce GHG and adapt to climate change within the eight incorporated jurisdictions¹ and the unincorporated areas within Sonoma County. The proposed CAP would include both regional measures (to be implemented by the RCPA and other regional agencies with local government support) and local measures (to be implemented by local governments with RCPA and regional agency support and on their own) to reduce GHG emissions. The proposed objectives of the CAP are to:

- Identify specific actions that the RCPA, other regional agencies, each participating jurisdiction, and individual residents and businesses can implement to reduce GHG emissions consistent with and even exceeding the goals established in Assembly Bill 32 (AB 32); specifically, the CAP target is to reduce countywide GHG emissions by 25% below 1990 levels by 2020.
- Promote consistency with the land use policy direction and growth anticipated in local general plans.
- Allow for continued economic growth to provide opportunities for businesses and residents.

The draft CAP is being prepared by the RCPA, in consultation with each of the participating jurisdictions and other regional agencies and programs. The other regional agencies and programs, which are currently implementing and will have a role in future implementation of certain regional measures, include: Sonoma Clean Power, Sonoma County Water Agency, Sonoma County Transportation Authority, the Sonoma County Energy Independence Program, and the Sonoma County Waste Management Agency.

The draft CAP will be released before or during the public review period for this draft environmental impact report (draft EIR). The draft CAP may be revised in response to public input throughout the public review process prior to consideration for adoption by the RCPA and by the participating jurisdictions.

¹ The City of Santa Rosa (Santa Rosa) has completed a separate CAP (Santa Rosa Climate Action Plan, adopted June 5, 2012). This draft EIR will not analyze the impacts of the GHG-reduction measures developed by Santa Rosa under the Santa Rosa Climate Action Plan. Santa Rosa is currently developing a supplemental EIR for their 2012 CAP, to be integrated in their General Plan Update.
1.2 Environmental Review Process

1.2.1 California Environmental Quality Act Requirements

The California Environmental Quality Act (CEQA) applies to all discretionary activities proposed to be implemented by California public agencies, including state, regional, county, and local agencies (California Public Resources Code [PRC] Section 21000 et seq.). CEQA requires lead agencies to quantify and evaluate the environmental impacts of their proposed project actions, avoid or reduce significant environmental impacts when feasible, and to consider the environmental implications of their actions prior to making a decision. CEQA also requires lead agencies to inform the public and other relevant agencies of proposed actions and consider public comments in the evaluation and decision-making process. The State CEQA Guidelines are the primary source of rules and interpretation of CEQA (PRC Sections 21000 et seq.; 14 CCR 15000 et seq.).

1.2.2 Purpose of the EIR

The purpose of this draft EIR is to provide the information necessary for the RCPA Board, other regional agencies, and the city councils of each participating jurisdiction to consider the potential approval and implementation of the CAP. The RCPA is acting as the CEQA lead agency, given its role to support climate action planning in the County. The participating jurisdictions are responsible agencies who will be considering whether to adopt specific GHG-reduction measures for their individual jurisdictions. Other regional agencies play a role in implementing certain GHG reduction measures.

This draft EIR has been prepared in compliance with CEQA to achieve the following goals:

- Identify potential direct, indirect, and cumulative environmental impacts associated with the implementation of the CAP.
- Describe feasible mitigation measures intended to avoid or reduce potentially significant impacts to a less-than-significant level.
- Disclose the environmental analysis, including the potential impacts of the implementation of the CAP and proposed mitigation measures, for public and agency review and comment.
- Discuss potential alternatives to the CAP that avoid or reduce identified significant impacts of implementation of the CAP.

Once the public review period for this draft EIR is complete, the RCPA will prepare a final EIR to include all the comments received on the draft EIR pertaining to environmental issues, responses to those comments, and any necessary revisions to the draft EIR. CEQA requires the RCPA’s decision-making body to review and consider the information in the EIR before making a decision on the CAP. Participating jurisdictions will also need to consider the information in the EIR before making decisions whether or not to approve specific GHG-reduction measures for their jurisdictions.

1.2.3 Program-Level Analysis and Tiering

The State CEQA Guidelines encourage lead agencies to prepare a programmatic—or program-level—EIR in circumstances that involve a series of projects that are related and can therefore be grouped under one “program.” A program-level EIR provides the framework for “tiering,” which
allows for the streamlining of future environmental analyses; more specific analysis for the individual projects would be tiered off the more general analysis in the program-level EIR. The concept of tiering is described in State CEQA Guidelines Section 15152:

a) “Tiering” refers to using the analysis of general matters contained in a broader EIR (such as one prepared for a general plan or policy statement) with later EIRs and negative declarations on narrower projects; incorporating by reference the general discussions from the broader EIR; and concentrating the later EIR or negative declaration solely on the issues specific to the later project.

b) Agencies are encouraged to tier the environmental analyses which they prepare for separate but related projects... This approach can eliminate reproductive discussions of the same issues and focus the later EIR or negative declaration on the actual issues ripe for decision at each level of environmental review.

Tiering reduces reproductive analysis of issues that may be common to multiple projects. In this case, use of a program-level EIR allows the lead and responsible agencies to characterize the proposed program as the “project” being analyzed and approved and to consider broad policy alternatives and program-wide mitigation measures early in the planning effort for the program.

This is a program-level EIR that analyzes a series of actions that are related geographically and that are likely to have similar environmental effects that can be mitigated in similar ways (CEQA Guidelines Section 15168(a)). The program-level analysis focuses on the environmental impacts of implementing GHG-reduction measures in the sectors of building energy, on-road transportation, off-road transportation and equipment, solid waste management, wastewater treatment, water conveyance, livestock and fertilizer, and agriculture.

This EIR is the first tier of environmental documentation. It would be augmented by second-tier environmental documents as appropriate when additional details for specific public or private projects necessary for CAP implementation are developed. Any required project-level environmental documents would incorporate by reference appropriate information from this EIR regarding secondary effects, cumulative impacts, broad alternatives, and other relevant factors. These environmental documents would focus solely on site-specific issues that have not been considered in this EIR. If activities were later found to have effects that were not examined in this EIR, additional CEQA review would be required. If the lead and responsible agencies finds that implementation of a later activity would have no new effects and that no new mitigation measures would be required, that activity would require no additional CEQA review.

This EIR also provides a second form of tiering for GHG analysis for discretionary development projects. As discussed in Chapter 1 of the CAP, the cities of Cloverdale, Cotati, Healdsburg, Petaluma, Rohnert Park, Sebastopol, Sonoma, the Town of Windsor, and Sonoma County intend to use the CAP to comply with project-level GHG impact analysis requirements under CEQA. Santa Rosa will continue to use its adopted CAP for this purpose. The State CEQA Guidelines (Section 15183.5) allow the GHG impacts of future projects to be evaluated using an adopted emissions reduction plan, like the CAP, provided that the plan meets specific requirements. The six requirements specified in the State CEQA Guidelines are listed below, with the CAP's compliance described in italics.

1. Quantify GHG emissions, both existing and projected over a specified time period, resulting from activities within a defined geographic area. The CAP quantifies GHG emissions from all primary sectors within County jurisdictions for 1990, 2010, 2015, 2020, 2040, 2030, and 2050.

2. Establish a level, based on substantial evidence, below which the contribution to GHG emissions from activities covered by the CAP would not be cumulatively considerable. The CAP establishes
a countywide GHG emissions target of 25% below 1990 levels by 2020, a target that goes well beyond the requirements of AB 32 and puts Sonoma County on a trajectory to achieve the even greater GHG reductions needed in the future. The CAP includes a GHG emissions budget for new development that will ensure that the countywide reduction target is met, even with projected population and economic growth. The GHG reduction measures in the CAP will reduce project-specific emissions and thereby ensure that the new-development share of total future emissions is not exceeded. Reducing and limiting emissions from new development is part of an overall strategy that substantially reduces emissions countywide and, therefore, contributions from new development that is consistent with the CAP would not be cumulatively considerable.

3. Identify and analyze the GHG emissions resulting from specific actions or categories of actions anticipated within the geographic area. The CAP analyzes community emissions, by sector, for the partner communities, including emissions from projected growth and development expected by 2020 and beyond.

4. Specify measures or a group of measures, including performance standards that substantial evidence demonstrates, if implemented on a project-by-project basis, would collectively achieve the specified emissions level. The CAP includes specific measures to achieve the overall reduction target.

5. Establish a mechanism to monitor the CAP’s progress toward achieving the GHG emissions level and to require amendment if the CAP is not achieving the specified level. The CAP includes periodic monitoring of plan progress.

6. Adopt the GHG emissions reduction plan in a public process following environmental review. This draft EIR has been prepared for the CAP, and the CAP itself will be adopted first by the RCPA, followed by adoption of community-specific portions by each local participating jurisdiction. The adoption process will include public outreach and public hearings.

Once the CAP is adopted, it may be used in the cumulative impacts analysis of later projects. Tiering the GHG analysis from the CAP potentially eliminates the need to prepare a quantitative assessment of GHG emissions on a project-by-project basis, which can help streamline the environmental review and permitting process for these projects. To accomplish this, future project-specific environmental documents must identify all applicable CAP measures and ensure they are binding and enforceable by incorporating measures into the project design and/or identifying CAP measures as project mitigation measures. Future projects that comply with the CAP will have a less-than-significant cumulative impact on GHG emissions and climate change (unless substantial evidence warrants a more detailed review of project-level GHG emissions).

### 1.3 Public Participation

Public participation is an important component of the environmental review process. CEQA encourages “wide public involvement, formal and informal… in order to receive and evaluate public reactions to environmental issues” (State CEQA Guidelines Section 15201).

The RCPA has provided, and will continue to provide, opportunities for the public to participate in the environmental review processes. These opportunities are summarized below.


1.3.1 Notice of Preparation and Scoping

Scoping refers to the process used to assist the lead agency in determining the focus and content of an EIR. Scoping solicits input on the potential topics to be addressed in an EIR, the range of project alternatives, and possible mitigation measures. Scoping is also helpful in establishing methods of assessment and in selecting the environmental effects to be considered in detail.

The scoping process for this draft EIR was formally initiated on September 28, 2015, when RCPA submitted the notice of preparation (NOP) to the California State Clearinghouse for distribution to state agencies and to the Sonoma County Clerk for public posting. Additionally, the NOP was sent to the cities and town which the CAP would encompass, including Cloverdale, Cotati, Healdsburg, Petaluma, Rohnert Park, Santa Rosa, Sebastopol, the City of Sonoma, and the Town of Windsor. The purpose of the NOP is to solicit participation from relevant agencies and from the public in determining the scope of an EIR. The NOP was distributed for a 30-day comment period that ended on October 27, 2015. Comments on the NOP were considered in the preparation of the draft EIR.

The RCPA held a public scoping meeting to introduce the proposed CAP to interested members of the public and to solicit public input. The public meeting was held on October 13, 2015 at 4:00 p.m. at the Permit and Resource Management Department, County of Sonoma, 2550 Ventura Avenue, Santa Rosa, CA.

Appendix A contains the NOP and the written comments received during the scoping process.

1.3.2 Draft EIR Public Review

CEQA requires the lead agency (the RCPA) to prepare an EIR that reflects the independent judgment of the agency regarding the impacts of a project, the level of significance of the impacts both before and after mitigation, and mitigation measures proposed to reduce the impacts. A draft EIR is circulated to responsible agencies, trustee agencies with resources affected by the project, and interested agencies and individuals. The purposes of public and agency review of a draft EIR include sharing expertise, disclosing agency analyses, checking accuracy, detecting omissions, discovering public concerns, and soliciting counterproposals.

Reviewers of this draft EIR should focus on the sufficiency of the document in identifying and analyzing the possible impacts on the environment and ways in which the significant effects of the project might be avoided or mitigated. Comments are most helpful when they suggest additional specific alternatives or mitigation measures that would provide better ways to avoid or mitigate significant environmental effects.

The draft EIR has been released for a 45-day public review period, beginning on March 21, 2016 and ending May 6, 2016. Comments on this draft EIR must be received by RCPA no later than 5:00 p.m. on May 6, 2016, and can be submitted by any of the following methods:

- **Mail:** Sonoma County Regional Climate Protection Authority
  Attn: Lauren Casey
  490 Mendocino Ave, Ste. 206
  Santa Rosa, CA 95407

- **Email:** lcasey@sctainfo.org
A public meeting will be held on Wednesday, April 20, 2016, at 5 p.m. at the County of Sonoma Permit and Resource Management Department (PRMD) Public Hearing Room at 2550 Ventura Ave, Santa Rosa, CA. Comments on the draft EIR will be received during the public meeting.

1.4 Scope of this EIR

The focus of this draft EIR is to evaluate the potential environmental consequences of the implementation of the CAP described above. Consistent with Appendix G and Appendix F of the State CEQA Guidelines, this draft EIR evaluates the following resource topics:

- Aesthetics
- Agriculture and forest resources
- Air quality
- Biological resources
- Cultural resources
- Geology and soils
- Greenhouse gas emissions
- Hazards and hazardous materials
- Hydrology and water quality
- Land use and planning
- Mineral resources
- Noise
- Population and housing
- Public services
- Recreation
- Transportation and traffic
- Utilities and service systems
- Energy

Resources areas identified above that would result in no impacts or less-than-significant impacts (mineral resources and population and housing) are discussed in Section 3.1, Effects Found Not to be Significant, of this draft EIR. The remaining topics are discussed in their separate sections in Chapter 3, Environmental Setting, Impacts, and Mitigation Measures.

The following topics are also analyzed in this draft EIR:

- Cumulative impacts
- Significant unavoidable impacts
- Significant irreversible changes in the environment
- Growth inducement
- Alternatives
1.5 Lead and Responsible Agencies Actions and CAP Approval

This EIR will be used by several responsible or trustee agencies that also have review authority over the proposed CAP. As stated in State CEQA Guidelines Section 15231:

A final EIR prepared by a lead agency or a negative declaration adopted by a lead agency shall be conclusively presumed to comply with CEQA for purposes of use by responsible agencies which were consulted pursuant to Sections 15072 or 15082 unless one of the following conditions occurs:

(a) The EIR or Negative Declaration is finally adjudged in a legal proceeding not to comply with the requirements of CEQA, or

(b) A subsequent EIR is made necessary by Section 15162 of these Guidelines.

The RCPA Board will use this draft EIR in the consideration of whether to adopt the proposed CAP (Climate Action 2020 and Beyond: Community Climate Action Plan). If the RCPA approves the CAP, it will recommend that the participating agencies adopt the local GHG reduction measures that apply to their individual jurisdictions. Only the local agencies have the authority to adopt local GHG reduction measures. The participating responsible agencies that will also use the draft EIR are identified below:

- City of Cloverdale
- City of Cotati
- City of Healdsburg
- City of Petaluma
- City of Rohnert Park
- City of Sebastopol
- City of Sonoma
- Town of Windsor
- County of Sonoma

In addition to the incorporated jurisdictions and the unincorporated County areas, there are other regional agencies that would be involved in implementation of regional CAP measures. These additional responsible agencies, which are listed in Chapter 5 of the CAP, include the following:

- Sonoma Clean Power
- Sonoma County Energy Independent Program
- Sonoma County Transportation Authority
- Sonoma County Transit
- Petaluma Transit
- Sonoma County Waste Management Authority
- Northern Sonoma County Air Pollution Control District
- Bay Area Air Quality Management District
• Sonoma County Water Agency
• Municipal water service providers
• Municipal wastewater service providers

Some of the individual implementing actions of the CAP may involve construction of facilities that may require approvals of other agencies, but such actions will require project-level CEQA evaluations for which those agencies would be involved as the lead or approving agency.

1.6 Organization of this Document

This draft EIR and supporting information are presented in the chapters and appendices listed below.

• Chapter 1, Introduction, provides an overview of the scope, content, and organization of this draft EIR and the environmental review process.

• Chapter 2, Project Description, provides a comprehensive description of the proposed CAP, including details on the location, objectives, and required approvals.

• Chapter 3, Environmental Setting, Impacts, and Mitigation Measures, describes the environmental setting, provides an analysis of the environmental impacts of the CAP, and identifies mitigation measures for any significant impacts.

• Chapter 4, Other CEQA-Required Discussions, provides a discussion of significant environmental impacts that cannot be avoided, significant irreversible environmental effects, growth-inducing impacts, and cumulative impacts (cumulative impacts are discussed in each resource section in Chapter 3 but summarized in Chapter 4).

• Chapter 5, Alternatives, provides an evaluation of project alternatives.

• Chapter 6, List of Preparers, identifies the individuals involved in the preparation of this document.

• Chapter 7, References, provides a list of the printed references and personal communications cited in this document.

• Appendices
  • Appendix A, NOP and Scoping Comments, provides the NOP and scoping comments that were received in response to the NOP.
  • Appendix B, CAP Measures, summarizes the state, regional, and local measures included in the CAP to reduce GHG emissions.
  • Appendix C, Local General Plan Goals, Objectives, and Policies, provides a list of the goals, objectives, and policies in the local general plans of the participating jurisdictions related to the resources areas analyzed in this draft EIR.
  • Appendix D, USFWS Species List, provides the official USFWS list of threatened and endangered species in the County.
Appendix E, *Local Lane Use and Noise Compatibility Standards and Noise Ordinances*, provides the land use and noise compatibility standards and noise ordinances for each jurisdiction.

The draft CAP is separately available on the RCPA website and is incorporated in its entirety as part of this draft EIR.
Chapter 2

Project Description

2.1 Project Location and Project Area

The boundary of the proposed Climate Action 2020: Community Climate Action Plan (CAP) Project (project) encompasses Sonoma County (County). Sonoma County is the largest and northern-most county of the nine counties that comprise the San Francisco Bay Area (Bay Area). The County is located along the Pacific coastline, approximately 40 miles north of the City of San Francisco and the Golden Gate Bridge. Sonoma County is bordered by Mendocino County to the north; the Pacific Ocean to the west; Marin County and San Pablo Bay to the south; and Solano, Napa, and Lake Counties to the east.

For the purposes of this draft environmental impact report (draft EIR) and the analyses herein, the boundary of the project area is the County boundary. The project area includes eight incorporated jurisdictions (Cloverdale, Cotati, Healdsburg, Petaluma, Rohnert Park, Sebastopol, Sonoma, and Windsor) and unincorporated areas within the County. Santa Rosa is not included in the project area because it already adopted a CAP and subsequent supplemental general plan EIR. However, as discussed in the CAP, the assessment of meeting the CAP’s overall target is of a countywide target and includes Santa Rosa and its reductions from the Santa Rosa CAP. The project area consists of 1,500 square miles and encompasses the land within the city limits of each incorporated city, the existing sphere of influence (SOI) area of each city, and the boundaries of the unincorporated County.

2.2 Project Objectives

The proposed CAP would include both regional measures (to be implemented by the Sonoma County Regional Climate Protection Authority [RCPA] and other regional agencies with local government support) and local measures (to be implemented by local governments with RCPA and regional agency support and on their own) to reduce greenhouse gas (GHG) emissions. The proposed objectives of the CAP are to:

- Identify specific actions that the RCPA, other regional agencies, each participating jurisdiction, and individual residents and businesses can implement to reduce GHG emissions consistent with and even exceeding the goals established in Assembly Bill 32 (AB 32); specifically, the CAP target is to reduce countywide GHG emissions by 25% below 1990 levels by 2020.

- Promote consistency with the land use policy direction and growth anticipated in local general plans.

- Allow for continued economic growth to provide opportunities for businesses and residents.

As part of the CAP, the RCPA is estimating GHG emissions for 1990 and 2010 and forecasting future emissions for 2020 and beyond. The community inventory includes GHG emissions occurring in association with the land uses within a jurisdictional boundary, and it consists of sources of emissions that a community can more readily influence or control. Emissions sectors analyzed in the
CAP include: building energy, land use and transportation, off-road transportation and equipment, solid waste generation, wastewater treatment, water conveyance, and agriculture.

The draft CAP will be released before or during the public review period for this draft EIR. The draft CAP may be revised in response to public input throughout the public review process prior to consideration for adoption by the RCPA and by the participating jurisdictions.

2.3 Project Background

2.3.1 Regional Climate Protection Authority

In 2009, the RCPA was created to coordinate climate change issues, establish a clearinghouse for efforts to reduce GHG emissions in the County, and secure funding for GHG-reducing efforts. The RCPA consists of ten communities, including Sonoma County, the Town of Windsor, and the following cities: Cloverdale, Cotati, Healdsburg, Petaluma, Rohnert Park, Santa Rosa, Sebastopol, and the City of Sonoma. The Staff Working Group (SWG) that developed the CAP collaboratively includes all communities except for the City of Santa Rosa. The City of Santa Rosa completed a separate climate action plan previously and therefore is not included in this draft EIR (and is not part of the SWG); however, it does participate in the RCPA.

The local governments within Sonoma County and the RCPA plan to reduce and avoid GHG emissions associated with community activities, which include everyday activities within the incorporated cities and the unincorporated areas of the County.

2.3.2 Past Actions to Reduce GHG Emissions

Sonoma County has a history of taking action to reduce GHG emissions. The County's past efforts to reduce GHG emissions was spearheaded by the leadership of forward-thinking local community officials at the city and County government levels, the actions of interested non-governmental organizations, and, most importantly, the individual actions of Sonoma County residents and businesses.

Some of the milestones in climate action planning in Sonoma County include the following:

- 2001: All Sonoma County communities committed to the International Council for Local Environment Initiatives campaign called Cities for Climate Protection, an initiative to reduce GHG emissions through local government action.
- 2005: The elected leadership in all Sonoma County communities adopted a countywide GHG emissions reduction target of 25% below 1990 levels by 2015. The City of Cotati adopted an even more aggressive goal of 30% below 1990 levels by 2015.
- 2008: A local community non-profit group, the Climate Protection Campaign (now known as the Center for Climate Protection), developed a community climate action plan, which was the first community-wide examination of strategies to reduce community-wide GHG emissions.
- 2009: Sonoma County communities established the nation's first regional climate protection authority, a multi-jurisdictional agency tasked with coordinating countywide efforts to reduce GHG emissions and become more resilient to climate change. The RCPA members and partners have created and pioneered innovative approaches to climate solutions including Property...
Assessed Clean Energy (PACE) financing, Pay As You Save (PAYS) on-bill repayment for resource efficiency, community choice aggregation, carbon-free water, electric vehicle infrastructure deployment, climate action through conservation, adaptation planning, and more.

- 2012: The City of Santa Rosa was the first local government in the County to adopt its own CAP and adopt a new GHG emissions reduction target of 25% below 1990 levels by 2020 (City of Santa Rosa 2012).

Community leadership has resulted in direct actions by the citizens, businesses, and communities in the County to reduce GHG emissions. For example:

- All communities in the county (except Healdsburg, which has its own electric utility) now participate in the local Community Choice Aggregation program (known as Sonoma Clean Power [SCP]), which provides electricity with a higher renewable energy content than otherwise available. Healdsburg’s municipal utility has provided electricity with a large renewable portfolio for many years.

- The County established a PACE program known as the Sonoma County Energy Independence Program to help property owners finance energy and water efficiency improvements. This program has reduced GHG emissions equal to taking 3,000 cars off the road and generated enough clean energy to power nearly 6,000 homes for a year.

- RCPA and County communities support energy-efficiency efforts and solar retrofits through a variety of programs. Waste minimization, recycling, and composting programs are already an essential part of resource conservation in the County.

- The Sonoma County Water Agency (SCWA) is a leader in innovating low-carbon methods for delivering water supplies and conserving water. SCWA reached its goal of a carbon-free water delivery system in 2015 and is a prominent supporter of energy conservation financing.

- The County is a center for sustainable wine growing and other sustainable agricultural practices.

By 2010, the combined actions of all Sonoma County communities had reduced countywide GHG emissions to approximately 7% below 1990 levels, even while the County’s population and economy grew substantially by 17% between 1990 and 2010. On a per capita basis, County GHG emissions declined approximately 26% over the same period. However, based on projections from the 2010 GHG inventory, the County is not expected to meet the 2015 goal of 25% below 1990 levels. Furthermore, the County’s population is projected to increase by 5% between 2010 and 2020, and employment is projected to increase by 13% over the same period. Population and economic growth are the main factors influencing the growth of GHG emissions.

Without additional actions, GHG emissions in 2020 and beyond will not be reduced and could increase because of continued population and economic growth. Therefore, the primary goal of the CAP is to grow smarter by reducing countywide GHG emissions to a level that is 25% below 1990 emissions by 2020, a target that is well beyond that established in current state law (AB 32). With ongoing efforts already underway combined with new actions proposed in the CAP, emissions reductions in 2020 are projected to meet the target of 25% below 1990 levels. Achieving the CAP’s 2020 goal will place the County in a favorable position for meeting more aggressive goals for 2030 and 2050.
2.4 Project Characteristics

The goal of the CAP is to identify specific actions that each community can implement to reduce GHG emissions. The CAP includes measures to reduce GHG emissions and reduce the County’s vulnerability to climate change hazards. The GHG reduction element of the CAP involves an assessment of GHG-reduction strategies, engagement of the public in planning efforts, and creation of a framework to maintain reductions in the future. The climate adaptation element of the CAP involves an analysis of the vulnerability of the communities to the effects of future climate change and identifies broad-level policies and actions that would increase the resiliency of the communities to these changes. This draft EIR analysis is limited to the GHG reduction measures and does not address the climate adaptation element of the CAP because the adaptation element of the CAP is a broad overview of climate vulnerabilities and general options for policy, not an implementation plan for GHG emissions.

The project includes reduction measures for the following sectors that produce GHG emissions: building energy; transportation and land use; solid waste generation; water conveyance and wastewater treatment; and livestock and fertilizer. The project also includes advanced climate initiatives that would protect and enhance the value of open and working lands, promote sustainable agriculture, increase carbon sequestrations, and educate residents about GHG emissions from the consumption of goods and services.

The RCPA has prepared a draft CAP for reducing countywide GHG emissions to 25% below 1990 levels by 2020. The draft CAP was prepared in consultation with the Sonoma County Transportation Authority (SCTA) and the SWG. The draft CAP may be revised in response to public input throughout the public review process prior to consideration for adoption by the RCPA and by the participating jurisdictions.

The entire draft CAP, including appendices, is hereby incorporated by reference as part of this draft EIR. The CAP is summarized further below. For a full description of the CAP and the GHG-reduction measures, please refer to the CAP document itself.

2.4.1 Sonoma County’s Community Greenhouse Gas Emissions

This section is derived from Chapter 2 and Appendix B of the draft CAP, which discuss the County’s GHG emissions.

2.4.1.1 GHG Profiles and Methodology for Measuring Emissions

Estimates of historic, current, and future GHG emissions are essential to understanding local emission sources that communities can influence to reduce local contributions to climate change. These profiles—referred to as backcasts, inventories, and forecasts—help to identify priorities for emissions reductions strategies and for tracking progress. Several GHG profiles were developed for the CAP:

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1990 Backcast: An estimate of community-wide emission levels in 1990 was developed to understand historic emission levels in the County and to provide a baseline for measuring future GHG reductions.

2010 Inventory: The 2010 inventory measured existing emissions sources that are either created within the County or participating jurisdictions or that occur in association with the land uses within the city limits. Any actions initiated by communities to reduce GHG emissions implemented prior to 2010 are accounted for in the inventory.

2020 Business-as-usual (BAU) Forecast: The 2020 emissions forecast was developed to predict how community emissions may occur in 2020, in the absence of state and local actions to reduce GHG emissions. This 2020 forecast was developed to evaluate the magnitude of the challenge in meeting the short-term CAP target of 25% below 1990 levels. The 2020 forecast is based on the expected growth in population, employment, and housing for the County in 2020.

Appendix B of the draft CAP describes the data sources and general methods and protocols used to develop the County’s GHG profiles. The RCPA inventoried 2010 GHG emissions from community activities for all cities (except Santa Rosa) and the unincorporated County areas. The 2010 inventory was extrapolated to forecast GHG emissions for 2020 and backcast GHG emissions for 1990. The CAP also forecasts future emissions in 2040 and 2050 under a BAU scenario to help prepare the County to meet long-term GHG reduction goals.

The 2010 inventory includes GHG emissions occurring in association with the land uses within a jurisdictional boundary, and generally consists of sources of emissions that a community can influence or control. The inventory includes emissions that occur inside and outside the jurisdictional boundary, but only to the extent that such emissions are created by land uses within the community. Emissions generated by the County’s municipal operations (e.g., government-owned facilities, vehicle fleets) are not individually highlighted in the CAP because separate municipal inventories were not prepared as part of the CAP effort. However, emissions generated by the County’s municipal operations occurring within the boundaries of participating jurisdictions are calculated into the overall community emissions inventories and subject to the CAP.

As is the standard practice, the GHG profiles are presented in metric tons of carbon dioxide equivalent (MTCO\textsubscript{2}e). Presenting inventories in MTCO\textsubscript{2}e allows one to characterize the complex mixture of GHGs as a single unit, taking into account that each gas has a different global warming potential (GWP).\textsuperscript{3}

\textbf{2.4.1.2 1990, 2010, and 2020 Countywide GHG Emissions}

As shown in Table 2-1, approximately 3.97 million MTCO\textsubscript{2}e emissions were generated by activities in the County in 1990. By 2010, emissions were approximately 8% lower, at 3.66 million MTCO\textsubscript{2}e, or per capita emissions of approximately 7.6 MTCO\textsubscript{2}e for the 483,878 residents in the County. However, in the absence of state and local climate actions, emissions in 2020 are projected to grow to 4.40 million MTCO\textsubscript{2}e, which is largely driven by population and economic growth.

\textsuperscript{2}The BAU scenario assumed that future development trends follow those of the past and no changes in climate action strategies or policies will take place. The BAU scenario can be forecast for multiple years.

\textsuperscript{3}The global warming potential, or GWP, is used to compare GHGs based on their potential to trap heat and remain in the atmosphere. Some gases can absorb more heat than others, and thus have a greater impact on global warming. For example, CO\textsubscript{2} is considered to have a GWP of 1, whereas N\textsubscript{2}O has a GWP of 265. This means that N\textsubscript{2}O is 265 times more powerful than CO\textsubscript{2}.\textsuperscript{3}
Table 2-1. Summary of 1990, 2010, and 2020 Countywide GHG Emissions

<table>
<thead>
<tr>
<th>Key CAP Indicators</th>
<th>Backcast 1990</th>
<th>Inventory 2010</th>
<th>Forecast 2020 BAU</th>
</tr>
</thead>
<tbody>
<tr>
<td>Countywide emissions (MTCO$_2$e)</td>
<td>3,966,000</td>
<td>3,659,000</td>
<td>4,395,000</td>
</tr>
<tr>
<td>Percent change from 1990</td>
<td>N/A</td>
<td>-8%</td>
<td>11%</td>
</tr>
<tr>
<td>Per capita emissions (MTCO$_2$e/person)</td>
<td>10.2</td>
<td>7.6</td>
<td>8.6</td>
</tr>
<tr>
<td>California per capita emissions (MTCO$_2$e/person)</td>
<td>14.5</td>
<td>12.1</td>
<td>12.5</td>
</tr>
<tr>
<td>Population (people)</td>
<td>388,222</td>
<td>483,878</td>
<td>509,766</td>
</tr>
<tr>
<td>Housing (housing units)</td>
<td>149,382</td>
<td>189,773</td>
<td>202,942</td>
</tr>
<tr>
<td>Employment (jobs)</td>
<td>172,064</td>
<td>202,123</td>
<td>229,710</td>
</tr>
</tbody>
</table>

1 For details on how the California per capita emissions were estimated, please refer to Appendix C of the draft CAP.

Table 2-2 depicts a breakdown of GHG emissions in the County by emissions sector. Of the total emissions in 2010, on-road transportation and building energy use (including residential and non-residential uses) are the largest sources of emissions at 52% and 33%, respectively. The third largest source of GHG emissions is fertilizer and livestock (9%), followed by solid waste generation (4%), off-road equipment (2%), wastewater treatment (0.4%), and water conveyance (0.1%).

As the County experiences population and economic growth, energy consumption, water usage, waste generation, and transportation activities will increase. For the CAP, BAU forecasts have been developed to evaluate the impacts of this growth on future GHG emissions in 2020, 2040, and 2050. The BAU forecast is based on changes in population, households, and employment, and it represents a scenario that does not consider the effects of future local, state, or federal actions to reduce GHG emissions. Both Tables 2-1 and 2-2 compare the 2020 BAU forecast to the 1990 backcast and 2010 inventory. As shown in Table 2-1, GHG emissions would increase by approximately 20% between 2010 and 2020 without state, regional, and local GHG reduction actions. Much of this increase in GHG emissions from 2010 to 2020 BAU is attributable to increases in building energy, on-road transportation (vehicle trips), off-road equipment, and solid waste generation emission sectors.

Changes in emissions by the community over time are a product of a number of factors, including economic and population growth, annexations, urban growth boundaries, an emphasis on city-centered growth, and changes in efficiency, energy sources, and behavior. Table 2-3 compares the 1990 backcast and 2010 GHG emissions inventory to projected 2020 BAU forecast for each community in the County. The cities of Windsor, Rohnert Park, and Petaluma are projected to experience the highest increase in GHG emissions between 2010 and 2020. Figure 2-1 shows the County’s emissions changes by sector from 1990 to 2050. For more information, please refer to Chapter 2 and Appendix B of the CAP.
Table 2-2. 1990, 2010, and 2020 Countywide GHG Emissions by Sector

<table>
<thead>
<tr>
<th>Emission Sector</th>
<th>Backcast 1990</th>
<th>Inventory 2010</th>
<th>Forecast 2020 BAU</th>
<th>Change in Emissions (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Building energy</td>
<td>859,100</td>
<td>1,219,800</td>
<td>1,410,500</td>
<td>42%</td>
</tr>
<tr>
<td>On-road transportation</td>
<td>1,203,400</td>
<td>1,899,300</td>
<td>2,349,500</td>
<td>58%</td>
</tr>
<tr>
<td>Off-road equipment</td>
<td>42,900</td>
<td>62,500</td>
<td>77,300</td>
<td>46%</td>
</tr>
<tr>
<td>Solid waste generation</td>
<td>281,200</td>
<td>133,600</td>
<td>235,900</td>
<td>-52%</td>
</tr>
<tr>
<td>Wastewater treatment</td>
<td>14,900</td>
<td>14,500</td>
<td>13,600</td>
<td>-3%</td>
</tr>
<tr>
<td>Water conveyance</td>
<td>26,600</td>
<td>3,500</td>
<td>13,600</td>
<td>-87%</td>
</tr>
<tr>
<td>Fertilizer and livestock</td>
<td>415,100</td>
<td>325,700</td>
<td>294,800</td>
<td>-22%</td>
</tr>
<tr>
<td>Santa Rosa 1990 emissions¹</td>
<td>1,123,100</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td><strong>Sonoma County Total (rounded)</strong></td>
<td><strong>3,966,000</strong></td>
<td><strong>3,659,000</strong></td>
<td><strong>4,395,000</strong></td>
<td><strong>-8%</strong></td>
</tr>
</tbody>
</table>

¹ Santa Rosa’s emissions in 1990 are not provided in the city’s CAP; 1990 emissions were therefore assumed to be equal to 15% below the baseline level of emissions, per the city’s CAP. As a result, sector emissions for Santa Rosa in 1990 are not available and are included as a separate line item. Sector emissions for 2010 and 2020 are included in the totals above.

Note: For details on changes in emissions over time, please refer to Chapter 2 and Appendix B of the draft CAP.

Table 2-3. 1990, 2010, and 2020 Countywide GHG Emissions by Community

<table>
<thead>
<tr>
<th>Community</th>
<th>Backcast 1990</th>
<th>Inventory 2010</th>
<th>Forecast 2020 BAU</th>
<th>Change in Emissions (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cloverdale</td>
<td>57,300</td>
<td>59,000</td>
<td>73,300</td>
<td>3%</td>
</tr>
<tr>
<td>Cotati</td>
<td>51,500</td>
<td>52,100</td>
<td>61,300</td>
<td>1%</td>
</tr>
<tr>
<td>Healdsburg</td>
<td>93,500</td>
<td>108,800</td>
<td>121,000</td>
<td>16%</td>
</tr>
<tr>
<td>Petaluma</td>
<td>387,000</td>
<td>441,900</td>
<td>543,000</td>
<td>14%</td>
</tr>
<tr>
<td>Rohnert Park</td>
<td>291,300</td>
<td>264,300</td>
<td>372,700</td>
<td>-9%</td>
</tr>
<tr>
<td>Santa Rosa</td>
<td>1,123,100</td>
<td>1,065,200</td>
<td>1,396,900</td>
<td>-5%</td>
</tr>
<tr>
<td>Sebastopol</td>
<td>73,200</td>
<td>76,300</td>
<td>93,000</td>
<td>4%</td>
</tr>
<tr>
<td>Sonoma</td>
<td>96,900</td>
<td>103,400</td>
<td>122,200</td>
<td>7%</td>
</tr>
<tr>
<td>Windsor</td>
<td>133,000</td>
<td>157,800</td>
<td>188,100</td>
<td>19%</td>
</tr>
<tr>
<td>Unincorporated Sonoma County</td>
<td>1,244,300</td>
<td>1,004,500</td>
<td>1,128,800</td>
<td>-19%</td>
</tr>
<tr>
<td>Agricultural Emissions</td>
<td>415,100</td>
<td>325,700</td>
<td>294,800</td>
<td>-22%</td>
</tr>
<tr>
<td><strong>Sonoma County Total (rounded to thousands)</strong></td>
<td><strong>3,966,000</strong></td>
<td><strong>3,659,000</strong></td>
<td><strong>4,395,000</strong></td>
<td><strong>-8%</strong></td>
</tr>
</tbody>
</table>

¹ Agriculture emissions (fertilizer and livestock) were not considered on an individual community basis. Thus, agriculture emissions are disaggregated from the community emissions and shown separately here.

Note: For details on changes in emissions over time, please refer to Chapter 2 and Appendix B of the draft CAP.
2.4.2 Greenhouse Gas Reduction Targets and Goals

This section is derived from Chapter 3 of the draft CAP, which discusses GHG reduction targets for the County.

2.4.2.1 GHG Reduction Target for 2020

Prior commitments by the County and participating jurisdictions to reduce GHG emissions included adopting and codifying reduction targets. In 2005, the County and all participating jurisdictions adopted regulations to reduce GHG emissions by 25% below 1990 levels by 2015. Although a 2015 inventory has not yet been completed, based on BAU projections from the 2010 inventory, the County is not expected to meet the previously adopted target of 25% below 1990 levels by 2015. Furthermore, the County’s population is expected to increase by 5% between 2010 and 2020, and employment is expected to increase by 14% over the same period. Without additional action, GHG emissions in the County in 2020 and beyond will increase as a result of continued population and economic growth.

Creation of the CAP was motivated by a need to identify specific near-term actions to reduce GHG emissions and to establish updated goals for 2020 and beyond. Year 2020 is an important milestone in the State of California because of the Global Warming Solutions Act (also known as AB 32). Under AB 32, California is seeking to reduce statewide GHG emissions to 1990 levels by 2020. In 2006, Sonoma County communities were significantly more ambitious than the state when adopting the goal of 25% below 1990 levels by 2015. Even though no formal GHG reduction plan was adopted, that ambition has driven positive results—emissions in 2010 were already 7.5% lower than 1990 levels.

A range of GHG reduction targets was considered for the CAP. The Sonoma County communities have agreed to adopt an updated countywide target of 25% below 1990 levels by 2020, as
illustrated in Figure 2-2. This goal is ambitious because it significantly surpasses the state’s AB 32 target. However, it is also a practical target because it can be achieved by implementing the suite of state, regional, and local measures outlined in the CAP. The selection of the countywide target is based on the aspiration to set ambitious goals that would place Sonoma County communities on track in the long-term and would recognize what is attainable through the package of measures considered and adopted by each community through 2020.

Figure 2-2. Achieving Sonoma County’s 2020 GHG Reduction Target

![Figure 2-2: Achieving Sonoma County’s 2020 GHG Reduction Target](image)

### 2.4.2.2 Long-Term Goals and Vision

The scientific consensus about the potential long-term ramifications of unchecked human-induced climate change has been integrated into state policy. Governor Schwarzenegger’s 2005 Executive Order S-03-05 (EO S-03-05) established a long-term statewide goal of 80% below 1990 levels by 2050. In order to reach this target for 2050, the state will have to go above and beyond what is included in the AB 32 Scoping Plan for 2020. Accordingly, in April 2015, Governor Brown issued Executive Order B-30-15 (EO B-30-15), which established an interim reduction target of 40% below 1990 levels by 2030. EO B-30-15 also directed the California Air Resources Board to update the AB 32 Scoping Plan to reflect the interim target; the updated Scoping Plan is expected in late 2016. There is currently no statewide plan to achieve the 2030 or 2050 targets; therefore, the California communities must continue to reduce emissions aggressively beyond 2020. The state legislature is also considering Senate Bill 32 (SB 32), which, if adopted, would establish the 2030 goal as a legislative mandate, thus broadening its legal applicability.4

In addition to the near-term target of 25% below 1990 levels by 2020, Sonoma County communities have agreed to pursue the long-term goals of 40% below 1990 levels by 2030 and 80% below 1990 levels by 2050. Although the specific path to reach this goal has not yet been determined—either locally or by the State of California—it is clear that pursuing the ambitious 2020 target will make substantial progress toward the 2030 statewide target in a manner that is more aggressive than the state’s current path under AB 32. Figure 2-3 shows that current state GHG reduction measures (e.g., vehicle fuel standards and renewable portfolio standards for electricity) will only achieve a portion

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4 Executive Orders are not binding on the private sector or local governments; only state law is.
of the reductions needed to meet long-term goals. While further state action to reduce emissions is anticipated, success will require scaling up existing local and regional strategies, including those in the CAP, and developing new solutions.

Figure 2-3. Sonoma County GHG Emissions Pathway from 1990 to 2050

Another way to look at the long-term challenge of achieving 80% below 1990 levels by 2050 is on a per capita basis. As shown in Figure 2-4, countywide GHG emissions were 7.6 MTCO$_2$e per person in 2010 and are forecast to increase to 8.4 MTCO$_2$e per person by 2015. Projected per-capita BAU emissions increase slightly to 8.6 MTCO$_2$e in 2020 and beyond because population is projected to increase somewhat faster than emissions. Nonetheless, given projected population and economic growth, meeting the long-term reduction target requires that per capita emissions in 2050 not exceed 1.3 MTCO$_2$e, an even steeper decline than is needed for overall emissions reduction. The County’s 2020 target is equivalent to 5.8 MTCO$_2$e per capita, further emphasizing the challenge of meeting the long-term goals and the importance of adopting an aggressive target of 25% below 1990 levels by 2020 to put the County on the right track to meet the long-term goals.

Although the long-term goal presents a challenge, there is much work underway in California, the United States, and in international negotiations to understand how to achieve it. The state has begun evaluating the cost and feasibility of strategies to achieve the long-term targets. Projects like the California Pathways Project demonstrate that success is possible based on scaling up the primary strategies in this plan: resource efficiency, zero carbon electricity, and switching away from fossil fuels. Further, implementing the local measures in the CAP will complement state efforts and would help Sonoma County achieve the near-term target while advancing goals for the long-term response beyond 2020.
2.4.3 Development of the Greenhouse Gas Reduction Strategies

In order to develop the GHG reduction measures, the County and the participating jurisdictions compiled a list of candidate GHG reduction measures for quantification and potential inclusion in the CAP, based on existing city and County documents, general plans, and local policies and programs. A comprehensive review of potential candidate measures recommended by the California Attorney General, California Air Pollution Control Officers Association (CAPCOA), and existing climate action plans throughout California was also conducted.

An extensive list of potential GHG reduction measures was developed and submitted to the RCPA and SWG for technical review. Based on feedback provided by the RCPA and SWG, candidate measures were selected to be analyzed in greater detail. The amount of GHG emissions that could be avoided in 2020 by each measure was calculated. Costs and savings associated with each measure were also quantified, as feasible, to help identify the financial and economic impact of the measures. Other benefits, such as reduction in air pollution, were also identified for all measures. The County also evaluated the methods of implementing different measures, including whether each measure should be implemented through incentive-based voluntary approaches, flexible performance-based measures, or new local mandates.

Based on consideration of the GHG reduction effectiveness, financial and economic costs of measures, and benefits, the County identified a list of voluntary and mandatory measures for inclusion in the CAP.

2.4.4 Greenhouse Gas Reduction Measures

This section is derived from Chapter 3 of the draft CAP, which discusses the GHG-reduction measures. Appendix C of the draft CAP provides an in-depth discussion of all GHG-reduction measures.

2.4.4.1 Overall GHG Reduction Strategy

The CAP planning process explored a variety of state, regional, and local measures to reduce GHGs within the County in order to achieve the target of 25% below 1990 levels by 2020 and provide a strong foundation for meeting the 2030 and 2050 goals. Measures were identified across levels of government and along a spectrum of strategies from voluntary to regulatory. Many of the measures build on existing programs, whereas other measures represent new opportunities. Public meetings and online engagement tools were used to collect input on community priorities for climate action.

The CAP measures are grouped into the following six sectors:

- Building Energy
- Transportation and Land Use
- Solid Waste Generation
- Water Conveyance and Wastewater Treatment
- Livestock and Fertilizer
- Advanced Climate Initiatives
Table 2-4 identifies the reduction goals for each sector. There are 20 overall goals for the GHG-reduction measures in the CAP.

**Table 2-4. Greenhouse Gas Reduction Measure Goals**

<table>
<thead>
<tr>
<th>Building Energy</th>
<th>1. Increase the energy efficiency of buildings.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2. Increase renewable energy use.</td>
</tr>
<tr>
<td></td>
<td>3. Switch equipment from fossil fuel to electricity.</td>
</tr>
<tr>
<td>Transportation and Land Use</td>
<td>4. Reduce travel demand through focused growth.</td>
</tr>
<tr>
<td></td>
<td>5. Encourage a shift toward low-carbon transportation options.</td>
</tr>
<tr>
<td></td>
<td>6. Increase vehicle and equipment fuel efficiency.</td>
</tr>
<tr>
<td></td>
<td>7. Encourage a shift toward low-carbon fuels in vehicles and equipment.</td>
</tr>
<tr>
<td></td>
<td>8. Reduce idling.</td>
</tr>
<tr>
<td></td>
<td>10. Increase capture and use of methane from landfills.</td>
</tr>
<tr>
<td>Water Conveyance and Wastewater Treatment</td>
<td>11. Reduce water consumption.</td>
</tr>
<tr>
<td></td>
<td>12. Increase recycled water and greywater use.</td>
</tr>
<tr>
<td></td>
<td>13. Increase the water and wastewater infrastructure efficiency.</td>
</tr>
<tr>
<td></td>
<td>14. Increase use of renewable energy in water and wastewater systems.</td>
</tr>
<tr>
<td>Livestock and Fertilizer</td>
<td>15. Reduce emissions from livestock operations.</td>
</tr>
<tr>
<td></td>
<td>16. Reduce emissions from fertilizer use.</td>
</tr>
<tr>
<td>Advanced Climate Initiatives</td>
<td>17. Protect and enhance the value of open and working lands.</td>
</tr>
<tr>
<td></td>
<td>18. Promote sustainable agriculture.</td>
</tr>
<tr>
<td></td>
<td>19. Increase carbon sequestration.</td>
</tr>
<tr>
<td></td>
<td>20. Educate residents about emissions from the consumption of goods and services.</td>
</tr>
</tbody>
</table>

The GHG reduction measures in the CAP would be implemented at three levels.

- **State** measures adopted and implemented by state agencies, including statewide fuel efficiency standards and renewable portfolio standards for electricity generation.

- **Regional** measures implemented by cross-jurisdictional agencies like the RCPA, SCP, transit agencies, and waste management and water supply agencies.

- **Local** actions implemented by the cities and the County. These local measures include voluntary, incentive-based, and regulatory approaches.

Appendix B, *CAP Measures*, summarizes the state, regional, and local measures included in the CAP to reduce GHG emissions. The measures are organized by GHG-reduction goals for the County as a whole, not including the City of Santa Rosa.
Statewide efforts to reduce GHG emissions are a fundamental part of the CAP. For example, the state’s Renewables Portfolio Standard (RPS) will reduce the carbon content of electricity throughout the state, including in Sonoma County. Electricity provided to the County will therefore be cleaner and less GHG-intensive than if the RPS had not been established. Regional actions, such as the SCP measure, encourage members of the community to subscribe to electricity service that surpasses RPS in terms of reducing carbon content. The SCP measure and others make the regional measures a critical part of the CAP as well. The CAP includes the impact of 9 state measures and 32 regional measures to reduce GHG emissions, as discussed further in Chapter 3 and Appendix C of the draft CAP.

In addition to the state and regional measures, 30 local measures have also been identified. The communities have reviewed the list of local measures and have selected from this list the measures that they would like to include as part of their individual community commitments. Thus, the suite of measures that a community will implement varies by each community. Although each community won't implement all 30 local measures, the individual community commitments will, in conjunction, act as a comprehensive GHG emissions reduction program and help the County achieve the countywide goal.

Some of the local measures include voluntary, incentive-based programs that would reduce emissions from both existing and new development in the communities. Some of the measures establish mandates for development, either pursuant to state regulations or through existing programs. Several other measures would be implemented by each community, while the regional measures would be implemented by other regional agencies with varying levels of coordination with the communities. While a number of the measures build on existing policies and programs, others provide new opportunities to address climate change. Successful implementation of these actions would require commitment from regional agencies, all participating jurisdictions and their various departments, and residents. The RCPA and communities would adaptively manage the implementation of the CAP to maximize GHG reductions and operational efficiency for each measure. Accordingly, the RCPA and communities may revise measures or add new measures to ensure that the region achieves the reduction target by 2020. If new federal programs that achieve local GHG reductions beyond state and local mandates are adopted and implemented prior to 2020, these federal programs may also be added to the CAP.

Successful implementation of the local strategies would rely on the combined participation of community staff along with residents, businesses, and community leaders throughout the County. The state and regional measures apply to all communities. There is diversity in the local measures selected by each community as the communities have made different choices in which measures are most appropriate for their community. Coordinating GHG-reduction programs within and across communities would streamline CAP implementation and potentially boost GHG reduction outcomes through synergies created among measures.

### 2.4.4.2 GHG Reduction with Implementation of the CAP

Table 2-5 presents countywide GHG emissions and reductions by sector for 2020 under both BAU conditions and with implementation of the CAP. As shown in Table 2-5, the County would achieve GHG reductions of over 1.4 million MTCO\textsubscript{2}e, including emission reductions from Santa Rosa, with implementation of the CAP. Table 2-6 presents the countywide GHG emissions and reductions by community. Under the CAP, the amount of GHG reductions would allow the County to meet the target goal of 25% below 1990 levels by 2020.
Table 2-5. 2020 Countywide GHG Emissions and Reductions by Sector

<table>
<thead>
<tr>
<th>Emission Sector</th>
<th>2020 BAU</th>
<th>CAP Reductions</th>
<th>2020 with CAP</th>
<th>% Reduction</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Countywide CAP Sectors</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Building energy</td>
<td>1,410,500</td>
<td>324,000</td>
<td>1,086,500</td>
<td>23%</td>
</tr>
<tr>
<td>On-road transportation</td>
<td>2,349,500</td>
<td>431,420</td>
<td>1,918,080</td>
<td>18%</td>
</tr>
<tr>
<td>Off-road equipment</td>
<td>77,300</td>
<td>5,440</td>
<td>71,860</td>
<td>7%</td>
</tr>
<tr>
<td>Solid waste generation</td>
<td>235,900</td>
<td>65,400</td>
<td>170,500</td>
<td>28%</td>
</tr>
<tr>
<td>Wastewater treatment</td>
<td>13,600</td>
<td>22,100</td>
<td>-8,500</td>
<td>163%</td>
</tr>
<tr>
<td>Water conveyance</td>
<td>13,600</td>
<td>500</td>
<td>13,100</td>
<td>4%</td>
</tr>
<tr>
<td>Livestock and Fertilizer</td>
<td>294,800</td>
<td>16,300</td>
<td>278,500</td>
<td>6%</td>
</tr>
<tr>
<td><strong>Santa Rosa CAP Reductions, including applicable state and city regulations</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Santa Rosa CAP</td>
<td>--</td>
<td>558,080(^1)</td>
<td>--</td>
<td></td>
</tr>
<tr>
<td><strong>Sonoma County Total</strong> (rounded)(^2)</td>
<td>4,395,200</td>
<td>1,423,200</td>
<td>2,971,900(^4)</td>
<td>32%</td>
</tr>
</tbody>
</table>

Totals may not add up due to rounding.

\(^1\)This number is from the Santa Rosa Climate Action Plan (City of Santa Rosa 2012).

\(^2\)Sonoma County total emissions are rounded down to the nearest hundreds.

\(^3\)The CAP reduction for the wastewater treatment sector is greater than 2020 BAU emissions because it contains emission reductions from multiple sectors. Wastewater treatment measures reduce direct fugitive emissions within the wastewater sector and also improve treatment efficiency, which reduces electricity use within the building energy sector.

\(^4\)The County total emission for 2020 with the CAP (2,971,900) does not include the Santa Rosa CAP reductions (558,080).

NOTE: For details on methodology and emissions calculations for emission sectors, please refer to Chapter 3 the draft CAP.
### Table 2-6. 2020 Countywide GHG Emissions and Reductions by Community

<table>
<thead>
<tr>
<th>Community</th>
<th>Emissions (MTCO₂e)</th>
<th>2020 BAU</th>
<th>CAP Reductions</th>
<th>2020 with CAP</th>
<th>% Reduction</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cloverdale</td>
<td>73,340</td>
<td>23,200</td>
<td>50,140</td>
<td>32%</td>
<td></td>
</tr>
<tr>
<td>Cotati</td>
<td>61,350</td>
<td>19,650</td>
<td>41,700</td>
<td>32%</td>
<td></td>
</tr>
<tr>
<td>Healdsburg</td>
<td>121,040</td>
<td>33,860</td>
<td>87,180</td>
<td>28%</td>
<td></td>
</tr>
<tr>
<td>Petaluma</td>
<td>542,970</td>
<td>167,710</td>
<td>375,260</td>
<td>31%</td>
<td></td>
</tr>
<tr>
<td>Rohnert Park</td>
<td>372,730</td>
<td>123,130</td>
<td>249,600</td>
<td>33%</td>
<td></td>
</tr>
<tr>
<td>Santa Rosa</td>
<td>1,396,900</td>
<td>558,080</td>
<td>838,820</td>
<td>40%</td>
<td></td>
</tr>
<tr>
<td>Sebastopol</td>
<td>92,990</td>
<td>30,220</td>
<td>62,770</td>
<td>32%</td>
<td></td>
</tr>
<tr>
<td>Sonoma</td>
<td>122,170</td>
<td>36,060</td>
<td>86,110</td>
<td>30%</td>
<td></td>
</tr>
<tr>
<td>Windsor</td>
<td>188,120</td>
<td>60,770</td>
<td>127,350</td>
<td>32%</td>
<td></td>
</tr>
<tr>
<td>Unincorporated Sonoma County</td>
<td>1,128,810</td>
<td>354,300</td>
<td>774,510</td>
<td>31%</td>
<td></td>
</tr>
</tbody>
</table>

#### Emissions Not Assigned to Individual Communities

<table>
<thead>
<tr>
<th>Emissions</th>
<th>2020 BAU</th>
<th>2020 with CAP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fertilizer and Livestock</td>
<td>294,800</td>
<td>278,500</td>
</tr>
</tbody>
</table>

#### Sonoma County Total (rounded)<sup>1</sup>

<table>
<thead>
<tr>
<th>Emissions</th>
<th>2020 BAU</th>
<th>2020 with CAP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sonoma County Total</td>
<td>4,395,200</td>
<td>2,971,900</td>
</tr>
</tbody>
</table>

<sup>1</sup> Sonoma County total emissions are rounded down to the nearest hundreds.

Note: For details on methodology and calculations for each community, please refer to Chapter 5 the draft CAP.

Implementing state, regional, and local measures in the CAP would avoid the generation of more than 1.4 million MTCO₂e in 2020 (annually), which is equivalent to any of the following individual actions (U.S. Environmental Protection Agency 2014):

- Removing almost 300,000 passenger vehicles from the road each year.<sup>5</sup>
- Reducing gasoline consumption by more than 160 million gallons per year.
- Providing renewable energy to power over 130,000 homes each year.

The actions in the CAP are priority actions and are intended for near-term implementation, such that the County can achieve its GHG reduction targets for 2020.

#### 2.4.5 Potential Physical Effects of CAP Measures

The CAP is a planning document; therefore, its adoption would not directly result in any physical changes. However, the goal of the CAP is to facilitate reductions in GHG emissions. This is the chief anticipated environmental effect. While the actions called for in the CAP would result in a number of environmental benefits, some of the actions may also result in adverse secondary impacts on the environment, which are analyzed in this draft EIR. Subsequent CEQA compliance would be required.

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<sup>5</sup> Assuming 10,000 miles traveled per year in a typical vehicle.
at a project level for any physical improvements necessary to implement the CAP measures, but the likely impacts would be analyzed at a planning level.

While state measures are discussed in the CAP, these state measures would apply whether or not the CAP is implemented. Thus, this draft EIR is focused on the potential environmental impacts of regional and local measures, and not state measures.

The physical changes resulting from the actions proposed in the CAP can be broadly categorized as follows:

- **Building Energy**
  1. *Increase the energy efficiency of buildings.* CAP measures focus on retrofits of existing buildings, greater energy efficiency in new development, more efficient lighting, planting of shade trees, and cogeneration in new development. Physical changes would be primarily associated with and located within existing and new buildings.
  2. *Increase renewable energy use.* CAP measures focus on increasing the use and production of renewable energy through SCP and supporting distributed solar installations on existing and new buildings. New energy facilities, primarily in the form of rooftop or parking lot solar, may result from these measures.
  3. *Switch equipment from fossil fuel to electricity.* CAP measures focus on supporting shifts from the use of fossil fuel (such as propane) for heating to electric heating. Physical changes would be primarily associated with and located within existing and new buildings.

- **Transportation and Land Use**
  4. *Reduce travel demand through focused growth.* CAP measures focus on reducing travel demand by promoting mixed use development, transit-oriented development, transit accessibility, and affordable housing linked to transit. Local plans already promote such development. As discussed in Chapter 3, Environmental Setting, Impacts, and Mitigation Measures, while the CAP supports these measures, the CAP would not result in changes to the existing land use plans. This draft EIR notes some of the effects that may come from implementing existing land use plans, but as a disclosure item and not as an impact of the CAP itself.
  5. *Encourage a shift toward low-carbon transportation options.* CAP measures support a shift to transit, trip reduction, carsharing, bike sharing, carpools, traffic calming, bicycle and pedestrian linkages, parking policies, and other strategies. These measures may result in additional transit facilities and operations, bicycle and pedestrian facilities, and traffic calming improvements.
  6. *Increase vehicle and equipment fuel efficiency.* CAP measures in this category are all previously adopted state measures. As such, any associated environmental impacts would not be impacts of CAP adoption.
  7. *Encourage a shift toward low-carbon fuels in vehicles and equipment.* Likely CAP measures in this category focus on reducing the carbon intensity of transportation fuels and promotion of alternative fuel use (including electric vehicles and equipment). These measures may require new facilities such as electric charging or alternative fueling facilities. These measures would also increase demand for alternative fuels, the production of which may have impacts on the environment.
8. **Reduce idling.** CAP measures support reduction of heavy vehicle and construction equipment idling, which would result in changes to heavy vehicle operations but likely would not require new facilities.

- **Solid Waste Generation**

9. **Increase solid waste diversion.** CAP measures would increase waste diversion from landfills, reuse of materials, and recycling. In order to achieve increased diversion, additional solid waste facilities and operations may be necessary.

10. **Increase capture and use of methane from landfill.** CAP measures would support the modification of landfill control and gas collection systems and the addition, modification, or expansion of waste-to-energy facilities.

- **Water Conveyance and Wastewater Treatment**

11. **Reduce water consumption.** CAP measures to increase water efficiency would primarily involve improvements within existing and new development as well as modifications to landscaping and landscaping irrigation systems. Some of these measures are already required by existing state law (such as Senate Bill X7-7 [SB X7-7]) and would occur with or without CAP adoption.

12. **Increase recycled water and greywater use.** CAP measures would support the expansion of recycled water treatment facilities and distribution lines and expanded greywater use. These expansions would require plumbing and fixture alterations.

13. **Increase water and wastewater infrastructure efficiency.** CAP measures to support efficiency improvements would require modification of existing water and wastewater treatment facilities.

14. **Increase the use of renewable energy in water and wastewater systems.** CAP measures in this category would result in expansion of renewable energy installations. This would happen primarily at existing water and wastewater treatment locations, but also indirectly through potential purchase of renewable energy for use at such facilities.

- **Livestock and Fertilizer**

15. **Reduce emissions from livestock operations.** CAP measures support additional methane collection and methane gas digestion facilities at dairies as well as exploration of methods to reduce enteric fermentation through modification of feed or feed supplements.

16. **Reduce emissions from fertilizer use.** CAP measures support continued replacement of fossil-fuel based fertilizer with alternative fertilizer or agricultural practices. Measures in this area would not likely result in construction of new facilities.

- **Advanced Climate Initiatives**

17. **Protect and enhance the value of open and working lands.** CAP measures support conservation of open space and agricultural lands. CAP measures represent primarily a continuation of existing city and County preservation policies.

18. **Promote sustainable agriculture.** CAP measures support certification programs, local sustainable and organic foods and products, and urban agriculture. CAP measures represent primarily a continuation of existing County support for sustainable agriculture and local farmer's markets. Urban agricultural efforts would result in reuse of existing urban land.
19. **Increase carbon sequestration.** CAP measures support changes in farming and grazing practices to increase carbon sequestration. These measures could result in changes in land management practices.

20. **Educate residents about emissions from the consumption of goods and services.** The CAP would expand education about the lifecycle emissions of goods and services to support shifts to lower carbon goods and services. Education efforts would not result in construction of new facilities, but would likely in time shift demand to lower-carbon goods and services; this may result in changes in good and service supply chain practices.

This draft EIR evaluates whether any of the physical changes outlined above would potentially result in significant environmental effects.

### 2.4.6 Community Co-Benefits

Implementing the CAP would result in environmental and community “co-benefits” that surpass GHG emissions reductions. For example, many of the CAP actions would improve public health by reducing air pollutants like ozone, carbon monoxide, and fine particulates. CAP measures improving mobility and alternative modes of transportation would increase walking and biking, activities that substantially lower the incidence of disease. These changes can also complement and encourage other sustainable modes of transportation, including public transit.

The GHG-reduction measures in the CAP create community co-benefits in a variety of ways:

- GHG reduction measures in the Building Energy and Transportation and Land Use sectors would reduce electricity and gasoline usage, which can help lessen the impact of future energy cost increases on County businesses and residents.
- Reducing gasoline consumption also reduces dependence on foreign oil and the environmental impacts of oil exploration, production, and transportation.
- Recycling and waste diversion measures would also reduce material consumption and the need for landfill space.
- Water efficiency measures would reduce water use in a water-constrained future and would adapt to the long-term hydrological effects of climate change.
- Transportation and Land Use measures would conserve natural resources and protect the long-term viability of natural and working landscapes in the County.
- Open space preservation offers aesthetic and recreational benefits for community residents as well as habitat for native wildlife and plants.
- Sustainable agriculture and wine-making practices would help preserve agricultural soil fertility and protect water quality.

### 2.4.7 Implementing the CAP

This section is derived from Chapter 4 of the draft CAP, which discusses implementation of the CAP.
### 2.4.7.1 Coordinated Implementation

The RCPA is committed to continuing its leadership role through the implementation of the CAP. RCPA will coordinate and facilitate implementation actions by aggregating funding opportunities to leverage federal, state, and regional grants; providing technical assistance to local partners; developing shared tools (such as case studies, model policy language, and new development consistency checklists); promoting inter-community efficiencies through communication and collaboration; and promoting accountability for CAP implementation through measurement and reporting.

As a part of the implementation process, each community would participate in the SWG and may also identify additional staff to bring specific expertise to the CAP implementation effort. Each community’s SWG representative will be responsible for participating in RCPA efforts to support implementation, and for organizing, monitoring, and reporting on implementation in their community. RCPA will provide as many resources as possible on behalf of SWG members in order to maximize efficiency.

SWG members will coordinate and lead the implementation of measures specific to their communities, with the support from RCPA and one another. Local governments will use the CAP as a tool to communicate and solidify their priorities within their communities.

RCPA member communities will continue to pool resources essential to the success of RCPA, staff participation in coordination meetings and processes (such as data collection and status reporting), collaboration on grant applications, and active participation in other aspects of plan implementation. Given the breadth of measures, success will require engagement from key community departments that oversee different GHG-reduction strategies such as planning, engineering, public works, fleet management, facilities management, police, fire and emergency services, and parks and recreation.

The countywide approach of the CAP recognizes that the cost of implementation would be higher if each community developed and implemented measures on their own. RCPA staff contributions can help ensure that city- or county-specific investments can be most efficient and effective, and leveraged across multiple local governments.

The City of Santa Rosa adopted its own CAP in 2012 and will continue to implement the measures in its plan. Santa Rosa may coordinate and collaborate with RCPA and other cities throughout the implementation process.

Other local countywide public agencies that would implement the regional measures in the CAP include:

- North Sonoma County Air Pollution Control District (NSCAPCD)
- Sonoma Clean Power (SCP)
- Sonoma County Agricultural Preservation and Open Space District
- Sonoma County Energy Independence Office
- Sonoma County Waste Management Agency (SCWMA)
- Sonoma County Transportation Authority (SCTA)
- Sonoma County Water Agency (SCWA)
In addition, continued community involvement is vital to the implementation of the CAP, particularly given that many strategies depend on voluntary commitment, creativity, and participation. Community members will participate in the public process at individual cities and the County to help shape the details of local measure implementation. The community—including residents, businesses, and non-governmental organizations—will also play an important role in holding local governmental entities accountable for successful plan implementation.

2.4.7.2 Implementation Strategy

The RCPA would coordinate with the SWG to accomplish the following general implementation steps in support of implementing the emissions reduction strategies:

- Develop implementation plans for each emissions-reduction measure.
- Estimate project-specific costs.
- Review new development for consistency with the CAP.
- Draft ordinances and/or codes.
- Establish partnerships.
- Pursue funding sources and facilitate investments in solution at scale.
- Create monitoring/tracking processes and indicators.
- Engage the community and stakeholders.
- Lobby for state and federal action.

2.4.7.3 Implementation Schedule

Implementation of the emissions-reduction strategies would occur following adoption of the CAP to ensure that all GHG-reduction measures are in place as planned by 2020. The RCPA and member agencies would initially pursue strategies based the following three groupings to prioritize measures:

- Group 1 strategies are those that need to be developed early and/or require long lead times to achieve reduction targets by 2020.
- Group 2 strategies are those that do not need to be implemented immediately but still require time for development to meet 2020 reduction targets.
- Group 3 strategies are those that need only to be developed by 2020 and can be implemented later in the decade.

Measure prioritization would be based on several factors, including: expected GHG reductions, cost and availability of funding, co-benefits, consistency with existing programs, implementation effort, and the timing necessary to support meeting the 2020 target. However, measures may be implemented in a different order depending on funding or policy opportunities.
Figure 2-4. Implementation Timeline for CAP GHG Reduction Measures

|------|------|-----------|------|-----------|-----------|
| • Adopt the CAP  
  • Identify funding mechanisms | • Implement Group 1 strategies  
  • Develop protocols for monitoring, reporting, and responding to CAP progress | • Implement Group 2 strategies  
  • Update emissions inventories  
  • Examine CAP progress | • Implement Group 3 strategies | • Update emissions inventories  
  • Examine CAP progress  
  • Consider post-2020 targets | • Update emissions inventories  
  • Report on CAP success  
  • Adopt post-2020 targets |

2.5 Required Permits and Approvals

The RCPA would use this draft EIR when deciding whether to certify the EIR, and whether to adopt the project (the CAP) and recommend its adoption by the local participating communities. The individual participating jurisdictions would then need to adopt specific local measures for their community. Most of the implementing actions of the CAP will involve other agencies and project-level CEQA review of the approving agency.
Chapter 3
Environmental Setting, Impacts, and Mitigation Measures

As described in Chapter 2, Project Description, the Sonoma County Regional Climate Protection Authority (RCPA) proposes to adopt the Climate Action 2020: Community Climate Action Plan (CAP). Participating jurisdictions propose to adopt local measures applicable within their jurisdictions that are articulated in the CAP. The intent of the CAP is to reduce greenhouse gas (GHG) emissions within the County through targeted reductions in the sectors of building energy, transportation and land use, solid waste generation, water conveyance and wastewater treatment, livestock and fertilizer, and advanced climate initiatives. The CAP includes a variety of regulatory, incentive-based, and voluntary GHG-reduction measures for city and county governments, communities, residents, and businesses that will reduce GHG emissions from both existing and new development in Sonoma County.

This chapter provides an environmental analysis of the physical impacts that could occur as a result of implementing the measures in the CAP. The chapter is organized into separate sections for each resource topic analyzed, as listed below.

- 3.1, Effects Found To Be Not Significant
- 3.2, Aesthetics
- 3.3, Agriculture and Forestry Resources
- 3.4, Air Quality
- 3.5, Biological Resources
- 3.6, Cultural Resources
- 3.7, Geology and Soils
- 3.8, Greenhouse Gas Emissions
- 3.9, Hazards and Hazardous Materials
- 3.10, Hydrology and Water Quality
- 3.11, Land Use and Recreation
- 3.12, Noise
- 3.13, Public Services, Utilities, and Energy
- 3.14, Transportation and Traffic

The following subsections are included in each resource section:

- Environmental Setting describes the existing or baseline conditions of the resources in the study area (Sonoma County).
- Regulatory Setting describes applicable plans, policies, and regulations.
• *Impacts Analysis* describes the methodology used for the analysis, the criteria used to determine the significance of potential impacts, and a corresponding discussion of CAP impacts. For each potential impact, a significance determination is made (less than significant, less than significant with mitigation, or significant and unavoidable). If required to reduce a significant impact, feasible mitigation measures are identified.

A discussion of the CAP's potential contribution to cumulative impacts is included at the end of each resource section in this chapter, but the conclusions and a summary discussion are presented in Chapter 4, *Other CEQA-Required Discussions*.

### 3.0 Analysis Approach Used to Evaluate Impacts of the CAP

The CAP is not a land use plan and does not alter the existing land use designations or zoning in the Sonoma County General Plan or the local general plans for the incorporated cities. The County and incorporated cities have already adopted policies aimed to promote city-centered development patterns to direct future growth to existing urbanized areas and to protect the surrounding agricultural and resource lands. Implementation of the CAP would continue to promote these existing development patterns adopted by the County and local jurisdictions.

It is possible that in the future local jurisdictions may expand or intensify city-oriented development and land use policies in consideration of reducing GHG emissions or in consideration of other factors, such as reducing traffic, supporting multiple modes of transportation, promoting affordable housing, creating walkable neighborhoods, reducing air pollution, and preserving agricultural land and open space. However, it is speculative to identify the potential land use and zoning changes that may be adopted by individual jurisdictions at that time. Land use planning must balance a wide variety of interests and impacts, among which GHG emission reductions are but one consideration. Future proposed changes in local land use policies or land use plans (general plans, area plans, specific plans, zoning, etc.) would be subject to the California Environmental Quality Act (CEQA) and would fully disclose potential secondary environmental impacts of any such future proposal.

The CAP also does not include entitlements for the construction of any structure or facilities. Therefore, the CAP does not provide for development of areas previously not considered for development by the County and incorporated cities and would not directly result in physical environmental effects caused by the construction and operation of facilities. However, in implementing the proposed policies and actions, the CAP encourages actions that could lead to the construction of facilities that could, in turn, result in physical environmental effects. This draft environmental impact report (draft EIR) focuses on the overall effects of the proposed CAP within the County and does not conduct a site-specific examination of the projects that may occur in the future in furtherance of the CAP. The nature of the CAP is such that many proposed policies are intended to be general, with details to be determined during implementation. This draft EIR assumes that specific development projects or infrastructure improvement proposals submitted to the County or the incorporated cities with jurisdiction will require an independent environmental assessment consistent with the requirements of CEQA. Therefore, many of the impacts and mitigation measures are described in this draft EIR in general terms. Depending on the issue area, the significance criteria are identified as quantitative, qualitative, or performance thresholds beyond which the CAP would be considered to result in a significant effect. Site-specific construction and
operational impacts could only be considered at the time of specific project proposals. Therefore, as described in Chapter 1, Introduction, this draft EIR provides a program-level impact analysis.

3.1 Effects Found To Be Not Significant

As discussed in Chapter 2, Project Description, the intent of the CAP is to reduce GHG emissions within the County. The CAP was prepared with environmental factors in mind and is intended to be self-mitigating to the extent possible. To achieve this, the CAP includes many GHG-reduction measures that are designed to mitigate environmental impacts. Therefore, the GHG-reduction measures in the CAP not only reduce GHG emissions associated with existing and future uses in the County, but would also provide mitigating effects in other issue areas, such as reductions in single-occupancy vehicle use and associated traffic and air pollution emissions, reductions in solid waste generation and landfilling, water conservation, and a corresponding reduction in wastewater treatment.

Based on a review of the CAP, RCPA has determined that there was no substantial evidence that the CAP would cause or otherwise result in significant environmental impacts associated with the resource areas discussed below.

3.1.1 Mineral Resources

Implementation of the CAP would not affect the availability of known mineral resources of value or locally important mineral resource recovery sites. The CAP measures promote and/or propose improvements to existing infrastructure and limited new facilities that would occur primarily within areas that are already developed and are not likely to contain mineral resources; the measures do not propose construction of extensive new facilities. Therefore, there would be no impacts on mineral resources.

3.1.2 Population and Housing

Implementation of the CAP would not result in an increase in population more than what was accounted for in the buildout of the Sonoma County General Plan 2020 or in the local general plans because the CAP does not propose changes in current land use policy. Rather, the CAP encourages a pattern of settlement that concentrates this population growth in city centers and along transit corridors, rather than spread out across the county. The CAP supports the siting of development in transit-oriented, urban areas, as reflected in existing land use plans. Further, implementation of the CAP would not result in the displacement of people or demolition of structures leading to the displacement of people. Therefore, there would be no impacts on population and housing.
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3.2 Aesthetics

This section describes the regulatory and environmental setting for aesthetics. It also describes impacts on aesthetics that would result from implementation of the Climate Action 2020: Community Climate Action Plan (CAP) and includes mitigation for significant impacts, where feasible and appropriate.

3.2.1 Environmental Setting

This section describes the visual resources present in Sonoma County. This information has been drawn and modified from the Sonoma County General Plan 2020 EIR (Sonoma County 2006).

Visual resources are visible elements of the landscape such as landforms (i.e., hills and mountains), vegetative forms (i.e., trees and plants), bodies of water (i.e., lakes, oceans, and streams), and neighborhoods and communities (developed areas). The County is characterized by the Petaluma River and the Russian River, rolling hills, mountains, marshlands, valleys, coastal bluffs, estuaries and beaches, and vineyards. The Petaluma River meanders through the southern portion of the County towards San Pablo Bay. Marshlands, agricultural land, rolling hills, and the Petaluma River dominate the visual character of southern Sonoma County. Eastern Sonoma County is characterized by the Sonoma and Mayacamas mountains, agricultural valleys and slopes, and smaller developed areas like the City of Sonoma. The western portion of the County is characterized by the Coast Range Mountains. The central part of the County is characterized by the Santa Rosa Plain, the Russian River, agricultural lands, and the urban and suburban areas of Santa Rosa and Windsor. The northern part of the County is characterized by the Russian River Valley in the center, the coniferous forests and coastal range in the west, and the drier scrub and forested Mayacamas Mountains in the east.

Scenic resources in the County include community separators, scenic landscape units, and scenic highway corridors. A key characteristic of Sonoma County is the clear demarcation between cities and rural/agricultural areas. Community separators (i.e., undeveloped areas between cities) ensure that this characteristic exists. The Sonoma County General Plan designated eight community separators. These include: Petaluma/Novato, Petaluma/Rohnert Park, Rohnert Park/Santa Rosa, Santa Rosa/Sebastopol, Windsor/Larkfield/Santa Rosa, Windsor/Healdsburg, Northeast Santa Rosa, and Glen Ellen/Agua Caliente.

The Sonoma County General Plan identifies scenic landscape units throughout the County. The scenic landscape units in Sonoma County are the coast, Oak Valley, Alexander and Dry Creek valleys, hills east of Windsor, Eastside Road, River Road, Laguna de Santa Rosa, Bennett Valley, Highway 116, Atascadero Creek, Coleman Valley, Sonoma Mountains, hills south of Petaluma, Sonoma Valley/Mayacamas Mountains, and South Sonoma Mountains.

Brief descriptions of each community’s existing visual character and scenic resources are provided below.

- The visual setting of Cloverdale is defined by hills to the west, north, and south, and the Russian River to the east. The Russian River separates Cloverdale from the other urbanized areas of the County. Visual resources in Cloverdale include the view of the hillsides surrounding the Cloverdale valley floor.
The visual setting of Cotati is defined by the Sonoma Mountains to the east, and a series of low hills to the west. Significant visual resources in Cotati include views of the Sonoma Mountains, expansive views of agricultural lands, wildlife habitat areas, the Laguna de Santa Rosa, and various creek corridors.

The visual setting of Healdsburg is defined by U.S. Highway 101, the Russian River, surrounding agricultural lands, and mountains to the east and west. View of wooded ridges and hillsides, the Russian River, and adjacent valleys are the primary scenic resources in Healdsburg, and Fitch Mountain is the most visible scenic landmark.

The visual setting of Petaluma is defined by the Petaluma River, with a backdrop of hills to the west and south, and vistas of the Sonoma Mountains to the east. Visual resources in Petaluma include views of the Sonoma Mountains, western ridgelines, and hillsides.

The visual setting of Rohnert Park is defined by low, rolling coastal hills to the west and the Sonoma Mountains to the east. Visual resources in Rohnert Park include these natural formations and designated scenic corridors.

The visual setting of Sebastopol is defined by the Sonoma Mountains to the west, and a series of rolling hills to the east. Visual resources in Sebastopol include agricultural lands, grasslands, chaparral, woodlands, riverine, wetlands, scenic highways, scenic corridors, and Laguna de Santa Rosa.

The visual setting of the City of Sonoma is defined by the surrounding greenbelt, which preserves open spaces, hills, and agricultural lands. Visual resources in Sonoma include views of hillside open spaces and vistas.

The visual setting of Windsor is defined by the Russian River on the west, a ridgeline to the north, the PG&E transmission lines to the east, and Airport Creek to the south. Visual resources in Windsor include view of the surrounding foothills, open space areas such as community separators, agricultural lands, the creeks, and the woodlands.

### 3.2.1 Scenic Highways and Roadways

Many of the highways and roadways within Sonoma County offer views of scenic areas. The State has officially designated two scenic highways in the County for a total length of approximately 40 miles. The officially designated State Scenic Highways are Highway 12, from Danielli Avenue east of Santa Rosa to London Way near Agua Caliente, and Highway 116, from Highway 1 to the Sebastopol city limit. In addition, the undesignated portions of Highway 12 and 116 and Highways 1, 37, and 121 are eligible for official state scenic highway designation (California Department of Transportation 2015). The County also has designated roadways through the unincorporated area as Scenic Corridors, including State Highways 1, 12, 37, 101, 116, 121, and 128, and County roadways including Skaggs Springs Road, River Road, Chalk Hill Road, Lakeville Highway, Bennett Valley Road, Dry Creek Road, Mark West Springs Road, Arnold Drive, Petaluma Hill Road, Bodega Avenue, Fulton Road, and many more.

### 3.2.1.2 Greenbelts and Open Space Buffers

Greenbelts are not officially recognized as scenic resources but serve as open space buffers around urbanized areas, similar to community separators. These areas are also eligible for protection by the Sonoma County Agricultural Preservation and Open Space District. Priority greenbelts are areas close to cities that have one or more desirable characteristic, often where multiple conservation
goals can be achieved. Priority greenbelts include Cloverdale, Healdsburg/Windsor, Windsor/Santa Rosa, Sebastopol/Santa Rosa, Taylor Mountain, Sonoma Valley, Santa Rosa/Rohnert Park, Sonoma Mountain, Rohnert Park/Petaluma, Napa/Sonoma, and Sonoma/Marin. Expanded greenbelts are rural open space areas providing a one-mile buffer beyond cities and highways for extended protection and to preserve rural character. Expanded greenbelts run along the entire length of Highway 128, 12, 121, 37, parts of Highway 101, 116, and surrounding Cloverdale, Healdsburg, Windsor, Santa Rosa, Sebastopol, Sonoma, Petaluma, and Rohnert Park.

3.2.2 Regulatory Setting

3.2.2.1 Federal

There are no federal regulations for identifying impacts on aesthetics of the CAP.

3.2.2.2 State

State Scenic Highway Program

In 1963, the California legislature created the Scenic Highway Program to preserve and protect scenic highway corridors from changes that would diminish the aesthetic value of lands adjacent to state highways. The state regulations and guidance governing the Scenic Highway Program are found in the Streets and Highways Code, Section 260 et seq. A highway may be designated scenic depending on 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. A scenic corridor is the land generally adjacent to and visible from the highway and is identified using a motorist's line of vision. A reasonable boundary is selected when the view extends to the distant horizon.

California Solar Rights Act and SB 226 (2012)

The California Solar Rights Act per Section 65850.5(c) does not allow a local government to deny a permit for a solar energy system unless it finds that the project would have specific, adverse impacts upon public health or safety and there is no feasible method to satisfactorily mitigate or avoid the specific adverse impact. Per SB 226 (2012), solar roofs do not have to comply with CEQA (unless one of a narrow list of exceptions applies, none of which are for visual or historic resources impacts).

3.2.2.3 Local

Appendix C, Local General Plan Goals, Objectives, and Policies, provides a list of the goals, objectives, and policies in the local general plans of the participating jurisdictions, including those related to aesthetics. These goals, objectives, and policies were reviewed to assess whether the Project is consistent with the general plans of participating jurisdictions. Disclosure of this consistency analysis is for informational purposes. An additional purpose of providing a list of relative local policies is, where appropriate, to provide the context within which the CAP will be locally implemented. As described in the CAP, most of the CAP measures represent implementation of many of the priorities outlined in existing local policies.

Inconsistencies with general plan policies are not necessarily considered a significant impact under CEQA unless it is related to a physical impact on the environment that is significant in its own right.
Implementation of the CAP is consistent with the applicable general plan goals, objectives, and policies of the participating jurisdictions in relation to aesthetics.

### 3.2.3 Impacts Analysis

#### 3.2.3.1 Methodology

The following analysis takes into account the attributes of aesthetics or visual character, including the natural and man-made environment. Impacts regarding aesthetics or visual character typically include changes to the original visual character of an area or the elimination of a significant natural feature.

#### 3.2.3.2 Significance Criteria

The State CEQA Guidelines Appendix G (14 California Code of Regulations [CCR] 15000 et seq.) has identified significance criteria to be considered for determining whether a project could have significant impacts on existing aesthetic resources.

An impact would be considered significant if construction or operation of the project would have any of the following consequences.

- 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.

#### 3.2.3.3 Impacts and Mitigation Measures

**Impact AES-1:** Implementation of the CAP could result in substantial adverse effects on scenic views or vistas, substantially damage scenic resources within a state scenic highway, or substantially degrade the existing visual character of the County (less than significant).

The CAP is a policy-level document that does not include any site-specific designs or proposals, or grant any entitlements for development that would have the potential to degrade the aesthetic quality of the environment or adversely affect visual resources. As a policy document, the CAP would have no direct impact on visual resources, but future implementation activities could change community aesthetics.

Several of the CAP measures, when implemented, would result in physical changes to the environment. Some of these changes may have the potential for adverse effects on the visual quality of the area in which they are situated, and in particular, could result in alteration or obstruction of scenic views from public viewing areas, vistas, or open spaces.

There are several CAP measures that could include the construction or installation of new facilities aimed to improve energy efficiency. The CAP includes measures that would increase renewable energy use by supporting the installation of small scale renewable energy systems, including solar photovoltaic and co-generation facilities within the County. Small-scale facilities, such as rooftop photovoltaic panels, generally do not involve construction that substantially changes roof lines or
add massive or tall new features that would have the potential to substantially alter or obstruct views. Therefore, visual impacts of small scale renewable energy systems are not expected to result in a significant impact on scenic views.

Solar panels are not as readily observable from street-level viewpoints and thus would have a limited effect on street-level views of neighborhoods and commercial districts and their visual character. While some reflection may be more observable from elevated viewpoints, the period of reflection will be limited in duration due to the transit of the sun. As such, while rooftop solar may alter views periodically from elevated viewpoints, given that they are not so prominent from street-level views and are generally in line with rooftop profiles, this is not expected to result in a significant aesthetic change in local visual character. Larger facilities, such as waste-to-energy facilities and anaerobic digesters, would mostly be installed within existing facilities (e.g., wastewater treatment plants, landfills, and dairies) and RCPA presently has no reason to conclude such facilities would have significant aesthetic impacts.

CAP measures aimed to encourage a shift in the mode used for transportation would involve generally minor changes to existing streetscapes. In general, these improvements are low-lying and do not involve the construction of massive new structures. Several CAP measures that promote the extension of recycled water lines would be located within existing utility right-of-ways and would not be visible at-grade. While these improvements could alter the visual quality of a neighborhood, these alterations would not generally result in a degradation of visual quality or have the potential to block or alter scenic views.

CAP measures intended to reduce travel demand through existing smart land use and development would promote mixed-use development, transit accessibility, and transit-oriented development (TOD) in city centers and along planned transit corridors. Communities have identified mixed-use development and affordable housing in city centers and TOD locations through their existing general plans, area plans, and specific plans. These changes may introduce new structures into the landscape, allow taller or more massive buildings, reduced set-backs, and altered streetscapes, all of which could introduce new elements to the urban landscape that could alter or block existing scenic views from public viewpoints, vistas, and open space, or that could adversely affect existing visual resources.

All future development projects that would implement CAP measures would be subject to applicable local regulations and requirements, as well as be subject to further CEQA analysis of project-specific impacts. Continued implementation of County or city general plan policy provisions and zoning regulations would manage the location and appearance of structural development in scenic corridors.

**Impact AES-2: Implementation of the CAP could result in an increase of daytime glare and/or nighttime lighting (less than significant with mitigation).**

Implementation of the CAP could introduce new sources of daytime glare and could change nighttime lighting.

As discussed under Impact AES-1, the CAP is a policy-level document that does not include site-specific designs or proposals or grant any entitlements for development that would increase daytime glare or nighttime lighting in the County. As a policy document, the CAP would have no direct impacts resulting from light and/or glare, but future implementation activities could result in changes that could alter lighting conditions in the County.
There are several CAP measures that promote and could include the construction of new facilities or retrofits to existing buildings aimed to increase energy efficiency, renewable energy use, solid waste diversion, recycled water and greywater use, and capture/use of methane from landfills and dairies. CAP measures aimed to reduce travel demand through smart land use and development would promote new infill development and redevelopment within the city centers and along transit corridors. Adherence to County or city general plan policies and community plan design standards is anticipated to minimize impacts related to glare from reflective surfaces and new sources of nighttime lighting from these new facilities and developments. Environmental review of individual projects requiring discretionary approval would provide additional opportunity to identify and mitigate site-specific and development-specific impacts of this kind. Mitigation measures, such as lighting design and use of non-reflective materials and architectural coatings, are generally effective at reducing such impacts to less than significant. Therefore, there is little potential for CAP measures aimed to reduce travel demand through smart land use and development to result in a substantial new source of light or glare, and the impact is less than significant.

The CAP includes measures that would increase renewable energy use by supporting the installation of small scale renewable energy systems, including solar photovoltaic and co-generation facilities within the County, which could have the potential to be new sources of light or glare. Some facilities could require lighting that could affect offsite receptors. The potential for glare from a photovoltaic panel surface exists when the angle of photovoltaic surface to the sun is such that sunlight is reflected toward a viewer. For instance, at midday, if a solar panel were flat, then the reflections from the surface of the panels would be toward or near the sun’s position in the sky. At a certain angles and time of day, photovoltaic panels could present glare impacts for motorists traveling in the vicinity as well as to residents in the area if reflections from the surface of the panels were directed toward a roadway or residences.

An anti-reflective coating or glass on a solar panel can reduce the amount of sunlight that is reflected and increase the amount of sunlight that is absorbed. Most solar panels are now designed with at least one anti-reflective layer and some panels have multiple layers.

In most cases, rooftop solar installations will be above the street level line of sight and thus will not create glare that could be a safety hazard to ground-level vehicle transit or would substantially affect daytime views. Potential rooftop solar installations in the vicinity of airports or airstrips would be subject to the compatible uses for the airport influences areas per Federal Aviation Regulations airspace policies. While the California Solar Rights Act prohibits local jurisdictions from restricting on-site solar installations for visual or aesthetic purposes, the Act does not prohibit local jurisdictions from restrictions or conditions that promote public health or safety. As such, the local government can impose requirements to avoid light and glare that would affect public safety, but cannot impose requirements for aesthetic impacts unrelated to public safety. RCPA presently has no reason to conclude such facilities would have significant aesthetic impacts.

Recommended Mitigation Measure AES-1 would require responsible agencies to develop of design guidelines for rooftop photovoltaic solar energy panels to minimize daytime glare for motorists traveling in the vicinity or for nearby airports/airstrips. The design guidelines prescribed in recommended Mitigation Measure AES-1 would set parameters and provisions for appropriate siting of photovoltaic solar panels to prohibit off-site day time glare impacts that could result in adverse impacts on public safety. Thus, with implementation of recommended Mitigation Measure AES-1, daytime glare impacts resulting from potential photovoltaic solar energy panels would be less than significant.
Mitigation Measure AES-1: Design guidelines for photovoltaic solar energy panels on rooftops regarding glare and safety.

To ensure that photovoltaic solar energy panels on rooftops do not result in glare impacts on motorists traveling in the vicinity or on nearby airports/airstrips, the responsible agency shall develop a set of design guidelines for the siting of such facilities. The guidelines shall contain specific provisions for design. At a minimum, the guidelines shall require solar installations to meet the following standards:

- Solar panels shall be required to use non-reflective coatings wherever they have the potential to result in glare on public roadways or facilities.
- Exposed frames and components should have a non-reflective surface.
- Reflection angles from collector surfaces should be oriented away from neighboring windows and, to the extent possible, away from public areas.

3.2.3.4 Cumulative Impacts

Impact C-AES-1: Implementation of the CAP, in combination with other foreseeable development in the surrounding area, could have a significant cumulative impact on aesthetics (less than considerable contribution with mitigation).

The cumulative context for the evaluation of cumulative impacts on aesthetics addresses the effects of the CAP in combination with other development in Sonoma County. The cumulative context for light and glare would be development that could affect the same sites that would be affected by light or glare generated by the CAP.

The proposed CAP does not propose any specific development, and any development that would occur in the County would be required to comply with the same general plan policies discussed above with regard to protection of scenic vistas. Implementation of these policies on a countywide basis would ensure a less-than-significant cumulative impact on scenic vistas.

Lighting emanates from the existing development in the County, and probable future development in the County would also include structures that emit glare or lighting, increasing daytime glare and nighttime lighting limiting views of the nighttime sky. This would be considered a significant cumulative glare and lighting impact. The CAP promotes the development of a limited number of facilities that would include exterior lighting. The CAP also promotes photovoltaic solar energy panels on existing and future buildings that may emit glare. Potential project lighting and glare, in addition to lighting and glare generated from other cumulative development, could create a new source of glare or light that would affect daytime or nighttime views in the area.

However, the number of facilities that would be developed under the CAP would be limited and would generally be of the type that lighting would only be required for security, which would be less intense than lighting required for occupied uses. In terms of potential glare generated by photovoltaic solar energy panels, recommended Mitigation Measure AES-1 would require the responsible agencies to develop siting guidelines to minimize potential glare impacts on motorists traveling in the vicinity and on nearby airports/airstrips. Therefore, the CAP’s contribution to cumulative light and glare impacts would be less than considerable.
3.3 Agriculture and Forest Resources

This section describes the regulatory and environmental setting for agricultural and forestry resources. It also describes impacts on agricultural and forest resources that would result from implementation of the Climate Action 2020: Community Climate Action Plan (CAP) and includes mitigation for significant impacts, where feasible and appropriate.

3.3.1 Environmental Setting

This section describes the agricultural and forest resources present in Sonoma County (County). This information has been drawn and modified from the Sonoma County General Plan 2020 Environmental Impact Report (EIR) (Sonoma County 2006).

3.3.1.1 Agricultural Resources

Sonoma County ranks 16th in California for farming productivity and 34th in the nation. Over the course of the County’s agricultural history, the dominant crop in the market has shifted several times. At the beginning of the 20th century, apples were the most valuable commodity, followed by a shift to poultry in the 1920s. Dairy products dominated the market in the mid-1950s, and wine grapes have been the dominant crops since the 1980s. Today, fruits have fallen in importance, and although dairy farms and livestock operations are still present, both are reduced in number. Vegetables have increased their share of the market, and the nursery industry has grown to supply the demand for varietal wine-grape rootstock.

Important farmland soils are located throughout Sonoma County but are concentrated primarily in the Sonoma Valley, west Sebastopol, west Santa Rosa, Alexander Valley, and Dry Creek Valley regions (Sonoma County 2008). As of 2012, Sonoma County had approximately 578,006 acres of agricultural land (56% of the County), as determined by the state through the Farmland Mapping and Monitoring Program (FMMP) (California Department of Conservation 2012a). Of that total, 417,091 acres (41% of the County) were designated as grazing land, and 160,915 acres (16% of the County) were classified as important farmlands (California Department of Conservation 2012a). Grazing land represents land where existing vegetation is suitable for grazing or browsing, whether growing naturally or through management. Important farmland categories represent the agricultural lands that are most suitable for cultivating crops and include Prime Farmland, Farmland of Statewide Importance, Unique Farmland, and Farmland of Local Importance, as described below in Section 3.3.2.2.

Table 3.3-1 provides the types and total acreages of the agricultural lands that were inventoried by the FMMP in the County for 2012.
Table 3.3-1. Total Acres of Agricultural Lands in Sonoma County (2012)

<table>
<thead>
<tr>
<th>Farmland Type</th>
<th>Total Acreage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prime Farmland</td>
<td>29,882</td>
</tr>
<tr>
<td>Farmland of Statewide Importance</td>
<td>17,213</td>
</tr>
<tr>
<td>Unique Farmland</td>
<td>33,079</td>
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<tr>
<td>Farmland of Local Importance</td>
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<tr>
<td><strong>Important Farmland Total</strong></td>
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<tr>
<td>Grazing Land</td>
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</tr>
<tr>
<td><strong>Agricultural Land Total</strong></td>
<td><strong>578,006</strong></td>
</tr>
</tbody>
</table>

Source: California Department of Conservation 2012a.

Most areas that have been designated as Prime Farmland, Farmland of Statewide Importance, Unique Farmland, or Farmland of Local Importance in the County are located outside city boundaries, in unincorporated areas. Designated Prime Farmland and Farmland of Statewide Importance are located in northern Sonoma County, south of Cloverdale and north and southwest of Geyserville. Most of the other mapped farmlands are in areas west of the City of Santa Rosa and southwest of the City of Sonoma (California Department of Conservation 2012b).

**Agricultural Preservation**

As the urbanized parts of Sonoma County continue to expand, pressure to develop agricultural lands increases. The many factors that might make a piece of property ideal for farming are similar to the factors that might make a piece of property attractive for development. The most common programs for preserving agricultural lands and continuing uses for agricultural purposes include the Williamson Act and programs related to the purchase of conservation easements.

Approximately 271,611 acres of prime and nonprime farmland in the County are covered by a Williamson Act contract (California Department of Conservation 2015). Approximately 30,000 acres of agricultural land are protected by the Sonoma County Agricultural Preservation and Open Space District under conservation easements or fee title. In addition, the Sonoma Land Trust protects 2,667 acres of agricultural land.

3.3.1.2 **Forest Resources**

Approximately 513,000 acres (about 50% of the County land area) consists of forest and woodlands, including approximately 72,000 acres of conifer forest, 284,000 acres of hardwoods, and 157,000 acres of conifer mixed with hardwoods (Sonoma County 2008). These forest and woodland areas in the County are often interspersed with grasslands, shrublands, or agricultural lands and residences. The Sonoma Land Trust protects 1,134 acres of sustainable forestry land.

Forest areas also provide commercial timber as a renewable resource. "Timberlands" are generally considered to be those lands that are capable of and available for growing a commercial species of timber, such as redwood and Douglas-fir. In Sonoma County, these lands are predominantly in the northwest part of the County and Russian River area. There are approximately 232,000 acres of timberland in the County (Sonoma County 2008).
3.3.2 Regulatory Setting

3.3.2.1 Federal

There are no relevant federal regulations for identifying impacts on agricultural and forestry resources as a result of the CAP.

3.3.2.2 State

California Land Conservation Act (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 prevent their premature conversion to urban uses. The Williamson Act established an agricultural preserve contract procedure by which any county or city within the state may tax a landowner at a lower rate, using a scale that is based on the actual use of the land for agricultural purposes, as opposed to its unrestricted market value. In return for a reduced tax rate, the owner guarantees that the property remains under agricultural production for a 10-year period. The contract is automatically renewed on an annual basis until the property owner indicates a desire to terminate the contract.

The California Department of Conservation has oversight responsibility for Williamson Act program administration and compliance. However, the local government is authorized to adopt rules to govern the administration of agricultural preserves. The County of Sonoma first adopted its Rules for Administering Agricultural Preserves in 1967, which were last amended in 1989. Two different rules were adopted, one for “Type I” preserves (prime agricultural land) and one for “Type II” preserves (nonprime agricultural land [e.g., grazing or open space]).

In 1998, the state passed the Farmland Security Zone law, sometimes known as the Super Williamson Act. Under the law, farmers can receive an additional 35% reduction in the land's value for property-tax purposes. To earn the additional tax reduction, farmers must agree to keep their land in the conservation program for 20 years, twice as long as required by the Williamson Act. Sonoma County adopted the Super Williamson Act through a County resolution on October 2, 2001, but has yet to receive any applications.

Farmland Mapping and Monitoring Program

The California Department of Conservation administers the FMMP, which evaluates the quality of farmlands throughout the state. The suitability of local soil resources plays a crucial part in the FMMP’s farmland classifications. The FMMP uses U.S. Department of Agriculture Natural Resource Conservation Service (USDA NRCS) soil survey information, land inventories, and monitoring criteria to classify most of the state’s agricultural regions into five agricultural and three nonagricultural land types. Every 2 years, the FMMP publishes this information in its Important Farmland map series. The five agricultural land classifications are as follows:

- **Prime Farmland** – Lands with the best combination of physical and chemical features that are able to sustain long-term production of agricultural crops. The land must be cropped and supported by a developed irrigation water supply that is dependable and of adequate quality during the growing season. Land must have been used for production of irrigated crops at some time during the two update cycles prior to the mapping date.
• **Farmland of Statewide Importance** – Lands that are similar to Prime Farmland but with minor shortcomings, such as greater slopes or less ability to store soil moisture. These lands have the same reliable sources of adequate-quality irrigation water available during the growing season. Land must have been used for production of irrigated crops at some time during the two update cycles prior to the mapping date.

• **Unique Farmland** – Lower quality soils that are used for the production of the state's leading agricultural crops. These lands are usually irrigated but may include non-irrigated orchards or vineyards, as found in some climatic zones of California. Land must have been cropped at some time during the two update cycles prior to the mapping date.

• **Farmland of Local Importance** – Land of importance to the local agricultural economy, as determined by each county's board of supervisors and local advisory committees. In Sonoma County, these farmlands include the hay-producing areas of the Santa Rosa Plains, Petaluma Valley, and Tubbs Island Naval Reservation. Additional areas include those lands that are classified as having the capability of producing locally important crops, such as grapes, corn, etc., but may not be planted at the present time.

• **Grazing Land** – Lands of at least 40 acres on which the existing vegetation is suited to the grazing of livestock.

The first three categories (Prime Farmland, Farmland of Statewide Importance, and Unique Farmland) are considered “important farmland” and also meet the definition of agricultural land under the California Environmental Quality Act (CEQA) (Section 21060.1).

### 3.3.2.3 Local

Appendix C, *Local General Plan Goals, Objectives, and Policies*, provides a list of the goals, objectives, and policies in the local general plans of the participating jurisdictions, including those related to agricultural and forestry resources. These goals, objectives, and policies were reviewed to assess whether the Project is consistent with the general plans of participating jurisdictions. Disclosure of this consistency analysis is for informational purposes. An additional purpose of providing a list of relative local policies is, where appropriate, to provide the context within which the CAP will be locally implemented. As described in the CAP, most of the CAP measures represent implementation of many of the priorities outlined in existing local policies.

Inconsistencies with general plan policies are not necessarily considered a significance impact under CEQA unless it is related to a physical impact on the environment that is significant in its own right.

Implementation of the CAP is consistent with the applicable general plan goals, objectives, and policies of the participating jurisdictions in relation to agricultural and forestry resources.

### 3.3.3 Impacts Analysis

#### 3.3.3.1 Methodology

The analysis of agriculture and forestry resources presented in this section is based on a review of the project description and available literature from state and local agencies. This impact analysis is focused on the compatibility of the project with existing agricultural uses and policies in Sonoma
Sonoma County and whether the activities that would occur with implementation of the CAP could result in physical effects on agriculture and forestry resources.

### 3.3.3.2 Significance Criteria

State CEQA Guidelines Appendix G (14 California Code of Regulations [CCR] 15000 et seq.) identifies the significance criteria to be considered in determining whether a project would have significant impacts on existing agriculture.

An impact would be considered significant if construction or operation of the project would have any of the following consequences.

- Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use.
- Conflict with existing zoning for agricultural use or a Williamson Act contract.
- Conflict with existing zoning for, or cause rezoning of, forestland (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 forestland or conversion of forestland to non-forest use.
- Involve other changes in the existing environment that, because of their location or nature, could result in the conversion of Farmland to non-agricultural use or conversion of forestland to non-forest use.

### 3.3.3.3 Impacts and Mitigation Measures

**Impact AG-1: Implementation of the CAP could convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) to non-agricultural use (less than significant).**

Sonoma County includes approximately 80,174 acres of farmlands that have been mapped on the FMMP as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. None of the CAP measures would result in direct conversion of existing mapped farmlands to non-agricultural uses. The CAP would promote the construction or installation of a limited number of facilities (e.g., anaerobic digester facilities to capture methane gas from manure) at existing dairies to reduce greenhouse gas (GHG) emissions from livestock operations. Because these facilities would be installed at existing dairies, they would not result in the conversion of farmland to a non-agricultural use.

Several CAP measures would encourage a shift in a mode of transportation. These would involve generally minor changes to existing streetscapes. Some new bicycle facilities may require road widening adjacent to farmlands, which could result in significant impacts and warrant mitigation. Mitigation for any new facilities would be identified during project-level review, but, given the limited scale of bicycle pathways, even those requiring road widening, such impacts would be readily mitigable to a less-than-significant level.

The CAP also promotes the construction of mixed-use and transit-oriented development in city centers to reduce fuel use and travel demand through smart land use and development as well as solid waste facilities to increase waste diversion, reuse of materials, and recycling. Infill mixed-use and transit-oriented development in city centers would be located in developed areas and would not
result in the conversion of farmlands to non-agricultural uses. Although the locations for the solid waste facilities are unknown, there is presently no basis to conclude that there will be impacts on agricultural land associated with these facilities.

Furthermore, CAP measures related to agriculture promote reducing GHG emissions from livestock operations and expanding sustainable agriculture practices. None of the proposed CAP measures would result in the conversion of farmland to a non-agricultural use. In fact, one measure would encourage the preservation of existing agricultural lands to prevent conversion of such lands to urban uses. Therefore, impacts related to the potential for converting farmlands to a non-agricultural use are considered to be less than significant at this time.

Individual proposals for solid waste facilities would be required to undergo project-level CEQA review, disclose any potential impacts related to conversion of farmlands, and provide mitigation of any significant impacts, if necessary. Since the CAP does not include any specific proposed facilities or facility locations, no further analysis of this potential impact can be provided at this time.

Impact AG-2: Implementation of the CAP could conflict with existing zoning for agricultural use or a Williamson Act contract (less than significant).

The CAP does not propose changes to existing land use designations or zoning and anticipates that actions promoted by the CAP will be consistent with the land use designations established by the local land use plans. As discussed above, the CAP promotes the construction of mixed-use and transit-oriented development in city centers to reduce fuel use and travel demand through smart land use and development as well as solid waste facilities to increase waste diversion, reuse of materials, and recycling. Although the locations of these developments and facilities are unknown, there is presently no basis to conclude that there will be conflicts with existing zoning for agricultural use or a Williamson Act contract associated with these facilities. Furthermore, as described above, one CAP measure would encourage communities and the County to preserve natural open space, working timberlands, and agricultural lands to prevent conversion of such lands to urban uses. Therefore, impacts related the potential conflicts with existing zoning for agricultural use or a Williamson Act contract are considered to be less than significant at this time.

Individual proposals for solid waste facilities would be required to undergo project-level CEQA review, disclose any potential impacts related to conflicts with agricultural zoning or Williamson Act contracts, and provide mitigation of any significant impacts, if necessary. Since the CAP does not include any specific proposed facilities or facility locations, no further analysis of this potential impact can be provided at this time.

Impact AG-3: Implementation of the CAP could conflict with zoning for or cause rezoning of forestland or timberland or result in the loss of forestland or conversion of forestland to non-forest use (less than significant).

Approximately half of the land area of Sonoma County consists of forests and woodlands, including approximately 232,000 acres of timberland in the County. As described under Impact AG-2, the CAP does not propose to change existing land use designations or zoning and anticipates that actions promoted by the CAP will be consistent with the land use designations established by the local land use plans. As described above, one CAP measure would encourage communities and the County to preserve natural open space, working timberlands, and agriculture lands to prevent conversion of such lands to urban uses. Therefore, impacts related the potential conflicts with existing zoning for or cause rezoning of forest land or timberland are considered to be less than significant at this time.
Individual proposals for solid waste facilities would be required to undergo project-level CEQA review, disclose any potential impacts related to conversion of forest or timberland, and provide mitigation of any significant impacts, if necessary. Since the CAP does not include any specific proposed facilities or facility locations, no further analysis of this potential impact can be provided at this time.

**Impact AG-4: Implementation of the CAP could involve other changes in the existing environment that could result in the conversion of Farmland to non-agricultural use or forestland to non-forest use (less than significant).**

As described under Impacts AG-1 through AG-3, the CAP does not propose to change existing land use designations or zoning and anticipates that actions promoted by the CAP will be consistent with the land use designations established by the local land use plans. The CAP includes several measures aimed at reducing GHG emissions related to agriculture and encouraging sustainable farming techniques. None of the proposed CAP measures would directly result in the conversion of farmland to a non-agricultural use or forestland to a non-forest use. In fact, one of the CAP measures would promote rangeland carbon farming and sequestration, which would improve agricultural soils and result in a wide range of other environmental benefits. Carbon farming is a method of farming that captures and holds carbon in vegetation and soils, thereby helping to reduce GHG emissions. Carbon farming includes techniques such as adding compost from local community waste or manure from dairy operations to the soil or planting hedgerows and riparian corridors. Residue management, prescribed grazing, range and critical area planting, and filter strips are other techniques. These methods would help to sustain the existing agricultural land by reducing erosion and soil loss, improving soil structures, increasing soil fertility, reducing soil salinity, increasing biodiversity, creating healthier soils and vegetation, increasing water efficiency, and buffering against drought (Carbon Farmers of Australia 2012). Therefore, impacts would be less than significant. No mitigation is required.

**3.3.3.4 Cumulative Impacts**

**Impact C-AG-1: Implementation of the CAP, in combination with other foreseeable development in the surrounding area, could have a significant cumulative impact on agricultural and forest resources (less than considerable contribution).**

The geographic context for the cumulative analysis of impacts on agricultural and forestry resources is the area affected by the CAP, in combination with other development in Sonoma County. Implementation of the CAP would include measures that would encourage energy efficiency, a transportation mode shift, and the densification of transit-oriented land uses near city centers and transit corridors. The CAP itself does not propose any specific facilities that would require conversion agricultural land uses, timberlands, or forestlands to nonagricultural or non-forest uses within Sonoma County and would not contribute considerably to any cumulative loss of agricultural land uses, timberlands, or forestlands.

Individual proposals for any future new facilities would be required to undergo project-level CEQA review, disclose any potential impacts related to agriculture, and provide mitigation of any significant impacts, if necessary. Since the CAP does not include any specific proposed facilities or facility locations, no further analysis of this potential impact can be provided at this time.
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3.4 Air Quality

This section describes the regulatory and environmental setting for air quality. It also describes impacts on air quality that would result from implementation of the Climate Action 2020: Community Climate Action Plan (CAP) and includes mitigation for significant impacts, where feasible and appropriate.

3.4.1 Environmental Setting

This section presents the environmental setting for air quality in Sonoma County. This information has been drawn and modified from the Sonoma County General Plan 2020 EIR (Sonoma County 2006).

3.4.1.1 Air Pollution Climatology

While the primary factors that determine air quality are the locations of air pollutant sources and the amount of pollutants emitted from those sources, meteorological conditions and topography are also important factors. Atmospheric conditions, such as wind speed, wind direction, and air temperature gradients interact with the physical features of the landscape to determine the movement and dispersal of air pollutants. Unique geographic features throughout the state define fifteen air basins with distinctive regional climates.

Sonoma County has complex geography and climates. The coastal mountain ranges form several valleys with varying climate regimes. Sonoma County is part of two distinct air basins: the northern portions of the County are part of the North Coast Air Basin (NCAB) and the southern portions of the County are part of the San Francisco Bay Area Air Basin (SFBAAB). This section discusses the climatology of the sub-regional air basins within the County: the Cotati/Petaluma Valleys, Sonoma Valley, and Alexander Valley. The Cotati/Petaluma Valleys and Sonoma Valley are generally part of the SFBAAB, and Alexander Valley is generally part of the NCAB.

Cotati/Petaluma Valleys

The Cotati Valley to the north and Petaluma Valley to the south create a wide basin stretching from Santa Rosa to San Pablo Bay. These valleys are bordered on the east by the Sonoma Mountains. To the west is a series of low hills and the Estero Lowlands, a relatively flat area surrounding Estero Americano, which is the southern boundary of the County at that point. The region from the Estero Lowlands to San Pablo Bay is known as the Petaluma Gap. This low-level gap in the coastal hills is a major source of marine air flow into the County and the northern Bay Area.

Wind patterns in the Petaluma and Cotati Valleys are strongly influenced by the Petaluma Gap, with winds predominantly from the west. As marine air travels through the Petaluma Gap, it creates northward and southward air currents moving into the Cotati and Petaluma Valleys. The southward path continues into San Pablo Bay and through the Carquinez Strait. Because of this pattern, the prevailing wind direction in Santa Rosa is from the southwest while the prevailing wind direction in Petaluma is from the northwest.

The air pollution potential (i.e., the limitation of the atmosphere’s ability to transport and dilute pollutants) is low in the Petaluma Valley because of the influence of the Petaluma Gap. Pollution
potential is higher in the Cotati Valley, which is less well-ventilated and has natural barriers to air flow to the north and east.

**Sonoma Valley**

The Sonoma Valley is a long, narrow valley running north-south between the Sonoma Mountains on the west and the taller Mayacamas Mountains to the east. Sheltered from winds flowing through the Petaluma Gap, the Sonoma Valley winds are lighter than in the western portions of the County and tend to be from the south during the day and from the north during the night.

The air pollution potential of the Sonoma Valley is high. Prevailing winds can transport locally and regionally generated pollutants northward into the narrow valley, which often traps and concentrates the pollutants under stable conditions. The local upslope (southerly) and downslope (northerly) flows set up by the surrounding mountains may also recirculate pollutants.

**Alexander Valley**

Alexander Valley is a relatively narrow valley aligned northwest to southeast, bound on the west by the coastal mountains and on the east by the Mayacamas Mountains. There is little terrain separating the Alexander Valley from the Cotati Valley to the south. While the Alexander Valley is ventilated by marine air moving up the Russian River valley, it is also influenced by wind flows traveling northward from the heavily-populated Cotati Valley.

The air pollution potential of the Alexander Valley is high. As an interior valley surrounded by high mountains it has frequent light winds and, like all of California, is subject to periods of high atmospheric stability. Although lightly developed with few industries, it is downwind of the Cotati Valley under certain wind conditions and is affected by pollutants transported into the local air basin.

### 3.4.1.2 Criteria Air Pollutants of Concern

The state and federal ambient air quality standards cover a wide variety of pollutants. The federal and state governments have established National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS), respectively, for six criteria pollutants: ozone, CO, lead (Pb), nitrogen dioxide (NO$_2$), sulfur dioxide (SO$_2$), and PM, which consists of PM of 10 microns in diameter or less (PM10) and PM of 2.5 microns in diameter or less (PM2.5).

Ozone and NO$_2$ are considered regional pollutants because they (or their precursors) affect air quality on a regional scale; NO$_2$ reacts photochemically with reactive organic gases (ROGs) to form ozone, and this reaction occurs at some distance downwind of the source of pollutants. Pollutants such as CO, SO$_2$, and Pb are considered to be local pollutants that tend to accumulate in the air locally. PM is considered to be a local pollutant as well as a regional pollutant.

According to the California Air Resources Board CAAQS, the SFBAB is designated nonattainment for O$_3$, PM2.5, and PM10. By federal standards, the SFBAB is designated nonattainment for O$_3$ and PM2.5. The NCAB is designated attainment or unclassified for all criteria pollutants by state standards and unclassified for all criteria pollutants by federal standards. Thus, the primary pollutants of concern in Sonoma County are: ozone (including NO$_X$) and PM. Principal characteristics surrounding these pollutants are discussed below.
Ozone

Ground level ozone, often referred to as smog, is not emitted directly, but is formed in the atmosphere through complex chemical reactions between nitrogen oxides (NOx) and reactive organic gases (ROG) in the presence of sunlight. The principal sources of NOx and ROG, often termed “ozone precursors,” are combustion processes (e.g., by automobiles and aircraft) and evaporation of solvents, paints, and fuels. Motor vehicles are the single largest source of ozone precursor’s emissions in Sonoma County. Exposure to ozone can cause eye irritation, aggravate respiratory diseases, and damage lung tissue, as well as harm vegetation and reduce visibility.

Ozone concentrations in the SFBAAB and southern NCAB have shown no strong trends over the last ten years. There is considerable year-to-year variation in levels due to the influence of weather.

Particulate Matter

Particulates are solid or liquid particles, including smoke, dust, aerosols, and metallic oxides that are small enough to remain suspended in the air for a long period of time. PM10 is particulate matter less than ten microns in diameter. PM2.5 is particulate matter less than 2.5 microns in diameter. There are many sources of particulate matter emissions, including combustion, industrial processes, grading and construction, farming operations, wind-blown dust, and motor vehicles. Of the particulate matter emissions associated with motor vehicle use, some are tailpipe and tire wear emissions, but greater quantities are generated by re-suspended road dust. Consequently, improvements in motor vehicle engines and fuels have not reduced particulate matter emissions as significantly as they have reduced emissions of other pollutants.

Wood burning is a significant source of particulate matter, particularly during episodes when levels of particulate concentrations are highest, as on a still and cold night. Wood smoke carries other pollutants, including carbon monoxide, nitrogen dioxide, and volatile organic compounds that include dioxin, benzene, and formaldehyde.

Health effects of particulate matter vary depending on a number of factors, including the type and size of the particle. Research has shown a correlation between highly inhalable particulate matter (PM10) concentrations and increased mortality rates. Elevated levels can also aggravate chronic respiratory illness such as bronchitis and asthma. Fine particulate matter (PM2.5) is a concern because it can bypass the body’s natural filtration system more easily than larger particles, and can lodge deep in the lungs. The largest emission sources for PM10 consist of construction and farming operations, entrained road dust, and wind-blown dust. The major sources of PM2.5 are combustion of fuels and smoke. Both PM10 and PM2.5 are also created as secondary pollutants in the atmosphere through chemical and photochemical processes.

Particulate matter concentrations in the SFBAAB and southern NCAB have shown no strong overall trends over the last ten years. While many stationary sources of particulate matter such as factories and mills have either closed or been controlled, area sources such as vehicle traffic and residential wood-burning have been increasing, off-setting the reductions in the stationary emissions.

Toxic Air Contaminants

Toxic air contaminants (TACs) are another group of pollutants of concern. Unlike criteria pollutants, no safe levels of exposure to TACs can be established. There are many different types of TACs, with varying degrees of toxicity. Sources of TACs include industrial processes (e.g., petroleum refining
and chrome plating operations), commercial operations (e.g., gasoline stations and dry cleaners),
and motor vehicle exhaust. Public exposure to TACs can result from emissions resulting from
normal operations, as well as accidental releases of hazardous materials during upset conditions.
The health effects of TACs include cancer, birth defects, neurological damage, and death.

**Diesel Exhaust**

In 1998, after a 10-year scientific assessment process, the California Air Resources Board identified
particulate matter from diesel-fueled engines as a TAC. The State has begun a program of identifying
and reducing risks associated with particulate matter emissions from diesel-fueled vehicles. The
program consists of new regulatory standards for all new on-road, off-road, and stationary diesel-
fueled engines and vehicles; new retrofit requirements for existing on-road, off-road, and stationary
diesel-fueled engines and vehicles; and new diesel fuel regulations to reduce the sulfur content of
diesel fuel as required by advanced diesel emission control systems.

The need to separate residential uses from sources of diesel can be in conflict with the need to locate
housing near bus service. The design, layout, and orientation of high-density housing needs to
minimize exposure of residents to diesel exhaust. This apparent conflict is likely to be reduced in the
future as bus systems switch to cleaner diesels or alternatively fueled vehicles.

Diesel particulate is a relatively inert pollutant (i.e., is not modified in the atmosphere). It is a
localized pollutant in that the highest concentrations are found near the source and concentration
decreases with distance from the source. The regulation of diesel exhaust from trucks and buses is
achieved at the State and federal levels. At the local level, appropriate policies that would site
residences, schools, day care centers, and other sensitive receptors away from major sources of
diesel exhaust (e.g., truck haul routes, warehouses, and distribution centers) can greatly reduce
exposures and health risks. In California, local transit and school districts are now mandated to
purchase buses with lower emissions.

**Wood Smoke**

Wood smoke has long been identified as a significant source of pollutants in urban and suburban
areas. Wood smoke contributes to particulate matter and carbon monoxide concentrations, reduces
visibility, and contains numerous TACs. The particles are composed of organic vapors, carbon, and
minerals that are not properly burned in the early phases of a fire. Present State controls on this
source include the adoption of emission standards for wood stoves and fireplace inserts. Within the
San Francisco Bay Air Basin some jurisdictions have adopted local wood smoke ordinances, based
on the Bay Area Air Quality Management District (BAAQMD) model wood burning ordinance. The
Northern Sonoma County Air Pollution Control District's Regulation IV prohibits the installation of
conventional fireplaces in new construction and remodels, and requires that any wood-burning
devices be certified. Wood smoke regulation is likely to increase with the recent adoption of PM2.5
State and federal standards.

**Other Air Quality Issues**

Other air quality issues of concern in Sonoma County include nuisance impacts of odors and dust.
Objectionable odors may be associated with a variety of pollutants and operations. Common sources
of odors include concentrated animal operations, wastewater treatment plants, landfills, composting
facilities, and industrial plants. Similarly, nuisance dust may be generated by a variety of sources
including mining, agriculture, grading, and construction. 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. Northeastern Sonoma County contains geothermal resources that are a potential source of an odorous substance, hydrogen sulfide. Rule 455 of the rules and regulations of the Northern Sonoma County Air Pollution Control District contain specific limitations on emissions of hydrogen sulfide from geothermal power plants. The adoption of this regulation and the general decline in geothermal production at the Geyser geothermal field has greatly reduced the potential for odor problems from this source.

### 3.4.1.3 Ambient Air Quality Standards

The federal and California ambient air quality standards for important pollutants are summarized in Table 3.4-1. These standards were developed independently with differing purposes and methods, although both processes attempt 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 PM10.

#### Table 3.4-1. National and State Ambient Air Quality Standards

<table>
<thead>
<tr>
<th>Criteria Pollutant</th>
<th>Average Time</th>
<th>California Standards</th>
<th>National Standards&lt;sup&gt;a&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Primary</td>
</tr>
<tr>
<td>Ozone</td>
<td>1-hour</td>
<td>0.09 ppm</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>8-hour</td>
<td>0.070 ppm</td>
<td>0.070 ppm</td>
</tr>
<tr>
<td>Particulate Matter</td>
<td>24-hour</td>
<td>50 µg/m³</td>
<td>150 µg/m³</td>
</tr>
<tr>
<td>(PM10)</td>
<td>Annual mean</td>
<td>20 µg/m³</td>
<td>None</td>
</tr>
<tr>
<td>Fine Particulate Matter</td>
<td>24-hour</td>
<td>None</td>
<td>35 µg/m³</td>
</tr>
<tr>
<td>(PM2.5)</td>
<td>Annual mean</td>
<td>12 µg/m³</td>
<td>12.0 µg/m³</td>
</tr>
<tr>
<td>Carbon Monoxide</td>
<td>8-hour</td>
<td>9.0 ppm</td>
<td>9 ppm</td>
</tr>
<tr>
<td></td>
<td>1-hour</td>
<td>20 ppm</td>
<td>35 ppm</td>
</tr>
<tr>
<td>Nitrogen Dioxide</td>
<td>Annual mean</td>
<td>0.030 ppm</td>
<td>0.053 ppm</td>
</tr>
<tr>
<td></td>
<td>1-hour</td>
<td>0.18 ppm</td>
<td>0.100 ppm</td>
</tr>
<tr>
<td>Sulfur Dioxide</td>
<td>Annual mean</td>
<td>None</td>
<td>0.030 ppm</td>
</tr>
<tr>
<td></td>
<td>24-hour</td>
<td>0.04 ppm</td>
<td>0.14 ppm</td>
</tr>
<tr>
<td></td>
<td>3-hour</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>1-hour</td>
<td>0.25 ppm</td>
<td>0.075 ppm</td>
</tr>
<tr>
<td>Lead</td>
<td>30-day Average</td>
<td>1.5 µg/m³</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>Calendar quarter</td>
<td>None</td>
<td>1.5 µg/m³</td>
</tr>
<tr>
<td></td>
<td>3-month average</td>
<td>None</td>
<td>0.15 µg/m³</td>
</tr>
<tr>
<td>Sulfates</td>
<td>24-hour</td>
<td>25 µg/m³</td>
<td>None</td>
</tr>
<tr>
<td>Hydrogen Sulfide</td>
<td>1-hour</td>
<td>0.03 ppm</td>
<td>None</td>
</tr>
<tr>
<td>Vinyl Chloride</td>
<td>24-hour</td>
<td>0.01 ppm</td>
<td>None</td>
</tr>
</tbody>
</table>

Source: California Air Resources Board 2013.

Notes:

- µg/m³ = micrograms per cubic meter
- ppm = parts per million

<sup>a</sup> National standards are divided into primary and secondary standards. Primary standards are intended to protect public health, whereas secondary standards are intended to protect public welfare and the environment.
3.4.1.4 Sonoma County Existing Air Quality

The two air quality monitoring sites in Sonoma County are located in Healdsburg and Santa Rosa. Table 3.4-2 below summarizes violations of air quality standards in Sonoma County from 2012 to 2014.

Table 3.4-2. Air Quality Data Summary for Sonoma County, 2012–2014

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Standard</th>
<th>Location</th>
<th>Days Standard Exceeded In</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>2012</td>
</tr>
<tr>
<td>Ozone</td>
<td>State 1-Hour</td>
<td>Healdsburg</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Santa Rosa</td>
<td>0</td>
</tr>
<tr>
<td>Ozone</td>
<td>Federal 8-Hour</td>
<td>Healdsburg</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Santa Rosa</td>
<td>0</td>
</tr>
<tr>
<td>Ozone</td>
<td>State 8-Hour</td>
<td>Healdsburg</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Santa Rosa</td>
<td>0</td>
</tr>
<tr>
<td>PM2.5</td>
<td>Federal 24-Hour</td>
<td>Santa Rosa</td>
<td>0</td>
</tr>
<tr>
<td>PM10</td>
<td>Federal 24-Hour</td>
<td>Healdsburg</td>
<td>*</td>
</tr>
<tr>
<td>PM10</td>
<td>State 24-Hour</td>
<td>Healdsburg</td>
<td>*</td>
</tr>
<tr>
<td>Carbon Monoxide</td>
<td>State/Federal 8-Hour</td>
<td>Santa Rosa</td>
<td>0</td>
</tr>
<tr>
<td>Nitrogen Dioxide</td>
<td>State 1-Hour</td>
<td>Santa Rosa</td>
<td>0</td>
</tr>
</tbody>
</table>

Source: California Air Resources Board 2015.
* means there was insufficient data available to determine the value.

3.4.1.5 Sensitive Receptors and Pollution Sources

Sensitive receptors are facilities where sensitive receptor population groups (i.e., children, the elderly, the acutely ill, and the chronically ill) are likely to be located. These land uses include residences, schools, retirement homes, convalescent homes, hospitals, and medical clinics. Such sensitive receptors are located in all areas of the County.

The emissions inventory for Sonoma County shows that the single largest source of ozone precursors is motor vehicle travel. Other major sources are solvent evaporation, industrial sources, and combustion of fuels. Major sources of particulate matter are road dust, residential wood burning, unpaved road travel, construction activities, and mineral extraction and processing.

The air districts maintain inventories of sources of TACs. The current inventory identifies numerous dry cleaners and gasoline stations as the most common sources of TACs in the County. Almost all of these sources are located within the jurisdiction of the cities of Santa Rosa, Petaluma, Rohnert Park, Sebastopol, Sonoma, and Windsor. Other sources of TACs include mineral processing plants, sewage treatment facilities, and geothermal power plants.

Since identification, quantification, and control of TAC emissions began in the late 1980s, emissions of these pollutants have been steadily declining.
3.4.1.6 Odors

Common sources of odors include wastewater treatment plants, landfills, composting facilities, refineries, and chemical plants. Odors rarely have direct health impacts, but they can be very unpleasant and can lead to annoyance and concern over possible health effects among the public. The ability to detect odors varies considerably among the population and overall is quite subjective. Some individuals have the ability to smell very 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; an odor that is offensive to one person (e.g., fast food restaurant) may be perfectly acceptable to another.

3.4.2 Regulatory Setting

3.4.2.1 Federal

Clean Air Act and National Ambient Air Quality Standards

The federal Clean Air Act (CAA), promulgated in 1963 and amended several times thereafter, including the 1990 Clean Air Act amendments (CAA), establishes the framework for modern air pollution control. The act directs the Environmental Protection Agency (EPA) to establish NAAQS for the six criteria pollutants (discussed above). The NAAQS are divided into primary and secondary standards; the former are set to protect human health within an adequate margin of safety, and the latter to protect environmental values, such as plant and animal life.

The CAA requires states to submit a State Implementation Plan (SIP) for areas in nonattainment for federal standards. The SIP, which is reviewed and approved by the EPA, must demonstrate how the federal standards would be achieved. Failing to submit a plan or secure approval can lead to denial of federal funding and permits. In cases where the SIP is submitted by the state but fails to demonstrate achievement of the standards, the EPA is directed to prepare a federal implementation plan.

3.4.2.2 State

California Clean Air Act

In 1988, the state legislature adopted the California Clean Air Act (CCAA), which established a statewide air pollution control program. CCAA requires all air districts in the state to endeavor to meet the CAAQS by the earliest practical date. Unlike the federal CAA, the CCAA does not set precise attainment deadlines. Instead, the CCAA establishes increasingly stringent requirements for areas that will require more time to achieve the standards. CAAQS are generally more stringent than the NAAQS and incorporate additional standards for SO4 (sulfate), H2S (hydrogen sulfide), C2H3Cl (vinyl chloride), and visibility-reducing particles.

Areas that have met the State standards are considered to be attainment areas. Similarly, areas that have not met the standards are determined to be nonattainment areas. An area that is close to attaining the standard would be given a nonattainment/transitional designation.

The SFBAAB was initially determined to be a state nonattainment area for carbon monoxide, ozone, and PM10. The SFBAAB was reclassified as an attainment area for carbon monoxide, but remains an ozone and PM10 nonattainment area.
The NCAB portion of the County is nonattainment for the state ozone and PM10 standard. The ozone designation is nonattainment/transitional, denoting that the area is close to attaining the standard.

### 3.4.2.3 Regional and County

The County is part of two distinct air basins and air districts. The boundary between the air basins/districts runs roughly from the southwest corner of the County at Estero Americano, northeasterly to the northeast corner of Sonoma County at its boundary with Lake and Napa County. The boundary between the two basins/districts crosses US 101 between Windsor and Healdsburg.

The northwestern portions of the County are part of the NCAB, consisting of Del Norte, Humboldt, Trinity, Mendocino, and northern Sonoma County. This portion of the County is within the Northern Sonoma County Air Pollution Control District (NSCAPCD). The NSCAPCD is primarily rural and mountainous, containing only two urbanized areas—Healdsburg and Cloverdale. Southern Sonoma County is part of the nine-county SFBAAB and the Bay Area Air Quality Management District (BAAQMD).

The BAAQMD and NSCAPCD are local air quality agencies responsible for preparing regional air quality plans under the state and federal Clean Air Acts. In addition to planning responsibilities, the local air district has permitting authority over stationary sources of pollutants. Authority over mobile sources of pollutants resides with the California Air Resources Board.

### Spare the Air Days

A Spare the Air Day is a day forecast to have ozone levels high enough to exceed federal health-based standards. An advisory is issued the day before this is expected to occur. Area residents are asked to modify their behavior to help minimize pollution, and people who are sensitive to unhealthy air are advised to limit their time outdoors, particularly in the afternoon hours. Spare the Air Days are usually declared in fall and winter for the County, from approximately November through February, when the highest wintertime pollution occurs on cold windless nights.

### Wood-Burning Devices

In regard to wood fireplaces, the NSCAPCD has adopted regulations prohibiting installation of conventional fireplaces in new construction and remodels and requiring that wood-burning devices meet certain standards. In October 2015, the BAAQMD strengthened its wood-burning rule by disallowing wood-burning devices to be installed in new building construction. New building construction must install cleaner and more efficient heating options, such as gas-fueled or electric heaters (Bay Area Air Quality Management District 2015).

### Odors

Complaints regarding nuisance odors are also monitored by the BAAQMD and NSCAPCD. BAAQMD Regulation 7 for Odorous Substances reflects the most stringent standards derived for nuisance orders. Similarly, NSCAPCD has established a nuisance rule to address odor issues. Rule 400 states that air contaminants will not be discharged in quantities sufficient to constitute a public nuisance to any considerable number of persons or the public or that would endanger the comfort or repose of any person or the public. Odors would be considered a nuisance by BAAQMD and NSCAPCD if a complaint is received from a significant number of people and the odor issue is verified upon inspection.
In addition, CalRecycle also requires that all compostable material handling operations and facilities prepare a site-specific odor impact minimization plan (14 CCR, Division 7, Chapter 3.1, Section 17863.4).

3.4.2.4 Local

Appendix C, Local General Plan Goals, Objectives, and Policies, provides a list of the goals, objectives, and policies in the local general plans of the participating jurisdictions, including those related to air quality. These goals, objectives, and policies were reviewed to assess whether the Project is consistent with the general plans of participating jurisdictions. Disclosure of this consistency analysis is for informational purposes. An additional purpose of providing a list of relative local policies is, where appropriate, to provide the context within which the CAP will be locally implemented. As described in the CAP, most of the CAP measures represent implementation of many of the priorities outlined in existing local policies.

Inconsistencies with general plan policies are not necessarily considered a significance impact under CEQA unless it is related to a physical impact on the environment that is significant in its own right.

Implementation of the CAP is consistent with the applicable general plan goals, objectives, and policies of the participating jurisdictions in relation to air quality.

3.4.3 Impacts Analysis

3.4.3.1 Methodology

The impact analysis below uses the local jurisdictions’ policies and development standard provisions of the County to determine whether implementation of the CAP measures would result in a significant environmental impact.

Site-specific subsequent activities or projects, their associated locations, and physical effects on the environment from the implementation of the CAP measures to reduce greenhouse gas (GHG) emissions are not known at this time. Therefore, this analysis uses a programmatic approach in evaluating possible air quality impacts of implementation of the CAP.

3.4.3.2 Significance Criteria

The State CEQA Guidelines Appendix G (14 CCR 15000 et seq.) has identified significance criteria to be considered for determining whether a project could have significant impacts on existing air quality and energy resources.

An impact would be considered significant if construction or operation of the project would have any of the following consequences.

- Conflict with or obstruct implementation of the applicable air quality plan.
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation.
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is a nonattainment area for an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors).
- Expose sensitive receptors to substantial pollutant concentrations.
- Create objectionable odors affecting a substantial number of people.

### 3.4.3.3 Impacts and Mitigation Measures

**Impact AQ-1: Implementation of the CAP would not conflict with or obstruct implementation of the applicable air quality plan (beneficial impact).**

Projects that result in an increase in population or employment growth beyond that identified in regional plans (e.g., Plan Bay Area) could result in increases in vehicle miles traveled (VMT) and subsequently increase mobile source emissions, which could conflict with the applicable air districts’ planning efforts. For example, if a plan or project’s projected VMT increase is greater than its projected population increase, a plan would be in conflict with the applicable air quality plan.

The CAP is intended to reduce GHG emissions generated within the County to contribute to global efforts to reduce the effects of climate change by, among other things, using alternatively fueled vehicles, reducing VMT, using renewable energy, reducing waste generation, and increasing water conservation. While these reduction strategies were formulated to reduce GHGs, they also act to improve overall air quality by reducing emissions of criteria pollutants.

With implementation of the CAP measures to reduce VMT, it is anticipated that annual VMT within the County would be reduced by approximately 132 million miles by 2020 compared with anticipated annual VMT without implementation of the CAP.

The CAP promotes mixed-use and transit-oriented development and additional transit facilities aimed to reduce fuel use and travel demand through smart land use and development. The County and incorporated cities have already adopted policies to promote city-centered development patterns in order to direct future growth and to protect the surrounding agricultural and resource lands as well as for GHG reduction benefits. As many local plans already promote such development, the mixed-use and transit-oriented development within city centers supported by the CAP would not result in increased population growth or increased VMT beyond that already anticipated in local general plans.

The CAP also includes transportation measures to improve air quality. These include measures to reduce vehicle fuel use by encouraging a shift in the mode used for transportation and reducing travel demand through smart land use and development. In addition, energy efficiency measures to reduce electricity use and renewable energy generation would reduce both GHG emissions and air pollutants at power plants generating electricity in the region. Energy efficiency measures in the CAP would also reduce natural gas combustion at residential and commercial land uses within the County, which would reduce local criteria air pollution. The proposed CAP would be consistent with applicable air quality plans. The effects associated with the reduction of air pollutant emissions in the County would be beneficial.

**Impact AQ-2a: Implementation of the CAP could violate any air quality standard or contribute to an existing long-standing air quality violation during construction activities (less than significant with mitigation).**

The CAP is a policy-level document that does not include any site-specific designs or proposals, or grant any entitlements for development that would have the potential to violate air quality standards or contribute to a long-standing air quality violation. As a policy document, the CAP would have no direct impact on air quality, but certain facilities associated with future implementation
activities may violate air quality standards or contribute to a long-standing air quality violation during construction activities.

Implementation of several of the CAP measures entails new or remodeled construction which could result in short-term construction emissions. Some proposed CAP measures involve minor construction activities such as energy or water efficiency upgrades to existing buildings that are not expected to result in substantial construction emissions. The CAP measures that are likely to result in construction emissions include those that promote the construction of solid waste facilities to increase waste diversion, reuse of materials, and recycling; mixed-use and transit-oriented development in city centers; wastewater plant upgrades; extension of recycled water lines; and construction of limited transportation facilities such as bicycle and pedestrian trails, traffic calming, transit support facilities, and electric vehicle charging stations.

Construction emissions result in increased emissions of ozone-precursor pollutants (i.e., ROG and NO$_x$) and emissions of PM. Emissions of ozone precursors would result from the operation of construction equipment, construction worker vehicle trips, and truck hauling trips. Emissions of airborne PM are largely associated with ground-disturbing activities, such as site preparation. The quantity of daily emissions, particularly ROG and NO$_x$ emissions, generated during construction would depend on the number of vehicles used and the hours of operation for specific construction activities. The significance of fugitive dust (PM) emissions would vary widely and would depend on a number of factors including the area of disturbed soil, the timing of disturbance, if structures would be demolished, if excavation is required, and if transportation of excavated material is required.

Although construction details are unknown, construction of these facilities may include land-disturbing activities and truck hauling trips that may result in air quality impacts from temporary construction activities. However, construction promoted by the CAP would involve mostly minor upgrades to existing uses and/or County and local programs. New facilities promoted by the CAP would not likely involve significant grading, which is the major land-disturbing activity that contributes construction-period air quality impacts. The CAP does not change existing policies related to mixed use and transit-oriented development which is already called for in local general plans and policies. However, construction activities could still result in temporary construction emissions exceeding BAAQMD or NSCAPCD air quality standards or contribute to an existing long-standing air quality violation. This could result in a significant impact.

Construction impacts are outside of the scope of the plan and are outside of RCPA’s jurisdiction to address. Nonetheless, there is no reason to anticipate future significant impacts on air quality, as these impacts can normally be mitigated to less than significant. As required by CEQA, this EIR identifies potential mitigation measures that lead agencies could and should impose in their consideration of particular projects. Recommended Mitigation Measure AQ-1 would require responsible agencies or the construction contractor to implement basic measures to reduce construction emissions to minimize air quality impacts from construction activities promoted by the CAP. Further, the CAP includes measures aimed to help reduce emissions related to construction activities by reducing idling times of heavy-duty construction equipment and encouraging the use of electric construction tools. In addition, any structures that could be constructed consistent with the CAP would be subject to further CEQA analysis of project-specific impacts. Thus, with implementation of recommended Mitigation Measure AQ-1, potential air quality impacts from construction activities would be less than significant.
Mitigation Measure AQ-1: Implement basic construction mitigation measures to reduce construction emissions.

The responsible agency will require construction contractors to implement the basic construction mitigation measures to reduce fugitive dust and equipment exhaust emissions. Alternative measures may be identified by the project sponsor or its contractor, as appropriate, provided that they are as effective as the measures below. Alternative measures shall be submitted to the responsible agency for approval.

- All exposed surfaces affected by construction (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) will be watered two times per day, or as needed during the dry season(s) (unless limited by state or local drought response requirements or if there is a rain event).
- All excavation, grading, and/or demolition activities will be suspended when average wind speeds exceed 20 miles per hour (mph) for a period of 2 hours or more.
- Windbreaks (e.g., fences) will be installed on the windward side(s) of actively disturbed areas of construction. Windbreaks will have at maximum 50 percent air porosity.
- Exposed ground areas that are to be reworked more than one month after initial grading will be sown with fast-germinating native grass seed and watered appropriately until vegetation is established. If grass seeding is not feasible, then non-toxic soil stabilizers may be used.
- All roadways, driveways, and sidewalks to be paved will be completed as soon as possible. Building pads will be laid as soon as possible after grading unless seeding or soil binders are used.
- All vehicle speeds on unpaved roads will be limited to 15 mph.
- All construction trucks and equipment, including tires, involved in ground disturbance or transit through loose soil areas will be washed off prior to leaving the site. Site accesses to a distance of 25 feet from the paved road shall be treated with a 6- to 12-inch compacted layer of wood chips, mulch, or gravel. Alternatively, a rumble plate may be used in place of chips, mulch, or gravel.
- All haul trucks transporting soil, sand, or other loose material off site will be covered.
- Sandbags or other erosion control measures will be installed to prevent silt runoff to public roadways from sites with a slope greater than 1 percent.
- All visible mud or dirt track-out onto adjacent public roads will be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- Idling time of diesel powered construction equipment will be limited to 2 minutes.
- All construction equipment, diesel trucks, and generators will be equipped with Best Available Control Technology for emission reductions of PM and NOx.
- All contractors will use equipment that meets the California Air Resources Board’s most recent certification standard for off-road heavy-duty diesel engines.
- A publicly visible sign will be posted with the telephone number and person to contact at the lead agency regarding dust complaints. This person will respond and take corrective action within 48 hours. BAAQMD’s or NSCAPCD’s phone number (depending on the project’s jurisdiction) will also be visible to ensure compliance with applicable regulations.
Impact AQ-2b: Implementation of the CAP could violate any air quality standard or contribute to an existing long-standing air quality violation during operation (less than significant).

The CAP contains measures that support energy-conserving programs and renewable energy generators, and encourage development in close proximity to transit. The CAP also includes measures to increase alternative fuel use and infrastructure in the County. These measures would help to reduce adverse air quality effects through the reduction of fossil fuel consumption and use of private motor vehicles. In addition, proposed CAP measures related to transportation would reduce VMT, and thus automobile-generated air pollutants, throughout the County. Implementation of the proposed CAP would reduce VMT in the County by approximately 132 million miles by 2020 compared with anticipated annual VMT without implementation of the CAP. Such a reduction of annual VMT would result in a benefit to regional air quality, because with fewer vehicle miles traveled, fewer criteria air pollutants are generated.

The CAP also promotes the installation of methane to energy facilities at landfills and methane digesters dairies for organic waste reduction and GHG abatement purposes. Methane to energy facilities and methane digesters, while reducing GHG emissions, can emit a variety of other emissions including nitrogen, sulfur oxides, particulate matter, carbon monoxide, and ammonia. However, all such facilities are subject to stationary source permitting requirements from the local air quality district. Those permitting requirements ensure that new sources do not result in non-compliance with regional air quality goal attainment. With implementation of such stationary source permitting requirements, new methane to energy facilities and methane digesters would not result in significant operational air quality impacts.

Therefore, the proposed CAP would result in less than significant impacts associated with contributing substantially to an existing or projected air quality violation, or increasing criteria pollutants during operational activities.

Impact AQ-3: Implementation of the CAP could result in a cumulatively considerable net increase of any criteria pollutant (less than significant).

The CAP is intended to reduce levels of GHG emissions throughout the County. In addition to reducing GHG emissions overall, many of the GHG-reduction measures would also reduce criteria air pollutants through the substantial reduction of VMT, the use of renewable energy, and other measures. As noted above, any new stationary sources supported by CAP measures would be subject to local air district permitting rules and requirements that are designed to ensure that they would not contribute to regional air quality degradation. Therefore, the proposed CAP would not contribute to cumulative increases in criteria pollutant, and this impact would be less than significant.

Impact AQ-4: Implementation of the CAP could expose sensitive receptors to toxic air contaminants (less than significant).

In general, the CAP measures would reduce the emission of TACs by reducing on-road emissions for both passenger and commercial vehicles. For example, the proposed anti-idling measures for on-road trucks and construction equipment would help to reduce diesel particulate matter (DPM) emissions, which is one of the most substantive TACs of concern to public health exposure. Furthermore, due to ongoing implementation of the state’s Diesel Risk Reduction Program, the level of DPM emissions in trucks is dramatically declining over time, which is helping to reduce the potential risk levels associated with truck emissions.
Some CAP measures encourage the densification of development in city centers and along transit corridors. Increased density and proximity to transit centers could result in a larger concentration of vehicles (autos and buses) in a smaller area, thereby resulting in substantial TAC emissions near sensitive receptors. This is a concern with transit-oriented development because emission sources, such as diesel-engines for buses and commuter trains, are intrinsically near sensitive receptors such as residential land uses. However, buses in the County are clean fuel diesel buses that would not generate substantial TAC emissions. Further, implementation of the CAP would be consistent with existing land use policies supporting transit-oriented development in city centers and with the previously adopted SMART project. Because the CAP is consistent with the land use policies of the County and incorporated communities, implementation of the CAP would not expose new sensitive receptors to TACs in excess of what is allowed and already analyzed in each jurisdiction’s general plan.¹

It should be noted that any future actions that would be implemented per the CAP would be subject to applicable BAAQMD or NSCAPCD regulations and requirements, as well as be subject to further CEQA analysis of project-specific impacts. Furthermore, none of the subsequent actions proposed as part of the CAP would result in a new major source of TACs such as industrial processes (e.g., petroleum refining and chromeplating operations), commercial operations (e.g., gasoline stations and dry cleaners), and motor vehicle exhaust. As noted above, waste-to-energy and methane digester facilities are subject to stationary source permitting requirements from the local air quality district that include evaluation and control of TACs to less than significant levels.

Thus, overall the CAP is expected to result in a reduction of TACs associated with construction equipment, commercial truck idling and general VMT reduction, while potential localized TAC emissions associated with waste-to-energy and methane digesters would be controlled by mandatory rules and regulations from local air districts. Thus, impacts associated with exposing sensitive receptors to TACs would be less than significant.

**Impact AQ-5: Implementation of the CAP could create objectionable odors affecting a substantial number of people (less than significant).**

In general, the CAP measures would not create new sources of substantial permanent odors. The CAP encourages an increase in installation of methane digesters at dairies to capture methane emissions from the decomposition of manure. This would result in concentrated manure collection that could result in odor concerns. However, the CAP does not create new dairies in Sonoma County and is not expected change manure collection at the existing facilities that would result in substantial odor issues.

The CAP also promotes the construction of solid waste facilities to increase waste diversion, reuse of materials, and recycling. Facilities that could be constructed to increase waste diversion could include transfer or composting facilities that could generate objectionable odors during operation. As discussed in Impact LU-2, the siting of solid waste facilities could result in land use incompatibilities, including potential odor impacts. Depending on the proximity of the facility to the nearest receptors, operation of solid waste facilities promoted by the CAP could result in

¹ Pursuant to the recent California Supreme Court ruling in the California Building Industry Association vs. Bay Area Air Quality Management District (BIA vs. BAAQMD) case, the impacts of a project placing new receptors in an area of existing air pollution is not considered an impact under CEQA unless the project itself exacerbates the existing environmental hazard. As noted above, the CAP is not changing current local land use policy in regards to transit-oriented or infill development and as such is not changing the potential for new receptors to be exposed to existing or future emissions. The SMART project is an already adopted project.
objectionable odors affecting a substantial number of people during operation. However, this impact is not anticipated to be significant in light of BAAQMD, Cal Recycle, and local agency review and regulations.

Individual proposals for solid waste facilities would be required to undergo project-level CEQA review, disclose any potential impacts related to creating objectionable odors, and provide mitigation of any significant impacts, if necessary. Since the CAP does not include any specific proposed facilities or facility locations, no further analysis of this potential impact can be provided at this time.

### 3.4.3.4 Cumulative Impacts

**Impact C-AQ-1: Implementation of the CAP, in combination with other foreseeable development in the surrounding area, could have a significant cumulative impact on air quality (less than considerable contribution with mitigation).**

The geographic context for the analysis of cumulative impacts associated with air quality is the air basins within Sonoma County—the NCAB and the SFBAAB. The context of cumulative air quality impacts addresses the effects of the CAP in combination with other development in Sonoma County. Implementation of the CAP, combined with other past and future development within the potentially affected geographic area, could violate any air quality standard or contribute to an existing long-standing air quality violation during construction activities if applicable thresholds are exceeded. However, the CAP’s construction activities are not expected to generate substantial air quality pollutants during construction because limited grading would likely be required, given the nature of the CAP promoted facilities. Further, recommended Mitigation Measure AQ-1 would require the construction contractor to implement basic measures to reduce construction emissions to minimize air quality impacts from construction activities promoted by the CAP. Thus, impacts related to implementation of the CAP would have a less than considerable contribution with respect to any potential cumulative construction-period air quality emissions.

In regards to operational air quality impacts, cumulative air quality impacts are described under Impact AQ-3. As described, the CAP is intended to reduce levels of GHG emissions throughout the County and many of the GHG-reduction measures would also reduce criteria air pollutants. Therefore, the proposed CAP would not contribute considerably to cumulative increases in criteria pollutant.
3.5 Biological Resources

This section describes the regulatory and environmental setting for biological resources. It also describes impacts on biological resources that would result from implementation of the *Climate Action 2020: Community Climate Action Plan* (CAP) and includes mitigation for significant impacts, where feasible and appropriate.

3.5.1 Environmental Setting

The environmental setting for biological resources has been modified from the *Sonoma County General Plan 2020, Draft Environmental Impact Report* (Sonoma County 2006).

Sonoma County encompasses over one million acres of diverse landscape, ranging from the marine environments of the coastal zone, to the forests, woodlands, and grasslands of the coast range foothills and mountains; the vernal pools, seasonal wetlands, and freshwater marshes of the Santa Rosa Plain and Laguna de Santa Rosa; and the extensive marshlands along San Pablo Bay. Urban development occupies much of the valley floors through the central portion of the County along U.S. 101 and State Routes 116 and 12, with cities separated and generally surrounded by grazing lands and agricultural uses, primarily vineyards, dryland crops, and irrigated pasture.

The remaining natural communities in Sonoma County support a wide diversity of plant and animal species, including a high number of special-status species and sensitive natural communities. Natural community types in the County include mixed evergreen forests, oak woodlands and savanna, native and nonnative grasslands, coastal beach dune, coastal bluff, northern coastal scrub, chaparral, coastal salt marsh, brackish marsh, freshwater marsh, and riparian scrub and woodland. Major distinguishable characteristics in Sonoma County include: the mosaic of forest, woodland, grassland, and chaparral in the northwest and in the Mayacamas and Sonoma mountains to the northeast and east, the extensive agricultural and urban development on the valley floors, and the grasslands across the southwestern portion of the County.

Historic land use has altered much of the landscape in the County, including the plant communities and wildlife dependent on them. Beginning in the mid-nineteenth century and continuing into the present, activities such as livestock grazing, timber operations, clearing and disking for agricultural production, road building, and urban and suburban development have markedly altered the remaining natural communities. Native perennial grasslands have been largely replaced by nonnative annual grasslands, and a number of highly invasive species now threaten the remaining grasslands. Most of the conifer forests have been logged extensively in the past, with only a few scattered stands of old growth redwood remaining in the Russian River and Gualala River watersheds. Fire suppression, livestock grazing, timber harvest, vineyard conversion, and more recently the effects of Sudden Oak Death have greatly altered the extent of woodland and forest cover. Grazing and clearing for firewood and agricultural production have reduced the extent of oak woodland and savanna and continue to affect oak regeneration, particularly on the valley floors and lower foothills where development pressures continue today as croplands are converted to urban and suburban uses. The past effects of poorly managed timber harvesting, gravel mining, and livestock overgrazing continue to influence the aquatic habitat of the rivers and streams in the County, and limit the viability of the anadromous fisheries. Urban and suburban development, freeway and highway widening projects, vineyard expansion, and use of exclusionary fencing to
protect crops have all contributed to considerable fragmentation of the remaining natural areas in the County. Although past influences have greatly altered the natural landscape, Sonoma County contains considerable land area that remains undeveloped or is used for grazing and timber production, which continues to provide important habitat for native plants and animals. These remaining undeveloped lands serve as core areas for habitat biodiversity, and maintenance of connectivity between these areas is essential for their sustainability. The scattered permanently protected open space; the remaining undeveloped, agricultural, and timber production lands; and the network of riparian corridors throughout the County serve as a foundation for protecting and restoring the values and functions of the natural environment.

### 3.5.1.1 Special-Status Species

The primary information source on the distribution of special-status species in California is the California Natural Diversity Database (CNDDB) inventory, which is maintained by the Wildlife and Habitat Data Analysis Branch of the California Department of Fish and Wildlife (CDFW). The CNDDB inventory provides the most comprehensive state-wide information on the location and distribution of special-status species and sensitive natural communities. The occurrence of a species of concern in a particular region is an indication that an additional population may occur at another location if habitat conditions are suitable. However, the absence of an occurrence in a particular location does not necessarily mean that special-status species are absent from the area in question, only that no data has been entered into the CNDDB inventory. Detailed field surveys are generally required to provide a conclusive determination on presence or absence of sensitive resources from a particular location where there is evidence of potential occurrence. The records of the CNDDB indicate that special-status plant and animal species occur in a wide range of habitat types throughout Sonoma County. Approximately 42 animal species and 86 plant species have been reported in Sonoma County in the CNDDB.

It should be noted that the occurrence records of the CNDDB tend to focus on listed species or those with a high inventory priority. Occurrence information for numerous special-status species known to occur in Sonoma County is either not monitored at all, or is recorded on only a sporadic basis by the CNDDB. This includes the possible seasonal occurrence of some bird species, the limited status of some animal species as a California Special Concern (CSC) species by the CDFW, and the limited status of many plant species on Lists 2, 3, or 4 of the California Native Plant Society Inventory (CNPS).

The U.S. Fish and Wildlife Service (USFWS) also maintains information on special-status species as part of their project review and consultation responsibilities, and will prepare lists of known or suspected species from a particular county or U.S. Geological Survey (USGS) quadrangle. A request for special-status species known or suspected to occur in Sonoma County generated a list of 46 species that are threatened or endangered. A number of marine wildlife species not in the CNDDB inventory are also included in the USFWS list. Appendix D, *USFWS Species List*, provides the official list of threatened and endangered species in the County.

For many of the special-status species known to occur in Sonoma County, habitat suitability is severely limited by the direct and indirect effects of development. These include the direct loss of habitat as a result of conversion to urban uses, effects of ongoing habitat modifications due to vegetation management and agricultural practices, and indirect effects such as non-point discharge into aquatic habitat and recreational activities on open space lands. Habitat fragmentation is an important consideration in evaluating the recovery of listed species and the viability of natural
communities as a whole. Identification and protection of essential habitat for special-status species must be recognized during the environmental review of proposed development applications and in planning future open space acquisitions. Detailed surveys may be needed for sites where there is a potential for occurrence of special-status plant and animal species.

A number of special-status species reported from Sonoma County are wide-ranging and are the focus of management efforts by trustee agencies. Species of particular concern include: California tiger salamander, California red-legged frog, coho salmon, steelhead trout, Chinook salmon, northern spotted owl, and numerous plant species associated with vernal pool habitat. The following provides a summary of relevant management issues for each of these species.

**Coho Salmon, Steelhead Trout, and Chinook Salmon**

Central California Coast coho salmon is listed as endangered under the federal Endangered Species Act (ESA) and is state listed as endangered by CDFW, and Central California Coast steelhead trout is listed as threatened under the federal ESA. California Coastal chinook salmon is also listed as threatened under the federal ESA. All are anadromous, spawning in coastal streams and rivers and then migrating to and maturing in the ocean. Timber harvest activities, overgrazing, gravel mining operations, channel modifications and removal of riparian vegetation, flood control facilities, hydroelectric facilities, and secondary water quality degradation have all contributed to a decline of these species. Coho and steelhead are native species of the County, which is part of the Central California Coast Evolutionarily Significant Unit (ESU) defined as part of species listings. It is uncertain whether Chinook salmon is a native species of the County, although the Russian River is part of the California Coastal ESU for the species listing.

**California Tiger Salamander**

The Sonoma County population of California tiger salamander is listed as endangered by the USFWS and is state listed as threatened by CDFW. California tiger salamander occurs in grassland and savanna habitat, breeding in vernal pools and swales, seasonal drainages, and human-made ponds, and spending most of the year in subterranean refugia such as rodent burrows, cracks, and under rocks and logs. Adults migrate to suitable breeding locations with the onset of sustained rainfall, and have been reported to move considerable distances. Most of the occurrences of this subspecies in Sonoma County are from the complex of vernal pools and drainages of the Santa Rosa Plain along the Laguna de Santa Rosa watershed, generally between Sebastopol, Santa Rosa, and Cotati, although a recent population has been found in the Roblar Valley. Extensive habitat conversion and fragmentation of breeding habitat has eliminated this species from much of its former range, and is considered a serious threat to the Sonoma County population. The USFWS has joined with other responsible agencies, the County, cities, and interest groups in developing a California tiger salamander conservation strategy (the Santa Rosa Plain Conservation Strategy) aimed at preservation of the species. The USFWS and CDFW have mapped critical habitat for the species in the County and have also created maps pursuant to the conservation strategy.

**California Red-Legged Frog**

This species is listed as threatened by the USFWS and is recognized as a CSC by the CDFW. It typically occurs in aquatic habitat of streams and ponds, but can disperse considerable distances in search of breeding and aestivation sites. Scattered occurrences of California red-legged frog are known from the west Petaluma and south Cotati vicinity, the Salmon Creek watershed, and the
Sonoma Valley. Three areas were identified as part of the critical habitat for this species as mapped by the USFWS (U.S. Fish and Wildlife Service 2010). In Sonoma County, the previously mapped critical habitat consisted of the areas surrounding Laguna Lake west of Petaluma, the grasslands east of Petaluma Marsh, and part of the Sonoma Mountains. Continued loss of upland dispersal habitat, fragmentation of remaining breeding locations, competition and predation by bullfrog, and degradation of aquatic habitat are primary concerns regarding protection and recovery of this species.

**Northern Spotted Owl**

The USFWS listed the northern spotted owl as a threatened species in 1990, and it is recognized as a CSC by the CDFW. The southern limit of their range extends across the coastal and inland forests and woodlands of Sonoma County southward into Marin County. Occurrences of this species extend along the entire coast of the County, the Mayacamas Mountains, and Sonoma Mountain. Ongoing studies have been conducted to monitor population health and further define essential habitat. The southern population of spotted owl is subject to several threats, including habitat loss and disturbance due to timber harvest, agricultural conversion, development at the fringe of existing forest and woodland habitat, hazardous fuel management, potentially catastrophic wildfires along the urban/wildland interface, and continued range expansion of the barred owl. Of particular concern is the continuing die-off of tanbark and coast live oaks throughout spotted owl habitat due to Sudden Oak Death, and the long-term impacts this may have on prey populations and owl nesting and foraging habitat.

**Special-Status Plant Species**

Several plant species with special-status are known to occur in the seasonal wetland habitats of the Santa Rosa Plain. Four of them, Sonoma sunshine, Burke’s goldfields, Sebastopol meadowfoam, and many-flowered navarretia, are federally and state-listed as endangered. Several others are believed to have been extirpated from the Santa Rosa Plain or have no legal protective status under the ESA but are CNPS list species associated with seasonal wetlands and uplands. These include dwarf downingia, Baker’s navarretia, Gairdner’s yampah, hayfield tarplant, the state-listed rare North Coast semaphore grass, the state- and federally listed endangered white sedge, the federally listed endangered Sonoma alopecurus, and the federally listed showy Indian clover.

Many other rare plants occur on the wide range of habitats throughout the County. Native habitats found within the County that tend to have the highest degree of rare plant species, other than the seasonal wetlands/vernal pool habitats, include serpentine habitat, coastal scrub, and chaparral. Serpentine habitat, for example, is distinct because of its unique soil chemical and physical characteristics, and thus is host to a high number of rare plants in Sonoma County. These species include ceanothus species (*Ceanothus divergens*, *Ceanothus confuse*, *Ceanothus sonomensis*), dwarf soaproot (*Chologalum pomeridianum* var. *minus*), Franciscan onion (*Allium pensilnulare* var. *franciscanum*), daisies (*Erigeron angustatus*, *Erigeron serpentinus*), buckwheat (*Eriogonum nervulosum*), fragrant fritillary (*Fritillaria lilaceae*), two-carpellate flax (*Hesperolinon bicarpellatum*), Crystal spring lessingia (*Lessingia arachnoidea*), and jewelflower species (*Streptanthus brachiatus* ssp. *hoffmani*, *Streptanthus brachiatus* ssp. *brachiatus*, *Streptanthus brachiatus* ssp. *brachiatus*).

Coastal scrub and chaparral are also unique natural landscapes associated with many rare plants such as: Mendocino Coast Indian paintbrush (*Castilleja mendocinensis*), San Francisco Bay spineflower (*Chorizanthe cuspidate* var. *villosa*), larkspur species (*Delphinium bakeri* and *Delphinium
luteum), manzanita species (Arctostaphylos bakeri ssp. bakeri, Arctostaphylos bakeri ssp. sublavis, Arctostaphylos canescens ssp. sonomensis), thin-lobed horkelia (Horkelia tenuiloba), and clovers (Trifolium amoenus and Trifolium buckwestiorum).

### 3.5.1.2 Sensitive Natural Communities

The CNDDB maintains records of sensitive natural communities, those considered rare or threatened in the state. Several of the natural communities in the County are considered to have a high priority for mapping and protection with the CNDDB. These communities have been designated as sensitive due to rarity and continuing loss as a result of human presence and other factors. No comprehensive mapping of sensitive natural community types in the County has been done: currently there are only 34 occurrence records contained in the CNDDB inventory. Only eight different sensitive natural community types have been mapped by the CNDDB: coastal and valley freshwater marsh, coastal brackish marsh, coastal terrace prairie, central dune scrub, northern coastal salt marsh, northern vernal pool, and valley needlegrass grassland. Each of these natural community types has been greatly reduced in extent due to a number of human-induced activities such as the filling of marshlands, leveling and conversion of vernal pools for agricultural crops and development, and historical overgrazing and replacement of native grasslands with nonnative species.

### 3.5.1.3 Wetlands

Although definitions vary to some degree, wetlands are generally considered to be areas that are periodically or permanently inundated by surface or ground water, and support vegetation adapted to life in saturated soil. Wetlands are recognized as important features on a regional and national level due to their high inherent value to fish and wildlife; use as storage areas for storm and flood waters; and water recharge, filtration, and purification functions. Technical standards for delineating wetlands have been developed by the U.S. Army Corps of Engineers (USACE) and the USFWS, which generally define wetlands through consideration of three criteria: hydrology, soils, and vegetation.

Wetlands in the County include areas of salt and brackish water marsh along the shoreline of the coast and bay, riparian habitat along creeks and streams, the vernal pools and swales of the Santa Rosa Plain, and freshwater seeps and springs. Major wetland systems in Sonoma County include the marine and estuarine system of the ocean, bays, and lagoons; the riverine and lacustrine systems of major creeks and channels; and the palustrine system composed of freshwater marsh, riparian scrub and woodland, and scattered stock ponds.

The wetlands associated with the Santa Rosa Plain are of particular significance because of the complexity of the habitat and the presence of a high number of special-status plant and animal species. The wetlands consist of perennial, intermittent, and seasonal features including: the Laguna de Santa Rosa, Mark West Creek, Santa Rosa Creek, tributary drainages, marshes, permanent ponds, vernal pools, and vernal swales.

### 3.5.1.4 Habitat Connectivity

Sonoma County contains a diverse assemblage of both natural and human-influenced environments: the Mendocino Highlands and Mayacamas Range in the north, bisected by the immensely varied Russian River watershed; the cities and agricultural uses on the valley floors juxtaposed with the
highly sensitive Laguna de Santa Rosa and the remaining vernal pool complex of the Santa Rosa Plain; the Sonoma Creek watershed to the southeast; and the extensive grasslands to the south bordered by the marshlands of San Pablo Bay. The natural areas that remain are increasingly threatened by continued land conversion, declining water quality, habitat destruction, and fragmentation.

Protecting and enhancing habitat connectivity and functional movement corridors between the remaining natural areas is essential to sustaining populations and allowing for the continued dispersal of native plant and animal species. Natural linkages include riparian corridors and drainages, canyons, ridgelines, and corridors across valley floors where impermeable barriers such as dense urban development, exclusionary fencing, and heavily traveled roadways have not yet eliminated options for wildlife movement and plant dispersal. Although narrow corridors may be the only option in some locations due to the extent of existing development, habitat linkages are most effective through maintenance of a permeable landscape (i.e., one that allows for uninhibited movement of species across large areas).

There are nine habitat linkages for the North Coast and Bay Area Ecoregions encompassing the Sonoma County vicinity. Linkages extending into and across Sonoma County include Coastal Wetlands for the Pacific Flyway, Russian River Riparian Corridor, Lake Sonoma-Cooley Ranch, North Sonoma Coast-Lake Sonoma, Mayacamas-Mark West, Sonoma Mountain-Mayacamas Mountains, Sonoma Creek, Sonoma Mountain-Burdell Mountain, and the Bay Wetlands.

### 3.5.2 Regulatory Setting

#### 3.5.2.1 Federal

**Endangered Species Act**

The federal ESA (United States Code [USC], Title 42, Section 4321 et seq.) and subsequent amendments provide guidance for conserving federally listed species and the ecosystems upon which they depend. The ESA is administered by the USFWS for terrestrial and freshwater fish species and by the National Marine Fisheries Service (NMFS) for marine and anadromous species. Species can be listed as either endangered or threatened. An endangered species is at risk of extinction throughout all or a significant portion of its range (ESA Section 3[6]). A threatened species is likely to become endangered within the foreseeable future (ESA Section 3[19]).

Section 9 of the ESA prohibits the take of any fish or wildlife species listed under ESA as endangered or threatened. Take, as defined by ESA, means “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.” Harm is defined as “any act that kills or injures the species, including significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering” (Code of Federal Regulations [CFR], Title 50, Section 17.3).

Section 9 prohibits the “removal or reduction to possession” of any listed plant species “under federal jurisdiction” (i.e., on federal land, where federal funding is provided, or where federal authorization is required). The ESA includes mechanisms that provide exceptions to the Section 9 take prohibitions. These are addressed in Section 7 for federal actions and Section 10 for nonfederal actions.

Section 7 (Interagency Consultation and Biological Assessments) requires federal agencies to consult with the USFWS or NMFS, as appropriate, to ensure that actions they authorize, fund, or
carry out are not likely to jeopardize the continued existence of threatened or endangered species or result in the destruction or adverse modification of critical habitat. Section 10 applies to non-federal actions and allows activities that would potentially take a listed species to proceed only upon issuance of an incidental take permit and associated habitat conservation plan.

**Clean Water Act**

**Section 404**

The objective of the Clean Water Act (CWA) 1977, as amended, is to restore and maintain the chemical, physical, and biological integrity of the nation’s waters. Discharge of fill material into waters of the U.S., including wetlands, is regulated by the USACE under Section 404 of the federal CWA (33 USC 1251-1376). USACE regulations implementing Section 404 define waters of the U.S. to include intrastate waters, including lakes, rivers, streams, wetlands, and natural ponds, the use, degradation, or destruction of which could affect interstate or foreign commerce. Wetlands are defined for regulatory purposes as “areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions” (33 CFR 328.3; 40 CFR 230.3). The jurisdictional boundaries for other waters of the U.S. are identified based on the presence of an ordinary high water mark (OHWM) as defined in 33 CFR 328.3(e). The placement of structures in “navigable waters of the U.S.” is also regulated by USACE under Section 10 of the federal Rivers and Harbors Act (33 USC 401 et seq.). Projects are permitted under either individual or general (e.g., nationwide) permits. Specific applicability of permit type is determined by USACE on a case-by-case basis.

In 1987, USACE published a manual that standardized the manner in which wetlands were to be delineated nationwide. To determine whether areas that appear to be wetlands are subject to USACE jurisdiction (jurisdictional wetlands), a wetland delineation must be performed. Under normal circumstances, positive indicators from three parameters—(1) wetland hydrology, (2) hydrophytic vegetation, and (3) hydric soils—must be present to classify a feature as a jurisdictional wetland. More recently, USACE developed the *Arid West Regional Supplement* (U.S. Army Corps of Engineers 2008) for identifying wetlands and distinguishing them from aquatic habitats and other non-wetlands. The supplement presents wetland indicators, delineation guidance, and other information that is specific to the Arid West Region. For any wetland delineations submitted after June 5, 2007, USACE is requiring that the site be surveyed according to both the 1987 manual and the supplement guidelines. In addition to verifying wetlands for potential jurisdiction, USACE is responsible for the issuance of permits for projects that propose filling of wetlands. Any permanent loss of a jurisdictional wetland as a result of project construction activities is considered a significant impact.


**Section 401**

Section 401 of the CWA requires any applicant for a federal license or permit to conduct any activity that may result in a discharge of a pollutant into waters of the U.S. to obtain a certification that the discharge will comply with the applicable effluent limitations and water quality standards. The appropriate Regional Water Quality Control Board regulates Section 401 requirements.
Migratory Bird Treaty Act and Executive Order 13186

The Migratory Bird Treaty Act (16 USC 702–712) (MBTA) protects selected species of birds that cross international boundaries (i.e., species that occur in more than one country at some point during their annual life cycle). The law applies to the removal of active nests, eggs, and feathers.

Executive Order 13186 directs each federal agency taking actions that have or may have adverse impacts on migratory bird populations to work with USFWS to develop a memorandum of understanding that will promote the conservation of migratory bird populations.

3.5.2.2 State

California Endangered Species Act

The California Endangered Species Act (CESA) mandates that state agencies not approve a project that would jeopardize the continued existence of listed or candidate species if reasonable and prudent alternatives are available that would avoid a jeopardy finding. The CDFW may allow the limited take of such species upon issuance of an incidental take permit under Section 2081. Take is defined under the California Fish and Game Code (more narrowly than under ESA) as any action or attempt to “hunt, pursue, catch, capture, or kill.” Therefore, take under CESA does not include “the taking of habitat alone or the impacts of the taking.”

Rather, the courts have affirmed that under CESA, “taking involves mortality.”

California Fish and Game Code

Section 1600 et seq. (Lake and Streambed Alteration)

Section 1600 et seq. requires notifying CDFW prior to any project activity undertaken in or near a river, stream, or lake that flows at least intermittently through a bed or channel. CDFW will issue a Lake and Streambed Alteration Agreement that conditionally allows work within the bed and bank of the lake or stream.

Section 3503 (Bird Nests and Birds of Prey)

Section 3503 states that it is “unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by the code or any regulation made pursuant thereto.” Section 3503.5 specifically addresses birds in the orders Falconiformes (hawks, eagles, and falcons) and Strigiformes (owls), collectively referred to as “birds-of-prey.” Under this subsection, both the nests and individual birds-of-prey may not be taken, possessed, or destroyed at any time.

Sections 3511, 4700, 5050, and 5515 (Fully Protected Species)

Sections 3511 (birds), 4700 (mammals), 5050 (reptiles and amphibians), and 5515 (fish) identify 37 fully protected species that may not be taken or possessed at any time, and no licenses or permits may be issued for their take except for collecting these species for necessary scientific research and relocation of bird species for the protection of livestock, or as part of an approved natural community conservation plan (NCCP). The fully protected classification was the state’s initial effort in the 1960s to identify and provide additional protection to those animals that were rare or faced

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possible extinction. Most fully protected species have also been listed as threatened or endangered under the more recent endangered species laws.

**California Native Plant Protection Act**

The California Native Plant Protection Act (Sections 1900–1913) requires all state agencies to use their authority to carry out programs to conserve endangered and rare native plants. It gives CDFW the power to designate native plants as endangered or rare and to protect endangered and rare plants from take.

3.5.2.3 Local

Appendix C, *Local General Plan Goals, Objectives, and Policies*, provides a list of the goals, objectives, and policies in the local general plans of the participating jurisdictions, including those related to biological resources. These goals, objectives, and policies were reviewed to assess whether the Project is consistent with the general plans of participating jurisdictions. Disclosure of this consistency analysis is for informational purposes. An additional purpose of providing a list of relative local policies is, where appropriate, to provide the context within which the CAP will be locally implemented. As described in the CAP, most of the CAP measures represent implementation of many of the priorities outlined in existing local policies.

Inconsistencies with general plan policies are not necessarily considered a significance impact under CEQA unless it is related to a physical impact on the environment that is significant in its own right.

Implementation of the CAP is consistent with the applicable general plan goals, objectives, and policies of the participating jurisdictions in relation to biological resources.

3.5.3 Impacts Analysis

3.5.3.1 Methodology

The analysis of biological resources presented in this section is based on a review of the project description and available literature from federal, state, and local agencies, with emphasis on the potential for activities that could occur during implementation of the CAP to result in physical effects on the resources present.

3.5.3.2 Significance Criteria

The State CEQA Guidelines Appendix G (California Code of Regulations [CCR], Title 14, Section 15000 et seq.) has identified significance criteria to be considered for determining whether a project could have significant impacts on existing biological resources.

An impact would be considered significant if construction or operation of the project would have any of the following consequences.

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.
• Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.

• Have a substantial adverse effect on federally or state protected wetlands or waters (including, but not limited to creeks, rivers, marshes, vernal pools, coastal wetlands, 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.

3.5.3.3 Impacts and Mitigation Measures

Impact BIO-1: Implementation of the CAP could impact sensitive and special-status species and their associated habitat or migratory corridors (less than significant with mitigation).

The CAP is a policy-level document that does not include any site-specific designs or proposals, or grant any entitlements for development that would have the potential to impact sensitive and special-status species and their associated habitat or migratory corridors. As a policy document, the CAP would have no direct impact, but future implementation of activities supported by the CAP could impact special-status species or their habitat.

Retrofits of existing buildings and placement of solar installations on rooftops and in parking lots would be within existing developed areas and would have limited to no effect on special-status species or their habitat, except in the case of tree removal where the trees contain nests for special-status migratory bird species.

The CAP also promotes the construction of mixed-use and transit-oriented development in city centers. Infill mixed-use and transit-oriented development in city centers would be located in urban areas and would not likely substantially impact special-status species and their habitats. Furthermore, as noted previously, the CAP would not change local land use policy as the local land use plans already call for mixed use and transit-oriented development, and thus any associated biological resource impacts would not represent new impacts above the approved land use plans.

The CAP also promotes solid waste facilities to increase waste diversion, reuse of materials, and recycling. Although the siting and location of the solid waste facilities are unknown, there is presently no basis to conclude that there will be impacts on sensitive and special-status species and their habitat associated with these facilities.

The CAP also promotes certain transportation improvements, such as bicycles and pedestrian facilities, minor transit support facilities, and electric vehicle charging stations. Several CAP measures also promote the extension of recycled water lines. In most cases, such facilities would have limited to no impact on biological resources as they are often located along, under, or as part of existing roadways. Where such facilities are not located as part of existing roadways, it is possible that they may affect extant areas providing habitat for special-status species.
New facilities promoted by the CAP that are proposed on land containing biological resources would be required to provide independent CEQA review and need to determine whether there is potential habitat on site for sensitive species. If potential habitat were found on site, focused surveys for those sensitive species potentially present would normally be required as part of the CEQA review process. If listed species were found, the project proponent would be required to consult with the CDFW and/or USFWS regarding impacts on sensitive species and ensuing mitigation. Mitigation for unavoidable impacts on sensitive species is often in the form of acquisition or restoration of habitat, on- or off site, at a ratio to the area of impacted land that would be determined by the CDFW or USFWS.

Construction impacts are outside of the scope of the CAP, and are outside of RCPA’s jurisdiction to address. Nonetheless, there is no reason to anticipate future significant impacts on biological resources, as these impacts can normally be mitigated to less than significant. As required by CEQA, this EIR identifies potential mitigation measures that lead agencies could and should impose in their consideration of particular projects. In order to ensure that potential impacts on special-status species, whether formally protected or not, are addressed, Mitigation Measures BIO-1a, BIO-1b, and BIO-1c (described below) are recommended. After compliance with all local, state, and federal regulatory requirements and with implementation of proposed mitigation, implementation of the proposed CAP would have a less-than-significant impact on special-status species.

**Mitigation Measure BIO-1a: Project-level biological surveys and avoidance, minimizations, and compensation for impacts on CEQA-defined special-status species, sensitive natural communities, state- and federally protected waters/wetlands, and riparian habitat.**

Lead agencies will require that any new project that could potentially impact a CEQA-defined special status species, sensitive natural community, state- or federally protected water/wetland, or riparian habitat conduct a biological resources survey of the site to determine if any areas would have the potential to contain such resources and, if such resources are found in the areas, whether they would be affected by the project. If such resources are found on the site, measures necessary to avoid, minimize, and/or compensate for identified impacts on these resources will be identified in the project-level CEQA review. The lead agency will adopt the feasible measures necessary to reduce impacts on such resources to a less-than-significant level.

**Mitigation Measure BIO-1b: Replacement of removed trees.**

Lead agencies will require that any new project removing trees will replace all trees removed in accordance with the tree preservation policies or ordinances of the jurisdiction in which the improvements are constructed.

**Mitigation Measure BIO-1c: Preconstruction surveys.**

Projects will avoid conducting vegetation removal during the migratory bird nesting season (February 1–August 31), if feasible. If construction activities must commence during the migratory bird nesting season, the project sponsor will retain a qualified wildlife biologist to conduct a survey for nests of migratory birds. Surveys for nesting migratory birds will occur within three (3) days prior to the commencement of ground disturbance and vegetation removal.

If an active nest is discovered, a no-disturbance buffer zone around the nest tree or shrub (or, for ground-nesting species, the nest itself) will be established. The no-disturbance zone will be
marked with flagging or fencing that is easily identified by the construction crew and will not affect the nesting bird or attract predators to the nest location. In general, the minimum buffer zone widths will be as follows: 50 feet (radius) for non-raptor ground-nesting species, 50 feet (radius) for non-raptor shrub- and tree-nesting species, and 300 feet (radius) for raptor species. Buffer widths may be modified based on discussion with the CDFW. Buffers will remain in place as long as the nest is active or young remain in the area and are dependent on the nest. If a burrowing owl nest is identified during preconstruction surveys, no-activity buffers will adhere to the recommendations in the 2012 Department of Fish and Game Staff Report on Burrowing Owl Mitigation.

**Impact BIO-2: Implementation of the CAP could impact wetland and riparian habitat in some areas of the County (less than significant with mitigation).**

Implementation of the CAP would not directly result in removal of riparian vegetation or wetlands in the County because the CAP does not confer entitlements for development.

New facilities necessary for CAP implementation could potentially be built in areas that might contain wetland or riparian habitat. A number of regulatory mechanisms address various types of construction-related impacts on wetlands and riparian areas. Disturbance within any water of the U.S. would require a Section 404 permit from the USACE (and disturbance within any water of the state would require a permit under state water quality law), which would place certain requirements for avoidance or replacement of lost water or wetland habitat to ensure no net loss of wetland resources. When a project would alter the natural flow or bed, channel, or bank of any river, stream, or lake, a Section 1602 streambed alteration agreement would need to be obtained from the CDFW. Like the 404 permit, this agreement would be expected to include measures that alleviate impacts on riparian habitats. Preparation and implementation of the stormwater pollution prevention plans for construction required under Section 402 of the CWA would alleviate potential indirect impacts relating to increased erosion, sedimentation, and runoff.

Retrofits of existing buildings and placement of solar installations on rooftops and in parking lots would be within existing developed areas and would have limited to no effect on wetland and riparian habitat. The CAP also promotes the construction of mixed-use and transit-oriented development in city centers. Infill mixed-use and transit-oriented development in city centers would be located in urban areas and would not likely substantially impact wetlands or riparian areas. Furthermore, as noted previously, the CAP would not change local land use policy as the local land use plans already call for mixed-use and transit-oriented development and thus any associated biological resource impacts would not represent new impacts above the approved land use plans.

The CAP also promotes certain transportation improvements such as bicycles and pedestrian facilities, minor transit support facilities, and electric vehicle charging stations. Additionally, the CAP promotes the extension of recycled water lines. In most cases, such facilities would have limited to no impact on wetland or riparian habitat as they are often located along, under, or as part of existing roadways. Where such facilities are not located as part of existing roadways, it is possible that they may affect extant wetland or riparian habitat.

Compliance with local general plan policies and existing regulations, such as Sections 401 and 404 of the CWA (which requires no net loss of wetlands), Section 1601 of the Fish and Game Code, and the state Porter-Cologne Water Quality Control Act, would protect wetlands and riparian resources from direct and indirect impacts and assure no net loss. Furthermore, direct and indirect impacts with the potential to have adverse effects on riparian and/or wetland habitats would be mitigated by avoidance, habitat restoration, or offsite compensation per the requirements of recommended
Mitigation Measures BIO-1a, BIO-1b, and BIO-1c (described above). Therefore, with compliance with federal, state, and local regulations and required mitigation, impacts on wetlands, waters, and riparian habitats would be less than significant.

**Impact BIO-3: Implementation of the CAP could conflict with local policies or ordinances protecting biological resources or the provisions of an adopted habitat conservation plan/natural community conservation plan (less than significant with mitigation).**

Some of the facilities promoted by the CAP may also require tree removal, but local tree ordinance requirements and/or project-level CEQA review (as warranted) would result in mitigation of any tree removals with tree replanting and replacement. Some CAP measures promote solar roofs and solar parking. If these improvements are proposed in areas with overhanging trees that substantially hinder solar access, trees may need to be removed on the property where the solar installation is proposed. Some of these trees may be protected by local tree ordinances. The California Solar Rights Act limits lead agency authority to deny permits for solar roof installations except in cases of public health and safety, which is usually not the case with potential tree removal. However, the act allows for use of feasible methods to satisfactorily mitigate specific adverse effects, which will allow local lead agencies to require mitigation of tree removal through tree replanting/replacement off site but not through complete avoidance of tree removal. Furthermore, solar installations are not eligible for the SB 226 CEQA exemption if they require tree removal subject to federal, state, or local regulations or if they remove a tree more than 25 years old. With imposition of tree replanting/replacement requirements in local tree ordinances and policies and/or CEQA level review (as warranted), including implementation of recommended Mitigation Measure BIO-1b (described above), this impact can be mitigated to a less-than-significant level.

There are no landscape level habitat conservation plans, natural community conservation plans, or other approved conservation plans that have been adopted encompassing all or large portions of Sonoma County. There are certain habitat conservation plans (HCPs) (called Low-Effect HCPs) for individual projects adopted pursuant to Section 10 of the federal ESA; if any CAP-promoted projects were proposed in an area subject to these project-level HCPs, they would be required to comply with the HCP requirements.

The Santa Rosa Plain Conservation Strategy was developed by the USFWS with other responsible agencies, the County, cities, and interest groups to address impacts on California tiger salamander and other listed federal species, but it is not an HCP or NCCP. Rather, it is a guidance document that is used by USFWS in considering individual project applications for projects with impacts on listed federal species on the Santa Rosa Plain. All contributing agencies have agreed to implement the conservation strategy locally. If individual projects supported by the CAP were to have impacts on listed federal species on the Santa Rosa Plain, USFWS would use the strategy in processing any necessary federal endangered species permits.

Given the above analysis, implementation of the CAP would not conflict with any conservation plans or local tree ordinances.
3.5.3.4 Cumulative Impacts

Impact C-BIO-1: Implementation of the CAP, in combination with other foreseeable development in the surrounding area, could have a significant cumulative impact on biological resources (less than considerable contribution with mitigation).

The cumulative context for the biological resources analysis for the proposed project is Sonoma County. As development in the County continues, habitat for plant and wildlife species native to the region is lost through conversion to urban development. Although more mobile species may be able to survive these changes in their environment by moving to new areas, less mobile species would simply be extirpated. With continued conversion of natural habitat to human use, the availability and accessibility of remaining foraging and natural habitats in this ecosystem would be reduced, and those remaining natural areas may not always be able to support additional plant or animal populations above their current carrying capacities through increased competition for resources, displacement, and development-induced introduction of nonnative species.

There are substantial local city and County policies and requirements that seek to reduce the effect of new development on biological resources in addition to state and federal laws protecting listed and non-listed special-status species, sensitive natural communities, wetlands and waters, and other biological resources.

The CAP promotes and supports city-centered development as called for in local land use plans, which helps to reduce impacts on more outlying areas of species habitat by promoting more compact urban development in areas that have been substantially altered previously. Furthermore, the CAP promotes reduction of vehicle miles traveled (VMT) overall, which helps to reduce air pollution and water pollution associated with vehicle emissions as well as reduces electricity and natural gas demand, which also helps to improve habitat conditions. Certain transportation and solid waste facilities supported by the CAP may result in limited impacts on biological resources, but, as discussed above, application of mitigation and local, state, and federal requirements would limit these impacts.

Although the conversion of plant and wildlife habitat and loss of protected species on a regional level could result in a cumulatively significant impact on biological resources, the CAP, with the implementation of recommended Mitigation Measures BIO-1a, BIO-1b, and BIO-1c, as well the application of local, state, and federal regulatory requirements, is not expected to contribute considerably to any such cumulative impacts.
3.6 Cultural Resources

This section describes the regulatory and environmental setting for cultural resources. It also describes impacts on cultural resources that would result from implementation of the Climate Action 2020: Community Climate Action Plan (CAP) and includes mitigation for significant impacts, where feasible and appropriate.

3.6.1 Environmental Setting

This section presents the historic and archaeological cultural resources present in Sonoma County. This information has been drawn and modified from the Sonoma County General Plan 2020, Draft Environmental Report (Sonoma County 2006).

3.6.1.1 Historical Resources

Historical resources include buildings, structures, and sites generally of the past two centuries. Historic structures in Sonoma County mark the successive eras of Russian, Spanish, Mexican, and North American occupation of Sonoma County. There are 230 local, state, or federally designated historical resources in the County (Sonoma County 2006).

3.6.1.2 Archaeological Resources

Archaeological resources are remaining material evidence of past human life. These materials could include graves, buildings, tools, and pottery. In Sonoma County, archaeology typically involves the study of the Native American inhabitants of the land from roughly 8,000 years ago to the early 1800s when the County was settled by American, Russian, Spanish, and Mexican colonists. During this period most Native Americans were brought into the mission system (Sonoma County 2006).

3.6.2 Regulatory Setting

3.6.2.1 Federal

National Historic Preservation Act of 1966

The National Historic Preservation Act of 1966 requires that the federal government list significant historic resources on the National Register of Historic Places (NRHP). Federal agencies must consult the NRHP when planning to undertake or grant approval through permits for a project. Prior to the issuance of any license or implementation of any project, the federal agency must consider the effects of a project or license on any historical buildings, sites, structures, or objects that are included on, or eligible for inclusion on, the NRHP (United States Code, Title 16, Section 470(f)). This typically includes consultation with the federal agency responsible for the undertaking, the state historic preservation officer, local Native American groups and individuals, local and state historical societies and organizations, and relevant archival sources, including the appropriate facility of the California Historical Resources Information System (CHRIS).

The NRHP criteria (contained in 36 CFR 60.4) are used to evaluate resources when complying with National Historic Preservation Act Section 106. Those criteria state that eligible resources comprise
districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feelings, and association, and:

1. are associated with events that have made a significant contribution to the broad patterns of our history;
2. are associated with the lives of persons significant in our past;
3. embody the distinctive characteristics of type, period, or method of construction, or that possess high artistic values, or that represent a significant distinguishable entity whose components may lack individual distinction; and
4. have yielded or may be likely to yield, information important to history or prehistory.

3.6.2.2 State

California Public Resources Code

California Public Resource Code (PRC) Section 5024 requires state agencies to identify and protect state-owned resources that meet NRHP listing criteria. PRC Section 5024.1, which established the California Register of Historical Resources (CRHR), protects historical resources.

California PRC Section 5097.5 prohibits removing, destroying, injuring, or defacing any vertebrate paleontological site, including fossilized footprints, or any other paleontological feature as well as items of archaeological and historic interest that are situated on public lands, except with permission of the public agency with jurisdiction.

A historical resource may be eligible for inclusion in the CRHR if it meets any of the following conditions.

1. The resource is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage.
2. The resource is associated with the lives of persons important in our past.
3. The resource embodies the distinctive characteristics of a type, period, region, or method of construction or represents the work of an important creative individual or possesses high artistic values.
4. The resource has yielded, or may be likely to yield, information important in prehistory or history.

California Code of Regulations, Title 14, Division 3, Chapter 1, Sections 4307 and 4309

The California Code or Regulations (CCR) prohibits the destruction, disturbance, or removal of earth, rocks, and paleontological features.

California Health and Safety Code—Treatment of Human Remains

Under Section 8100 of the California Health and Safety Code, six or more human burials at one location constitute a cemetery. Disturbance of Native American cemeteries is a felony (Health and Safety Code Section 7052).
Section 7050.5 of the 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 then contact the Native American Heritage Commission (NAHC), which has jurisdiction pursuant to Section 5097 of the California PRC.

When human remains are discovered or recognized in any location other than a dedicated cemetery, no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains may take place until the County coroner has been informed and has determined that no investigation of the cause of death is required, and, if the remains are of Native American origin, either:

- The descendants of the deceased Native American(s) have made a recommendation to the landowner or the person responsible for the excavation work for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in PRC Section 5097.98; or
- The NAHC was unable to identify a descendant or the descendant failed to make a recommendation within 24 hours after being notified by the commission.

**Senate Bill 18**

Senate Bill (SB) 18 (Government Code Section 65352.3) incorporates the protection of California traditional tribal cultural places into land use planning for cities, counties, and agencies by establishing responsibilities for local governments to contact, refer plans to, and consult with California Native American tribes as part of the adoption or amendment of any general or specific plan proposed on or after March 1, 2005. SB 18 requires public notice to be sent to tribes listed on the NAHC's SB 18 Tribal Consultation list within the geographical areas affected by the proposed changes. Tribes must respond to a local government notice within 90 days (unless a shorter timeframe has been agreed upon by the tribe), indicating whether or not they want to consult with the local government. Consultations are for the purpose of preserving or mitigating impacts on places, features, and objects described in PRC Sections 5097.9 and 5097.993 that may be affected by the proposed adoption of or amendment to a general or specific plan.

**Assembly Bill 52**

On September 25, 2014, Governor Jerry Brown signed Assembly Bill (AB) 52, which requires the lead agency on a proposed project to consult with any California Native American tribes affiliated with the geographic area. The legislation creates a broad new category of environmental resources, “tribal cultural resources,” which must be considered under the California Environmental Quality Act (CEQA); AB 52 creates a distinct category for tribal cultural resources, requiring a lead agency to not only consider the resource's scientific and historical value, but also whether it is culturally important to a California Native American tribe. AB 52 defines tribal cultural resources as “sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe” that are included in or determined to be eligible for inclusion in the CRHR or the local register of historical resources.

AB 52 also sets up an expanded consultation process. Beginning July 1, 2015, lead agencies are required to provide notice of proposed projects to any tribe traditionally and culturally affiliated with the geographic area. If, within 30 days, a tribe requests consultation, the consultation process
must begin before the lead agency can release a draft environmental document. Consultation with the tribe may include discussion of the type of review necessary, the significance of tribal cultural resources, the significance of the project’s impacts on the tribal cultural resources, and alternatives and mitigation measures recommended by the tribe. The consultation process will be deemed concluded when either (a) the parties agree to mitigation measures or (b) any party concludes, after a good faith effort, that an agreement cannot be reached. Any mitigation measures agreed to by the tribe and lead agency must be recommended for inclusion in the environmental document. If a tribe does not request consultation, or otherwise assist in identifying mitigation measures during the consultation process, a lead agency may still consider mitigation measures if the agency determines that a project will cause a substantial adverse change to a tribal cultural resource.

3.6.2.3 Local

Appendix C, Local General Plan Goals, Objectives, and Policies, provides a list of the goals, objectives, and policies in the local general plans of the participating jurisdictions including those related to cultural resources. These goals, objectives, and policies were reviewed to assess whether the project is consistent with the general plans of participating jurisdictions. Disclosure of this consistency analysis is for informational purposes. An additional purpose of providing a list of relative local policies is, where appropriate, to provide the context within which the CAP will be locally implemented. As described in the CAP, most of the CAP measures represent implementation of many of the priorities outlined in existing local policies.

Inconsistencies with general plan policies are not necessarily considered significant impacts under CEQA unless they are related to physical impacts on the environment that are significant in their own right.

Implementation of the CAP is consistent with the applicable general plan goals, objectives, and policies of the participating jurisdictions in relation to cultural resources.

3.6.3 Impacts Analysis

3.6.3.1 Methodology

This analysis is based on a review of the known historic and cultural resources contained in the Sonoma County General Plan 2020. Because there is the potential for unknown historic resources to occur within the County, the analysis conservatively assumes that any ground disturbing activities could affect these resources.

3.6.3.2 Significance Criteria

The State CEQA Guidelines Appendix G (14 CCR 15000 et seq.) has identified significance criteria to be considered for determining whether a project could have significant impacts on existing cultural resources.

An impact would be considered significant if construction or operation of the project would have any of the following consequences.

- Cause a substantial adverse change in the significance of a historical resource as defined in section 15064.5.
- Cause a substantial adverse change in the significance of an archaeological resource pursuant to section 15064.5.
- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.
- Disturb any human remains, including those interred outside of formal cemeteries.

### 3.6.3.3 Impacts and Mitigation Measures

**Impact CUL-1:** Implementation of the CAP could result in the potential disturbance of historical resources (significant and unavoidable with mitigation for CAP solar roof installations; less than significant with mitigation for all other CAP facilities).

There are a number of historic resources in Sonoma County and many are recognized as Historic Landmarks.

It is possible that CAP-promoted solar roofs might be proposed on historic buildings in the County and incorporated cities as promoted by the CAP. In most cases, solar roofs can be designed to not significantly alter a historic building. In addition, solar roofs are reversible because they can be removed, and thus rarely require permanent alteration of roof features. However, depending on the individual proposal, the addition of solar roofs in certain circumstances could substantially change a character-defining feature of an individual historic building, which could be a significant impact. The California Solar Rights Act per Section 65850.5(c) does not allow a local government to deny a permit for a solar energy system unless it finds that the project would have specific, adverse impacts upon public health or safety and there is no feasible method to satisfactorily mitigate or avoid the specific adverse impact. Also, per SB 226 (2012), solar roofs do not have to comply with CEQA (unless one of a narrow list of exceptions apply, none of which are related to visual or historic resources impacts). Thus, the feasible options for mitigation of this potential impact are limited. Construction impacts are outside of the scope of the plan, and are outside of RCPA’s jurisdiction to address. As required by CEQA, this EIR identifies potential mitigation measures that lead agencies could and should impose in their consideration of particular projects. Although not within RCPA’s jurisdiction, Mitigation Measure CUL-1a is recommended in cases where solar roofs are proposed on historic buildings. Although most solar roof installations can be designed to avoid substantial alterations of historic buildings, given the limitations in law, significant impacts may be unavoidable in certain cases. In the event that CAP-promoted solar roofs alter or destroy the character-defining features of historic buildings and disqualify a resource from eligible listing in the NRHP or CRHR, this would be a significant and unavoidable impact.

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1 PRC Section 21080.35 includes the following exceptions to the use of the statutory exemption: (1) if associated equipment occupies more than 500 square feet, (2) an individual permit is needed under Section 404 or 401 of the federal clean water act or the state Porter-Cologne Water Quality Control Act; (3) an individual take permit for species protected by the state or federal endangered species acts; (4) a streambed alteration permit is needed under Section 1600 of the Fish and Game Code; (5) trees will need to be removed that are related to local, state, or federal requirements; or (6) trees that are more than 25 years have to be removed.
Mitigation Measure CUL-1a: Review of alternatives for solar roofs on historic buildings.

If solar roofs are proposed on historic buildings, the lead land use agency will require the following.

- A qualified architectural historian will determine if the building is eligible for the CRHR or the NRHP. If the building is eligible for one or both of the registers, the qualified architectural historian will identify if the proposed solar roof will substantially affect the eligibility of the building as a historic resource. If a substantial effect is identified, the qualified historian will identify feasible alterations to the proposed solar roof installation that would avoid or minimize the substantial effects. If no feasible alterations can be identified, the qualified architectural historian will document measures considered and why they are not feasible.

- The lead agency will review the architectural historian’s report for completeness only.

- The project sponsor will identify which of the feasible design alternatives that avoid the substantial effect they prefer if one or more are identified by the qualified architectural historian. If the feasible alternatives will only reduce, but not avoid a substantial effect, the project proponent will identify which of the minimization alternatives it prefers.

- The lead agency will only issue a permit for the preferred feasible alternative identified by the project sponsor per the above requirements.

- If no feasible alternatives are available that reduce or avoid the substantial effect, then the lead agency will issue the permit for the proposed solar roof.

The CAP also promotes mixed-use and transit-oriented development and additional transit facilities aimed to reduce fuel use and travel demand through smart land use and development. The County and incorporated cities have already adopted policies aimed at promoting city-centered development patterns in order to direct future growth and protect the surrounding agricultural and resource lands, in addition to greenhouse gas reduction benefits. As many local plans already promote such development, the mixed-use and transit-oriented development within city centers promoted by the CAP would not introduce new impacts on historic resources beyond existing land use plans and policies.

In addition, there are several CAP measures that promote and could include the construction of new facilities aimed at increasing renewable energy use, solid waste diversion, and the capture/use of methane from landfills, as well as reducing emissions from livestock operations. Many of these new facilities would be constructed within or on existing buildings (e.g., rooftops, wastewater treatment plants, landfills, dairies). In addition, the CAP promotes construction of new bicycle and pedestrian facilities as well as minor facilities for traffic calming, transit support, and electric vehicle charging stations. The CAP also promotes the extension of recycled water lines, which would likely be located within the existing utility right-of-way. Many of these minor street improvements would occur within or under the existing public right-of-way.

These CAP-promoted activities could also be proposed at the site of a historical resource or at the site of a resource considered to be a potential historical resource, resulting in potential impacts on historical resources, including resources listed in or eligible for listing in the NRHP and/or CRHR. These activities could also have the potential to cause a substantial adverse change in the significance of a historical resource through the alteration of a historical resource's physical...
characteristics. However, implementation of recommended Mitigation Measures CUL-1b and CUL-1c would ensure that impacts on historic resources would be less than significant.

**Mitigation Measure CUL-1b: Studies documenting the presence/absence of historical resources.**

In areas of documented or inferred historic resource presence, the lead agency staff will require applicants for development permits to provide studies to document the presence/absence of historical resources. On properties where historic structures or resources are identified, such studies will provide a detailed mitigation plan, including a monitoring program and recovery and/or in situ preservation plan, based on the recommendations of a qualified historical preservation expert.

**Mitigation Measure CUL-1c: Historical resources investigations.**

Prior to activities that would physically affect buildings or structures 45 years old or older or affect their historic setting, the project applicant will retain a cultural resource professional who meets the Secretary of the Interior's Professional Qualifications Standards for Architectural History to determine if the project would cause a substantial adverse change in the significance of a historical resource as defined in State CEQA Guidelines Section 15064.5. The investigation will include, as determined appropriate by the cultural resource professional and the lead agency, the appropriate archival research, including, if necessary, a records search of the Archaeological Information Center of the CHRIS and a pedestrian survey of the proposed improvements area to determine if any significant historic-period resources would be adversely affected by the proposed CAP activities. The results of the investigation will be documented in a technical report or memorandum that identifies and evaluates any historical resources within the improvements area and includes recommendations and methods for eliminating or reducing impacts on historical resources. The technical report or memorandum will be submitted to the lead agency for approval. As determined necessary by the lead agency, environmental documentation (e.g., CEQA documentation) prepared for future development within the project site will reference or incorporate the findings and recommendations of the technical report or memorandum. The project applicant will be responsible for implementing methods for eliminating or reducing impacts on historical resources identified in the technical report or memorandum. Additional methods could include, but not be limited to, written and photographic recordation of the resource in accordance with the level of Historic American Building Survey documentation that is appropriate to the significance (local, state, national) of the resource.

**Impact CUL-2: Implementation of the CAP could result in the potential disturbance of known or undiscovered archaeological resources and human remains (less than significant with mitigation).**

Development of some of the proposed project's measures could result in damage, destruction, or removal of known and/or unrecorded archaeological resources, resulting in impacts. Many of the CAP measures are not expected to generate significant impacts because they are minor improvements to existing infrastructure and/or programs. However, there are other CAP measures that would involve ground-disturbing activities that could potentially disturb or damage undiscovered archaeological resources and/or human remains.
Archaeological resources have been identified by previous investigations in the County, and it is anticipated that archaeological resources may be discovered in other areas throughout the County during construction of facilities envisioned under the CAP; these activities have the potential to destroy and/or degrade known and unknown prehistoric archaeological resources, historical archaeological resources, or human remains. State CEQA Guidelines Section 15064.5, subdivision (e), requires that whenever human remains are uncovered, excavation activities must be stopped and the County coroner be called in to assess the remains. If the County coroner determines that the remains are of Native American origin, the Native American Heritage Commission must be contacted within 24 hours. At that time, the lead agency must consult with the appropriate Native Americans, if any, as identified by the Native American Heritage Commission. Section 15064.5 directs the lead agency (or applicant), under certain circumstances, to develop an agreement with the appropriate Native Americans for the treatment and disposition of the remains. Consequently, compliance with existing regulations, and recommended Mitigation Measures CUL-2a, CUL-2b, and CUL-2c, would ensure that impacts on known or undiscovered archaeological resources would be less than significant.

Mitigation Measure CUL-2a: Cultural resource investigations and protection and recovery of significant resources.

The lead agency will conduct a cultural resource investigation that includes a background records search (including a search of records from Sonoma State and historical societies, contact with Native American representatives identified by the NAHC, and site pedestrian surveys) for the areas of ground disturbance from each roadway improvement. If significant known or suspected sites are discovered within the project footprint and would be disturbed by the project, then a cultural resource treatment plan will be prepared, defining project monitoring and resource recovery and curation requirements concerning any encountered cultural resources.

Mitigation Measure CUL-2b: Work stoppage if cultural resources are encountered during ground-disturbing activities.

In the event that cultural resources are encountered during ground-disturbing activities, all work within proximity of the find will temporarily halt so that a qualified archaeologist, as determined by the responsible agency, can examine the find and document its location and nature (e.g., with drawings, photographs, written descriptions). The archaeologist will then direct that the work proceed if the find is deemed to be insignificant, continue elsewhere, or cease until adequate mitigation measures are adopted. If the find is determined to be potentially significant, the archaeologist, in consultation with the appropriate jurisdiction, will develop a treatment plan, which could include site avoidance, capping, or data recovery. If data recovery is determined to be appropriate, excavation will target recovery of an appropriate amount of information from archaeological deposits to determine the potential of the resource to address specific research questions. If it occurs, data recovery will emphasize the understanding of the archaeological deposit’s structure, including features and stratification, horizontal and vertical extent, and content, including the nature and quantity of artifacts.

Mitigation Measure CUL-2c: Work stoppage if human remains are encountered during ground-disturbing activities.

If human remains are discovered (in either an archaeological or construction context), all work within proximity of the remains will stop so that the archaeological monitor can examine the
remains. The County Coroner will be notified to make a determination as to whether the remains are of Native American origin. If the remains are determined to be Native American, the coroner will notify the NAHC immediately. The NAHC will notify those persons it believes are most likely descended from the deceased Native American. Once the NAHC identifies the most likely descendants, the descendants will make recommendations regarding proper burial, which will be implemented in accordance with Section 15064.5(e) of the State CEQA Guidelines.

Impact CUL-3: Implementation of the CAP could result in the potential disturbance of paleontological resources within the County (less than significant with mitigation).

Paleontological resources include fossil remains, as well as fossil localities and rock or soil formations that have produced fossil material. Fossils are the remains or traces of prehistoric animals and plants. Fossils are important scientific and educational resources because of their use in: (1) documenting the presence and evolutionary history of particular groups of now extinct organisms, (2) reconstructing the environments in which these organisms lived, and (3) determining the relative ages of the strata in which they occur and of the geologic events that resulted in the deposition of the sediments that formed these strata and in their subsequent deformation. The age and abundance of fossils depend on the location, topographic setting, and particular geologic formation in which they are found. The potential exists for projects developed to implement CAP measures to disturb undiscovered paleontological resources. Implementation of recommended Mitigation Measure CUL-3 would reduce this impact to a less-than-significant level.

Mitigation Measure CUL-3: Avoidance of encountered paleontological resources until resources have been evaluated and recorded, and treatment has been determined.

If paleontological resources are encountered during future grading or excavation activities associated with CAP-related activities, work will avoid altering the resource and its stratigraphic context until a qualified paleontologist has evaluated, recorded, and determined appropriate treatment of the resource, in consultation with the lead agency. Project personnel will not collect cultural resources. Appropriate treatment may include collection and processing of “standard” samples by a qualified paleontologist to recover micro vertebrate fossils; preparation of significant fossils to a reasonable point of identification; and depositing significant fossils in a museum repository for permanent curation and storage, together with an itemized inventory of the specimens.

3.6.3.4 Cumulative Impacts

Impact C-CUL-1: Implementation of the CAP, in combination with other foreseeable development in the surrounding area, could have a significant cumulative impact on cultural resources (cumulatively considerable with mitigation).

The cumulative context for the impacts on cultural resources would be development in Sonoma County. Urban development that has occurred over the past several decades in Sonoma County has resulted in the adverse impacts on significant historical and archaeological resources, and it is reasonable to assume that present and future development activities will continue to result in impacts on significant cultural resources, including historical resources, archaeological resources, and human remains. Federal, state, and local laws protect cultural resources in most instances but are not always feasible to protect cultural resources, particularly when in-place preservation would frustrate implementation of projects. For this reason, the cumulative effects of development in Sonoma County on cultural resources are considered significant. Implementation of recommended
mitigation measures identified for the CAP (Mitigation Measures CUL-1a, CUL-1b, CUL-1c, CUL-2a, CUL-2b, CUL-2c, and CUL-3) would help to protect any significant historic, archaeological, and paleontological resources, if present, to help reduce the project’s incremental contribution to these cumulative effects to a less-than-considerable level in most instances. However, it is possible that there may be individual alterations to historic buildings that cannot be fully mitigated, and thus it is possible that implementation of the CAP may contribute considerably to cumulatively significant impacts on historic resources.
3.7 Geology and Soils

This section describes the regulatory and environmental setting for geology and soils. It also describes impacts on geology and soils that would result from implementation of the Climate Action 2020: Community Climate Action Plan (CAP) and includes mitigation for significant impacts, where feasible and appropriate.

3.7.1 Environmental Setting

This section describes the geologic, seismic, and soil hazards present in Sonoma County. This information has been drawn and modified from the Sonoma County General Plan 2020 EIR (Sonoma County 2006).

3.7.1.1 Regional Geology

Topography

The topography in Sonoma County is varied, including several mountain ranges, distinctive valleys, and coastal terraces. The geology is quite complex and is continually evolving because of its location at an active plate margin. The County is bounded on the south by the San Pablo Bay and associated wetlands. The Cotati and Petaluma Valleys create the wide basin stretching from Santa Rosa to the Bay. Rolling hills and grasslands predominate here, as well as in Marin County to the south. The rugged Mayacamas and Sonoma mountains geographically form the eastern boundary and 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 Geysers geothermal field, located in the northeastern section of the County, extends into both Sonoma and Lake Counties. The Mendocino Highlands form a common geographic unit with Mendocino County to the north. The Alexander Valley runs from northwest to southeast, bounded on the east by the Mayacamas Mountains and on the west by the Coast Range. The Pacific Ocean forms the western County boundary, including an interesting assemblage of steep hills, marine terraces, beaches, and offshore sea stacks.

Geology

The geology of Sonoma County is a result of the past tectonic, volcanic, erosion, and sedimentation processes of the California Coast Range geomorphic province. Ongoing tectonic forces resulting from the collision of the North American Plate with the Pacific Plate, combined with more geologically recent volcanic activity, have resulted in mountain building and down warping of parallel valleys. The margin of the two tectonic plates is defined by the San Andreas Fault system: a broad zone of active, dormant, and inactive faults dominated by the San Andreas Fault which trends along the western margin of the County. This fault system results in the northwestern structural alignment that controls the overall orientation of the County's ridges and valleys. The land has been modified by more recent volcanic activity, evidenced by Mount St. Helena that dominates the northeastern part of the County. Erosion, sedimentation, and active faulting occurring in recent times have further modified Sonoma County's landscape to its current form.
3.7.1.2 Geologic Hazards

Seismicity

Earthquakes are most common along geologic faults that are planes of weakness or fractures along which rocks have been displaced. Faults located within Sonoma County are part of the San Andreas Fault system which extends along most of the length of California and represents the boundary between the Pacific and North American plates of the earth's crust. These faults show significant surface evidence of lateral or vertical movement in the past two million years (i.e., the Quaternary geologic period) and are defined as active or are considered to be potentially active in the future. Sudden movement or displacement along faults generally causes earthquakes. However, earthquakes are also caused by volcanic activity. Although there are no known active volcanic sources in Sonoma County, the Geysers' Known Geothermal Resource Area is a source of similar seismic events related to movement within deep seated hot or semi-molten rock.

The two most important faults for purposes of planning for seismic impacts in Sonoma County are the San Andreas and Rodgers Creek faults. Current seismic data indicates that the highest magnitude earthquakes to be expected for the northern San Andreas Fault and the Rodgers Creek faults are 8.0 and 7.5, respectively, on the Richter scale. It has been accepted for many years that earthquakes of magnitude 8.0 or more somewhere on the San Andreas Fault can be expected to reoccur every 50 to 200 years.

Ground Shaking and Liquefaction

Seismic ground-shaking and seismic-induced liquefaction can result in damaging impacts to both close to and at great distances from the source of the earthquake. Seismic ground shaking causes liquefaction by increasing pore water pressure between the sand or silt grains, which temporarily transforms certain water saturated soils to a semi-liquid state. This results in loss of shear strength, thereby removing support from foundations and causing differential settlement, subsidence or total collapse of buildings, bridges, roadways, or other structures. The most susceptible areas are the silty “Bay muds” south of Petaluma and Sonoma and near Bodega Bay. Deposits that are also susceptible to liquefaction are areas underlain by saturated unconsolidated alluvium that has fairly uniform grain size. Thus, in alluvial basins within Sonoma County, the potential for liquefaction failures will tend to increase in the winter and spring when the ground water table is higher. These areas include the largest population centers and most intensely developed areas of Sonoma County.

Earthquake-Induced Landslides

Beyond the immediate area of surface fault rupture, ground deformation can distort the surface, secondary ground cracks can open, and both can damage structures. These kinds of ground failures are caused by the torsion effects on the ground adjacent to the fault trace as blocks of the earth move past each other. Seismic lurching is the movement of a soil or rock mass toward an unsupported free face such as a sea cliff, road cut, or steep natural hillside. These kinds of ground failures are caused by seismic accelerations and are transitional to seismically triggered landslides.
3.7.1.3 Soil Hazards

Soil characteristics can greatly influence land-use activities. Within Sonoma County there are soils with characteristics that include seasonal shrink and swell (i.e., expansive soils), weak or collapsing soils that compress under a load or when wet, soils that are corrosive to certain materials, soils that may liquefy during seismic shaking, and soils that are susceptible to erosion.

Slope Stability and Landslides

The most frequent and widespread type of ground failure in Sonoma County is landsliding. In the broadest sense, a landslide is a downward and outward movement of slope forming materials composed of rock, soils, artificial fills, or a combination of these. Because of the highly fractured rock formations, steep topography, long coastline, and the area's seismicity, extensive land areas of the County are subject to this destructive hazard. Virtually all parts of the County except the flat lying alluvial valleys are subject to damaging landslides of various kinds. Landslides vary in size, speed of movement, and mechanism.

Areas prone to landsliding include locations of past landslides in the County and hillsides where clay and silt-rich soils absorb water and loose strength and where rock strata are parallel to surface slopes. In addition, landslides occur where faults have fractured rock and along the base of slopes or cliffs where supporting material has been removed by stream or wave erosion, or human activities. Heavy rainfall, human actions, or earthquakes can trigger landslides. They may take the form of a slow continuous movement such as a slump or may move very rapidly as a semi-liquid mass such as a debris flow or avalanche.

Subsidence and Differential Settlement

Most subsidence is caused by the withdrawal of fluids (e.g., ground water or oil) from subsurface reservoirs or from the collapse of surface and near surface soils and rocks over subterranean voids such as mines and caves. The extent over which subsidence occurs can be very localized, or it can impact large areas.

Settlement is a more localized phenomenon and is related to the loading of soils and their subsequent compression as a result of construction activities. Differential settlement results when settlement across an area settles at different rates or in different amounts. Settlement can result if the native soils are porous or weak such that the weight to a building or other structure causes the soil to compress. This can occur in native soils or in manmade fills. The amount of settlement depends on the thickness of the weak compressible soils or fill, the load imposed by the construction, as well as the original density of the soils. Non-uniform or differential settlement can occur if the compressible soil section beneath the structure is variable, if the soil is heterogeneous, or if there are variable loads imposed across the footprint of the structure. If a structure is constructed such that it spans native soil and bedrock or native soil and a section of fill, differential settlements can be expected. The kinds of damage cause by settlement and differential settlement are similar to that caused by expansive soil (tilted and cracked floor slabs, uneven floors in buildings, cracked pavements, etc.).

Expansive and Creeping Soil

Expansive soils, which are found in various parts of Sonoma County, greatly increase in volume when they absorb water and shrink when they dry out. Expansion of the soil or rock is due to the
attraction and absorption of water into the expansible crystal lattices of the clay minerals. The water may be derived from moisture in the air or ground water beneath the foundations of buildings. When buildings are placed on expansive soils, foundations may rise each wet season and fall each dry season. Roadways, pavements, and other flat construction are highly susceptible to damage from expansive soils. Movements may vary under different parts of a building with the result that foundations crack, various structural portions of the building are distorted, and doors and windows are warped so that they do not function properly. Where expansive soils are located on hill slopes which are common in parts of Sonoma County, they undergo a process of seasonal down slope movement called "soil creep". Soil creep forces can be substantial and need to be evaluated to determine their effects on foundation elements, retaining walls, and other structures.

3.7.2 Regulatory Setting

3.7.2.1 Federal

There are no relevant federal regulations for geology and soils other than Section 402 of the Clean Water Act which contains requirements relative to erosion control, and this regulation is discussed in Section 3.8, Hydrology and Water Quality.

3.7.2.2 State

Alquist-Priolo Earthquake Fault Zoning Act

California's Alquist-Priolo Earthquake Fault Zoning Act (Alquist-Priolo Act) (Public Resources Code [PRC] Section 2621 et seq.), originally enacted in 1972 as the Alquist-Priolo Special Studies Zones Act and renamed in 1994, is intended to reduce risks to life and property from surface fault rupture during earthquakes. The Alquist-Priolo Act prohibits the location of most types of structures intended for human occupancy1 across the traces of active faults and strictly regulates construction in the corridors along active faults (earthquake fault zones). It also defines criteria for identifying active faults, giving legal weight to terms such as active, and establishes a process for reviewing building proposals in and adjacent to earthquake fault zones.

Under the Alquist-Priolo Act, faults are zoned, and construction along or across them is strictly regulated if they are sufficiently active and well defined. A fault is considered sufficiently active if one or more of its segments or strands shows evidence of surface displacement during Holocene time (defined for purposes of the act as referring to approximately the last 11,000 years). A fault is considered well-defined if its trace can be identified clearly by a trained geologist at the ground surface or in the shallow subsurface using standard professional techniques, criteria, and judgment (Bryant and Hart 2007).

Seismic Hazards Mapping Act

Similar to the Alquist-Priolo Act, the Seismic Hazards Mapping Act of 1990 (PRC Sections 2690–2699.6) is intended to reduce damage resulting from earthquakes. While the Alquist-Priolo Act addresses surface fault rupture, the Seismic Hazards Mapping Act addresses other earthquake-

1 With reference to the Alquist-Priolo Act, a structure for human occupancy is defined as one “used or intended for supporting or sheltering any use or occupancy, which is expected to have a human occupancy rate of more than 2,000 person-hours per year” (California Code of Regulations, Title 14, Div. 2, Section 3601[e]).
related hazards, including strong groundshaking, liquefaction, and seismically induced landslides. Its provisions are similar in concept to those of the Alquist-Priolo Act: the state is charged with identifying and mapping areas at risk of strong groundshaking, liquefaction, landslides, and other corollary hazards, and cities and counties are required to regulate development within mapped seismic hazard zones.

Under the Seismic Hazards Mapping Act, permit review is the primary mechanism for local regulation of development. Specifically, cities and counties are prohibited from issuing development permits for sites within seismic hazard zones until appropriate site-specific geologic and/or geotechnical investigations have been carried out and measures to reduce potential damage have been incorporated into the development plans.

**California Uniform Building Code**

The major state regulations regarding geo-seismic hazards, other than surface faulting, are contained in Title 24, Part 2, California Uniform Building Code (CUBC). The CUBC applies to public building and a large percentage of private building in the state. It is based on the current federal Uniform Building Code, but contains additional amendments, and repeals that are specific to building conditions and structural requirements in the state of California. Local codes are permitted to be more restrictive than Title 24 but are required to be no less restrictive. Chapter 23 of the CUBC deals with general design requirements, including (but not limited to) regulations governing seismically resistant construction. Chapters 29 and 70 deal with excavations, foundations, retaining walls, and grading including (but not limited to) requirements for seismically resistant design, foundation investigations, stable cut and fill slopes, and drainage and erosion control.

**National Pollutant Discharge Elimination System General Construction Stormwater Permit**

The General National Pollutant Discharge Elimination System (NPDES) Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Order 2009-0009-DWQ as amended by Order No.2010-0014-DWQ and 2012-0006-DWQ) (Construction General Permit) regulates stormwater discharges for construction activities under CWA Section 402. Dischargers whose projects disturb 1 or more acres of soil, or whose projects disturb less than 1 acre but are part of a larger common plan of development that in total disturbs 1 or more acres, are required to obtain coverage under the Construction General Permit. The Construction General Permit requires the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP).

**National Pollutant Discharge Elimination System General Municipal Stormwater Permit**

MS4 permits require that cities and counties develop and implement programs and measures to reduce the discharge of pollutants in stormwater discharges to the maximum extent possible, including management practices, control techniques, system design and engineering methods, and other measures as appropriate.

### 3.7.2.3 Local

Appendix C, *Local General Plan Goals, Objectives, and Policies*, provides a list of the goals, objectives, and policies in the local general plans of the participating jurisdictions including those related to geology and soils. These goals, objectives, and policies were reviewed to assess whether the project
is consistent with the general plans of participating jurisdictions. Disclosure of this consistency analysis is for informational purposes. An additional purpose of providing a list of relative local policies is, where appropriate, to provide the context within which the CAP will be locally implemented. As described in the CAP, most of the CAP measures represent implementation of many of the priorities outlined in existing local policies.

Inconsistencies with general plan policies are not necessarily considered significant impacts under CEQA unless they are related to physical impacts on the environment that are significant in their own right.

Implementation of the CAP is consistent with the applicable general plan goals, objectives, and policies of the participating jurisdictions in relation to geology and soils.

### 3.7.3 Impacts Analysis

#### 3.7.3.1 Methodology

This analysis is based on a review of the soils and geologic information contained in the Sonoma County General Plan. Effects related to geology and soils are analyzed qualitatively and are focused on the implementation of the CAP's potential to increase the risk of personal injury, loss of life, or damage to property, including new or upgraded facilities, as a result of existing geologic conditions in the County.

#### 3.7.3.2 Significance Criteria

The State California Environmental Quality Act (CEQA) Guidelines Appendix G (14 California Code of Regulations [CCR] 15000 et seq.) has identified significance criteria to be considered for determining whether a project could have significant impacts on geology and soils.

An impact would be considered significant if construction or operation of the project would have any of the following consequences.

- Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving any of the following:
  - Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault [refer to Division of Mines and Geology Special Publication 42];
  - 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 an onsite or offsite 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 wastewater disposal systems in areas where sewers are not available for the disposal of wastewater.

Pursuant to the recent California Supreme Court ruling in the California Building Industry Association vs. Bay Area Air Quality Management District (BIA vs. BAAQMD) case, the impacts of a project placing new residents or structures in an area of existing geological, soil, or seismic risk is not considered an impact under CEQA unless the project itself exacerbates the existing environmental hazard. As such, CEQA impacts would occur where the project results in a geological, soil, or seismic risk and not where risks may occur due to the mere introduction of new receptors or structures in areas of existing risk. However, local lead agencies have numerous policies requiring the safe design of projects to avoid undue risks to people and structures and have local police power to require actions as conditions of approval whether or not they are defined as CEQA impacts in the end. As such, the text below notes when certain on-site impacts might not be considered as CEQA impacts, but are nevertheless considered impacts and mitigation is recommended as a condition of approval, in the event an impact may be determined to not meet the requirements as a CEQA impact.

3.7.3.3 Impacts and Mitigation Measures

Impact GEO-1: Implementation of the CAP could expose people or structures to risks involving earthquake induced seismic hazards, such as surface fault ruptures, groundshaking, ground failures including liquefaction, and landslides (less than significant).

The CAP is a policy-level document that does not include any site-specific designs or proposals, or grant any entitlements for development that would have the potential to expose people or structures to increased risks associated with seismic hazards. As a policy document, the CAP would have no direct impact on geology and soils, but future implementation of activities supported by the CAP could increase risks involving with seismic hazards.

There are several CAP measures that promote and could include the construction of new facilities or retrofits aimed to increase renewable energy use, increase solid waste diversion, increase capture/use of methane from landfills, promote recycled water use, and reduce emission from livestock operations. The CAP also promotes mixed-use and transit-oriented development and additional transit facilities and electric-vehicle charging stations aimed to reduce fuel use and travel demand through smart land use and development. The siting of these new facilities and buildings could expose on-site people or structures to risk from earthquake induced seismic hazards if the structures are sited within active seismic fault zone areas.

Under CEQA, this could result in a significant impact if on-site structural failure were to result in impact on off-site people or structures. This could occur for example if an on-site structure were to collapse into an adjacent structure or facility, or catch fire due to ruptured gas lines following an earthquake that then spread to adjacent structures or areas thus endangering off-site people or structures. These sorts of risks are routinely addressed in both ministerial and discretionary projects. Where there is the potential for these impacts, they are routinely addressed through project-level environmental review and permitting. Many existing city and county policies and ordinances address such impacts. Where existing ordinances do not address these impacts, then project-level CEQA review will assess the specific significance of the project impact and, where appropriate, identify mitigation to address those impacts. In particular, this impact is routinely addressed with standard mitigation identified during project-level review such as preparing site-specific geotechnical investigations for new structures and incorporating site-specific...
recommendations into the structure’s design and construction. Projects in furtherance of the CAP will be subject to CEQA review, and RCPA has no basis to conclude there is any significant risk.

**Impact GEO-2: Implementation of the CAP could result in substantial soil erosion or loss of topsoil (less than significant).**

Although the CAP does not directly involve the construction of structures, future implementation of activities supported by the CAP could result in ground-disturbing activities that could result in soil erosion or loss of topsoil. There are several CAP measures that promote and could include the construction of new facilities aimed to increase renewable energy use, increase solid waste diversion, increase capture/use of methane from landfills, promote recycled water use, and reduce emission from livestock operations. The CAP also promotes mixed-use and transit-oriented development and additional transit facilities and electric-vehicle charging stations aimed to reduce fuel use and travel demand through smart land use and development. Ground-disturbing activities associated with the construction of these structures and facilities could result in soil erosion or the loss of topsoil.

However, as discussed above, the CAP does not directly involve the construction of any structures. Any structures that could be constructed consistent with the CAP would be subject to further CEQA analysis of project-specific impacts and State Water Resources Control Board (State Water Board) regulations regarding construction activities, including the preparation of a SWPPP for a project per the NPDES General Construction Permit. A project’s SWPPP would include site-specific pollution prevention measures (erosion and sediment control measures and measures to control non-stormwater discharges and hazardous spills), demonstration of compliance with all applicable local and regional erosion and sediment control standards, identification of responsible parties, a detailed construction timeline, and best management practices (BMPs) monitoring and maintenance schedule to determine quantities of pollutants leaving the site. SWPPP BMPs are recognized as effective methods to prevent or minimize the potential releases of pollutants into drainages, surface waters, or groundwater. SWPPP compliance coupled with using the appropriate BMPs would reduce potential erosion and water quality impacts during construction activities. Post-construction, implementation of the CAP as a component of a specific project would be subject to the NPDES and local ordinances and regulations to reduce the potential for erosion and loss of topsoil. With compliance to local regulations, and the NPDES and SWPPP requirements, impacts associated with soil erosion and loss of topsoil would be less than significant.

**Impact GEO-3: Facilities promoted by the CAP could be located on an unstable geological unit/soil or expansive soil, potentially resulting in increased risks of geologic and soil hazards or damage to project structures (less than significant).**

There are several CAP measures that promote and could include the construction of new facilities aimed to increase renewable energy use, increase solid waste diversion, increase capture/use of methane from landfills, promote recycled water use, and reduce emission from livestock operations. The CAP also promotes mixed-use and transit-oriented development and additional transit facilities and electric-vehicle charging stations aimed to reduce fuel use and travel demand through smart land use and development. The siting of these new facilities and buildings in areas underlain with unstable or expansive soils could pose risk to life or property due to facility upset conditions.

Under CEQA, this could result in a significant impact if the risks due to structural failure were to affect off-site people or structures. These sorts of risks are site specific and routinely addressed in both ministerial and discretionary projects. Where there is the potential for these impacts, they are
routinely addressed through project-level environmental review and permitting. Many existing city and county policies and ordinances address such impacts. Where existing ordinances do not address these impacts, then project-level CEQA review will assess the specific significance of the project impact and, where appropriate, identify mitigation to address those impacts. In particular, this impact is routinely addressed with standard mitigation identified during project-level review such as preparing site-specific geotechnical investigations for new structures and incorporating site-specific recommendations into the structure's design and construction. Projects in furtherance of the CAP will be subject to CEQA review, and RCPA has no basis to conclude there is any significant risk.

**Impact GEO-4: Implementation of the CAP would not involve the use of septic tanks or alternate wastewater disposal systems that would result in soil impacts (no impact).**

Implementation of the CAP does not include any measures that would directly involve the use of or support the use of septic tanks or alternate wastewater disposal systems. Thus, there would be no impact.

### 3.7.3.4 Cumulative Impacts

**Impact C-GEO-1: Implementation of the CAP, in combination with other foreseeable development in the surrounding area, could have a significant cumulative impact to geology and soils (less than considerable contribution).**

The context for the evaluation of cumulative impacts on geology and soils addresses the effects of the CAP in combination with other development in Sonoma County. The geographic context for the analysis of impacts resulting from geologic hazards is generally site specific rather than cumulative in nature. Every project has unique geologic considerations that are subject to existing state and local site development and construction standards. As such, the potential for cumulative impacts to occur is limited. For impacts related to exposure to seismic hazards, the geographic context is the Bay Area because the entire region is seismically active, with people subject to risk of injury and structures subject to damage as a result of seismic ground shaking. Where there is the potential for impacts, they are routinely addressed through project-level environmental review and permitting. Many existing city and county policies and ordinances address such impacts. Where existing ordinances do not address these impacts, then project-level CEQA review will assess the specific significance of the project impact and, where appropriate, identify mitigation to address those impacts. In particular, this impact is routinely addressed with standard mitigation identified during project-level review such as preparing site-specific geotechnical investigations for new structures and incorporating site-specific recommendations into the structure's design and construction. There is no basis to conclude there is any cumulatively considerable contribution to existing risk.
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3.8 Greenhouse Gas Emissions

This section describes the regulatory and environmental setting for greenhouse gas (GHG) emissions. It also describes impacts on GHG emissions that would result from implementation of the Climate Action 2020: Community Climate Action Plan (CAP) and includes mitigation for significant impacts, where feasible and appropriate. The CAP itself provides an in-depth review of GHG emissions and forecasts for Sonoma County and the participating jurisdictions; the CAP is hereby incorporated by reference.

Following is a brief description of the terminology and concepts used in this section.

- **Greenhouse Gas.** GHGs encompass the following six gases present in the Earth’s lower atmosphere: carbon dioxide (CO$_2$), methane (CH$_4$), nitrous oxide (N$_2$O), perfluorocarbons (PFCs), sulfur hexafluoride (SF$_6$), and hydrofluorocarbons (HFCs).

- **Greenhouse Effect.** This phenomenon keeps the atmosphere near the Earth's surface warm enough for habitation by humans and other life forms. Visible sunlight passes through the atmosphere without being absorbed. Some of the sunlight striking the Earth is absorbed and converted to heat, which warms the surface. The surface emits infrared radiation to the atmosphere, where some of it is absorbed by GHGs and re-emitted toward the surface; some of the heat is not trapped by GHGs and escapes into space. Human activities that emit additional GHGs to the atmosphere increase the amount of infrared radiation that gets absorbed before escaping into space, thus enhancing the greenhouse effect and amplifying the warming of the Earth (Center for Climate and Energy Solutions 2011). Thus, GHGs play a critical role in maintaining the Earth’s temperature.

- **Global Warming and Climate Change.** Increases in fossil fuel combustion and deforestation have exponentially increased concentrations of GHGs in the atmosphere since the Industrial Revolution. Rising atmospheric concentrations of GHGs in excess of natural levels enhance the greenhouse effect, which contributes to *global warming* of the Earth's lower atmosphere and may induce large-scale changes in ocean circulation patterns, precipitation patterns, global ice cover, biological distributions, and other changes to the Earth system that are collectively referred to as *climate change*. The Intergovernmental Panel on Climate Change (IPCC) has been established by the World Meteorological Organization and United Nations Environment Programme to assess scientific, technical, and socioeconomic information relevant to the understanding of climate change, its potential impacts, and options for adaptation and mitigation.

Climate change is a global problem, and GHGs are global pollutants, unlike criteria air pollutants (such as ozone precursors), which are primarily pollutants of regional and local concern. Given their long atmospheric lifetimes, GHGs emitted by countless sources worldwide accumulate in the atmosphere. No single emitter of GHGs is large enough to trigger global climate change on its own. Rather, climate change is the result of the individual contributions of countless past, present, and future sources. Therefore, GHG impacts are inherently cumulative, and the analysis below is a cumulative impact analysis.
3.8.1 Environmental Setting

The unique chemical properties of GHGs enable them to become well-mixed within the atmosphere and transported over long distances. Consequently, unlike other resource areas that are primarily concerned with localized project impacts (e.g., within 1,000 feet of a particular project site), the global nature of climate change requires a broader analytic approach. Although this section focuses on GHG emissions generated as a result of the CAP, the analysis considers them in the context of potential state, national, and global GHG impacts.

3.8.1.1 Greenhouse Gases

The primary GHGs are CO$_2$, CH$_4$, N$_2$O, PFCs, SF$_6$, and HFCs, as defined by California law and identified in the California Environmental Quality Act (CEQA) Guidelines (Health and Safety Code 38505(g); CCR, title 14, section 15364.5). Each of these gases is discussed in detail below except PFCs, which are primarily generated by industrial processes and are not anticipated to be generated by the CAP.

To simplify reporting and analysis, methods have been set forth to describe emissions of GHGs in terms of a single gas. The most commonly accepted method to compare GHG emissions is the global warming potential (GWP) methodology defined in the IPCC Fourth Assessment Report (AR4) reference documents (Intergovernmental Panel on Climate Change 2007b). Therefore, GWP methods from the AR4 are utilized herein. The IPCC defines the GWP of various GHG emissions on a normalized scale that recasts all GHG emissions in terms of CO$_2$ equivalent (CO$_2$e). This normalized scale compares the heat-trapping ability of each gas to the same mass of CO$_2$ (CO$_2$ has a global warming potential of 1 by definition) calculated over a specified time interval (such as 100 years).

Table 3.8-1 lists the global warming potential of several GHGs, their lifetimes, and abundances in the atmosphere.

<table>
<thead>
<tr>
<th>Greenhouse Gases</th>
<th>Global Warming Potential (100 years)</th>
<th>Lifetime (years)</th>
<th>2014 Atmospheric Abundance</th>
</tr>
</thead>
<tbody>
<tr>
<td>CO$_2$</td>
<td>1</td>
<td>50–200</td>
<td>394 ppm</td>
</tr>
<tr>
<td>CH$_4$</td>
<td>28</td>
<td>9–15</td>
<td>1,893 ppb</td>
</tr>
<tr>
<td>N$_2$O</td>
<td>265</td>
<td>121</td>
<td>326 ppb</td>
</tr>
<tr>
<td>SF$_6$</td>
<td>23,500</td>
<td>3,200</td>
<td>7.8 ppt</td>
</tr>
<tr>
<td>HFC-23</td>
<td>12,400</td>
<td>222</td>
<td>18 ppt</td>
</tr>
<tr>
<td>HFC-134a</td>
<td>1,300</td>
<td>13.4</td>
<td>75 ppt</td>
</tr>
<tr>
<td>HFC-152a</td>
<td>138</td>
<td>1.5</td>
<td>3.9 ppt</td>
</tr>
</tbody>
</table>


CO$_2$ = carbon dioxide
CH$_4$ = methane
N$_2$O = nitrous oxide
SF$_6$ = sulfur hexafluoride
HFC = hydrofluorocarbon
ppm = parts per million by volume
ppb = parts per billion by volume
ppt = parts per trillion by volume.
Carbon Dioxide

CO₂ is the most important anthropogenic GHG and accounts for more than 75% of all GHG emissions caused by humans. Its atmospheric lifetime of 50–200 years ensures that atmospheric concentrations of CO₂ will remain elevated for decades even after mitigation efforts to reduce GHG concentrations are promulgated (Intergovernmental Panel on Climate Change 2007a). The primary sources of anthropogenic CO₂ in the atmosphere are the burning of fossil fuels (including motor vehicles), gas flaring, cement production, and land use changes (e.g., deforestation, oxidation of elemental carbon). CO₂ can also be removed from the atmosphere by photosynthetic organisms.

Atmospheric CO₂ has increased from a preindustrial concentration of 280 parts per billion (ppb) to 394 parts per million (ppm) (Intergovernmental Panel on Climate Change 2007b; National Oceanic and Atmospheric Administration 2014).

Methane

CH₄, the main component of natural gas, is the second most abundant GHG and has a GWP of 25 (Intergovernmental Panel on Climate Change 2007b). Sources of anthropogenic emissions of CH₄ include growing rice, raising cattle, using natural gas, landfill outgassing, and mining coal (National Oceanic and Atmospheric Administration 2010). Certain land uses also function as both a source and sink for CH₄. For example, the primary terrestrial sources of CH₄ are wetlands, whereas undisturbed, aerobic soils act as a CH₄ sink (i.e., they remove CH₄ from the atmosphere).

Atmospheric CH₄ has increased from a preindustrial concentration of 715 ppb to 1,893 ppb (Intergovernmental Panel on Climate Change 2007b; Blasing 2014).

Nitrous Oxide

N₂O is a powerful GHG, with a GWP of 298 (Intergovernmental Panel on Climate Change 2007b). Anthropogenic sources of N₂O include agricultural processes (e.g., fertilizer application), nylon production, fuel-fired power plants, nitric acid production, and vehicle emissions. N₂O also is used in rocket engines, racecars, and as an aerosol spray propellant. Natural processes, such as nitrification and denitrification, can also produce N₂O, which can be released to the atmosphere by diffusion. In the United States, more than 70% of N₂O emissions are related to agricultural soil management practices, particularly fertilizer application.

N₂O concentrations in the atmosphere have increased 18% from preindustrial levels of 270 ppb to 326 ppb (Intergovernmental Panel on Climate Change 2007b; Blasing 2014).

Hydrofluorocarbons

HFCs are anthropogenic chemicals used in commercial, industrial, and consumer products and have high GWPs (U.S. Environmental Protection Agency 2006). HFCs are generally used as substitutes for ozone-depleting substances (ODS) in automobile air conditioners and refrigerants. As seen in Table 3.8-1, the most abundant HFCs, in descending order, are HFC-134a, HFC-23, and HFC-152a.

HFC concentrations in the atmosphere have risen from 0 to more than 64 (HFC-134a) parts per trillion (ppt) since preindustrial times (Intergovernmental Panel on Climate Change 2007b; Blasing 2014).
Sulfur Hexafluoride

SF$_6$, a human-made chemical, is used as an electrical insulating fluid for power distribution equipment, in the magnesium industry, in semiconductor manufacturing, and also as a tracer chemical for the study of oceanic and atmospheric processes (U.S. Environmental Protection Agency 2006). In 2014, atmospheric concentrations of SF$_6$ were 7.8 parts per trillion (ppt) and steadily increasing in the atmosphere (Blasing 2014). SF$_6$ is the most powerful of all GHGs listed in IPCC studies, with a GWP of 23,500 (Myhre et al. 2013).

3.8.1.2 Greenhouse Gas Emissions Inventories

A GHG inventory is a quantification of all GHG emissions and sinks within a selected physical and/or economic boundary. GHG inventories can be performed on a large scale (i.e., for global and national entities) or on a small scale (i.e., for a particular building or person). Although many processes are difficult to evaluate, several agencies have developed tools to quantify emissions from certain sources.

Table 3.8-2 outlines the most recent global, national, and statewide inventories to help contextualize the magnitude of potential CAP-related emissions.

<table>
<thead>
<tr>
<th>Emissions Inventory</th>
<th>CO$_2$e (metric tons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010 IPCC Global GHG Emissions Inventory</td>
<td>52,000,000,000</td>
</tr>
<tr>
<td>2013 EPA National GHG Emissions Inventory</td>
<td>6,673,000,000</td>
</tr>
<tr>
<td>2013 ARB State GHG Emissions Inventory</td>
<td>459,300,000</td>
</tr>
<tr>
<td>2007 SFBAAB GHG Emissions Inventory</td>
<td>95,800,000</td>
</tr>
<tr>
<td>2010 CAP Sonoma County Inventory</td>
<td>3,700,000</td>
</tr>
</tbody>
</table>

Sources: Intergovernmental Panel on Climate Change 2014, U.S. Environmental Protection Agency 2015; California Air Resources Board 2015; BAAQMD 2008, and the RCPA CAP

CO$_2$e = carbon dioxide equivalent
IPCC = Intergovernmental Panel on Climate Change
EPA = Environmental Protection Agency
ARB = California Air Resources Board
SFBAAB = San Francisco Bay Area Air Basin

3.8.1.3 Impacts of Climate Change

Climate change is a complex phenomenon that has the potential to alter local climatic patterns and meteorology. Modeling indicates that climate change will result globally and regionally in sea level rise as well as changes in climate and rainfall, among other effects. However, there remains uncertainty in characterizing the precise local climate characteristics and predicting how various ecological and social systems will react to any changes in the existing climate at the local level. Regardless of this uncertainty in precise predictions, it is widely understood that substantial climate change is expected to occur in the future.

Consequently, Sonoma County will be impacted by changing climatic conditions. Research efforts coordinated through the California Air Resources Board (ARB), California Energy Commission (CEC), California Environmental Protection Agency, the University of California system, and others are examining the specific changes to California’s climate that will occur as the Earth’s surface warms.
Climate change could impact the natural environment in California in the following ways, among others.

- Rising sea levels along the California coastline, particularly in San Francisco and the San Joaquin Delta due to ocean expansion.
- Extreme-heat conditions, such as heat waves and very high temperatures, which could last longer and become more frequent.
- An increase in heat-related human deaths and infectious diseases, and a higher risk of respiratory problems caused by deteriorating air quality.
- Reduced snow pack and stream flow in the Sierra Nevada, affecting winter recreation and water supplies.
- Potential increase in the severity of winter storms, affecting peak stream flows and flooding.
- Changes in growing season conditions that could affect California agriculture, causing variations in crop quality and yield.
- Changes in distribution of plant and wildlife species due to changes in temperature, competition from colonizing species, changes in hydrologic cycles, changes in sea levels, and other climate-related effects.

With respect to central western California, including Sonoma County, climate change effects will be similar to California-wide impacts, and are expected to include the following conditions (PRBO Conservation Science 2011).

- Hotter and drier climate, with average annual temperatures increasing 1.6–1.9°F by 2070 and mean annual rainfall decreasing by 61–188 millimeters.
- Sea level rise by 8.7–12.7 centimeters by 2020–2050 and by 19.2–40.9 centimeters by 2070–2099, potentially affecting or inundating coastal development.
- More frequent and intense wildfires, with the area burned projected to increase by an estimated 10–50% by 2070–2090.
- Decreases in chaparral/coastal scrub (19–43% by 2070) and blue oak woodland/foothill pine (44–55% by 2070); increases in grassland (85–140% by 2070).
- Increased salinity in the San Francisco Bay, with salinity increasing by 1–3 practical salinity units during dry years.
- Increase in estuarine flows into the San Francisco Bay estuary, with winter gains approximately balancing spring-summer losses.
- Increased heat and decreased air quality, with the result that public health will be placed at risk, native plant and animal species may be lost, and there will be an estimated 60% growth in electricity consumption.

**Sonoma County Climate Change Impacts**

The following information was taken from the *Climate Ready Sonoma County: Climate Hazards and Vulnerabilities* Report (North Bay Climate Adaptation Initiative 2015). Although climate change will likely have varying effects in different parts of the County, the general trend is warming of valley bottoms and cooling in some mountainous areas. Temperatures are projected to increase by 5–15°F
by the end of the century with uncurbed emissions, but by only a few degrees with heavily mitigated emissions.

In the past 20 years, average maximum temperatures have already increased by 2.7°F, and they are expected to continue to rise. Projections show the average temperature to be as high as 15°F warmer by the end of the century if emissions continue unmitigated. The number of extreme heat days (days with a high temperature above 93°F) is projected to increase to 40–80 days per year, compared with the current average of 0–10 days a year.

Precipitation is predicted to be more variable, with bigger, more variable floods. Climate models analyzed in the *Climate Ready Sonoma County: Climate Hazards and Vulnerabilities Report* present a range of precipitation scenarios, the wettest showing a 25% increase in precipitation compared to twentieth century conditions, and the driest projecting a 20% decrease. Although projections of precipitation changes do not give a clear picture of the future, Sonoma County will experience drier soil and plants due to the warmer weather. The warmer weather and more erratic precipitation also increases the risk of wildfire. Other factors that may increase wildfire risk in the County include tree mortality and increases in the extent of flammable invasive species. From 1900 to 2008, sea level has risen 0.08 inch per year in the San Francisco Bay, and the Bay is projected to rise 16.5–65.8 inches by 2100.

Scientific consensus has established a direct connection between GHG emissions and climate change. Projection models for climate change impacts show far more extreme effects under scenarios in which GHG emissions are not mitigated, and much milder effects under scenarios in which emissions are heavily mitigated.

### 3.8.2 Regulatory Setting

#### 3.8.2.1 Federal

Climate change is widely recognized as an imminent threat to the global climate, economy, and population. The U.S. Environmental Protection Agency (EPA) has acknowledged potential threats imposed by climate change in a Cause or Contribute Finding, which found that GHG emissions contribute to pollution that threatens public health and welfare and was a necessary finding prior to adopting new vehicle emissions standards that reduce GHG emissions. Federal climate change regulation under the federal Clean Air Act (CAA) is also currently under development for both existing and new sources. Despite the actions discussed below, there is still no comprehensive, overarching federal law specifically related to the reduction of GHG emissions.

**Update to Corporate Average Fuel Economy Standards (2009/2012)**

The Corporate Average Fuel Economy (CAFE) standards incorporate stricter fuel economy standards promulgated by the State of California into one uniform standard. Additionally, automakers are required to cut GHG emissions in new vehicles by roughly 25% by 2016.

EPA, the National Highway Traffic Safety Administration (NHTSA), and ARB issued joint Final Rules for CAFE standards and GHG emissions regulations for 2017 to 2025 model year passenger vehicles, which require an industry-wide average of 54.5 miles per gallon (mpg) in 2025 (National Highway Traffic Safety Administration 2012).
EPA Clean Power Plan (2015)

On June 2, 2014, under President Obama's Climate Action Plan, EPA proposed the Clean Power Plan, which includes national GHG limits for the electric power industry. The rule was adopted on August 3, 2015, and contains state-specific emission-reduction goals and will help cut carbon pollution from the power sector by 32% from 2005 levels by 2030. On February 9, 2016, the United States Supreme Court stayed implementation of the Clean Power Plan pending judicial review.

EPA and NHTSA Fuel Economy for Medium and Heavy Duty Engines and Vehicles (2011/2015)

On August 9, 2011, EPA and NHTSA announced a new national program to reduce GHG emissions and improve fuel economy for new medium- and heavy-duty engines and vehicles sold in the United States. EPA and NHTSA finalized a joint rule (Phase 1) that established a national program consisting of new standards for engines in model years 2014 through 2018, which would reduce CO₂ emissions by about 270 million metric tons and save about 530 million barrels of oil over the life of vehicles built for the 2014 to 2018 model years.

EPA and NHTSA are currently working on Phase 2 standards, which would reduce CO₂ emissions associated with model year 2018 and beyond.

3.8.2.2 State

California has adopted statewide legislation addressing various aspects of climate change, GHG mitigation, and energy efficiency. Much of this establishes a broad framework for the state's long-term GHG and energy reduction goals and climate change adaptation program. The former and current governors of California have also issued several Executive Orders (EOs) related to the state's evolving climate change policy. Summaries of key policies, EOs, regulations, and legislation at the state level that are relevant to the project are provided below.

Executive Orders S-03-05 (2005)

EO S-03-05 is designed to reduce California's GHG emissions to (1) 2000 levels by 2010, (2) 1990 levels by 2020, and (3) 80% below 1990 levels by 2050.

Executive Order B-16-2012 (2012)

EO B-16-2012 establishes benchmarks for reducing transportation-related GHG emissions. It requires agencies to implement the Plug-in Electric Vehicle Collaborative and California Fuel Cell Partnership by 2015 and sets forth targets specific to the transportation section, including the goal of reducing transportation-related GHG emissions to 80% less than 1990 levels.


EO B-30-15 established a medium-term goal for 2030 of reducing GHG emissions by 40% below 1990 levels and requires ARB to update its current Assembly Bill (AB) 32 Scoping Plan to identify the measures to meet the 2030 target. The executive order supports EO S-03-05, described above, but is currently only binding on state agencies. However, there are current (2015/2016) proposals (Senate Bill [SB] 32) at the state legislature to adopt a legislative target for 2030.
**Senate Bill 350 (2015)**

SB 350 (De Leon, also known as the *Clean Energy and Pollution Reduction Act of 2015*) was approved by the California legislature in September 2015 and signed by Governor Brown in October 2015. Its key provisions are to require the following by 2030: (1) a renewables portfolio standard of 50% and (2) a doubling of efficiency for existing buildings.


Known as Pavley I, AB 1493 provided the nation’s first GHG standards for automobiles. AB 1493 required ARB to adopt vehicle standards that will lower GHG emissions from new light-duty autos to the maximum extent feasible beginning in 2009. Additional strengthening of the Pavley standards (referred to previously as Pavley II and now referred to as the *Advanced Clean Cars* [ACC] measure) was adopted for vehicle model years 2017–2025 in 2012. Together, the two standards are expected to increase average fuel economy to roughly 54.5 mpg in 2025.


SBs 1078 and 107, California’s Renewables Portfolio Standard (RPS), obligated investor-owned utilities, energy service providers, and Community Choice Aggregations to procure an additional 1% of retail sales per year from eligible renewable sources until 20% is reached by 2010. The California Public Utilities Commission and CEC are jointly responsible for implementing the program. SB X 1-2, called the *California Renewable Energy Resources Act*, obligates all California electricity providers to obtain at least 33% of their energy from renewable resources by 2020. As of 2013, SDG&E’s renewable procurement was 23.6%. As noted above, SB 350 increased the RPS to 50% for 2030.

**Assembly Bill 32, California Global Warming Solutions Act (2006)**

AB 32 codified the state’s GHG emissions target by requiring California’s global warming emissions to be reduced to 1990 levels by 2020. Since being adopted, ARB, CEC, the California Public Utilities Commission, and the California Building Standards Commission have been developing regulations that will help the state meet the goals of AB 32 and EO S-03-05. The scoping plan for AB 32 identifies specific measures to reduce GHG emissions to 1990 levels by 2020 and requires ARB and other state agencies to develop and enforce regulations and other initiatives to reduce GHG emissions. Specifically, the scoping plan articulates a key role for local governments by recommending that they establish GHG emissions-reduction goals for both their municipal operations and the community that are consistent with those of the state (i.e., approximately 15% below current levels) (California Air Resources Board 2008).

ARB re-evaluated its emissions forecast in light of the economic downturn and updated the projected 2020 emissions to 545 million metric tons of carbon dioxide equivalent (MTCO$_2$e). Two reduction measures (Pavley I and RPS [12–20%]) that were not previously included in the 2008 scoping plan baseline were incorporated into the updated baseline, further reducing the 2020 statewide emissions projection to 507 million MTCO$_2$e. The updated forecast of 507 million MTCO$_2$e is referred to as the AB 32 2020 baseline. An estimated reduction of 80 million MTCO$_2$e is necessary to lower statewide emissions to the AB 32 target of 427 million MTCO$_2$e by 2020 (California Air Resources Board 2014).
ARB approved the First Update to the Scoping Plan on May 22, 2014 (California Air Resources Board 2014). The first update includes both a 2020 element and a post-2020 element. The 2020 element focuses on the state, regional, and local initiatives that are being implemented now to help the state meet the 2020 goal. ARB is currently working on a second update to the Scoping Plan to reflect the 2030 target established in EO B-30-15, noting that "California has already made great progress in driving the development of clean technologies thanks to programs developed under AB 32 and other important Legislation; the 2030 target will ensure that success continues beyond 2020" (California Air Resources Board 2015). ARB is expecting to present the final 2030 Target Scoping Plan to the board in the fall of 2016.


EO S-01-07, the Low Carbon Fuel Standard (LCFS), mandates (1) that a statewide goal be established to reduce the carbon intensity of California's transportation fuels by at least 10% by 2020, with a reduction in the carbon content of fuel by 0.25% starting in 2011, and (2) that a low carbon fuel standard for transportation fuels be established in California. The EO initiates a research and regulatory process at ARB. The LCFS regulation does not apply to certain transportation applications, including locomotives and Ocean-Going Vessels (OGVs). Note that the majority of the emissions benefits due to the LCFS come from the production cycle (upstream emissions) of the fuel rather than the combustion cycle (tailpipe). As a result, LCFS-related reductions are not included in this analysis of combustion-related emissions of CO₂.

Senate Bill 375—Sustainable Communities Strategy (2008)

SB 375 provides for a new planning process that coordinates land use planning, regional transportation plans (RTPs), and funding priorities in order to help California meet the GHG reduction goals established in AB 32. SB 375 requires RTPs, developed by metropolitan planning organizations, to incorporate a sustainable communities strategy (SCS). The goal of the SCS is to reduce regional vehicle miles traveled through land use planning and consequent transportation patterns. SB 375 also includes provisions for streamlined CEQA review for some infill projects such as transit-oriented development.

The final reduction targets from ARB require the Metropolitan Transportation Commission/Association of Bay Area Governments (MTC/ABAG) to identify strategies to reduce per capita GHG emissions from passenger vehicles by approximately 7% by 2020 and 15% by 2035 over base year 2005. MTC/ABAG’s Plan Bay Area details the land use and transportation planning strategies that MTC/ABA propose to reduce light duty/passenger vehicle miles traveled (VMT) emissions. Plan Bay Area was adopted in 2013 and an update is presently being prepared. Although MTC/ABAG have a transportation planning and funding role in helping to determine what regional transportation investments are made, local land use planning is still the prerogative of local governments.

Cap-and-Trade (2012)

On October 20, 2011, ARB adopted the final cap-and-trade program for California. The California cap-and-trade program is a market-based system with an overall emissions limit for affected sectors. Examples of affected entities include CO₂ suppliers, in-state electricity generators, hydrogen production, petroleum refining, and other large-scale manufacturers and fuel suppliers. The cap-and-trade program is currently regulating more than 85% of California’s emissions. Compliance
requirements began according to the following schedule: (1) electricity generation and large industrial sources (2012) and (2) fuel combustion and transportation (2015). Cap-and-trade allowance auction proceeds are used to fund a variety of investments. The first 3-year investment plan prioritizes (1) sustainable communities and clean transportation (including low-carbon freight equipment with specific emphasis on efforts that would be beneficial for disadvantaged communities located near ports, railyards, freeways, and distribution centers), (2) energy efficiency and clean energy, and (3) natural resources and waste diversion. The second 3-year plan (fiscal years 2016–2017 through 2018–2019) was submitted to the Department of Finance in January 2016. Funds are administered through various state departments.

**Senate Bill 97 (2007) and State CEQA Guidelines Sections 15064.4, 15126.4, 15183.5**

In 2007, the California Legislature enacted SB 97, which required the Office of Planning and Research and the Natural Resources Agency to develop new statewide CEQA guidelines “for the mitigation of greenhouse gas emissions or the effects of greenhouse gas emissions” by January 1, 2010. The SB 97 CEQA guidelines do not set a GHG emissions significance threshold, and instead rely on lead agencies to set their own thresholds based on substantial evidence.

The SB 97 CEQA Guidelines require lead agencies to describe, calculate, or estimate the amount of GHG emissions that would result from a project. Moreover, the State CEQA Guidelines emphasize the necessity to determine potential climate change effects of a project and propose mitigation as necessary. They do not prescribe or recommend a specific analysis methodology or provide quantitative criteria for determining the significance of GHG emissions. However, the State CEQA Guidelines do confirm the discretion of lead agencies to determine appropriate significance thresholds, but require the preparation of an environmental impact report (EIR) if “there is substantial evidence that the possible effects of a particular project are still cumulatively considerable notwithstanding compliance with adopted regulations or requirements” (Section 15064.4).

State CEQA Guidelines Section 15126.4, adopted pursuant to SB 97, includes considerations for lead agencies related to feasible mitigation measures to reduce GHG emissions, which may include, among others, measures in an existing plan or mitigation program for the reduction of emissions that are required as part of the lead agency’s decision; implementation of project features, project design, or other measures that are incorporated into the project to substantially reduce energy consumption or GHG emissions; offsite measures, including offsets that are not otherwise required, to mitigate a project's emissions; and measures that sequester carbon or carbon-equivalent emissions.

State CEQA Guidelines Section 15183.5 allows the GHG impacts of future projects to be evaluated using an adopted plan for reduction of GHG emissions. Section 15183.5 of the State CEQA Guidelines, which allows for tiering and streamlining the analysis of GHG emissions, is discussed in Proposed Tiering of Future New Discretionary Development from the CAP and this EIR under Section 3.8.3.2, Significance Criteria, below.

### 3.8.2.3 Regional and County

The County is part of two distinct air basins and air districts. The boundary between the air basins/districts runs roughly from the southwest corner of the County at Estero Americano,
northeasterly to the northeast corner of Sonoma County at its boundary with Lake and Napa County. The boundary between the two basins/districts crosses US 101 between Windsor and Healdsburg.

The northwestern portions of the County are part of the North Coast Air Basin, consisting of Del Norte, Humboldt, Trinity, Mendocino, and northern Sonoma County. This portion of the County is within the Northern Sonoma County Air Pollution Control District (NSCAPCD). The NSCAPCD is primarily rural and mountainous, containing only two urbanized areas—Healdsburg and Cloverdale. Southern Sonoma County is part of the nine-county San Francisco Bay Air Basin and the Bay Area Air Quality Management District (BAAQMD).

The BAAQMD and NSCAPCD are local air quality agencies responsible for preparing regional air quality plans under the state and federal Clean Air Acts. In addition to planning responsibilities, the local air district has permitting authority over stationary sources of pollutants. Authority over mobile sources of pollutants resides with the ARB.

**North Sonoma County Air Pollution Control District Regulations**

The NSCAPCD regulations follow the federal permitting for greenhouse gas emissions. A new stationary source or modification or an existing source must comply with an emission analysis and review process, including implementation of Best Available Control Technology for GHG emissions. An existing stationary source must include GHG emissions in its operating permit, as well as all applicable GHG requirements. If the owner or operator does not choose to comply with this rule, then the stationary source must not emit more than 50,000 tons of CO$_2$e in any 12-month period.

The regulations do not cover mobile sources. GHG emissions from mobile sources are regulated by the ARB.

**Bay Area Air Quality Management District CEQA Guidelines**

The BAAQMD's (2010) CEQA Guidelines outline advisory thresholds for stationary source and land use development projects. The mass emissions threshold for stationary source projects is 10,000 MTCO$_2$e per year. For land use development projects, the guidelines establish three potential analysis criteria for determining project significance: compliance with a qualified climate action plan, a mass emissions threshold of 1,100 MTCO$_2$e per year, a project-level GHG efficiency threshold of 4.6 MTCO$_2$e per service population (project jobs + projected residents), and a plan-level GHG efficiency threshold of 6.6 MTCO$_2$e per service population (project jobs + projected residents).

BAAQMD's resolution approving the 2010 CEQA Guidelines at the District’s board level has been rescinded pursuant to court order, and to date the resolution has not been readopted. Nonetheless, that litigation does not involve the question of whether the BAAQMD 2010 CEQA Guidelines are supported by substantial evidence. The recent California Supreme Court decision in the *California Building Industry Assoc. v. Bay Area Air Quality Management District (BIA vs. BAAQMD)* case concerned whether CEQA applies to impacts of the environment on a project and is not relevant to the BAAQMD guidance regarding GHG emissions.

BAAQMD, like several other districts, looked to AB 32 for policy guidance in deriving a threshold for “cumulatively considerable” GHG impacts, and BAAQMD’s approach takes the broad approach that a project’s emissions should be deemed significant if they hinder compliance with the emissions reductions mandates found in AB 32. BAAQMD’s derivation of numerical thresholds reflects its analysis and judgment regarding the quantities of emissions reductions from stationary sources and
new land use projects that would be consistent with that goal, given ARB's other Scoping Plan measures intended to reach AB 32's goals. In particular, BAAQMD estimated that a 23.9% reduction in GHG emissions could be expected from ARB's "land use driven" AB 32 Scoping Measures, leaving a “gap” of 2.3% in necessary additional GHG emissions reductions to meet AB 32 goals of a 26.2% reduction from statewide land use-driven emissions. BAAQMD estimated that a 2.3% reduction in BAAQMD’s projected 2020 emissions projections requires emissions reductions of 1.6 million MTCO$_2$e per year from the land-use-driven sectors, and used that number to derive a bright-line threshold for individual projects.

The guidelines do not identify a GHG emission threshold for construction-related emissions. However, BAAQMD recommends that GHG emissions from construction be quantified and disclosed, and that a determination regarding the significance of these GHG emissions be made with respect to whether a project is consistent with the AB 32 GHG emission reduction goals. BAAQMD further recommends that best management practices (BMPs) be incorporated to reduce GHG emissions during construction, as feasible and applicable. BMPs may include, but are not limited to, using alternative-fueled (e.g., biodiesel, electric) construction vehicles/equipment for at least 15% of the fleet, using at least 10% of local building materials, and recycling or reusing at least 50% of construction waste or demolition materials.

### 3.8.2.4 Local

Appendix C, *Local General Plan Goals, Objectives, and Policies*, provides a list of the goals, objectives, and policies in the local general plans of the participating jurisdictions including those related to GHG emissions. These goals, objectives, and policies were reviewed to assess whether the project is consistent with the general plans of participating jurisdictions. Disclosure of this consistency analysis is for informational purposes. An additional purpose of providing a list of relative local policies is, where appropriate, to provide the context within which the CAP will be locally implemented. As described in the CAP, most of the CAP measures represent implementation of many of the priorities outlined in existing local policies.

Inconsistencies with general plan policies are not necessarily considered significant impacts under CEQA unless they are related to physical impacts on the environment that are significant in their own right.

Implementation of the CAP is consistent with the applicable general plan goals, objectives, and policies of the participating jurisdictions in relation to GHG emissions.

### 3.8.3 Impacts Analysis

#### 3.8.3.1 Methodology

The following analysis is based on a review of the greenhouse gas emissions information contained in the CAP. Effects related to greenhouse gas emissions are analyzed quantitatively, and the analysis focused on the CAP’s potential to reduce GHG emissions in the County.
3.8.3.2 Significance Criteria

Approach to Significance Determination

The State CEQA Guidelines Appendix G (14 CCR 15000 et seq.) requires that agencies evaluate the significance of GHG emissions, and contains the following checklist questions.

- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.
- Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

The State CEQA Guidelines do not indicate what amount of GHG emissions would constitute a significant impact on the environment. Instead, they authorize the lead agency to consider thresholds of significance previously adopted or recommended by other public agencies or recommended by experts, provided the decision of the lead agency to adopt such thresholds is supported by substantial evidence (State CEQA Guidelines Sections 15064.4(a) and 15064.7(c)). The California Supreme Court decision in the Center for Biological Diversity et al. vs. California Department of Fish and Wildlife, the Newhall Land and Farming Company (November 30, 2015, Case No. S217763) (hereafter Newhall Ranch) case confirmed that "multiple agencies' efforts at framing greenhouse gas significance issues have not yet coalesced into any widely accepted set of numerical significance thresholds." The Supreme Court also concluded the following.

"Local governments thus bear the primary burden of evaluating a land use project's impact on greenhouse gas emissions. Some of this burden can be relieved by using geographically specific greenhouse gas emission reduction plans to provide a basis for the tiering or streamlining of project-level CEQA analysis."

A number of expert lead agencies throughout the state, including multiple air districts, have drafted and/or adopted varying threshold approaches and guidelines for analyzing GHG emissions and climate change in CEQA documents. The different thresholds include (1) compliance with a qualified GHG reduction strategy, (2) performance-based reductions, (3) numeric "bright-line" thresholds, and (4) efficiency-based thresholds. These approaches are commonly used and/or recommended by expert agencies, including the various air districts.

Newhall Ranch confirmed that when an "agency chooses to rely completely on a single quantitative method to justify a no-significance finding, CEQA demands the agency research and document the quantitative parameters essential to that method." All current CEQA GHG thresholds that are drafted, adopted, or recommended by expert agencies are based on AB 32's requirement to reduce statewide GHG emissions from both existing and new development to 1990 levels by 2020. Neither AB 32 nor the drafted, adopted, or recommended CEQA GHG thresholds address reduction targets beyond 2020. EO B-30-15 has set forth an interim reduction target to reduce GHG emissions by 40% below 1990 levels by 2030. To date, the Legislature has not concurred in that target, and there is no regulatory framework that directly translates state targets into either regionally specific reductions or project-level emissions thresholds. At present, there are also no proposed or adopted significance thresholds for analyzing post-2020 emissions for development projects in California and there is no adopted statewide plan to reduce emissions 40% below 1990 levels by 2030.

Given the scientific evidence that additional GHG reductions are needed through 2050 to stabilize CO₂ concentrations, the Association of Environmental Professionals Climate Change Committee recommended in its Beyond 2020: The Challenge of Greenhouse Gas Reduction Planning by Local
Governments in California white paper that CEQA analyses for most land use development projects continue to rely on current thresholds for the immediate future but that general plans and long-term projects should consider "post-2020 emissions consistent with 'substantial progress' along a post-2020 reduction trajectory toward meeting the 2050 target." The Beyond 2020 white paper further recommends that the "significance determination...should be based on consistency with 'substantial progress' along a post-2020 trajectory."

The purpose of the CAP is to reduce GHG emissions and the resulting decrease of GHG emissions is not a GHG impact. The basis of the CAP target is a set of policies that secure GHG reductions for Sonoma County overall that are consistent with the AB 32 Scoping Plan through 2020 and that are consistent with substantial progress after 2020 toward post-2020 reduction targets. Although the CAP will not directly result in any new emissions, there will continue to be GHG emissions in Sonoma County. As a matter of comparison, the Sonoma County emissions are compared to the BAAQMD plan-level efficiency target of 6.6 MTCO$_2$e/Service Population.

**Proposed Tiering of Future New Discretionary Development from the CAP and this EIR**

As discussed in Chapter 1 of the CAP, the cities of Cloverdale, Cotati, Healdsburg, Petaluma, Rohnert Park, Sebastopol, Sonoma, the Town of Windsor, and Sonoma County intend to use the CAP to comply with project-level GHG impact analysis requirements under CEQA. Santa Rosa will continue to use its adopted CAP for this purpose.

The State CEQA Guidelines (Section 15183.5) allow the GHG impacts of future projects to be evaluated using an adopted emissions reduction plan, like the CAP, provided that the plan meets specific requirements. The six requirements specified in the State CEQA Guidelines are listed below, with the CAP’s compliance described in italics.

1. **Quantify GHG emissions**, both existing and projected over a specified time period, resulting from activities within a defined geographic area. *The CAP quantifies GHG emissions from all primary sectors within County jurisdictions for 1990, 2010, 2015, 2020, 2040, 2030, and 2050.*

2. **Establish a level**, based on substantial evidence, below which the contribution to GHG emissions from activities covered by the plan would not be cumulatively considerable. *The CAP establishes a countywide GHG emissions target of 25% below 1990 levels by 2020, a target that goes well beyond the requirements of AB 32 and puts Sonoma County on a trajectory to achieve the even greater GHG reductions needed in the future. The CAP includes a GHG emissions budget for new development that will ensure that the countywide reduction target is met, even with projected population and economic growth. The GHG reduction measures in the CAP will reduce project-specific emissions and thereby ensure that the new-development share of total future emissions is not exceeded. Reducing and limiting emissions from new development is part of an overall strategy that substantially reduces emissions countywide and, therefore, contributions from new development that is consistent with the CAP would not be cumulatively considerable.*

3. **Identify and analyze the GHG emissions** resulting from specific actions or categories of actions anticipated within the geographic area. *The CAP analyzes community emissions for the partner*

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1 With the notable exception of the “percent below Business as Usual” approach that the Supreme Court called into question in the Newhall Ranch decision.
4. Specify measures or a group of measures, including performance standards that substantial evidence demonstrates, if implemented on a project-by-project basis, would collectively achieve the specified emissions level. The CAP includes specific measures to achieve the overall reduction target.

5. Establish a mechanism to monitor the plan's progress toward achieving the GHG emissions level and to require amendment if the plan is not achieving the specified level. The CAP includes periodic monitoring of plan progress.

6. Adopt the GHG emissions reduction plan in a public process following environmental review. This draft EIR has been prepared for the CAP, and the CAP itself will be adopted first by the Regional Climate Protection Authority, followed by adoption of community-specific portions by each local participating jurisdiction. The adoption process will include public outreach and public hearings.

Once the CAP is adopted, it may be used in the cumulative impacts analysis of later projects, a process known in CEQA as tiering. Tiering the GHG analysis from the CAP potentially eliminates the need to prepare a quantitative assessment of GHG emissions on a project-by-project basis, which can help streamline the environmental review and permitting process for these projects. To accomplish this, future project-specific environmental documents must identify all applicable CAP measures and ensure they are binding and enforceable by incorporating measures into the project design and/or identifying CAP measures as project mitigation measures. Future projects that comply with the CAP will have a less-than-significant cumulative impact on GHG emissions and climate change (unless substantial evidence warrants a more detailed review of project-level GHG emissions).

Impacts of Climate Change on Projects Within Sonoma County

The California Supreme Court has recently confirmed that “CEQA generally does not require an analysis of how existing environmental conditions will impact a project’s future users or residents.” However, an agency must “evaluate existing conditions in order to assess whether a project could exacerbate hazards that are already present.” The effects of climate change, such as coastal flooding due to sea level rise, would not be considered as significant impacts under CEQA unless future projects “exacerbate” such physical effects.

3.8.3.3 Impacts and Mitigation Measures

Impact GHG-1: Implementation of the CAP would be consistent with and would support applicable plan, policy, and regulation adopted for the purpose of reducing GHG emissions (beneficial impact).

Sonoma County and all the participating jurisdictions have a GHG emissions reduction goal of 25% below 1990 levels by 2020. This is a far-more aggressive goal than the AB 32 target, which commits to reducing statewide GHG emissions to 1990 levels by 2020.

The County's 1990 backcast, 2010 inventory, and business as usual (BAU) forecast emissions for 2015, 2020, 2040, and 2050 are shown in Table 3.8-3 by major emission sector. The largest source of GHG emissions in 2010 is on-road transportation, followed by building energy. Future BAU
emissions are based on 2010 emissions, expected growth in population, employment, and households in the County.

### Table 3.8-3. GHG Inventory and Forecast Results by Emission Sector and Year

<table>
<thead>
<tr>
<th>Emission Sector</th>
<th>Backcast Emissions (MTCO₂e)</th>
<th>Inventory Emissions (MTCO₂e)</th>
<th>2015 Forecasts (MTCO₂e)</th>
<th>2020 BAU (MTCO₂e)</th>
<th>2040 BAU (MTCO₂e)</th>
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</tr>
<tr>
<td>Off-Road Equipment</td>
<td>42,900</td>
<td>62,500</td>
<td>68,500</td>
<td>77,300</td>
<td>121,600</td>
<td>126,600</td>
</tr>
<tr>
<td>Solid Waste Generation</td>
<td>281,200</td>
<td>133,600</td>
<td>224,900</td>
<td>235,900</td>
<td>285,100</td>
<td>305,700</td>
</tr>
<tr>
<td>Wastewater Treatment</td>
<td>14,900</td>
<td>14,500</td>
<td>13,400</td>
<td>13,600</td>
<td>14,800</td>
<td>15,500</td>
</tr>
<tr>
<td>Water Conveyance</td>
<td>26,600</td>
<td>3,500</td>
<td>13,000</td>
<td>13,600</td>
<td>17,000</td>
<td>18,400</td>
</tr>
<tr>
<td>Agriculture</td>
<td>415,100</td>
<td>325,700</td>
<td>309,600</td>
<td>294,800</td>
<td>234,100</td>
<td>203,700</td>
</tr>
<tr>
<td>Santa Rosa 1990 Emissions</td>
<td>1,123,100</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Sonoma County Total</td>
<td>3,966,000</td>
<td>3,659,000</td>
<td>4,160,000</td>
<td>4,395,000</td>
<td>4,964,000</td>
<td>5,147,000</td>
</tr>
</tbody>
</table>

1 Santa Rosa’s emissions in 1990 are not available from the city’s CAP; 1990 emissions were therefore assumed to be equal to 15% below the baseline level of emissions, per the city’s CAP. As a result, sector emissions for Santa Rosa in 1990 are not available and are included as a separate line item.

Note: For more details on changes in emissions over time, please refer to Chapter 2 and Appendix B of the CAP.

The near-term focus of the CAP is on how Sonoma County communities will meet a local GHG-reduction target (25% below 1990 levels) in support of the state’s goals for 2020 (as described above, the state’s goal is to achieve 1990 levels by 2020). Sonoma County communities previously adopted targets to reduce emissions by 25% below 1990 levels by 2015, and actions inspired by those targets have led to significant progress. The County’s 2010 emissions were already 8% below 1990 levels. However, projections for 2015 and 2020 reveal that emissions continue to rise and without further action Sonoma County communities will not meet their target.

The CAP describes the reduction measures that would be employed by the Sonoma County communities, through implementation of the CAP, and through a variety of state legislation and regulations. The combination of proposed new strategies identified in the CAP help to reduce the countywide GHG emissions level.

The GHG-reduction measures in the CAP would substantially reduce projected 2020 BAU forecast emissions. The CAP includes measures to address the resultant emissions from building energy, transportation and land use, solid waste generation, water conveyance and wastewater treatment, and livestock and fertilizer. The CAP also includes advanced climate initiatives that would protect and enhance the value of open and working lands, promote sustainable agriculture, increase carbon sequestrations, and educate residents about GHG emissions from the consumption of goods and services. Chapter 3 and Appendix B of the CAP contain detailed descriptions of the GHG-reduction measures.

Implementation of the CAP would result in GHG emissions reductions equivalent to approximately 25% reduction from 1990 baseline emissions, as shown in Table 3.8-4.
Table 3.8-4. Annual GHG Emissions Reductions from CAP Measures (MTCO$_2$e)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Emissions (MTCO$_2$e)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990 GHG Emissions Backcast (Baseline)</td>
<td>3,966,000</td>
</tr>
<tr>
<td>2020 BAU GHG Emissions Forecast</td>
<td>4,395,000</td>
</tr>
<tr>
<td>2020 Community Emissions Reduction Target (25% below 1990 levels)</td>
<td>2,974,500</td>
</tr>
<tr>
<td><strong>Total 1 Reductions Needed to Reach Target</strong></td>
<td><strong>1,420,500</strong></td>
</tr>
<tr>
<td>Total CAP Reductions (does not include Santa Rosa)</td>
<td>865,200</td>
</tr>
<tr>
<td>Santa Rosa CAP reductions</td>
<td>558,000</td>
</tr>
<tr>
<td><strong>Total 2 County 2020 GHG Reductions</strong></td>
<td><strong>1,423,200</strong></td>
</tr>
<tr>
<td>Emissions Reductions in Excess of Target (Total 2 – Total 1)</td>
<td>2,800</td>
</tr>
<tr>
<td>2020 GHG Emissions with CAP</td>
<td>2,971,720</td>
</tr>
<tr>
<td>AB 32 GHG Emissions Target (1990 level emissions)</td>
<td>3,966,000</td>
</tr>
</tbody>
</table>

Note: For additional details on methodology and calculations, please refer to Chapter 2, Chapter 3, and Appendix B of the CAP.

The CAP would be consistent with AB 32, as the GHG emissions for Sonoma County would experience approximately a 25% reduction below 1990 emissions by 2020, whereas the AB 32 target is to reach 1990 emissions levels by 2020. In addition, with CAP implementation, the County’s emissions would be 5.8 MTCO$_2$e per capita\(^2\) compared to the BAAQMD’s recommended plan level threshold for consistency with AB 32 of 6.6 MTCO$_2$e per capita.

In addition to the near-term emission reduction goal for 2020, the CAP also includes longer term goals of reducing emissions by 40% below 1990 levels by 2030 and by 80% below 1990 levels by 2050, which will necessitate another phase of local climate action after 2020. These long-term goals are intended to keep the County on track for meeting the goals of EO B-30-15 (40% below 1990 levels by 2030) and EO S-03-05 (80% below 1990 emissions by 2050). The CAP would help the County to achieve reductions that are approximately 80% of the way to the 2030 goal in EO-B-30-15. Another way to envision the CAP results is that it would provide reductions sufficient to keep the County on the trend toward the 2030 target up to 2026 (e.g., 80% of the way from 2020 to 2030 on a downward trajectory). As noted above, ARB is presently developing a Scoping Plan Update to identify the strategies necessary statewide to achieve the 2030 statewide goal. At some point after 2020, Sonoma County will need to update the CAP to evaluate the effect of new state actions and to identify the regional and local actions necessary to take the County out to 2030 and beyond.

The implementation of the CAP would meet and exceed state goals to reduce GHG emissions through 2020 and would place the County approximately 80% of the way to meeting 2030 goals. Thus, the CAP would have a beneficial impact on GHG emissions.

**Impact GHG-2: Implementation of the CAP would help Sonoma County to be more resilient to the future effects of climate change on Sonoma County (disclosure item only; not a CEQA impact).**

The CAP would help to reduce GHG emissions to contribute to cumulative reductions globally to help constrain the severity of changes in the climate in the long run. However, as described in the CAP, while mitigation can help make climate change less severe, changes cannot be avoided entirely.

2020 GHG Emissions with CAP / 2020 Projected Population = 2,971,720 MTCO$_2$e / 509,766 people = 5.8 MTCO$_2$e per capita.
Therefore, climate adaptation is a fundamental part of the County's overall climate action program and is discussed in Chapter 6 of the CAP.

There are several key vulnerabilities to climate change that can be broken into three categories: people and social systems, built systems, and natural and working lands. Hotter, drier weather with longer summers, more variable rain, and sea-level rise can each have prolonged effects on these categories. The CAP includes nine goals, listed in Table 3.8-5 below, which will help to increase the adaptive capacity of the community and make Sonoma County climate-ready.

The GHG-reduction measures described in the CAP each have a way of increasing the adaptive capacity of Sonoma County and its resources. In particular, measures in the building energy sector will help conserve energy and expand localized, renewable energy generation, both of which will reduce community reliance on the electrical grid. Because electricity transmission and distribution resources are vulnerable to several expected climate hazards, producing more energy locally will help minimize community disruptions during larger grid power failures. Similarly, measures in the transportation and land use sector will help reduce stress on the aging transportation network by increasing alternative modes of travel, such as walking, biking, and transit. GHG reduction measures in other sectors also provide various resiliency benefits, including water and resource conservation.

To ensure climate change adaptation is adequately incorporated into future planning efforts, the CAP includes measures to guide County and city staff involvement in coordinating, preparing for, and educating the public on the potential impacts that climate change may have on the community.

Table 3.8-5. Climate Change Adaptation Objectives

<table>
<thead>
<tr>
<th>Goals</th>
<th>Opportunities</th>
<th>Climate Hazards Addressed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Promote healthy, safe communities</td>
<td>Invest in measures to increase community knowledge and capacity to respond and adapt to climate hazards, including improving baseline health, well-being, and financial security, especially in vulnerable populations. Link vulnerable populations to services that reduce safety, health, and financial risks related to climate hazards. Reduce non-climate economic and health stressors.</td>
<td>All hazards, especially those sensitive to demographic and economic changes</td>
</tr>
<tr>
<td>Protect water resources</td>
<td>Conserve and reuse water, protect and enhance groundwater recharge areas, capture storm- and flood water, protect streamside areas, invest in natural infrastructure. Reduce non-climate stressors such as hydro-modification, pollution, and overuse of water.</td>
<td>Drought, flooding, and infrastructure failure risks to water quantity and quality</td>
</tr>
<tr>
<td>Promote a sustainable, climate-resilient economy</td>
<td>Better define the economic risks of climate change. Communicate to businesses and the broader community about practices that contribute to climate resilience and how to implement them. Reduce non-climate stressors.</td>
<td>All hazards, especially those sensitive to demographic and economic changes</td>
</tr>
<tr>
<td>Mainstream the use of climate projections (not just past patterns) in planning, design, and budgeting</td>
<td>Educate and share information among government agencies. Create and promote guidelines for how to use climate information in planning and decision making.</td>
<td>All hazards, especially sea-level rise, drought, wildfire, and flooding</td>
</tr>
<tr>
<td>Goals</td>
<td>Opportunities</td>
<td>Climate Hazards Addressed</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Protect coastal, bayside, and inland buffer zones</td>
<td>Protect, expand, and enhance wetlands, water source areas, fire management zones, and flood zones. Review/revise land management plans, development codes, parks plans, and prevention and response plans for floods and fires. Reduce non-climate stressors in these areas.</td>
<td>Sea-level rise, changing temperature and rain patterns, drought, wildfire</td>
</tr>
<tr>
<td>Promote food system security and agricultural climate preparedness</td>
<td>Promote peer-to-peer agricultural adaptation networking, including the potential to cultivate alternative crops or adopt new agricultural land management strategies. or adopt new agricultural land management strategies.</td>
<td>Changing temperature and rain patterns, drought, higher food prices</td>
</tr>
<tr>
<td>Protect infrastructure: buildings, energy systems, communications systems, water infrastructure, and transportation systems</td>
<td>Conduct a risk assessment by evaluating potential climate impacts on key infrastructure, buildings, and transit systems. Invest in strategies to ensure the long-term sustainability and reliability of energy resources or adopt new agricultural land management strategies.</td>
<td>Drought, flooding, wildfire, and extreme heat</td>
</tr>
<tr>
<td>Increase emergency preparedness</td>
<td>Support continued interagency emergency planning. Educate the public about climate hazards. Assess and address gaps in vulnerable populations’ capacity to respond to extreme events. Reduce non-climate stressors such as forest health problems and provide adequate funding for emergency preparedness and response.</td>
<td>Public health and safety impacts of heat, flooding, and wildfire</td>
</tr>
<tr>
<td>Monitor the changing climate and its biophysical effects in real time</td>
<td>Measure actual conditions to validate and/or refine models of climate and climate change effects in order to plan and manage with better information.</td>
<td>All hazards</td>
</tr>
</tbody>
</table>

### Climate Action 2020: Community Climate Action Plan

**3.8 Greenhouse Gas Emissions**

**Climate Hazards Addressed**

- Sea-level rise, changing temperature and rain patterns, drought, wildfire
- Changing temperature and rain patterns, drought, higher food prices
- Drought, flooding, wildfire, and extreme heat
- Public health and safety impacts of heat, flooding, and wildfire
- All hazards
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3.9 Hazards and Hazardous Materials

This section describes the regulatory and environmental setting for hazards and hazardous materials. It also describes hazards and hazardous materials impacts that would result from implementation of the Climate Action 2020: Community Climate Action Plan (CAP) and includes mitigation for significant impacts, where feasible and appropriate.

A hazardous material is any substance that, because of its quantity, concentration, or physical or chemical properties, may pose a hazard to human health and the environment. Under Title 22 of the California Code of Regulations (CCR), the term hazardous substance refers to both hazardous materials and hazardous wastes. Both of these are classified according to four properties: (1) toxicity, (2) ignitability, (3) corrosiveness, and (4) reactivity (CCR Title 22, Chapter 11, and Article 3). A hazardous material is defined in CCR, Title 22 as:

[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 reversible, illness; or (2) pose a substantial present or potential hazard to human health or environment when improperly treated, stored, transported or disposed of or otherwise managed (CCR, Title 22, Section 66260.10).

Hazardous materials in various forms can cause death, serious injury, long-lasting health effects, and damage to buildings, homes, and other property. Hazards to human health and the environment can occur during production, storage, transportation, use, or disposal of hazardous materials.

3.9.1 Environmental Setting

This section describes the hazards and hazardous materials present in Sonoma County. This information is drawn and modified from the Sonoma County General Plan 2020 EIR (Sonoma County 2006).

3.9.1.1 Hazardous Materials

Hazardous Materials Contaminated Sites

Brownfields are sites that were previously used for industrial or commercial purposes that may have been contaminated with hazardous water or pollution but have the potential for redevelopment or reuse. Brownfield sites within Sonoma County include former auto-wrecking yards, gas stations, computer-electronics industry sites with chlorinated solvent discharges, and lumber mills. Environmental remediation is required to make the land suitable for redevelopment.

Underground storage tanks (USTs) are common throughout Sonoma County. They are most often used for the storage of gasoline and diesel fuels but are also used for the storage of new and used motor oil, solvents, and chemicals. Leaking underground fuel tanks (LUFTs), mainly those containing petroleum, are the leading cause of soil and groundwater contamination in the County. LUFTs occur within the urbanized areas of the County, along the US 101 corridor and other County highways.

There are numerous sites that have been contaminated with hazardous waste. Many of these sites have been remediated and are considered case closed. The remaining sites are considered open cases (i.e., still active) and in need of remediation.
The Sonoma County Local Oversight Program (LOP) oversees the investigation and cleanup of fuel releases from USTs in all areas of the County, with the exception of the cities of Santa Rosa and Healdsburg. Sites are entered into the LOP when a release from a UST is reported, typically when a UST is removed and signs of a release are noted or reported in laboratory sample results. Releases are also reported when contamination is found while repairing fuel delivery systems or when environmental site assessments are done at the time of property sales. Once entered into the LOP, the site must be investigated and cleaned up in accordance with state and County regulations.

**Existing Hazardous Materials Uses and Waste Generating Sites**

There are a number of hazardous materials use, waste generating, storage, and disposal facilities in Sonoma County. Business and industry generators include the automotive and transportation industries, which store and use petroleum fuels and use chlorinated solvents and paints for repairs; manufacturing industries, which use solvents, paints, metals, compressed gases, and cleaning agents; and the agricultural industry, which uses pesticides, fungicides, herbicides, and fertilizers. In residential uses, there are a number of common household toxics found in the garage (antifreeze, motor oil, gasoline, waxes, auto batteries, brake fluid); in the workshop (paint, paint thinner, wood preservatives, glues, solvents, photo chemicals); in the house (ammonia and bleach cleaners, polishes, medications, syringes, batteries); and in the yard (pesticides, fungicides, weed killers, pool chemicals, pool backwash).

**Hazardous Materials Emergency Response**

The Sonoma County Department of Emergency Services (DES), Hazardous Materials Division, is the hazardous waste and hazardous materials management Certified Unified Program Agency (CUPA) for cities and unincorporated areas within Sonoma County. Through the DES, the County regulates the use, storage, and disposal of commercial hazardous materials by issuing permits, inspecting facilities, and investigating complaints. The County issues permits for the installation and removal of underground storage tanks. It inspects businesses for compliance with the Hazardous Waste Control Act and also requires that businesses that handle hazardous materials and hazardous wastes submit a Hazardous Materials Business Plan (HMBP). The HMBP includes an inventory of hazardous materials and hazardous wastes, as well as a prepared emergency response to incidents involving applicable hazardous materials and wastes.

The County DES Hazardous Materials Division responds to hazardous materials incidents throughout the County and maintains contracts with some of the cities for hazardous materials releases within those cities. They maintain lists of large quantity hazardous waste generators (i.e., those that generate more than 5 tons per year.) There are additional two other hazardous emergency teams in the County: the City of Santa Rosa Fire Department and the City of Rohnert Park Department of Public Safety. Together, these three teams assist each other under the County's mutual aid agreement.

**3.9.1.2 Safety Hazards**

**Sensitive Receptors – Schools**

There are 181 public schools in Sonoma County, including 108 elementary schools, 23 middle/junior high schools, 19 high schools, 24 alternatives schools, and 7 independent schools
(Sonoma County Office of Education 2015). In addition, there are approximately 50 private schools in the County (California Department of Education 2015).

**Safety Hazards to Related to Airports and Private Air Strip Operations**

There are six airports in Sonoma County open for public use: two are privately-owned (Sonoma Skypark and Sonoma Valley), three are owned by cities (Cloverdale, Healdsburg, and Petaluma airports), and the Sonoma County Airport is County-owned. The Sonoma County Airport is the only airport within the County for commercial airline service. The Sonoma County Airport Land Use Commission (ALUC) adopted the Sonoma County Comprehensive Airport Land Use Plan (CALUP) which identifies compatible land uses in the areas adjacent to the airports as related to noise, airspace, and safety. All six Sonoma County airports are subject to the regulations of the ALUC and the CALUP.

Sonoma Skypark and Sonoma Valley airports are located south of the City of Sonoma. The three city-owned airports are located within their respective localities, and the Sonoma County Airport is located south of the Town of Windsor.

**Emergency Response Plans and Evacuation Plans**

The Sonoma County Fire and Emergency Services Department, Emergency Management Division, is responsible for planning and coordination of response, recovery, and mitigation activities related to countywide emergencies and disasters.

**Wildland Fires**

The California Department of Forestry and Fire Protection (CAL FIRE) has mapped areas in Sonoma County with the potential for large wildland fires. Areas identified as "very high or high potential for wildland fires" include over half of the County (CAL FIRE 2007). The highest potential for large wildland fires in the County is in the mountainous areas where there is an abundance of fire fuel vegetation and fire potential is enhanced by steeper slopes. These very high or high potential wildland fire areas lie within, adjacent to, or in close proximity to Sea Ranch, Occidental, Geyserville, Russian River, Forestville, Monte Rio, Graton, and Sonoma Valley.

### 3.9.2 Regulatory Setting

#### 3.9.2.1 Federal


The federal Toxic Substances Control Act (1976) and the Resource Conservation and Recovery Act of 1976 (RCRA) established a U.S. Environmental Protection Agency (EPA)-administered program to regulate the generation, transport, treatment, storage, and disposal of hazardous waste. The RCRA was amended in 1984 by the Hazardous and Solid Waste Act, which affirmed and extended the cradle to grave system of regulating hazardous wastes.
Comprehensive Environmental Response, Compensation, and Liability Act/Supersfund Amendments and Reauthorization Act

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as “Superfund,” was enacted by Congress on December 11, 1980. This law (42 United States Code [USC] 103) provides broad federal authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the environment. CERCLA establishes requirements concerning closed and abandoned hazardous waste sites, provides for liability of persons responsible for releases of hazardous waste at these sites, and establishes a trust fund to provide for cleanup when no responsible party can be identified. CERCLA also enabled the revision of the National Contingency Plan (NCP). The NCP (Title 40, Code of Federal Regulations [CFR], Part 300) provides the guidelines and procedures needed to respond to releases and threatened releases of hazardous substances, pollutants, and/or contaminants. The NCP also established the National Priorities List. CERCLA was amended by the Superfund Amendments and Reauthorization Act on October 17, 1986.

Occupational Safety and Health Administration

The Occupational Safety and Health Administration’s (OSHA’s) mission is to ensure the safety and health of American workers by setting and enforcing standards; providing training, outreach, and education; establishing partnerships; and encouraging continual improvement in workplace safety and health. The OSHA staff establishes and enforces protective standards and reaches out to employers and employees through technical assistance and consultation programs. OSHA standards are listed in 29 CFR 1910.

Toxic Substances Control Act

The Toxic Substances Control Act (TSCA) came into law on October 11, 1976. TSCA authorized EPA to secure information on all new and existing chemical substances, as well as to control any of the substances that were determined to cause unreasonable risk to public health or the environment. The current polychlorinated biphenyls (PCB) regulations (40 CFR 761), were published pursuant to the TCSA, and include the following list of CFR Sections that are applicable to the implementation of the CAP.

- Section 761.60 Disposal requirements.
- Section 761.61 PCB remediation waste cleanup and disposal options.
- Section 761.77 Coordination with the EPA Regional Administrator.
- Section 761.79 Decontamination standards and procedures.
- Section 761.97 Export requirements for disposal.
- Section 761.125 Requirements for PCB spill cleanup.
- Section 761.130 Sampling requirements.
- Section 761.180 Records and monitoring.

Department of Transportation Hazardous Materials Regulations (49 CFR 100–185)

U.S. Department of Transportation (DOT) Hazardous Materials regulations cover all aspects of hazardous materials packaging, handling, and transportation. Parts 107 (Hazard Materials
Program), 130 (Oil Spill Prevention and Response), 172 (Emergency Response), 173 (Packaging Requirements), 174 (Rail Transportation), 176 (Vessel Transportation), 177 (Highway Transportation), 178 (Packaging Specifications), and 180 (Packaging Maintenance) would all apply to the implementation of the CAP and/or surrounding uses.

Enforcement of these DOT regulations is shared by each of the following administrations under delegations from the Secretary of the DOT.

- Research and Special Programs Administration is responsible for container manufacturers, reconditioners, and retesters and shares authority over shippers of hazardous materials.
- Federal Highway Administration enforces all regulations pertaining to motor carriers.
- Federal Railroad Administration enforces all regulations pertaining to rail carriers.
- Federal Aviation Administration (FAA) enforces all regulations pertaining to air carriers.
- Coast Guard enforces all regulations pertaining to shipments by water.

**Federal Aviation Administration**

FAA regulates aviation at regional, public, private, and military airports, including Sonoma County’s six existing airports. The FAA regulates objects affecting navigable airspace and structures taller than 200 feet according to Federal Aviation Regulation 49 CFR 77.13.

### 3.9.2.2 State

**California Environmental Protection Agency**

The California Environmental Protection Agency (CalEPA) was created in 1991. It unified California’s environmental authority in a single cabinet-level agency and brought the California Air Resources Board (ARB), State Water Resources Control Board (State Water Board), Regional Water Quality Control Boards (RWQCBs), the California Department of Resources Recycling and Recovery (CalRecycle), the Department of Toxic Substance Control (DTSC), the Office of Environmental Health Hazard Assessment, and the Department of Pesticide Regulation under one agency. These agencies were placed within the CalEPA umbrella for the protection of human health and the environment to ensure the coordinated deployment of state resources. Their mission is to restore, protect, and enhance the environment and ensure public health, environmental quality, and economic vitality.

**Department of Toxic Substance Control**

DTSC, a department of CalEPA, is the primary agency in California for regulating hazardous waste, cleaning up existing contamination, and finding ways to reduce the amount of hazardous waste produced in California. DTSC regulates hazardous waste primarily under the authority of the federal RCRA and the California Health and Safety Code (primarily Division 20, Chapters 6.5–10.6, and Title 22, Division 4.5). Other laws that affect hazardous waste are specific to handling, storage, transportation, disposal, treatment, reduction, cleanup, and emergency planning.

USC 65962.5 (commonly referred to as the Cortese List) includes DTSC-listed hazardous waste facilities and sites, Department of Health Services lists of contaminated drinking water wells, sites listed by the State Water Board as having a leaking UST or a discharge of hazardous wastes or
materials into the water or groundwater, and lists from local regulatory agencies of sites with a known migration of hazardous waste/material.

**Hazardous Waste Control Act**

DTSC is responsible for the enforcement of the Hazardous Waste Control Act (California Health and Safety Code Section 25100 et seq.), which creates the framework under which hazardous wastes are managed in California. The law provides for the development of a state hazardous waste program that administers and implements the provisions of the federal RCRA cradle-to-grave waste management system in California. It also provides for the designation of California-only hazardous waste and development of standards that are equal to or, in some cases, more stringent than federal requirements.

**Hazardous Materials Release Response Plans and Inventory Act of 1985**

The Hazardous Materials Release Response Plans and Inventory Act, also known as the Business Plan Act, requires businesses that use hazardous materials to prepare a plan that describes their facilities, inventories, emergency response plans, and training programs. Hazardous materials are defined as unsafe raw or unused materials that are part of a process or manufacturing step. They are not considered hazardous waste. Health concerns pertaining to the release of hazardous materials, however, are similar to those pertaining to hazardous waste.

**Unified Hazardous Waste and Hazardous Materials Management Regulatory Program**

The Unified Hazardous Waste and Hazardous Materials Management Regulatory Program (Unified Program) (California Health and Safety Code, Chapter 6.11, Sections 25404–25404.9) consolidates, coordinates, and makes consistent the administrative requirements, permits, inspections, and enforcement activities of the environmental and emergency response programs and provides authority to the CUPA.

The Unified Program consolidates, coordinates, and makes consistent the administrative requirements, permits, inspections, and enforcement activities of the following hazardous materials programs: Hazardous Materials Business Plan Program, California Accidental Release Prevention Program, Underground Storage Tank Program, Aboveground Storage Tank Program, Hazardous Waste Generator Program, and Hazardous Waste Tiered-Permitting Program.

**California Code of Regulations, Title 8 (Industrial Relations)**

Occupational safety standards exist in federal and state laws to minimize worker safety risks from both physical and chemical hazards in the workplace. The California Division of Occupational Safety and Health (Cal OSHA) and the federal OSHA are the agencies responsible for assuring worker safety in the workplace. Cal OSHA assumes primary responsibility for developing and enforcing standards for safe workplaces and work practices. These standards would be applicable to both construction and operation of the CAP.

**California Labor Code (Division 5; Parts 1 and 7.5)**

The California Labor Code is a collection of regulations that include the regulation of the workplace to ensure appropriate training on the use and handling of hazardous materials and the operation of
equipment and machines that use, store, transport, or dispose of hazardous materials. Division 5, Part 1, Chapter 2.5 ensures employees that are in charge of the handling of hazardous materials are appropriately trained on, and informed of, the materials they are handling. Division 5, Part 7 ensures employees who work with volatile flammable liquids are outfitted in appropriate safety gear and clothing.

**California Department of Forestry and Fire Protection Fire Hazard Safety Zones**

In accordance with PRC Sections 4201 through 4204 and Government Code Section 51175 through 1189, CAL FIRE has mapped areas of significant wildland fire hazards based on fuels, weather, topography, and other factors. These Fire Hazard Severity Zones represent relative risks associated with wildland fires.

State regulations as specified in PRC 4290 and 4291 and Title 14 require that specific vegetation management requirements be adhered to within very high severity hazard risk zones in order to reduce property damage and loss of life within these areas.

### 3.9.2.3 Local

Appendix C, *Local General Plan Goals, Objectives, and Policies*, provides a list of the goals, objectives, and policies in the local general plans of the participating jurisdictions including those related to hazards and hazardous materials. These goals, objectives, and policies were reviewed to assess whether the project is consistent with the general plans of participating jurisdictions. Disclosure of this consistency analysis is for informational purposes. An additional purpose of providing a list of relative local policies is, where appropriate, to provide the context within which the CAP will be locally implemented. As described in the CAP, most of the CAP measures represent implementation of many of the priorities outlined in existing local policies.

Inconsistencies with general plan policies are not necessarily considered significant impacts under CEQA unless they are related to physical impacts on the environment that are significant in their own right.

Implementation of the CAP is consistent with the applicable general plan goals, objectives, and policies of the participating jurisdictions in relation to hazards and hazardous materials.

### 3.9.3 Impacts Analysis

#### 3.9.3.1 Methodology

This analysis is based on a review of the hazards and hazardous materials information contained in the Sonoma County General Plan. Effects related to hazards and hazardous materials are analyzed qualitatively and are focused on the CAP’s potential to increase the risk of personal injury, loss of life, or damage to property, including new or upgraded facilities, as a result of existing hazards and hazardous materials conditions in the County.

#### 3.9.3.2 Significance Criteria

The State CEQA Guidelines Appendix G (14 CCR 15000 et seq.) has identified significance criteria to be considered for determining whether a project could have significant impacts on existing hazards and hazardous materials.
An impact would be considered significant if construction or operation of the project would have any of the following consequences.

- 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 involve handling hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.
- Be located on a site that 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.
- Be located within an airport land use plan area or, where such a plan has not been adopted, be within two miles of a public airport or public use airport, and result in a safety hazard for people residing or working in the project area.
- Be located within the vicinity of a private airstrip and 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.
- Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

3.9.3.3 Impacts and Mitigation Measures

Impact HAZ-1a: Implementation of the CAP could cause a significant hazard to the public or environment through the routine transport, use, or disposal of hazardous materials and accident conditions involving the release of hazardous materials into the environment during construction (less than significant with mitigation).

The CAP is a policy-level document that does not include any site-specific designs or proposals, or grant any entitlements for development that would have the potential to expose the public or environment to increased risks associated with the routine transport, use, or disposal of hazardous materials or accident conditions involving the release of hazardous materials. As a policy document, the CAP would have no direct impact related to hazards and hazardous materials, but future implementation of activities supported by the CAP could increase risks involving hazardous materials.

There are several CAP measures that promote and could include the construction of new facilities or retrofits to existing buildings aimed to increase renewable energy use and operations, provide bicycle and pedestrian facilities, increase solid waste diversion, increase capture/use of methane from landfills, promote recycled water use, and reduce emissions from livestock operations. The CAP also promotes mixed-use and transit-oriented development and additional transit facilities aimed to reduce fuel use and travel demand through focused growth and transit promotion. Construction activities associated with these CAP measures would require the routine transport,
use, or disposal of hazardous materials during the construction period and have the potential for an accidental release of hazardous materials into the environment. The use of construction equipment typically requires hazardous materials such as vehicle fuels and lubricants in small quantities. While these are commonly used materials, if handled improperly they could pose a hazard to the public or environment. This could result in a significant impact.

Construction impacts are outside of the scope of the plan, and are outside of RCPA’s jurisdiction to address. Nonetheless, there is no reason to anticipate future significant impacts due to hazardous materials, as these impacts can normally be mitigated to a less-than-significant level. As required by CEQA, this EIR identifies potential mitigation measures that lead agencies could and should impose in their consideration of particular projects. Recommended Mitigation Measure HAZ-1 would require construction contractors to implement a spill prevention, control, and countermeasure program (SPCCP) to minimize the potential for and effects from hazardous, toxic, or petroleum substance spills during construction activities promoted by the CAP. In addition, any structures that could be constructed consistent with the CAP would be subject to further CEQA analysis of project-specific impacts. Thus, with implementation of recommended Mitigation Measure HAZ-1, impacts associated with the routine transport, use, or disposal of hazardous materials and an accidental release of hazardous materials during construction would be less than significant.

**Mitigation Measure HAZ-1: Spill prevention, control, and countermeasure program for construction activities**

Lead agencies will require project sponsors to develop and implement an SPCCP to minimize the potential for and effects from spills of hazardous, toxic, or petroleum substances during construction activities. The SPCCP will be completed before any construction activities begin, and the measures will comply with state and federal water quality regulations. The project sponsor will include the SPCCP with construction documents to be implemented by the construction contractor.

**Impact HAZ-1b: Implementation of the CAP could cause a significant hazard to the public or environment through the routine transport, use, or disposal of hazardous materials and accident conditions involving the release of hazardous materials into the environment during operation (less than significant).**

Operation of several facilities supported by the CAP would likely utilize hazardous materials (such as fluids, paints, metals, solvents, or cleaning agents used for maintenance) and generate limited quantities of hazardous wastes. Hazardous waste could also be generated from CAP measures that support the installation of cogeneration facilities, waste-to-energy facilities proposed at landfills, recycled water treatment facilities, and methane digesters proposed at dairies. The disposal of generated hazardous materials at these facilities could pose a hazard to the public or environment.

However, the CAP does not directly involve the construction or operation of any structures. Any structures that could be constructed or projects that would be undertaken consistent with the CAP would be subject to further CEQA analysis of project-specific impacts and applicable federal, State, and local hazardous materials regulations. Local regulations require best management practices for hazardous materials to minimize the potential for and effects from spills of hazardous, toxic, or petroleum substances during construction activities. Further, businesses within the County that handle hazardous materials and wastes are required to prepare and implement an HMBP. With compliance to federal, state, and local regulations, impacts associated with the routine transport,
use, or disposal of hazardous materials and an accidental release of hazardous materials during operation would be less than significant.

**Impact HAZ-2: Implementation of the CAP could emit or involve handling hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school (less than significant with mitigation).**

As described in Impacts HAZ-1a and HAZ-1b, construction activities associated with the CAP could utilize typical construction hazardous materials such as vehicle fuels and lubricants in small quantities. Implementation of recommended Mitigation Measure HAZ-1 requires the preparation of an SPCCP to minimize the potential for and effects from hazardous, toxic, or petroleum substance spills during construction activities promoted by the CAP. With implementation of recommended Mitigation Measure HAZ-1 and compliance with federal, state, and local regulations, impacts associated with the handling of hazardous materials, substances, and wastes near schools during construction would be less than significant.

Operation of several facilities supported by the CAP would likely utilize hazardous materials (such as fluids, paints, metals, solvents, or cleaning agents used for maintenance) and generate limited quantities of hazardous wastes. The siting and location of these facilities is unknown. However, facilities that would handle hazardous materials and wastes during operation are required to comply with best management practices and HMBPs. Thus, there is presently no basis to conclude that there would be significant operational impacts.

**Impact HAZ-3: Implementation of the CAP could be located on a site that is included on a list of hazardous materials sites and, as a result, would create a significant hazard to the public or the environment (less than significant).**

There are several CAP measures that promote and could include the construction of new facilities aimed to increase renewable energy use, promote transit, provide bicycle and pedestrian facilities, increase solid waste diversion and recycled water use, increase capture/use of methane from landfills, and reduce emissions from livestock operations. Most of these new facilities would be constructed within or on existing buildings (e.g., rooftops, water treatment plants, wastewater treatment plants, landfills, and dairies), and would not require extensive ground-disturbing activities to install these facilities. The siting and location of these facilities is unknown but could be located on a site that is included on a list of hazardous materials sites and as a result create a significant hazard to the public or environment. Where there is the potential for these impacts, they are routinely addressed through project-level environmental review and permitting. Many existing city and county policies and ordinances address such impacts. Where existing ordinances do not address these impacts, then project-level CEQA review will assess the specific significance of the project impact and, where appropriate, identify mitigation to address those impacts. In particular, this impact is routinely addressed with standard mitigation identified during project-level review such as preparing site safety plans for soils and groundwater management during ground-disturbing activities. However, there is presently no basis to conclude that this would be a significant impact.
Impact HAZ-4: Implementation of the CAP could be located within an airport land use plan area, within two miles of a public airport, or within the vicinity of a private airstrip and result in a safety hazard for people residing or working in the project area (less than significant).

There are several CAP measures that promote and could include the construction of new facilities that may require new employees including new solid waste diversion facilities, recycled water treatment, increase capture/use of methane from landfills, and reduce emissions from livestock operations. Most of these new facilities would be constructed within or on existing buildings (e.g., rooftops, wastewater treatment plants, landfills, and dairies), and could be additions to existing structures located in proximity to one of the six public airports or private airstrips in the County.

The CAP also includes mixed-use and transit-oriented development, which would focus growth in city centers and along transit corridors. Most of the public airports and private airstrips are generally outside of areas in close proximity to city centers and areas targeted for focused growth, but some of this focused growth may occur within several miles of airports or airstrips. However, the CAP would not change existing land use plans and designations and thus existing land use plans have already addressed issues related to the location of new development relative to airport safety concerns. In addition, project-level CEQA review is also required to address such concerns.

Any structures that could be constructed or projects that would be undertaken consistent with the CAP would be subject to further CEQA analysis of project-specific impacts and applicable federal, State, and local aviation safety regulations. Local regulations require compliance with the adopted Sonoma County Comprehensive Airport Land Use Plan (CALUP) which identifies compatible land uses in the areas adjacent to the airports as related to noise, air space, and safety. With compliance to local regulations, impacts associated aviation hazards would be less than significant.

Impact HAZ-5: Implementation of the CAP could interfere with an adopted emergency response plan or emergency evacuation plan (less than significant).

Most of the new facilities promoted by CAP Measures would be constructed within or on existing buildings (e.g., rooftops, wastewater treatment plants, landfills, and dairies) and would not interfere with an adopted emergency response/evacuation plan as these facilities would be additions to the existing structure.

The CAP also promotes the construction of mixed-use and transit-oriented development in city centers, and solid waste facilities to increase waste diversion, reuse of materials, and recycling. Infill mixed-use and transit-oriented development in city centers would be located in areas that have previously been developed and would not interfere with an adopted emergency response/evacuation plan. Although the siting and location of the solid waste facilities are unknown, these facilities are generally structures that are located on a continuous parcel of land and would not change access on public right-of-way or interfere with an adopted emergency response/evacuation plan.

Further, there are several CAP measures that encourage a shift in the mode used for transportation and reducing travel demand. These CAP measures promote minor changes to the existing streetscape, such as traffic calming roadways improvements, and additional transit, pedestrian, and bicycle facilities to promote increased transit accessibility. In general, these roadways and transit, pedestrian, and bicycle improvements would not deteriorate accessibility or interfere with an adopted emergency response/evacuation plan but instead would promote alternatives to single-occupancy vehicle travel. Moreover, the CAP overall promotes a reduction of VMT in general, which would reduce regional traffic, which would reduce congestion on major arterials and highways, which will help in response times for emergency vehicles in general compared to unabated VMT.
growth which would otherwise result in continued congestion which could hinder emergency response times during traffic peak hours. Thus, impacts would be less than significant.

**Impact HAZ-6: Implementation of the CAP could expose people or structures to a significant risk of loss, injury, or death involving wildland fires (less than significant).**

Large parts of Sonoma County are designated to be in high or very high fire hazard severity zones. CAP measures that promote mixed-use and transit-oriented development in city centers would likely not be at high risk for wildland fires due to the urban and developed nature of the city centers. CAP measures support the development of some facilities, such as new solid waste facilities, improvements at landfills, improvements at water treatment and wastewater treatment facilities, or at dairies, that could be located in outlying areas that may be identified as high fire severity zones. Most of these CAP measures are likely to be within existing facilities. Any structures that could be constructed consistent with the CAP would be subject to project-level review and applicable State and local wildland fire regulations, including the Sonoma County Hazard Mitigation Plan, which identifies mitigation strategies for exposure to wildland fires. With compliance to local regulations, impacts associated with wildland fires would be less than significant.

### 3.9.3.4 Cumulative Impacts

**Impact C-HAZ-1: Implementation of the CAP, in combination with other foreseeable development in the surrounding area, could have a significant cumulative impact from hazards and hazardous materials (less than considerable contribution with mitigation).**

The cumulative context for the evaluation of cumulative impacts on hazards and hazardous materials addresses the effects of the CAP in combination with other development in Sonoma County. The geographic context for the analysis of impacts resulting from hazards and hazardous materials is generally site specific rather than cumulative in nature, and varies depending on the topic. For disposal and transport of hazardous materials, the geographic context would include the area between where hazardous waste is generated and where it is disposed of as well as the route between a distribution facility and the project area where risk of upset and accident would occur. The cumulative context for impacts associated with contaminated groundwater would include the watersheds within the County. The context for analysis of contaminated soil and risk from hazardous materials is site specific. For the discussion of airport hazards, the geographic context would be the airport influence area of the six public airports or private airstrips in the County. The cumulative context for impact associated with the impairment of emergency access or emergency plans would be the County.

Any development that would occur consistent with the CAP would be required to comply with the same hazards and hazardous materials regulations as well as the recommended identified mitigation (Mitigation Measure HAZ-1) discussed above. There would be no considerable contribution to cumulative impacts with respect to routine transport, use, or disposal of hazardous materials; accidental release of hazardous materials; aviation hazards; interference with an adopted emergency response/evacuation plan; and wildland fires because impacts would be addressed through compliance with federal, State, and local regulations as well as the identified mitigation. Thus, the CAP would not contribute considerably to cumulative impacts regarding hazards and hazardous materials with mitigation.
3.10 Hydrology and Water Quality

This section describes the regulatory and environmental setting for hydrology and water quality. It also describes impacts on hydrology and water quality that would result from implementation of the Climate Action 2020: Community Climate Action Plan (CAP) and includes mitigation for significant impacts, where feasible and appropriate.

3.10.1 Environmental Setting

This section describes the hydrology and water quality conditions present in Sonoma County. This information has primarily been drawn and modified from the Sonoma County General Plan 2020 EIR (Sonoma County 2006).

3.10.1.1 Regional Climate and Topography

The climate of Sonoma County is characterized as Mediterranean. Temperatures along the coast are generally cool throughout summer and seldom drop below freezing in winter. Inland, however, temperature can vary greatly, with occasional highs exceeding 100 degrees Fahrenheit and lows sometimes falling below freezing.

Both precipitation and temperature in Sonoma County are influenced by the area’s topography, the Pacific Ocean, and the waters of San Pablo Bay to the south. Annual precipitation generally increases with elevation, and is greatest in the western part of the County. Average annual precipitation ranges from roughly 20 inches in the southeastern County to 30 to 40 inches in central and northern valley areas. Annual precipitation in upper and coastal watersheds can exceed 80 to 100 inches. During summer months, low clouds and evening drizzle in coastal areas can provide enough moisture to keep vegetation green. Inland, however, the summer dry period is long enough to deplete soil moisture and dry up vegetation.

3.10.1.2 Watersheds and Surface Hydrology

Hydrologically, land in Sonoma County falls within seven distinct watersheds. Table 3.10-1 summarizes the characteristics of the watersheds within the County. The Russian River watershed is the largest in terms of area, runoff volume, number of cities, and population. Due to the large size of the Russian River watershed and the complexity of the coastal watersheds, it is useful to divide or group the Russian River watershed and several of the coastal watersheds into subbasin units whose size and boundaries are determined by several common traits including runoff patterns, geology, topography, vegetation, and land use.
### Table 3.10-1. Summary of Watershed and Subbasins in Sonoma County

<table>
<thead>
<tr>
<th>Watershed (subbasin in <em>italics</em>)</th>
<th>Impaired Water Body&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Land Use</th>
<th>Hydrological Issues</th>
</tr>
</thead>
<tbody>
<tr>
<td>North Coast (49 square miles)</td>
<td>No</td>
<td>70% rural</td>
<td>Sea cliff/bluff retreat; upland gully erosion; stream bank failure</td>
</tr>
<tr>
<td></td>
<td></td>
<td>21% park/recreation area 9% agricultural</td>
<td></td>
</tr>
<tr>
<td>Gualala River (269 square miles)</td>
<td>Yes</td>
<td>99% rural</td>
<td>Excessive sedimentation and siltation due to habitat modification and erosion of unpaved roads</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(timber/grazing)</td>
<td></td>
</tr>
<tr>
<td>Russian River (921 square miles in Sonoma County)</td>
<td>Yes</td>
<td>--</td>
<td>Sedimentation and siltation due to grazing, agriculture, road construction, and habitat modification</td>
</tr>
<tr>
<td><strong>Russian River Subbasin</strong> (237 square miles)</td>
<td>--</td>
<td>61% rural 32% agricultural 4% park/recreation area</td>
<td>Flooding; bank erosion; streambed downcutting; elevated bacteria levels; hillside vineyards; and gravel mining</td>
</tr>
<tr>
<td><strong>Austin Creek Subbasin</strong> (70 square miles)</td>
<td>--</td>
<td>93% rural 7% park/recreation area</td>
<td>Erosion along roads</td>
</tr>
<tr>
<td><strong>Dry Creek Subbasin</strong> (70 square miles)</td>
<td>--</td>
<td>57% rural 20% agricultural (vineyards/orchards) 12% park/recreation area 10% commercial/industrial</td>
<td>Erosion along roads; vineyards and orchards; creek bank instability; loss of riparian habitat</td>
</tr>
<tr>
<td><strong>Big Sulphur Creek Subbasin</strong> (80 square miles)</td>
<td>--</td>
<td>97% rural 3% agricultural</td>
<td>Erosion of unpaved roads; erosion after wildfires</td>
</tr>
<tr>
<td><strong>Maacama Creek Subbasin</strong> (69 square miles)</td>
<td>--</td>
<td>44% rural 46% agricultural 7% commercial/industrial</td>
<td>--</td>
</tr>
<tr>
<td><strong>Santa Rosa Creek Subbasin</strong> (81 square miles)</td>
<td>Yes</td>
<td>38% rural 35% urban 18% agricultural 8% park/recreation area</td>
<td>Urbanization (water quality and stormwater runoff); bank instability; fisheries; riparian restoration</td>
</tr>
<tr>
<td><strong>Laguna de Santa Rosa Subbasin</strong> (89 square miles)</td>
<td>Yes</td>
<td>17% urban 44% agricultural 33% rural</td>
<td>Flooding in the lower reaches; siltation and shallowing causing loss of floodplain storage and flood conveyance capacity; water quality and biological resources</td>
</tr>
<tr>
<td><strong>Mark West Subbasin</strong> (83 square miles)</td>
<td>Yes</td>
<td>55% rural 29% agricultural 11% urban</td>
<td>Low gradient in lower reaches resulting in some flooding</td>
</tr>
</tbody>
</table>

<sup>a</sup> Impaired Water Body: Yes or No
3.10 Hydrology and Water Quality

### Watershed Impaired Water Bodya Land Use Hydrological Issues

<table>
<thead>
<tr>
<th>Watershed (subbasin in italics)</th>
<th>Impaired Water Bodya</th>
<th>Land Use</th>
<th>Hydrological Issues</th>
</tr>
</thead>
<tbody>
<tr>
<td>Green Valley Subbasin (37 square miles)</td>
<td>Yes</td>
<td>56% agricultural 39% rural</td>
<td>Inadequate channel capacities along Atascadero Creek causing flooding problems; expansion of two large rock quarries impacting water quality and salmonid habitat</td>
</tr>
<tr>
<td>Sonoma Creek (170 square miles)</td>
<td>Yes</td>
<td>54% agricultural 30% rural 11% park/recreation area</td>
<td>Flooding; stream bank erosion; riparian &amp; fisheries habitat; water diversions; groundwater pumping; sedimentation, nutrients and pathogens</td>
</tr>
<tr>
<td>Estero Americano (50 square miles in Sonoma County)</td>
<td>Yes</td>
<td>Predominantly rural, very little development</td>
<td>Gully erosion; stream bank instability</td>
</tr>
<tr>
<td>Petaluma River (112 square miles in Sonoma County)</td>
<td>Yes</td>
<td>Predominantly agricultural</td>
<td>Flooding; sedimentation/siltation, nutrients and pathogens</td>
</tr>
<tr>
<td>Stemple Creek (22 square miles in Sonoma County)</td>
<td>Yes</td>
<td>91% agricultural 8% park/recreation area</td>
<td>High nutrient levels</td>
</tr>
<tr>
<td>Salmon Creek (37 square miles)</td>
<td>No</td>
<td>51% agricultural 47% rural</td>
<td>Gully erosion; stream bank instability</td>
</tr>
<tr>
<td>South Coast (9 square miles)</td>
<td>No</td>
<td>79% agricultural 17% park/recreation area</td>
<td>--</td>
</tr>
</tbody>
</table>

Source: Sonoma County 2006

Notes:

a The term Impaired Water Body refers to waters that are not attaining water quality standards set forth by the Environmental Protection Agency and regulated by the State Water Resources Control Board.

### 3.10.1.3 Groundwater Hydrology

In Sonoma County, rivers and stream corridors are important source areas for groundwater recharge, as are some upland areas underlain by permeable formations. Groundwater is a vital source of water supply for both agricultural and urban uses in Sonoma County. In fact, Sonoma has the second largest number of wells of any county in California. Groundwater provides an important portion of the water supply for the cities of Sonoma, Sebastopol, Cotati, Rohnert Park, and Petaluma. The Valley of the Moon Water District and the Sonoma County Water Agency also rely on groundwater to supplement their water supply.

General groundwater availability issues found in portions of Sonoma County include the decrease in groundwater recharge rates, lack of groundwater monitoring, local well interference, and potential groundwater management problem areas.

Table 3.10-2 summarizes the characteristics of the 11 separate groundwater basins in Sonoma County. These basins, formed over geologic time under various conditions, vary in water availability,
water quality, and recharge potential. In some cases, the groundwater basins have been divided into groundwater subbasins that have different hydrogeologic characteristics.

### Table 3.10-2. Summary of Groundwater Basins in Sonoma County

<table>
<thead>
<tr>
<th>Groundwater Basin (subbasin in italics)</th>
<th>Surface Area (square miles)</th>
<th>Groundwater Availability Class(es)</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annapolis Ohlson Ranch Formation Highland</td>
<td>13.5</td>
<td>III</td>
<td>Some wells may go dry in fall months</td>
</tr>
<tr>
<td>Knights Valley</td>
<td>6</td>
<td>I</td>
<td>Usually adequate for domestic use</td>
</tr>
<tr>
<td>Alexander Valley</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td><strong>Cloverdale Area Groundwater Subbasin</strong></td>
<td>10</td>
<td>I, IV</td>
<td>Groundwater elevations may be declining in some areas</td>
</tr>
<tr>
<td><strong>Alexander Groundwater Subbasin</strong></td>
<td>--</td>
<td>--</td>
<td>Groundwater levels relatively stable</td>
</tr>
<tr>
<td>Santa Rosa Valley</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td><strong>Healdsburg Area Groundwater Subbasin</strong></td>
<td>--</td>
<td>--</td>
<td>USGS currently conducting studies</td>
</tr>
<tr>
<td><strong>Santa Rosa Plain Groundwater Subbasin</strong></td>
<td>262</td>
<td>I, II, III, IV</td>
<td>Overall lowering of groundwater levels compared to historic baseline conditions; reduced groundwater contribution to stream flow; reduced groundwater evapotranspiration in riparian areas; more infiltration of surface water to groundwater(^1)</td>
</tr>
<tr>
<td><strong>Rincon Valley Groundwater Subbasin</strong></td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Bodega Bay Area</td>
<td>--</td>
<td>IV</td>
<td>Limited information available</td>
</tr>
<tr>
<td>Wilson Grove Formation Highlands</td>
<td>--</td>
<td>I, III, IV</td>
<td>Well yields may be low in fall months in some parts of basin</td>
</tr>
<tr>
<td>Lower Russian River Valley</td>
<td>10</td>
<td>I, IV</td>
<td>Mostly high yield</td>
</tr>
<tr>
<td>Fort Ross Terrace Deposits</td>
<td>--</td>
<td>III, IV</td>
<td>Variable yields</td>
</tr>
<tr>
<td>Petaluma Valley</td>
<td>70</td>
<td>I, III, IV</td>
<td>City conducting groundwater assessment</td>
</tr>
</tbody>
</table>


3.10 Hydrology and Water Quality

3.10.1.4 Water Quality

Overall, Sonoma County is predominantly rural, with areas of intense development primarily along the US 101 corridor. Anthropogenic land use changes (including urban and agricultural uses) have negatively impacted the water quality of some waterways in the County. While the U.S. Environmental Protection Agency (EPA) and the State Regional Water Quality Control Boards (RWQCBs) do not compile a list of waterways that have good water quality, they do compile a list of waterways that do not meet the water quality standards set forth by the EPA.

Table 3.10-3 provides an overview of the water quality impairments in the County. There are several waterways in Sonoma County that have been placed on a Section 303(d) list by either the RWQCBs or the EPA: Bodega Harbor, Estero Americano, Calabazas Creek, Campbell Cove, Gualala River, Russian River (including Stemple Creek and Big Sulphur Creek), Petaluma River, and San Antonio River. Additionally, San Pablo Bay, which receives water from the Petaluma River, has also been listed as an impaired water body for constituents. The most prominent water quality problems affecting waterways in the County are sedimentation and siltation, nutrients, and pathogens, or high bacteria levels.

Table 3.10-3. Overview of Water Quality Impairments in Sonoma County

<table>
<thead>
<tr>
<th>Waterway</th>
<th>Pollutant/Stressor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bodega Harbor</td>
<td>Invasive species</td>
</tr>
<tr>
<td>Estero Americano</td>
<td>Nutrients and sedimentation/siltation</td>
</tr>
<tr>
<td>Calabazas Creek</td>
<td>Diazinon</td>
</tr>
</tbody>
</table>

Source: Sonoma County 2006.

Notes:

1 This information is summarized from the Santa Rosa Plain Watershed Groundwater Management Plan (Santa Rosa Plain Basin Advisory Panel 2014)

2 This information is summarized from the Sonoma Valley Groundwater Management Program Five-Year Review and Update Final Report (Sonoma County Water Agency 2014).
### Waterway Pollutant/Stressor

<table>
<thead>
<tr>
<th>Waterway</th>
<th>Pollutant/Stressor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Campbell Cove</td>
<td>Indicator bacteria</td>
</tr>
<tr>
<td>Gualala River</td>
<td>Aluminum, sedimentation/siltation, water temperature</td>
</tr>
<tr>
<td>Russian River</td>
<td>Sedimentation/Siltation, water temperature, aluminum, indicator bacteria, specific conductivity, diazinon, phosphorus, dissolved oxygen, mercury, manganese, nutrients</td>
</tr>
<tr>
<td>San Pablo Bay</td>
<td>Chlorodane, DDT, dieldrin, dioxin compounds, invasive species, furan compounds, mercury, PCBs, PCBs (dioxin-like), selenium</td>
</tr>
<tr>
<td>Petaluma River</td>
<td>Diazinon, nickel, nutrients, pathogens, sedimentation/siltation, trash</td>
</tr>
<tr>
<td>Sonoma Creek</td>
<td>Nutrients, pathogens, sedimentation/siltation</td>
</tr>
<tr>
<td>San Antonio Creek</td>
<td>Diazinon</td>
</tr>
</tbody>
</table>

Source: California State Water Resources Control Board 2012

### 3.10.1.5 Flooding

#### Flood Hazard Areas

The flood hazard areas within the County include areas near the Russian River, streams, and the southern portions of the County adjacent to San Pablo Bay (see Figure PS-1e of the Sonoma County General Plan). Flood zone hazards in Sonoma County are sub-regional in geographic scope, and could affect County residents, structures, and land use activities throughout certain portions of the County.

Several FEMA-designated floodplain areas within Sonoma County have a history of repetitive flood damage. These include areas along Sonoma Creek in and near the city of Sonoma, along the Petaluma River above and within the City of Petaluma, along the Laguna de Santa Rosa in and near Sebastopol, and along the middle and lower course of the Russian River, including the communities of Guerneville and Monte Rio.

Section 7B of the current County Code requires that residential structures built within FEMA-designated 100-year flood hazard zones be elevated at least 1 foot above the elevation of the 100-year flood level to protect these structures from flood damage. New non-residential buildings must either meet this criterion or provide an alternate method of flood proofing that is certified by a registered engineer and approved by the PRMD Chief Building Inspector. Similar requirements exist in the incorporated cities in the County.

#### Dam Failures

The County has 44 regulated dams within its boundaries. Larger dams whose potential failure could cause severe inundation include the Warm Springs Dam built by the Army Corps of Engineers in 1983 at the confluence of Warm Springs Creek and Dry Creek, and the Coyote Dam built in 1958 on the East Fork Russian River in Mendocino County. Although the County has not experienced dam failure in the last 20 years, the sudden failure of any one of these facilities—for instance, in response to a large magnitude earthquake—could potentially cause flooding in communities downstream of the dams.
The most extensive series of levees in Sonoma County that are potentially susceptible to failure are the predominantly non-engineered farm levees that protect low lying farmland and rural housing along the lower reaches of the Petaluma River and Sonoma Creek. Although some of these may be maintained by small reclamation districts, most of the non-engineered farm levees in these areas are maintained by the individual farmers and ranchers. Technical support and assistance are sometimes provided by the Department of Agriculture and local Resource Conservation Districts. Levees in these areas probably represent the greatest risk of levee failure, and several farm levees along the lower Petaluma River and Sonoma Creek failed during flood events as recently as 1998. Although several low lying farmhouses and some farm buildings and equestrian facilities were flooded, and there was some loss of agricultural crops, widespread damage did not occur.

3.10.2 Regulatory Setting

3.10.2.1 Federal

Clean Water Act

Several sections of the Clean Water Act (CWA) pertain to regulating impacts on waters of the United States. The term waters of the United States essentially refers to all surface waters, such as all navigable waters and their tributaries, all interstate waters and their tributaries, all wetlands adjacent to these waters, and all impoundments of these waters. The EPA is the overarching authority protecting the quality of waters of the United States. However, the State Water Resources Control Board (State Water Board) regulates waters of the United States under CWA Sections 303, 401 and 402, and the United States Army Corps of Engineers (USACE) has jurisdiction over waters of the United States under CWA Section 404.

Section 303—Impaired Waters

The State of California adopts water quality standards to protect beneficial uses of state waters as required by CWA 303 Total Maximum Daily Load Program and the state’s Porter-Cologne Water Quality Control Act of 1969. CWA Section 303(d) established the total maximum daily load (TMDL) process to guide the application of state water quality standards (see the discussion of state water quality standards below). To identify candidate water bodies for TMDL analysis, a list of water-quality-limited streams is generated. These streams are impaired by the presence of pollutants, including sediments, and have no additional assimilative capacity for these pollutants.

In addition to the impaired waterbody list required by CWA Section 303(d), CWA Section 305(b) requires states to develop a report assessing statewide surface water quality. Both CWA requirements are being addressed through the development of a 303(d)/305(b) Integrated Report, which will address both an update to the 303(d) list and a 305(b) assessment of statewide water quality. The State Water Board developed a statewide 2010 California Integrated Report based on the Integrated Reports from each of the nine RWQCBs. The 2010 California Integrated Report was approved by the State Water Board at a public hearing on August 4, 2010, and the report was submitted to the EPA for final approval. Although updates to the 303(d) list must be finalized by the EPA before becoming effective, this updated 303(d) list will be used for this analysis in order to have the most up-to-date information available.
Section 401—Water Quality Certification

CWA Section 401 requires that an applicant pursuing a federal permit to conduct any activity that may result in a discharge of a pollutant obtain a water quality certification (or waiver). Water quality certifications are issued by the RWQCBs in California. Under CWA, the state (as implemented by the relevant board) must issue or waive CWA 401 water quality certification for the CAP to be permitted under CWA 404. Water quality certification requires the evaluation of water quality considerations associated with dredging or the placement of fill materials into waters of the United States.

Section 402—National Pollutant Discharge Elimination System

The 1972 amendments to the federal Water Pollution Control Act established the National Pollutant Discharge Elimination System (NPDES) permit program to control discharges of pollutants from point-source discharges, or discharges that one can point to as a known source of pollutants. NPDES is the primary federal program that regulates point-source and nonpoint-source discharges to waters of the United States.

The 1987 amendments to the CWA created a new section of the CWA devoted to stormwater permitting (Section 402). EPA has granted the State of California primacy in administering and enforcing the provisions of the CWA and NPDES within state boundaries. NPDES permits are issued by one of the nine RWQCBs.

National Flood Insurance Program

In response to increasing costs of disaster relief, Congress passed the National Flood Insurance Act (NFIP) of 1968 and the Flood Disaster Protection Act of 1973. The Federal Emergency Management Agency (FEMA) administers the NFIP to provide subsidized flood insurance to communities that comply with FEMA regulations limiting development in floodplains. A Flood Insurance Rate Map (FIRM) is the official map of a community prepared by FEMA to delineate both the special flood hazard areas and the flood risk premium zones applicable to the community.

3.10.2.2 State

Porter-Cologne Water Quality Control Act

The Porter-Cologne Act was established and is implemented by the State Water Board and nine RWQCBs. The State Water Board is the primary state agency responsible for protecting the quality of the state’s surface and groundwater supplies, or waters of the state. Waters of the state are defined more broadly than waters of the United States and defined as any surface water or groundwater, including saline waters, within the boundaries of the state. This includes waters in both natural and artificial channels. It also includes all surface waters that are not waters of the United States or non-jurisdictional wetlands, which are essentially distinguished by whether they are navigable. If waters are not navigable, then they are considered to be isolated and, therefore, only fall under the jurisdiction of the Porter-Cologne Act and not the CWA. The RWQCBs are responsible for implementing CWA Sections 303(d), 401, and 402 mentioned above and described in more detail below.

The Porter-Cologne Act authorizes the State Water Board to draft state policies regarding water quality. The act requires projects that are discharging, or proposing to discharge, wastes that could
affect the quality of the state’s water to file a Report of Waste Discharge (RWD) with the appropriate RWQCB. The Porter-Cologne Act also requires that State Water Board or a RWQCB adopt basin plans for the protection of water quality. Basin plans are updated and reviewed every 3 years and provide the technical basis for determining Waste Discharge Requirements (WDRs), taking enforcement actions, and evaluating clean water grant proposals. A basin plan must include (1) a statement of beneficial water uses that the RWQCB will protect, (2) water quality objectives needed to protect the designated beneficial water uses, and (3) strategies to be implemented with time schedules for achieving the water quality objectives.

Sonoma County is located within the jurisdiction of two RWQCBs: the North Coast (Region 1) RWQCB, and the San Francisco Bay (Region 2) RWQCB, which includes the Petaluma River and Sonoma Creek. The RWQCBs have the authority to implement water quality protection standards through the issuance of permits for discharges to waters at locations within their respective jurisdictions. Their jurisdiction also extends to discharge of wastes and wastewater to land, and to land disturbance, if the activities could affect the beneficial uses of surface water or groundwater.

In basin plans, RWQCBs designate beneficial uses for all water body segments in their jurisdictions and then set criteria necessary to protect these uses. Consequently, the water quality objectives developed for particular water segments are based on the designated use and vary depending on such use. The RWQCBs have region-wide and water body-specific beneficial uses and have set numeric and narrative water quality objectives for several substances and parameters in numerous surface waters in its region. For those waters that don’t have specific beneficial uses or water quality objectives, the tributary rule applies to streams. Specific objectives for concentrations of chemical constituents are applied to bodies of water based on their designated beneficial uses.

In addition, the State Water Board identifies waters failing to meet standards for specific pollutants, which are then state-listed in accordance with CWA Section 303(d). If it is determined that waters are impaired for one or more constituents and the standards cannot be met through point source or non-source point controls (NPDES permits or Waste Discharge Requirements), then CWA requires the establishment of TMDLs. TMDLs may establish daily load limits of the pollutant, or in some cases require other regulatory measures, with the ultimate goal of reducing the amount of the pollutant entering the water body to meet water quality objectives. The latest 303(d) impairments are listed in the 2010 Clean Water Act Section 303(d) and 305(b) Integrated Report (California State Water Resources Control Board 2011). More information on beneficial uses, water quality objectives, and 303(d) impairments that apply to the implementation of the CAP are provided in the surface water quality discussions in Section 3.8.2, Environmental Setting.

**NPDES General Construction Stormwater Permit**

The General NPDES Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Order 2009-0009-DWQ) (Construction General Permit) regulates stormwater discharges for construction activities CWA Section 402. Dischargers whose projects disturb 1 or more acres of soil, or whose projects disturb less than 1 acre but are part of a larger common plan of development that in total disturbs 1 or more acres, are required to obtain coverage under the Construction General Permit. The Construction General Permit requires the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP must list best

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1 The "tributary rule" refers to any streams not specifically listed in the plan that are deemed to have the same beneficial uses and water quality objectives of the listed stream, river, or lake to which they are a tributary.
management practices (BMPs) that the discharger will use to protect stormwater runoff and document the placement and maintenance of those BMPs. Additionally, the SWPPP must contain a visual monitoring program; a chemical monitoring program for “non-visible” pollutants, to be implemented in case of a BMP failure; and a monitoring plan for turbidity and pH for projects that meet defined risk criteria (California State Water Resources Control Board 2015). The requirements of the SWPPP are based on the construction design specifications detailed in the final design plans of a project and the hydrology and geology of the site expected to be encountered during construction. The local or lead agency requires proof of coverage under the CGP prior to building permit issuance. The SWPPP is submitted to the State Water Board, and a copy is kept at the jobsite where it is updated during different phases of construction. The SWPPP must be available for inspection and review upon request.

**NPDES General Municipal Stormwater Permit**

CWA Section 402 mandates permits for municipal stormwater discharges, which are regulated under the NPDES General Permit for Municipal Separate Storm Sewer Systems (MS4) (MS4 Permit). Phase I MS4 regulations cover municipalities with populations greater than 100,000, certain industrial processes, or construction activities disturbing an area of 5 acres or more. Phase II (Small MS4) regulations require that stormwater management plans be developed by municipalities with populations smaller than 100,000 and construction activities disturbing 1 or more acres of land area. The State Water Board adopted a Statewide Phase II Small MS4 General Permit in 2013 to efficiently regulate discharges from numerous, qualifying, small MS4s under a single permit. Small MS4s were categorized as either Traditional or Non-Traditional. Traditional MS4s operate throughout a community. Non-Traditional MS4s are similar to a Traditional MS4 but operate at a separate campus facility. Most Non-Traditional MS4s throughout California were not designated as having to comply with the statewide Phase II Small MS4 General Permit, although the State Water Board reserved the right to allow the RWQCBs to designate through due process any single Non-Traditional MS4 if it deemed necessary.

MS4 permits require that cities and counties develop and implement programs and measures to reduce the discharge of pollutants in stormwater discharges to the maximum extent possible, including management practices, control techniques, system design and engineering methods, and other measures as appropriate. As part of permit compliance, these permit holders have created Stormwater Management Plans (SWMP) for their respective locations. These plans outline the requirements for municipal operations, industrial and commercial businesses, construction sites, and planning and land development. These requirements may include multiple measures to control pollutants in stormwater discharge. During implementation of specific projects under the program, project applicants will be required to follow the guidance contained in the stormwater management plans as defined by the permit holder in that location.

The State Water Board is advancing Low Impact Development (LID) in California as a means of complying with municipal stormwater permits. LID incorporates site design, such as the use of vegetated swales and retention basins and minimizing impermeable surfaces, to manage stormwater to maintain a site's predevelopment runoff rates and volumes.

**California Department of Pesticides Regulation**

California Department of Pesticides Regulation (DPR) is the lead agency for regulating the registration, sale, and use of pesticides in California. It is required by law to protect the environment,
including surface waters, from adverse effects of pesticides by prohibiting, regulating, or controlling
the uses of such pesticides. DPR has both a Surface Water and Groundwater Protection Program that
addresses sources of pesticide residues in surface waters and has preventive and response
components that reduce the presence of pesticides in surface and ground waters. The preventive
component includes local outreach to promotion of management practices that reduce pesticide
runoff and prevents continued movement to groundwater in contaminated areas. In order to
promote cooperation to protect water quality from the adverse effects of pesticides, DPR and the
State Water Board signed a Management Agency Agreement (MAA). The MAA, and its companion
document, The California Pesticide Management Plan for Water Quality, are intended to coordinate
interaction, facilitate communication, promote problem solving, and ultimately ensure the
protection of water quality.

3.10.2.3 Local

Appendix C, Local General Plan Goals, Objectives, and Policies, provides a list of the goals, objectives,
and policies in the local general plans of the participating jurisdictions including those related to
hydrology and water quality. These goals, objectives, and policies were reviewed to assess whether
the project is consistent with the general plans of participating jurisdictions. Disclosure of this
consistency analysis is for informational purposes. An additional purpose of providing a list of
relative local policies is, where appropriate, to provide the context within which the CAP will be
locally implemented. As described in the CAP, most of the CAP measures represent implementation
of many of the priorities outlined in existing local policies.

Inconsistencies with general plan policies are not necessarily considered significant impacts under
CEQA unless they are related to physical impacts on the environment that are significant in their
own right.

Implementation of the CAP is consistent with the applicable general plan goals, objectives, and
policies of the participating jurisdictions in relation to hydrology and water quality.

3.10.3 Impacts Analysis

3.10.3.1 Methodology

Effects related to hydrology and water quality are analyzed qualitatively and are focused on the
CAP’s potential to impact surface water hydrology, groundwater hydrology, water quality, and
flooding in the County during construction and/or operation based on the CAP’s magnitude,
intensity, location, and duration of activities.

3.10.3.2 Significance Criteria

The State CEQA Guidelines Appendix G (14 CCR 15000 et seq.) has identified significance criteria to
be considered for determining whether a project could have significant impacts on existing
hydrology and water quality resources.

An impact would be considered significant if construction or operation of the project would have
any of the following consequences.

- Violate any water quality standards or waste discharge requirements.
- Substantially deplete groundwater supplies or interfere substantially with groundwater recharge, resulting in a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level 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 or siltation onsite or offsite.
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding onsite or offsite.
- Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.
- Otherwise substantially degrade water quality.
- 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 a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam.
- Contribute to inundation by seiche, tsunami, or mudflow.

The California Supreme Court has recently confirmed that “CEQA generally does not require an analysis of how existing environmental conditions will impact a project’s future users or residents.” However, an agency must “evaluate existing conditions in order to assess whether a project could exacerbate hazards that are already present.”

### 3.10.3.3 Impacts and Mitigation Measures

**Impact HYD-1a: Implementation of the CAP could violate water quality standards and waste discharge requirements, or could otherwise substantially degrade water quality during construction (less than significant).**

The CAP is a policy-level document that does not include any site-specific designs or proposals, or grant any entitlements for development that would have the potential to violate water quality standards and waste discharge requirements. As a policy document, the CAP would have no direct impact on water quality and waste discharge, but future implementation activities could violate water quality standards and waste discharge requirements, or could otherwise substantially degrade water quality during construction activities.

There are several CAP measures that promote and could include the construction of new facilities or retrofits to existing buildings aimed to increase energy efficiency, renewable energy use, solid waste diversion, recycled water and greywater use, and capture/use of methane from landfills and dairies. Further, several CAP promote the construction of minor changes to the existing streetscape, such as traffic calming roadways improvements, and additional transit, pedestrian, and bicycle facilities to promote increased transit accessibility.
Although construction details are unknown, construction of these facilities may include land-disturbing activities that could result in sedimentation and other pollutants which can degrade surface water quality. Construction activities may also involve the use of chemicals and operation of heavy equipment that could result in accidental spills of hazardous materials (e.g., fuel and oil) which can also degrade surface water quality. Activities involving more than 1 acre of land disturbance would be required to comply with the State Water Board general construction permit to ensure water quality is not degraded during the construction process. The construction general permit requires the development and implementation of a SWPPP and BMPs for erosion control. Construction activities promoted by the CAP that disturb more than 1 acre of land would be required to comply with the State Water Board general construction permit to minimize water quality impacts during construction. Construction activities that are not required to comply with the State Water Board construction general permit could result in water quality impacts during construction but are still required to comply with BMPs (as generally mandated in the local agencies’ applicable MS4 permits). Where there is the potential for these impacts, they are routinely addressed through project-level environmental review and permitting. Many existing city and county policies and ordinances address such impacts. Where existing ordinances do not address these impacts, then project-level CEQA review will assess the specific significance of the project impact and, where appropriate, identify mitigation to address those impacts. In particular, this impact is routinely addressed with standard mitigation identified during project-level review such as implementing erosion-control measures to protect water quality during construction. Future facilities will be analyzed on a site-specific basis pursuant to CEQA. Based on available information, there is no current basis to conclude that there would be a significant impact.

**Impact HYD-1b: Implementation of the CAP could violate water quality standards and waste discharge requirements, or could otherwise substantially degrade water quality during operation (less than significant).**

There are several CAP measures that promote and could include the construction of new facilities aimed to increase energy efficiency, renewable energy use, use alternative fuels, solid waste diversion, recycled water and greywater, and capture/use of methane from landfills and dairies. Most of these new facilities would be constructed within or on existing buildings (e.g., rooftops, existing buildings, wastewater treatment plants, landfills, and dairies). The installation of most of these new facilities within existing buildings would not result in a substantial new source of discharge or stormwater runoff that could impact water quality because they are located within or on existing facilities (see separate discussion of recycled water and greywater below). Further, the CAP also promotes mixed-use and transit-oriented development in city centers. These new structures and associated impervious areas could increase surface runoff from storms and introduce new pollutants to storm drains that could impact water quality; however, such development is already called for in local land use plans and would not be an additional impact of CAP implementation above that already called for.

Recycled water facilities promoted by the CAP would include additional water treatment facilities which would be located at or immediately adjacent to existing wastewater treatment facilities and would be subject to all local, state, and federal water quality requirements relative to any associated discharges. New recycled water lines would also be required. Recycled water is wastewater effluent that has been further treated and disinfected to provide a non-potable (non-drinking water) water supply. Recycled water is safe and suitable for uses such as landscape irrigation and some industrial processes. The California Water Recycling Criteria (encoded in Title 22 of the California Code of Administration) allow 43 specified uses of recycled water, including irrigation of all types of food...
crops, parks and schools, golf courses, and landscaping. These criteria include different water quality requirements for different types of irrigation. In addition to crops and landscaping, the state’s criteria also outline recycled water use for industrial applications such as cooling towers and toilet flushing. In specific instances, recycled water can also be used for groundwater recharge. California’s regulations are among the most stringent in the world and have been used as a model for many other countries’ guidelines and water reuse regulations. Thus, new proposals for increased recycled water use would follow all applicable state regulations which are specifically designed to protect water quality.

Increased greywater use would involve the reuse of non-potable water from a building structure within that same building and thus does not require large-scale distribution lines, but rather local plumbing within the building itself. The residential Greywater Standard, incorporated into the California Plumbing Code (Title 24, Part 5, Chapter 16A), divides greywater installations into three tiers: clothes washer systems (commonly referred to as laundry-to-landscape systems); simple systems, which reuse up to 250 gallons per day; and complex systems, using over 250 gallons per day. A clothes washer system can be installed without a building permit, as long as installation guidelines in the code are followed. The next two tiers do require a building permit, but the technical stipulations help ensure a consistent level of quality that protects consumers and the environment. The state code specifies that untreated greywater may only be used outdoors (for irrigation). It may be applied to all kinds of plants, including food plants, except the edible portions. It may be distributed fairly near the soil surface, but must be covered by at least 2” of mulch. Required setbacks from buildings and property lines are 2.0 and 1.5 feet respectively, so greywater can be used to irrigate landscape strips along buildings and boundary fences. Greywater that will be reused indoors (for toilet and urinal flushing) must be treated to at least tertiary recycled water standards and it is subject to other regulations governing recycled water. Kitchen sink water, dishwasher effluent and diaper wash water are excluded from the greywater standard. They are effectively defined as blackwater (sewage). With compliance with all applicable local and state standards, greywater use can be expanded without adverse effects to water quality.

Any structures that could be constructed consistent with the CAP would be subject to further CEQA analysis of project-specific impacts and State Water Board regulations for stormwater discharge. Post-construction, implementation of the CAP as a component of a specific project would be subject to the NPDES and local ordinances and regulations requiring the development of a long-term SWPPP or a long-term SWMP to cover potential stormwater pollution associated with site development. The long-term SWPPP and/or SWMP would identify potential sources of pollution that may be reasonably expected to affect the quality of stormwater discharges and implement long-term BMPs that would ensure the reduction of these pollutants during operational stormwater discharges. With compliance to local regulations and the NPDES requirements, impacts associated with operational water quality impacts from stormwater discharges would be less than significant.

**Impact HYD-2: Implementation of the CAP could substantially deplete groundwater supplies or interfere substantially with groundwater recharge in the County (less than significant).**

Most of the new facilities promoted by the CAP would be constructed within or on existing buildings (e.g., rooftops, water treatment plants and wastewater treatment plants, landfills, and dairies), and these minor improvements to existing structures would not likely result in substantial new impervious surfaces that would interfere with groundwater infiltration. The CAP also promotes mixed-use and transit-oriented development. This type of development is consistent with current local land use plans that promote more compact urban growth which helps to reduce more extensive increase in impervious areas and additional roadway building which would otherwise
occur with a relatively greater amount of low-density development in outlying areas. Several CAP measures promote the construction of minor changes to the existing streetscape, such as traffic calming and additional transit, pedestrian, and bicycle facilities. Construction of these facilities could result in additional impervious surfaces that could interfere with groundwater infiltration.

Any structures that could be constructed consistent with the CAP would be subject to further CEQA analysis of project-specific impacts and applicable local regulations regarding the protection of groundwater supplies. Local agencies’ applicable MS4 permits require that discretionary projects maintain or increase a site’s pre-development absorption of runoff to recharge groundwater to the maximum extent practicable. With compliance to local regulations, impacts associated with groundwater recharge would be less than significant.

**Impact HYD-3: Implementation of the CAP could alter existing drainage patterns in the County that would result in substantial erosion or siltation onsite or offsite, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding onsite or offsite (less than significant).**

As described above, there are several CAP measures that promote the construction of new facilities. These new facilities might alter existing drainage patterns that would result in substantial erosion or siltation or substantially increase the rate or amount of surface runoff that would result in flooding on or off site. Any structures that could be constructed consistent with the CAP would be subject to further CEQA analysis of project-specific impacts and applicable State Water Board and local regulations for erosion and runoff. New facilities would be subject to NPDES requiring the development of a long-term SWPPP or a long-term SWMP to cover potential stormwater pollution associated with site development. Further, County regulations require that discretionary projects maintain or increase a site’s pre-development absorption of runoff to recharge groundwater to the maximum extent practicable. With compliance to local regulations, impacts associated with erosion or siltation or flooding on or off site as a result of altering existing drainage patterns or substantially increasing the rate or amount of runoff would be less than significant.

**Impact HYD-4: Implementation of the CAP could create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff (less than significant).**

As described above, new facilities constructed as part of implementation of CAP measures could result in additional impervious surfaces that could create or contribute runoff water exceeding the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. Any structures that could be constructed consistent with the CAP would be subject to further CEQA analysis of project-specific impacts and applicable State Water Board and local regulations for stormwater discharge and runoff. Implementation of the CAP as a component of a specific project would be subject to NPDES requiring the development of a long-term SWPPP or a long-term SWMP to cover potential stormwater pollution associated with site development. Further, County regulations require that discretionary projects maintain or increase a site’s pre-development absorption of runoff to recharge groundwater to the maximum extent practicable. With compliance to local regulations, impacts associated with increased runoff exceeding the capacity of existing or planned stormwater drainage systems or resulting in additional sources of polluted runoff would be less than significant.
Impact HYD-5: Implementation of the CAP could place housing within flood hazard areas or could place structures within flood hazard areas that would impede or redirect flood flows (less than significant).

The flood hazard areas within the County include general areas near the Russian River, streams, and the southern portions of the County adjacent to San Pablo Bay as well as more localized areas of flood risk. There is existing development in these locations designed as flood hazard areas and several local general plans would continue to allow new development and redevelopment in these FEMA 100-year flood hazard areas. As described above, there are several CAP measures that promote the construction of new facilities. Although the siting of these facilities is unknown, these facilities promoted by the CAP could be located within flood hazard areas that would impede or redirect flood flows. Any structures that could be constructed consistent with the CAP would be subject to further CEQA analysis of project-specific impacts and applicable local regulations for flood hazards. County and local city regulations require that residential structures built within FEMA-designated 100-year flood hazard zones be elevated at least 1 foot above the elevation of the 100-year flood level to protect these structures from flood damage. New non-residential buildings must either meet this criterion or provide an alternative method of flood-proofing that is certified by a registered engineer and approved by local land use officials. In addition, the County's Zero Net Fill Ordinance and similar local city requirements would require that any materials placed within the 100-year floodplain that could displace floodwaters and result in flooding elsewhere be offset by the removal of a like amount of material. With compliance to local regulations, impacts associated with placing housing or structures within flood hazards areas would be less than significant.

As noted above, in locations where placement of housing would result in flood risks to new individuals or structures associated with the new development but would not exacerbate the underlying flood risk, this is not considered a significant impact under CEQA per the recent ruling in the BIA vs. BAAQMD case. Nevertheless, local land use jurisdictions will continue to apply all relevant regulations concerning flood risk management regardless of whether CEQA applies or not.

Impact HYD-6: Implementation of the CAP could expose people or structures to significant risk involving flooding a result of levee or dam failures (less than significant).

The County has 44 regulated dams within its boundaries, but the most extensive series of levees in Sonoma County that are potentially susceptible to failure are the predominantly non-engineered farm levees that protect low lying farmland and rural housing along the lower reaches of the Petaluma River and Sonoma Creek. Implementation of the CAP would support development in urban city center areas consistent with existing land use plans but would not change local land use plans and thus would not change the potential for exposure to flood risks in relation to the promotion of mixed use development, transit-oriented development, or affordable housing linked to transit. Some of the CAP measures promote new facilities such as solid waste diversion facilities, water treatment and wastewater treatment efficiency upgrades, recycled water facilities, and other facilities. Some of these facilities may be located in areas subject to risk of flooding associated with levee or dam failures. However, these facilities would not introduce large numbers of people to potential risks. Furthermore, any such new facilities would be subject to project-level review under CEQA which would assess and address any significant flood risks related to dam or levee failure. With project-level review, impacts associated with exposing people or structure to risks involving flooding as a result of levee or dam failures would be less than significant.

As noted above, in locations where placement of new structures would result in flood risks to new individuals or structures associated with the new structure but would not exacerbate the underlying flood risk, this is not considered a significant impact under CEQA per the recent ruling in the BIA vs.
BAAQMD case. Nevertheless, local land use jurisdictions will continue to apply all relevant regulations concerning flood risk management regardless of whether CEQA applies or not.

Impact HYD-7: Implementation of the CAP could contribute to inundation by seiche, tsunami, or mudflow (less than significant).

The western portions of Sonoma County border the Pacific Ocean and the southeastern tip of the County borders San Pablo Bay. Tsunami hazards are potential along the San Pablo Bay margin and long the Pacific Coast. Shoreline areas along Bodega Bay Harbor, Lake Sonoma, and similar enclosed bodies of water in the County are subject to impacts from seiches. Implementation of the CAP would support development in urban city center areas and would not promote increased development or in rural areas along the Pacific Ocean or outlying large bodies of water (such as Lake Sonoma). The CAP would promote infill redevelopment in urbanized areas consistent with existing land use plans. Thus, implementation of the CAP would not significantly contribute to inundation by seiche, tsunami, or mudflow, and impacts would be less than significant.

3.10.3.4 Cumulative Impacts

Impact C-HYD-1: Implementation of the CAP, in combination with other foreseeable development in the surrounding area, could have a significant cumulative impact to hydrology and water quality (less than considerable contribution).

The geographic context for the analysis of cumulative impacts associated with surface hydrology and water quality are the subwatersheds and watersheds within Sonoma County (provided in Table 3.10-1). The context for groundwater hydrology is the subbasins and basins within Sonoma County (provided in Table 3.10-2). The context for cumulative hydrology and water quality impacts is geographic and a function of whether impacts could affect surface water features/watersheds, the storm drainage systems within the County, or groundwater, each of which has its own physical boundary. The context of cumulative hydrology and water quality impacts addresses the effects of the CAP in combination with other development in Sonoma County.

Implementation of the CAP, combined with other past and future development within the potentially affected geographic area, could degrade stormwater quality through an increase in impervious surface area and an increase in contaminated runoff, which could ultimately violate water quality standards. During construction, runoff may contain sediments and other construction materials and wastes (e.g., concrete debris), resulting from activities such as site clearing and grubbing, demolition and the removal of existing structures and pavement, cut-and-fill activities, grading and excavation, paving, building construction, tree removal, and landscaping. During operation, runoff may contain oil, grease, and metals accumulated in streets and driveways as well as pesticides, herbicides, particulate matter, nutrients, animal waste, and other oxygen-depriving substances from landscaped areas. Where there is the potential for these impacts, they are routinely addressed through project-level environmental review and permitting. Many existing city and county policies and ordinances address such impacts. Where existing ordinances do not address these impacts, then project-level CEQA review will assess the specific significance of the project impact and, where appropriate, identify mitigation to address those impacts. In particular, this impact is routinely addressed with standard mitigation identified during project-level review such as implementing erosion-control measures to protect water quality during construction and operation. Through compliance with applicable regulatory requirements, the project’s contribution to potentially cumulative impacts on water quality would be less than considerable.
Groundwater recharge in the subbasins within Sonoma Country occurs primarily through streamflow infiltration and direct recharge from percolating precipitation. Cumulative development in highly urbanized areas would not be expected to increase the amount of impervious surfaces substantially because this development would occur mostly in already urbanized areas. Therefore, groundwater recharge from percolating rainfall would not be adversely affected, and an indirect lowering of the local groundwater table is not likely to occur. However, development outside of areas with prior impervious surfaces would affect groundwater recharge, and the effects may be cumulatively significant. Because the CAP promoted infill development in city centers, the CAP contributes only minimally to groundwater recharge, and thus, impacts related to implementation of the CAP would be less than cumulatively considerable with respect to any potential cumulative loss of groundwater recharge and supply.

In regards to storm drain capacity, implementation of the CAP in combination with other development could increase the rate and volume of stormwater runoff because of the overall increase in impervious surfaces. Increases in the rate or volume of stormwater runoff can cause localized flooding if storm drain capacity is exceeded. All projects would be required to include design features to reduce flows to pre-project conditions, according to local County requirements. Thus, impacts related to implementation of the CAP would be less than cumulatively considerable with respect to any potential cumulative impacts on storm drainage capacity.

In regards to flooding risks, implementation of the CAP in combination with other development could increase impervious area and result in greater flood flows, create impediments to flow that would raise flood levels, and/or place additional people or structures within flood-prone areas. All projects would be required to include design features to elevate structures at least 1 foot above the elevation of the 100-flood level and comply with the local regulations to offset floodplain fill that could displace floodwaters and result in flooding elsewhere. Thus, impacts associated with implementation of the CAP would be less than cumulatively considerable with respect to cumulative flooding impacts.
3.11 Land Use and Recreation

This section describes the regulatory and environmental setting for land use and recreation. It also describes impacts on land use and recreation that would result from implementation of the Climate Action 2020: Community Climate Action Plan (CAP) and includes mitigation for significant impacts, where feasible and appropriate.

3.11.1 Environmental Setting

This section describes the existing land use and recreational resources present in Sonoma County (County). This information has been drawn and modified from the Sonoma County General Plan 2020 Environmental Impact Report (EIR) (Sonoma County 2006).

3.11.1.1 Land Use

Existing Land Use Pattern

Sonoma County has a diverse and unique physical setting, including mountain ridges, hills, and valleys, which are replete with forests, oak woodlands, stream corridors, and tidal and fresh water marshes. It borders on both the Pacific Ocean to the west and San Pablo Bay to the southeast. Sonoma County lies adjacent to Mendocino County to the north, Napa County to the east, and Marin County to the south. The main highways in Sonoma County include US 101 and State Route (SR) 1, both of which run north-south through the County. SR 12, 116, and 128 generally run east-west through the County, connecting Sonoma County to adjacent counties to the east. There are nine incorporated cities within Sonoma County, including Cloverdale, Cotati, Healdsburg, Petaluma, Rohnert Park, Santa Rosa, Sebastopol, Sonoma, and the Town of Windsor.

Sonoma County’s development pattern is typical of California’s rural counties, with low-density land uses in small towns, more dense urban/suburban growth in large cities, and extensive tracts of land with agricultural uses, timberlands, and open space in outlying areas. This has created a land use pattern in which much of the County’s land area interfaces between wildlands, agriculture, and areas of residential and commercial development. The County General Plan and the individual city general plans establish a city-centered development pattern that directs future growth to cities and protects the surrounding agricultural and other resource lands. Thus, the majority of Sonoma County residents live in cities along US 101. Designated Community Separators (i.e., open space areas) provide separation between the cities. Beyond the main US 101 corridor, the city of Sonoma is located on SR 12 in the southeast portion of the County, and the city of Sebastopol is located west of US 101 on SR 116. The County’s 12 unincorporated communities are concentrated along these three main highway corridors (i.e., US 101, SR 12, SR 116), though the area beyond Sebastopol and the coastal communities also contain small yet notable concentrations of unincorporated growth. However, the lack of infrastructure (e.g., highways and roads, water and wastewater systems, flood control facilities) constrains continued growth and development in these areas.

Existing Land Uses

Table 3.11-1 lists the land uses in Sonoma County, including the incorporated cities. According to State Department of Conservation data, about 71,825 acres, or 7 percent of the County’s
1,026,080 acres, are developed at a density of at least 1.5 units per acre (i.e., “urbanized”) (California Department of Conservation 2012). The majority of this urbanized land, approximately 45,000 acres, is within the spheres of influence of the nine incorporated cities. Although most of the urbanized area is residential, about 5 percent of it is developed with industrial and commercial uses. Roads, schools, and other infrastructure account for a significant proportion of the urban acreage. Farmland (17 percent) and grazing land (41 percent) account for 58 percent of the County’s land area, with other land and water areas making up 35 percent. This 35 percent includes lower-density (i.e., more than 1.5 acres per unit) rural residential development areas and timberlands (California Department of Conservation 2012).

### Table 3.11-1. Summary of Land Uses in Sonoma County

<table>
<thead>
<tr>
<th>Land Use Type</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urbanized</td>
<td>7%</td>
</tr>
<tr>
<td>Grazing Land</td>
<td>41%</td>
</tr>
<tr>
<td>Important Farmland</td>
<td>17%</td>
</tr>
<tr>
<td>Timber/Other Lands</td>
<td>33%</td>
</tr>
<tr>
<td>Water Bodies</td>
<td>2%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

Source: Sonoma County 2006

### 3.11.1.2 Recreation

Several public agencies are responsible for recreational services and access to public recreational lands in the County. These agencies include Sonoma County Regional Parks, California State Parks, the Sonoma County Agricultural Preservation and Open Space District, U.S. Army Corps of Engineers, Bureau of Land Management, two local park and recreation districts, and the nine incorporated city jurisdictions. The County’s recreational resources includes coastal resources adjacent to the Pacific Ocean; rivers and lakes, including the Russian River and the Gualala River; multi-use trails; natural and open space parklands; and community-oriented parks (Sonoma County Regional Parks 2015).

Table 3.11-2 provides a summary of the four main types of outdoor recreational facilities in Sonoma County, the number of acres associated with each facility type, and the primary characteristics of each. Parklands are classified as Community and Neighborhood Parks, Regional Recreation Areas, Regional Open Space Parks, or Other Lands.
Table 3.11.2. Summary of Outdoor Recreational Facilities in Sonoma County

<table>
<thead>
<tr>
<th>Recreational Facility Type</th>
<th>Total Acreage</th>
<th>Primary Providers</th>
<th>Defining Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community and Neighborhood Parks</td>
<td>1,998</td>
<td>County and non-profit organizations, public schools, cities, and special districts</td>
<td>• Less than 25 acres</td>
</tr>
<tr>
<td>Regional Recreation Areas</td>
<td>1,181</td>
<td>County</td>
<td>• More than 25 acres</td>
</tr>
<tr>
<td>Regional Open Space Parks</td>
<td>3,105</td>
<td>County</td>
<td>• More than 200 acres</td>
</tr>
<tr>
<td>Other Lands</td>
<td>46,469</td>
<td>Federal agencies, state agencies, and non-profit organizations</td>
<td>• State and federal parks or preserves</td>
</tr>
</tbody>
</table>

Source: Sonoma County 2006.

3.11.2 Regulatory Setting

3.11.2.1 Federal

There are no relevant federal regulations related to land use and recreation.

3.11.2.2 State

California General Plan Requirements

All cities and counties within California are required by the state to adopt a general plan, thereby establishing goals and policies for long-term development, protection from environmental hazards, and conservation of identified natural resources (California Government Code Section 65300, et seq.). Local general plans lay out the pattern of future residential, commercial, industrial, agricultural, open space, and recreational land uses within a community. To facilitate implementation of planned growth patterns, general plans typically also include goals and policies that address the coordination of land use patterns with the development and maintenance of infrastructure facilities and utilities. California Government Code Section 65302 lists seven “elements,” or chapters, that cities and counties must include in their general plans: Land Use, Circulation, Housing, Conservation, Open Space, Noise, and Safety.

Local jurisdictions implement their general plans by adopting zoning, subdivision, grading, and other ordinances. Zoning identifies the specific types of land uses that may be allowed on a given site and establishes the standards that would be imposed on new development. Zoning regulations vary from jurisdiction to jurisdiction. However, typical standards promulgated in zoning ordinances...
include the siting of structures relative to parcel boundaries, architectural design (including height limitations), and the percentage of building coverage allowed relative to the overall square footage of a parcel. In some jurisdictions, the zoning ordinance permits construction “by right” (i.e., without the need for hearing) as an allowable use. In others, a conditional use permit or similar discretionary action is needed.

**Quimby Act**

The Quimby Act (California Government Code Section 66477) was established by the California Legislature in 1965 to preserve open space and parkland in rapidly urbanizing areas of the state. The Quimby Act allows local governments to establish parkland standards (at a maximum of 5 acres per 1,000 residents) and require residential developers to provide either land or in-lieu fees for developing new or rehabilitating existing neighborhood or community park or recreational facilities for new residents.

**3.11.2.3 Local**

General plans guide the physical development and character of a county or city/town. General plans set forth county or city/town policies regarding the types of and locations for future land uses and activities. General plans are used by a county or city/town council and planning commission in making planning and land use decisions.

Zoning ordinances implement the designated land uses and enforce the policies described in the general plans. Zoning ordinances generally define the zoning districts that the county or city/town is divided into and identify permitted land uses or conditionally permitted land uses. Zoning ordinances also establish development regulations pertaining to building height, land cover by buildings, and floor area.

Appendix C, *Local General Plan Goals, Objectives, and Policies*, provides a list of the goals, objectives, and policies in the local general plans of the participating jurisdictions, including those related to land use and recreation. These goals, objectives, and policies were reviewed to assess whether the project is consistent with the general plans of participating jurisdictions. Disclosure of this consistency analysis is for informational purposes. An additional purpose of providing a list of relative local policies is, where appropriate, to provide the context within which the CAP will be locally implemented. As described in the CAP, most of the CAP measures represent implementation of many of the priorities outlined in existing local policies.

Inconsistencies with general plan policies are not necessarily considered significant impacts under CEQA unless they are related to physical impacts on the environment that are significant in their own right.

Implementation of the CAP is consistent with the applicable general plan goals, objectives, and policies of the participating jurisdictions in relation to land use and recreation.

**3.11.3 Impacts Analysis**

**3.11.3.1 Methodology**

The evaluation of potential land use impacts associated with implementation of the CAP was based on a review of relevant planning documents from Sonoma County and the eight incorporated cities
and a comparison of the CAP features. The planning documents that were reviewed in the analysis of potential land use impacts included Sonoma County General Plan 2020 and the general plans for the Cities of Cloverdale, Cotati, Healdsburg, Petaluma, Rohnert Park, Sebastopol, and Sonoma and the Town of Windsor.

This section evaluates the potential for land use incompatibilities to occur as a result of CAP implementation. New development adjacent to existing land uses, particularly if it is much more intensive or involves operations or activities with effects that would extend beyond the property, may result in land use incompatibilities. The significance of the land use impact was determined by considering whether implementation of the project would result in incompatibilities between the types and intensities of development allowed under the relevant planning documents and the adjacent land uses.

This section also discusses the general consistency between the CAP and the applicable land use policies of the aforementioned general plans. A conflict between a proposed project and the applicable land use plans, policies, and regulations of an agency with jurisdiction over a project does not necessarily indicate a significant effect on the environment under the California Environmental Quality Act (CEQA). The local jurisdiction’s planning commission and/or board of supervisors ultimately determines whether an individual project that may be advanced during implementation of the CAP is consistent with the goals and policies contained in the general plan and the requirements of other planning documents.

### 3.11.3.2 Significance Criteria

State CEQA Guidelines Appendix G (14 California Code of Regulations [CCR] 15000 et seq.) identifies the significance criteria to be considered when determining whether a project could have significant impacts on existing land uses and recreation.

An impact would be considered significant if construction or operation of the project would result in any of the following consequences.

#### Land Use
- Physically divide an established community.
- Conflict with any applicable land use plan, policy, or regulation (including, but not limited to, a general plan, specific plan, local coastal program, or zoning ordinance) of an agency with jurisdiction over the project that has been adopted for the purpose of avoiding or mitigating an environmental effect.
- Conflict with any applicable habitat conservation plan or natural community conservation plan.

#### Recreation
- Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facilities would occur or be accelerated.
- Include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment.
3.11.3.3  Impacts and Mitigation Measures

Impact LU-1: Implementation of the CAP could physically divide an established community (less than significant).

The CAP is a policy-level document that does not include any site-specific designs or proposals or grant any entitlements for development that would have the potential to divide an established community. As a policy document, the CAP would have no direct impact, but future implementation of activities supported by the CAP could physically divide an established community.

There are several CAP measures that promote the construction of new facilities. These are aimed at increasing the use of renewable energy, increasing solid waste diversion, increasing the capture/use of methane from landfills, and reducing emissions from livestock operations. Most of these new facilities would be constructed within or on existing buildings (e.g., rooftops, wastewater treatment plants, landfills, dairies) and would not physically divide an established community because these facilities would be additions to the existing structure.

The CAP also promotes the construction of mixed-use and transit-oriented development in city centers to reduce fuel use and travel demand through “smart” land use and development. It also promotes the construction of solid waste facilities to increase waste diversion, the reuse of materials, and recycling. Infill mixed-use and transit-oriented development in city centers would be located near similar existing uses and would most likely not physically divide an established community but rather allow for more connectivity between communities through increased transit accessibility. Although the locations of the solid waste facilities are unknown, these facilities could be located in established communities. However, solid waste facilities are generally located on continuous parcels of land and therefore would most likely not divide an established community or change access for nearby uses. Furthermore, there are several CAP measures that encourage a shift related to mode of transportation and reduced travel demand. These CAP measures promote minor changes to the existing streetscape, such as traffic-calming improvements and additional transit, pedestrian, and bicycle facilities to promote increased transit accessibility. In general, these roadway and transit improvements would not affect accessibility or divide established communities. Streetscape improvements involving transit, pedestrian, and bicycle facilities would improve connectivity within established communities. Thus, impacts would be less than significant.

Impact LU-2: Implementation of the CAP could conflict with applicable land use plans, policies, or regulations (less than significant).

Although the CAP does not directly involve the construction of structures, future implementation of activities supported by the CAP could result in uses that would conflict with applicable land use plans, policies, or regulations. Several CAP measures could include the construction of new facilities to increase the use of renewable energy, increase solid waste diversion, increase the capture/use of methane from landfills, and reduce emissions from livestock operations. Most of these new facilities would be constructed within or on existing buildings (e.g., rooftops, wastewater treatment plants, landfills, dairies) and, in general, would not result in incompatibility with surrounding land uses.

The CAP promotes mixed-use and transit-oriented development as well as transit facilities that reduce fuel use and travel demand through smart land use and development. These mixed-use and transit-oriented developments within city centers are likely to be compatible with local land use plans. The County and incorporated cities have already adopted policies that promote city-centered development patterns in order to direct future growth toward cities and protect the surrounding agricultural and other resource lands. Benefits related to reductions in greenhouse gas (GHG)
emissions would also be realized. Because many local plans already promote such development, mixed-use and transit-oriented development within city centers would not result in incompatibility with similar surrounding land uses.

The CAP also promotes the construction of solid waste facilities to increase waste diversion, the reuse of materials, and recycling. Although the locations of these facilities are unknown, potential land use compatibility issues may arise. In general, solid waste facilities are typically located in industrial areas or near existing utility infrastructure; this would include areas that have been designated in the general plans for industrial, institutional, public, and semi-public facilities. Land use compatibility conflicts would not generally be expected for facilities located in these areas. The specifics of land use conflicts would be analyzed in project-specific CEQA documents. Therefore, impacts related the potential conflicts with applicable land use plans, policies, or regulations are considered to be less than significant at this time.

**Impact LU-3: Implementation of the CAP would not conflict with any applicable habitat conservation plan or natural community conservation plan (no impact).**

No habitat conservation plans, natural community conservation plans, or other approved conservation plans have been adopted that encompass all or any relevant portions of Sonoma County. Thus, implementation of the CAP would not conflict with any conservation plan, and there would be no impact.

**Impact LU-4: Implementation of the CAP could temporarily disrupt recreational facilities during construction but would not increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facilities would occur or be accelerated (less than significant).**

Several CAP measures promote the construction of new facilities, such as electric charging or alternative fueling facilities; transit, bicycle, and pedestrian facilities; renewable energy facilities; and mixed-use and transit-oriented development in city centers. Depending on the locations of these facilities, construction associated with implementation of the CAP measures could temporarily disrupt the use of existing nearby parks and recreational facilities. However, the temporary disruption of nearby parks and recreational facilities would be limited to the construction period for the new facilities and would most likely not result in the permanent disruption of park and recreational facility use. Thus, impacts would be less than significant.

Several CAP measures promote the construction of new facilities to increase renewable energy use, increase solid waste diversion, increase the capture/use of methane from landfills, and reduce emissions from livestock operations. Most of these new facilities would be constructed within or on existing buildings (e.g., rooftops, wastewater treatment plants, landfills, dairies) where employees already work. The installation of these new facilities within or on existing buildings would not result in a new employee population that would increase the use of existing parks and other recreational facilities. The CAP promotes the construction of solid waste facilities to increase waste diversion, the reuse of materials, and recycling. Furthermore, the CAP also promotes mixed-use and transit-oriented development in city centers to reduce fuel use and travel demand through smart land use and development. These new structures could generate a new employee and residential population and increase the use of existing parks and other recreational facilities, which could accelerate the physical deterioration of these recreational facilities. However, as discussed above, the CAP does not directly involve the construction of any structures. Any structures that could be constructed under the CAP would be subject to further CEQA analysis of project-specific impacts. Although new solid waste facilities promoted by the CAP may generate an employee population, it is likely that the
people who would work at the solid waste facilities would be existing employees or County residents. New mixed-use and transit-oriented development could generate a residential population that would increase localized use of existing parks and other recreational facilities in city centers because of the denser population; however, all future development projects would be subject to applicable local regulations, requirements, and development impact fees for recreational uses and parklands. Furthermore, such mixed-use and transit-oriented development is already called for in the local land use plans, and thus, the CAP will not be causing a change in that future expected demand for recreational facilities. Through compliance with local regulations, impacts on parks and other recreational facilities in city centers would be less than significant.

Impact LU-5: Implementation of the CAP would include recreational facilities or require the construction or expansion of recreational facilities that could have an adverse physical effect on the environment (less than significant with mitigation).

The CAP promotes additional recreational bicycle facilities (such as bike paths) to reduce vehicle fuel use by encouraging a shift related to mode of transportation. The additional recreational bicycle facilities would most likely be located adjacent to existing roadways or pedestrian paths. The construction-related and operational impacts of the additional recreational facilities promoted by the CAP are addressed in other resource sections of this chapter. Some new bicycle facilities may require road widening adjacent to sensitive biological resources, which could result in significant impacts and warrant mitigation. Mitigation for any new facilities would be identified during project-level review, but given the limited scale of bicycle pathways, even those requiring road widening, such impacts would be readily mitigable to less-than-significant levels.

3.11.3.4 Cumulative Impacts

Impact C-LU-1: Implementation of the CAP, in combination with other foreseeable development in the surrounding area, could have a significant cumulative impact on land use and recreation (less than considerable contribution).

The geographic context for the evaluation of cumulative impacts on land use and recreation considers the effects of the CAP in combination with other development in Sonoma County. Past, present, and future development within this geographic context assumes full buildout of Sonoma County General Plan 2020 and the general plans of the nine incorporated cities.

Implementation of CAP policies to reduce GHG emissions would focus growth and development in city centers. This densification of land uses near city centers and transit corridors is consistent with local land use plans that promote a city-centered development pattern to direct future growth toward cities and protect the surrounding agricultural and other resource lands. As discussed in Impact LU-2, implementation of CAP policies that support increased solid waste diversion could result in the siting of new solid waste facility uses adjacent to existing sensitive land uses. Furthermore, consistency with land use plans and policies is inherently a project-specific issue. Each jurisdiction determines project consistency at the project level. Given the general consistency of the CAP with existing land use plans and policies, and the limited extent of the new facilities that would be necessary to support the CAP, the CAP’s contribution to any cumulative land use impacts would be less than considerable with mitigation.

In terms of recreational resources, implementation of the CAP would not result in a population increase greater than that projected for buildout of Sonoma County General Plan 2020 or the local city general plans. Rather, the CAP encourages a pattern of settlement that concentrates expected population growth in city centers and along transit corridors. Densifying the population in city
centers could result in a localized incremental increase in the use of recreational facilities within the area. However, all future development that could be constructed consistent with the CAP would be subject to local regulations pertaining to impacts on recreational facilities. The CAP would not generate a new population beyond that projected for buildout of the general plans or increase the use of countywide recreational resources or require additional resources. Thus, the CAP’s contribution to any cumulative impacts on recreational facilities would be less than considerable.
3.11 Land Use and Recreation

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3.12 Noise and Vibration

This section describes the regulatory and environmental setting for noise and vibration. It also describes noise and vibration impacts that would result from implementation of the Climate Action 2020: Community Climate Action Plan (CAP) and includes mitigation for significant impacts, where feasible and appropriate.

3.12.1 Environmental Setting

This section describes the fundamentals of environmental noise and vibration and also describes the sources of noise and vibration present in Sonoma County (County). This information is drawn and modified from the Sonoma County General Plan 2020 Environmental Impact Report (EIR) (Sonoma County 2006).

3.12.1.1 Fundamentals of Environmental Noise and Vibration

Overview of Noise and Sound

*Noise* is commonly defined as unwanted sound that annoys or disturbs people and potentially causes an adverse psychological or physiological effect on human health. Because noise is an environmental pollutant that can interfere with human activities, an evaluation of noise is necessary when considering the environmental impacts of a proposed project.

*Sound* is mechanical energy (vibration) transmitted by pressure waves over a medium such as air or water. Sound is characterized by various parameters, including the rate of oscillation of the sound waves (frequency), the speed of propagation, and the pressure level or energy content (amplitude). In particular, the sound pressure level is the most common descriptor used to characterize the loudness of an ambient (existing) sound level. Although the decibel (dB) scale, a logarithmic scale, is used to quantify sound intensity, it does not accurately describe how sound intensity is perceived by human hearing. The human ear is not equally sensitive to all frequencies in the entire spectrum, so noise measurements are weighted more heavily for frequencies to which humans are sensitive in a process called *A-weighting*, written as *dBA* and referred to as *A-weighted decibels*.

Table 3.12-1 defines the sound measurements and other terminology used in this chapter, and Table 3.12-2 summarizes typical A-weighted sound levels for different noise sources.
### Table 3.12-1. Definition of Sound Measurements

<table>
<thead>
<tr>
<th>Sound Measurements</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decibel (dB)</td>
<td>A unitless measure of sound on a logarithmic scale, which indicates the squared ratio of sound pressure amplitude to a reference sound pressure amplitude. The reference pressure is 20 micropascals.</td>
</tr>
<tr>
<td>A-Weighted Decibel (dBA)</td>
<td>An overall frequency-weighted sound level in decibels that approximates the frequency response of the human ear.</td>
</tr>
<tr>
<td>C-Weighted Decibel (dBC)</td>
<td>The sound pressure level in decibels as measured using the C-weighting filter network. The C-weighting is very close to an unweighted or flat response. C-weighting is used only in special cases when low-frequency noise is of particular importance. A comparison of measured A- and C-weighted levels gives an indication of low-frequency content.</td>
</tr>
<tr>
<td>Maximum Sound Level ($L_{\text{max}}$)</td>
<td>The maximum sound level measured during the measurement period.</td>
</tr>
<tr>
<td>Minimum Sound Level ($L_{\text{min}}$)</td>
<td>The minimum sound level measured during the measurement period.</td>
</tr>
<tr>
<td>Equivalent Sound Level ($L_{\text{eq}}$)</td>
<td>The equivalent steady-state sound level that, in a stated period of time, would contain the same acoustical energy.</td>
</tr>
<tr>
<td>Percentile-Exceeded Sound Level ($L_{xx}$)</td>
<td>The sound level exceeded xx % of a specific time period. $L_{10}$ is the sound level exceeded 10% of the time. $L_{90}$ is the sound level exceeded 90% of the time. $L_{90}$ is often considered to be representative of the background noise level in a given area.</td>
</tr>
<tr>
<td>Day-Night Level ($L_{\text{dn}}$)</td>
<td>The energy average of the A-weighted sound levels occurring during a 24-hour period, with 10 dB added to the A-weighted sound levels occurring during the period from 10:00 p.m. to 7:00 a.m.</td>
</tr>
<tr>
<td>Community Noise Equivalent Level (CNEL)</td>
<td>The energy average of the A-weighted sound levels occurring during a 24-hour period, with 5 dB added to the A-weighted sound levels occurring during the period from 7:00 p.m. to 10:00 p.m. and 10 dB added to the A-weighted sound levels occurring during the period from 10:00 p.m. to 7:00 a.m.</td>
</tr>
<tr>
<td>Vibration Velocity Level (or Vibration Decibel Level, VdB)</td>
<td>The root-mean-square velocity amplitude for measured ground motion, expressed in dB.</td>
</tr>
<tr>
<td>Peak Particle Velocity (Peak Velocity or PPV)</td>
<td>A measurement of ground vibration, defined as the maximum speed (measured in inches per second) at which a particle in the ground is moving relative to its inactive state. PPV is usually expressed in inches per second.</td>
</tr>
<tr>
<td>Frequency: Hertz (Hz)</td>
<td>The number of complete pressure fluctuations per second above and below atmospheric pressure.</td>
</tr>
</tbody>
</table>
### Table 3.12-2. Typical A-Weighted Sound Levels

<table>
<thead>
<tr>
<th>Common Outdoor Activities</th>
<th>Noise Level (dBA)</th>
<th>Common Indoor Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jet flyover at 1,000 feet</td>
<td>110</td>
<td>Rock band</td>
</tr>
<tr>
<td>Gas lawnmower at 3 feet</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Diesel truck at 50 feet at 50 mph</td>
<td>90</td>
<td></td>
</tr>
<tr>
<td>Noisy urban area, daytime</td>
<td>80</td>
<td>Food blender at 3 feet</td>
</tr>
<tr>
<td>Gas lawnmower, 100 feet</td>
<td>70</td>
<td>Garbage disposal at 3 feet</td>
</tr>
<tr>
<td>Commercial area</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heavy traffic at 300 feet</td>
<td>60</td>
<td>Vacuum cleaner at 10 feet</td>
</tr>
<tr>
<td>Quiet urban daytime</td>
<td>50</td>
<td>Normal speech at 3 feet</td>
</tr>
<tr>
<td>Quiet urban nighttime</td>
<td>40</td>
<td>Large business office</td>
</tr>
<tr>
<td>Quiet suburban nighttime</td>
<td>30</td>
<td>Theater, large conference room</td>
</tr>
<tr>
<td>Quiet rural nighttime</td>
<td>20</td>
<td>Library</td>
</tr>
<tr>
<td>Silent rural nighttime</td>
<td>10</td>
<td>Bedroom at night, concert hall</td>
</tr>
<tr>
<td>Silent suburban nighttime</td>
<td>0</td>
<td>Broadcast/recording studio</td>
</tr>
</tbody>
</table>

Source: California Department of Transportation 2013.

In general, human sound perception is such that a change in sound level of 1 dB cannot typically be perceived by the human ear, a change of 3 dB is barely noticeable, a change of 5 dB is clearly noticeable, and a change of 10 dB is perceived as doubling or halving the sound level, if sound levels increase or decrease, respectively.

Different types of measurements are used to characterize the time-varying nature of sound. These measurements include the equivalent sound level ($L_{eq}$), the minimum and maximum sound levels ($L_{min}$ and $L_{max}$), percentile-exceeded sound levels (such as $L_{10}$, $L_{20}$), the day-night sound level ($L_{dn}$), and the community noise equivalent level (CNEL). $L_{dn}$ and CNEL values differ by less than 1 dB. As a matter of practice, $L_{dn}$ and CNEL values are considered to be equivalent and are treated as such. These measurements are defined in Table 3.12-1.

For a point source, such as a stationary compressor or construction equipment, sound attenuates (i.e., lessens in intensity), based on geometry, at a rate of 6 dB per doubling of distance. For a line source such as free-flowing traffic on a freeway, sound attenuates at a rate of 3 dB per doubling of distance (California Department of Transportation 2013). Atmospheric conditions, including wind,
temperature gradients, and humidity, can change how sound propagates over distance and affect the level of sound received at a given location. The degree to which the ground surface absorbs acoustical energy also affects sound propagation. Sound that travels over an acoustically absorptive surface such as grass attenuates at a greater rate than sound that travels over a hard surface such as pavement. The increased attenuation is typically in the range of 1 to 2 dB per doubling of distance. Barriers such as buildings and topography that block the line of sight between a source and receiver also increase the attenuation of sound over distance.

Community noise environments are generally perceived as quiet when the 24-hour average noise level is below 45 dBA, moderate in the 45 to 60 dBA range, and loud above 60 dBA. Very noisy urban residential areas are usually around 70 dBA CNEL. Along major thoroughfares, roadside noise levels are typically between 65 and 75 dBA CNEL. Along major thoroughfares, roadside noise levels are typically between 65 and 75 dBA CNEL. Increments of 3 to 5 dB to the existing 1-hour $L_{eq}$, or to the CNEL, are commonly used as thresholds for an adverse community reaction to a noise increase. However, there is evidence that incremental thresholds in this range may not be sufficiently protective in areas where noise-sensitive uses are located and CNEL is already high (i.e., above 60 dBA). In these areas, limiting noise increases to 3 dB or less is recommended (Federal Transit Administration 2006). Noise intrusions that cause short-term interior levels to rise above 45 dBA at night can disrupt sleep. Exposures to noise levels greater than 85 dBA for 8 hours or longer can cause permanent hearing damage.

**Overview of Groundborne Vibration**

Operation of heavy construction equipment, particularly pile-driving equipment and other impact devices (e.g., pavement breakers), create seismic waves that radiate along the surface of and downward into the ground. These surface waves can be felt as ground vibration. Vibration from operation of this equipment can result in effects that range from annoyance of people to damage to structures. Variations in geology and distance result in different vibration levels with different frequencies and displacements. In all cases, vibration amplitudes decrease with increasing distance.

Perceptible groundborne vibration is generally limited to areas within a few hundred feet of construction activities. As seismic waves travel outward from a vibration source, they cause rock and soil particles to oscillate. The actual distance that these particles move is usually only a few thousandths to a few thousandths of an inch. The rate or velocity (in inches per second) at which these particles move is the commonly accepted descriptor of the vibration amplitude, referred to as the peak particle velocity (PPV).

Vibration amplitude attenuates over distance. It is a complex function of how energy is imparted into the ground and the soil or rock conditions through which the vibration is traveling. The following equation is used to estimate the vibration level at a given distance for typical soil conditions. $PPV_{ref}$ is the reference PPV at 25 feet (Table 3.12-3).

$$PPV = PPV_{ref} \times (25/\text{Distance})^{1.5}$$

Table 3.12-3 summarizes typical vibration levels generated by construction equipment at a reference distance of 25 feet and other distances, as determined through use of the attenuation equation above.
Table 3.12-3. Vibration Source Levels for Construction Equipment

<table>
<thead>
<tr>
<th>Equipment</th>
<th>PPV at 25 Feet</th>
<th>PPV at 50 Feet</th>
<th>PPV at 75 Feet</th>
<th>PPV at 100 Feet</th>
<th>PPV at 175 Feet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pile driver (sonic/vibratory)</td>
<td>0.734</td>
<td>0.2595</td>
<td>0.1413</td>
<td>0.0918</td>
<td>0.0396</td>
</tr>
<tr>
<td>Hoe ram</td>
<td>0.089</td>
<td>0.0315</td>
<td>0.0171</td>
<td>0.0111</td>
<td>0.0048</td>
</tr>
<tr>
<td>Large bulldozer</td>
<td>0.089</td>
<td>0.0315</td>
<td>0.0171</td>
<td>0.0111</td>
<td>0.0048</td>
</tr>
<tr>
<td>Loaded trucks</td>
<td>0.076</td>
<td>0.0269</td>
<td>0.0146</td>
<td>0.0095</td>
<td>0.0041</td>
</tr>
<tr>
<td>Jackhammer</td>
<td>0.035</td>
<td>0.0124</td>
<td>0.0067</td>
<td>0.0044</td>
<td>0.0019</td>
</tr>
<tr>
<td>Small bulldozer</td>
<td>0.003</td>
<td>0.0011</td>
<td>0.0006</td>
<td>0.0004</td>
<td>0.0002</td>
</tr>
</tbody>
</table>

PPV = peak particle velocity

Table 3.12-4 and Table 3.12-5 summarize guidelines developed by the California Department of Transportation (Caltrans) for damage and annoyance potential from the transient and continuous vibration that is usually associated with construction activity. The pieces of equipment or activities that are typical of continuous vibration include excavation equipment, static compaction equipment, tracked vehicles, traffic on a highway, vibratory pile drivers, pile-extraction equipment, and vibratory compaction equipment. The pieces of equipment or activities that are typical of single-impact (transient) or low-rate repeated impact vibration include impact pile drivers, blasting, drop balls, “pogo stick” compactors, and crack-and-seat equipment.

Groundborne vibration can also be quantified by the root-mean-square (RMS) velocity amplitude, which is useful for assessing human annoyance; the RMS amplitude is expressed in terms of the velocity level in decibel units (VdB). The background vibration velocity level in residential areas is usually around 50 VdB or lower. The vibration velocity level threshold of perception for humans is approximately 65 VdB. Most perceptible indoor vibration is caused by sources within buildings, such as the operation of mechanical equipment, the movement of people, or the slamming of doors. Typical outdoor sources of perceptible groundborne vibration are heavy construction equipment, steel-wheeled trains, and traffic on rough roads. If a roadway is smooth, the groundborne vibration from traffic is rarely perceptible.

Table 3.12-4. Vibration Damage Potential Threshold Criteria Guidelines

<table>
<thead>
<tr>
<th>Structure and Condition</th>
<th>Maximum PPV (in/sec)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Transient Sources</td>
</tr>
<tr>
<td>Extremely fragile historic buildings, ruins, ancient monuments</td>
<td>0.12</td>
</tr>
<tr>
<td>Fragile buildings</td>
<td>0.2</td>
</tr>
<tr>
<td>Historic and some old buildings</td>
<td>0.5</td>
</tr>
<tr>
<td>Older residential structures</td>
<td>0.5</td>
</tr>
<tr>
<td>Newer residential structures</td>
<td>1.0</td>
</tr>
<tr>
<td>Modern industrial/commercial buildings</td>
<td>2.0</td>
</tr>
</tbody>
</table>

Source: California Department of Transportation 2004.
Note: Transient sources create a single isolated vibration event, such as blasting or drop balls. Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.
PPV = peak particle velocity
### Table 3.12-5. Vibration Annoyance Potential Criteria Guidelines

<table>
<thead>
<tr>
<th>Structure and Condition</th>
<th>Transient Sources</th>
<th>Continuous/Frequent Intermittent Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barely perceptible</td>
<td>0.04</td>
<td>0.01</td>
</tr>
<tr>
<td>Distinctly perceptible</td>
<td>0.25</td>
<td>0.04</td>
</tr>
<tr>
<td>Strongly perceptible</td>
<td>0.9</td>
<td>0.10</td>
</tr>
<tr>
<td>Severe</td>
<td>2.0</td>
<td>0.4</td>
</tr>
</tbody>
</table>

Note: Transient sources create a single isolated vibration event, such as blasting or drop balls. Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.
PPV = peak particle velocity

#### 3.12.1.2 Existing Noise Sources

**Sources from Land Uses**

The production of noise is an inherent part of many industrial, commercial, and agricultural processes, even when the best available noise control technology is applied. Noise production within industrial or commercial facilities is controlled indirectly by federal and state employee health and safety regulations (i.e., from the Occupational Safety and Health Administration [OSHA] and California Division of Occupational Safety and Health [known as Cal-OSHA]), but exterior noise emissions from such operations have the potential to exceed locally acceptable standards at nearby noise-sensitive land uses.

Several major industrial sources in the County generate significant noise levels and result in noise-related land use conflicts. These sources include industrial mineral resource extraction and processing facilities, geothermal developments, wineries, solid waste disposal facilities, and other industrial operations (such as lumber remanufacturing and landscape supply companies). Other significant noise sources in the County include the Infineon Raceway during racetrack activity.

**Sources from Transportation**

**Roadways**

Vehicular traffic is the largest contributor to noise levels in unincorporated Sonoma County. Exhibits 7.7-5 and 7.7-6 of the Sonoma County General Plan 2020 EIR, Appendix 7.7, show the distances from state highways in the County and County roadway centerlines to the existing 60 and 65 dB L_{dn} noise contours. Noise-sensitive land uses located within these contours are potentially affected by traffic noise, in accordance with the land use compatibility criteria.

**Airports**

Six airports in Sonoma County are open for public use: two are privately owned (Sonoma Skypark and Sonoma Valley), three are owned by cities (Cloverdale, Healdsburg, and Petaluma), and one is County owned (Sonoma County Airport). Sonoma County Airport is the only airport within the County for commercial airline service. The Sonoma County Airport Land Use Commission (ALUC) adopted the
Sonoma County Comprehensive Airport Land Use Plan (CALUP), which identifies compatible land uses in the areas adjacent to the airports with respect to noise, airspace, and safety. All six Sonoma County airports are subject to the regulations of the ALUC and the CALUP.

Noise exposure contours for airports use the CNEL metric to be consistent with the requirements of California Airport Noise Regulations (California Code of Regulations [CCR] Title 21) and land use compatibility planning guidelines adopted by the ALUC. The 55, 60, and 65 dB CNEL contours are shown in the CALUP, which includes a noise compatibility criterion of 60 dB CNEL for residential uses. This criterion is consistent with the transportation noise standards recommended in the Sonoma County General Plan 2020, Noise Element. Although the California Airport Noise Regulations require airports to ensure compatible land uses within the 65 dB CNEL contour, the ALUC recommendations recognize the rural nature of Sonoma County and the fact that ambient noise levels are lower in the County than in urbanized jurisdictions.

**Existing Noise Levels**

A community noise survey was conducted for the Sonoma County General Plan 2020 EIR to document noise exposure in representative areas of the County with noise-sensitive land uses. Noise-sensitive land uses in this survey included all residential uses, schools, long-term care facilities (e.g., hospitals, nursing homes), churches, and libraries.

The community noise survey results indicate that typical noise levels in noise-sensitive areas range from 45 to 55 dB L_{dn}. These are relatively low noise levels and typical of small communities and rural areas. In more developed areas, increased local traffic would result in higher noise levels, in the range of 55 to 65 dB L_{dn}.

**3.12.1.3 Existing Groundborne Vibration Sources**

The most common sources of groundborne vibration are construction activities, roadway truck traffic, and trains. A large loaded truck can generate groundborne vibration velocity levels as high as about 77 VdB at 50 feet from the source (Federal Transit Administration 2006). As described above, the vibration velocity threshold of perception for humans is approximately 65 VdB. Therefore, a large loaded truck can potentially produce vibration that is perceptible. However, large delivery trucks traveling on smooth, well-maintained roads rarely produce perceptible groundborne vibration.

**3.12.2 Regulatory Setting**

**3.12.2.1 Federal**

Generally, the federal government sets noise standards for transportation-related noise sources that are closely linked to interstate commerce. These sources include aircraft, locomotives, and trucks. No federal noise standards are directly applicable to implementation of the CAP.

**3.12.2.2 State**

The state government sets noise standards for transportation noise sources such as automobiles, light trucks, and motorcycles. Noise sources associated with industrial, commercial, and construction activities are generally subject to local control through noise ordinances and general plan policies.
California Code

Title 24 of the CCR, Part 2, California Noise Insulation Standards, establishes minimum noise insulation standards to protect persons within new hotels, motels, dormitories, long-term care facilities, apartment houses, and dwellings other than single-family residences. Under this regulation, interior noise levels attributable to exterior noise sources cannot exceed $45 \text{ L}_{dn}$ in any habitable room.

3.12.2.3 Local

Appendix C, Local General Plan Goals, Objectives, and Policies, provides a list of the goals, objectives, and policies in the local general plans of the participating jurisdictions including those related to noise and vibration. Appendix E, Local Land Use and Noise Compatibility Standards & Noise Ordinances, contains local land use compatibility standards and noise ordinances for each jurisdiction. These goals, objectives, and policies were reviewed to assess whether the project is consistent with the general plans of participating jurisdictions. Disclosure of this consistency analysis is for informational purposes. An additional purpose of providing a list of relative local policies is, where appropriate, to provide the context within which the CAP will be locally implemented. As described in the CAP, most of the CAP measures represent implementation of many of the priorities outlined in existing local policies.

Inconsistencies with general plan policies are not necessarily considered significant impacts under the California Environmental Quality Act (CEQA) unless they are related to physical impacts on the environment that are significant in their own right.

Implementation of the CAP is consistent with the applicable general plan goals, objectives, and policies of the participating jurisdictions in relation to noise and vibration.

3.12.3 Impacts Analysis

3.12.3.1 Methodology

This analysis is based on a review of existing noise and vibration sources. Effects related to noise and vibration are analyzed qualitatively and focused on the CAP’s potential to expose people to noise levels in excess of local standards.

3.12.3.2 Significance Criteria

State CEQA Guidelines Appendix G (14 CCR 15000 et seq.) identifies the significance criteria to be considered when determining whether a project could have significant impacts related to noise.

An impact would be considered significant if construction or operation of the project would have any of the following consequences:

- Expose persons to or generate noise levels in excess of standards established in a local general plan or noise ordinance or applicable standards of other agencies.
- Expose persons to or generate excessive groundborne vibration or groundborne noise levels.
- Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.
- Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.
- Be located within an airport land use plan area or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport and expose people residing or working in the project area to excessive noise levels.
- Be located in the vicinity of a private airstrip and expose people residing or working in the project area to excessive noise levels.

### 3.12.3.3 Impacts and Mitigation Measures

**Impact NOI-1a: Implementation of the CAP could generate noise levels in excess of local standards or result in a substantial temporary increase in ambient noise levels during construction (less than significant).**

Evaluation of noise impacts generally requires site-specific analysis. The CAP is a policy-level document. It does not include any site-specific designs or proposals or grant any entitlements for development that would have the potential to expose people to or generate noise levels in excess of local standards. As a policy document, the CAP would have no direct impact related to noise. However, future implementation of activities supported by the CAP could expose people to or generate noise levels in excess of local standards or result in a substantial increase in ambient noise levels during construction.

There are several CAP measures that promote the construction of new facilities or retrofits to existing buildings to improve energy efficiency and increase renewable energy use, increase solid waste diversion, increase recycled and greywater use, improve water efficiency, and increase the capture/use of methane from landfills and dairies. The CAP also promotes mixed-use and transit-oriented development in city centers, consistent with existing land use plans. Furthermore, several CAP measures promote minor changes to the existing streetscape, such as traffic-calming improvements and additional transit, pedestrian, and bicycle facilities to promote increased transit accessibility.

Table 3.12-6 lists equipment that is likely to be used for construction. For each equipment type, the table shows the corresponding acoustical usage factor (i.e., the percentage of time the equipment is typically in operation) and the $L_{\text{max}}$ value at 50 feet.
Table 3.12-6. Typical Construction Noise Emission Levels

<table>
<thead>
<tr>
<th>Equipment</th>
<th>Acoustical Use Factor</th>
<th>$L_{\text{max}}$ at 50 Feet (dBA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Backhoe</td>
<td>40%</td>
<td>78</td>
</tr>
<tr>
<td>Compressor</td>
<td>40%</td>
<td>78</td>
</tr>
<tr>
<td>Concrete mixer truck</td>
<td>40%</td>
<td>79</td>
</tr>
<tr>
<td>Concrete saw</td>
<td>20%</td>
<td>90</td>
</tr>
<tr>
<td>Crane</td>
<td>16%</td>
<td>81</td>
</tr>
<tr>
<td>Dozer</td>
<td>40%</td>
<td>82</td>
</tr>
<tr>
<td>Excavator</td>
<td>40%</td>
<td>81</td>
</tr>
<tr>
<td>Front-end loader</td>
<td>40%</td>
<td>79</td>
</tr>
<tr>
<td>Generator</td>
<td>50%</td>
<td>81</td>
</tr>
<tr>
<td>Grader</td>
<td>40%</td>
<td>85</td>
</tr>
<tr>
<td>Jackhammer</td>
<td>20%</td>
<td>89</td>
</tr>
<tr>
<td>Paver</td>
<td>50%</td>
<td>77</td>
</tr>
<tr>
<td>Pneumatic Tools</td>
<td>50%</td>
<td>85</td>
</tr>
<tr>
<td>Impact pile driver</td>
<td>20%</td>
<td>101</td>
</tr>
<tr>
<td>Roller</td>
<td>20%</td>
<td>80</td>
</tr>
<tr>
<td>Truck</td>
<td>40%</td>
<td>74</td>
</tr>
<tr>
<td>Welder</td>
<td>40%</td>
<td>74</td>
</tr>
</tbody>
</table>

Source: Federal Highway Administration 2006.

$L_{\text{max}}$ – maximum sound level
dBA = A-weighted decibel

There is presently no basis to conclude that construction of these facilities will generate noise levels in excess of local standards for continuous and intermittent construction noise. Where there is the potential for these impacts, they are routinely addressed through project-level environmental review and permitting. Many existing city and county policies and ordinances address such impacts. Where existing ordinances do not address these impacts, then project-level CEQA review will assess the specific significance of the project impact and, where appropriate, identify mitigation to address those impacts. In particular, this impact is routinely addressed with standard mitigation identified during project-level review such as employing noise-reducing construction practices including muffling construction equipment exhaust, prohibiting construction activities to certain days and times, and using noise-reducing enclosures or shielding around noise-generating equipment. Thus, impacts related to substantial increases in ambient noise levels are considered to be less than significant at this time.

Impact NOI-1b: Implementation of the CAP could generate noise levels in excess of local standards or result in a substantial permanent increase in ambient noise levels during operation (less than significant).

There are several CAP measures that promote the construction of new facilities or retrofits to existing buildings to improve energy efficiency and increase renewable energy use, increase solid waste diversion, increase recycled water treatment and use, and increase the capture/use of methane from landfills and dairies. Most of these new facilities would be constructed within or on existing buildings (e.g., rooftops, wastewater treatment plants, landfills, dairies). Such improvements would most likely not be a new source of excessive noise.
Several CAP measures promote additional transit facilities and operations as well as pedestrian and bicycle facilities to reduce vehicle fuel use by encouraging a shift in the mode of transportation that people use. The CAP also includes measures that promote mixed-use and transit-oriented development in city centers, consistent with existing land use plans. Together, new mixed-use/infill development in city centers and additional transit operations could generate noise levels in excess of local standards and increase ambient noise levels. However, any mixed-use and transit-oriented development in city centers would be subject to further CEQA analysis of project-specific impacts and compliance with local land use and noise compatibility standards. Furthermore, the CAP would not represent a change in local land use policies. Thus, impacts related to substantial increases in ambient noise levels are considered to be less than significant at this time.

Impact NOI-2: Implementation of the CAP could expose people to or generate excessive groundborne vibration or groundborne noise levels (less than significant).

As noted above, most of the new facilities promoted by the CAP would be constructed within or on existing buildings (e.g., rooftops, wastewater treatment plants, landfills, dairies). These minor improvements to existing structures would most likely not require construction methods that would generate excessive groundborne vibration or groundborne noise levels. In addition, these improvements would not result in an increase in the number of large trucks or add any sources of permanent operational groundborne vibration.

Although construction details are unknown, construction of new facilities may require the use of impact tools that are typically associated with substantial vibrational impacts, such as pile drivers, jackhammers, impact hammers, and earth compaction tools. The operation of heavy-duty construction equipment could generate localized groundborne vibration in the vicinity of the construction activity. Depending on the proximity of the new facilities to receptors and existing structures, construction activities could generate excessive ground vibration and potentially disturb nearby receptors or damage surrounding existing structures. In city centers, the construction of mixed-use and transit-oriented development is likely to be in proximity to existing structures. Construction-generated groundborne vibration may structurally damage surrounding structures, and this could result in a significant impact. However, the CAP would not change local land use plans. Therefore, the potential for vibration effects due to the construction of mixed-use, infill, or transit-oriented development is part of the existing potential from prior adoption of current land use plans. It is not a new impact related to the CAP. Where there is the potential for these impacts, they are routinely addressed through project-level environmental review and permitting. Many existing city and county policies and ordinances address such impacts. Where existing ordinances do not address these impacts, then project-level CEQA review will assess the specific significance of the project impact and, where appropriate, identify mitigation to address those impacts. In particular, this impact is routinely addressed with standard mitigation identified during project-level review such as preparing vibration monitoring plans and incorporating project-specific methods for minimizing or reducing vibrational impacts on nearby vibration-sensitive structures. Thus, impacts related to excessive groundborne vibration or groundborne noise levels are considered to be less than significant at this time.
Impact NOI-3: New development promoted by the CAP could be located within airport land use plan areas, within 2 miles of a public airport, or within the vicinity of a private airstrip and expose people residing or working in the project area to excessive noise levels (less than significant).

As noted above, the CAP would promote the construction of several new commercial or industrial facilities related to recycled water, solid waste, renewable energy, and energy efficiency. This may result in additional employees. The CAP would also promote mixed-use, transit-oriented, and infill development as well as affordable housing near transit stations but only as consistent with existing land use plans.

New development could be located in proximity to one of six public airports or private airstrips, exposing people residing or working in these areas to excessive noise levels from aviation activities. However, the CAP does not directly involve the construction or operation of any structures. Any structures that could be constructed or projects that would be undertaken under the CAP would be subject to further CEQA analysis of project-specific impacts and applicable federal, state, and local aviation safety regulations. Local regulations require compliance with the adopted Sonoma County CALUP, which identifies compatible land uses in the areas adjacent to the airports with respect to noise, airspace, and safety. Through compliance with local regulations, impacts associated with excessive aviation noise would be less than significant.

3.12.3.4 Cumulative Impacts

Impact C-NOI-1: Implementation of the CAP, in combination with other foreseeable development in the surrounding area, could have a significant cumulative impact from noise (less than considerable contribution).

The geographic context for the evaluation of cumulative construction noise impacts and stationary-source operational noise impacts is generally very small (i.e., a few hundred feet) because noise diminishes rapidly with distance (6 dBA per doubling of distance for point and stationary sources). For cumulative operational noise impacts from traffic, the geographic context is generally larger; thus, overall growth in the County is considered when assessing potential cumulative impacts. The context for cumulative noise impacts considers the effects of the CAP in combination with other development in Sonoma County.

Implementation of CAP policies to reduce greenhouse gas emissions could promote the construction of new facilities. Although the locations for the facilities promoted by the CAP are unknown, if the construction of a nearby project occurs at the same time as construction of a CAP-promoted facility, cumulative construction noise effects could occur. Where there is the potential for these cumulative impacts, they are routinely addressed through project-level environmental review and permitting. Many existing city and county policies and ordinances address such impacts. Where existing ordinances do not address these impacts, then project-level CEQA review will assess the specific significance of the project impact and, where appropriate, identify mitigation to address those impacts. In particular, this impact is routinely addressed with standard mitigation identified during project-level review such as employing noise-reducing construction practices and preparing vibration monitoring plans. As such, cumulative noise impacts from projects in furtherance of the CAP would require site-specific analysis and at present is speculative.
3.13 Public Services, Utilities, and Energy

This section describes the regulatory and environmental setting for public services, utilities, and energy. It also describes impacts on public services, utilities and service systems, and energy that would result from implementation of the Climate Action 2020: Community Climate Action Plan (CAP) and includes mitigation for significant impacts, where feasible and appropriate.

3.13.1 Environmental Setting

This section describes the public services and utilities and service systems present in Sonoma County. This information has primarily been drawn and modified from the Sonoma County General Plan 2020, Draft Environmental Impact Report (Sonoma County 2006).

3.13.1.1 Public Services

Fire Protection Services

Fire protection in Sonoma County is provided by approximately 29 different agencies. There are 15 volunteer fire companies that comprise Community Service Area 40 (CSA 40), which is funded primarily through donations, with equipment and administrative support provided by the County Department of Emergency Services. There are 17 Fire Protection Districts (FPDs) funded through County taxes and operated by the Fire Division of the Department of Emergency Services. In addition, the cities of Cloverdale, Healdsburg, Petaluma, Santa Rosa, Sebastopol, and Sonoma operate independent fire departments funded through local property taxes. The Occidental and Cazadero County Service Districts fund fire protection services. Four other agencies provide fire protection through other means: the Sonoma Developmental Center’s 1,600-acre campus provides its own fire protection; the Two Rock Coast Guard provides its own fire protection; the Rohnert Park Department of Public Safety provides fire protection to Rohnert Park; and the California Department of Forestry and Fire Protection provides additional fire protection services in the unincorporated parts of the County.

Police Protection Services

Police protection in the unincorporated portion of Sonoma County is primarily provided by the County Sheriff’s Department. Since 1993, the County Sheriff’s Department has also provided law enforcement services to the Town of Windsor under a contract most recently renewed in 2008 for a 10-year period. In addition, the City of Sonoma contracted with the Sonoma County Sheriff’s Office to provide law enforcement services in 2004. The County Sheriff’s Department maintains a 24-hour patrol force operating from five substations and the main office located in Santa Rosa. As of 2015, the County Sheriff’s Department has 189 peace officers—including deputies who work in patrol, administration, the helicopter unit, the boating unit, and the civil bureau—and 35 detectives working in investigations, for a total of 224 officers (Sonoma County Sheriff’s Office 2015). With a service population of nearly 500,000, the County Sheriff’s Department maintains a service ratio of approximately 0.45 officers per 1,000 residents, which is less than the 2.0 officers per 1,000 residents set by the Federal Bureau of Investigation.

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1 CSA 40 covers approximately 640 square miles of unincorporated land throughout Sonoma County.
There are a number of other agencies that also provide law enforcement in Sonoma County. These agencies include the college and university police, city police departments, state agencies, and federal law enforcement agencies.

**Schools and Other Community Facilities**

Sonoma County has 40 school districts (31 elementary districts, 3 high school districts, and 6 unified districts) whose attendance areas are wholly contained within the County, and 5 districts that provide facilities outside of the County. These districts vary significantly in size, ranging in enrollment from 7 students in the smallest district to just below 5,000 in the largest. There are 181 public schools in Sonoma County, including 108 elementary schools, 23 middle and junior high schools, 19 high schools, 24 alternative schools, and 7 independent study schools. In addition, there are approximately 50 private schools in the County (California Department of Education 2015).

Enrollment in public elementary, middle and junior, and high schools has generally decreased over the past decade, from 72,295 in 2004/2005 to 70,932 in 2014/2015 (Sonoma County Office of Education 2015). However, the latter shows an increase from 2012/2013’s enrollment of 70,637.

**3.13.1.2 Utilities and Service Systems**

**Water Services**

The Sonoma County Water Agency (SCWA) is a special district that was created by the California Legislature in 1949 and operates under the direction of a Board of Directors, who are also members of the Sonoma County Board of Supervisors. The SCWA provides potable water to approximately 600,000 people in Sonoma and Marin Counties. Water is delivered to the SCWA’s primary water customers through the SCWA’s transmission system. The primary water customers are the cities of Santa Rosa, Rohnert Park, Petaluma, Cotati, and Sonoma, and the North Marin, Valley of the Moon, and Forestville water districts.

**Water Sources**

The main water sources for the unincorporated portions of the County are either groundwater or SWCA’s high capacity surface wells along the Russian River. Nearly all of the urban water providers have one or more wells, which provide the primary source for most small providers and offer a supplemental backup source for the large providers primarily using Russian River water. Groundwater is the primary water source for all rural areas of the County, including many water systems for small communities, subdivisions, and institutions. Because the amount of urban and rural development depending on groundwater, Sonoma County reportedly has the second largest number of public and private wells of any county in California. Approximately 42% of the population’s water supply comes from groundwater sources.

Water for the incorporated portions of the County is provided by each local jurisdiction. In addition, water is provided for other incorporated areas in the County by the Valley of the Moon, Forestville, Sweetwater Springs, and Russian River County water districts; Cal-American, Penngrove/Kenwood, Occidental, and Sea Ranch water companies; Camp Meeker Parks and Recreation Department; Geyserville Water Works; and Graton.
Transmission System

The SCWA’s existing water transmission system includes diversion facilities at the Russian River and an aqueduct system comprising pipelines, pumps, and storage tanks. Diversion facilities are located near Wohler Bridge and Mirabel Park adjacent to the Russian River and include Ranney-type collector wells, conventional wells, an inflatable dam and associated fish ladders, infiltration ponds, and treatment facilities. The aqueduct system distributes the water produced from the diversion facilities to customers in SCWA’s service area. The transmission system includes approximately 85 miles of 16- to 48-inch-diameter pipelines, 17 water storage tanks with a total capacity of 118.8 million gallons, and 8 booster pump stations. The total capacity of the transmission system is 92 million gallons per day (mgd), with 20 mgd of standby capacity.

Wastewater Management Services

Incorporated cities and special districts own and operate numerous centralized wastewater collection and treatment systems throughout the County. The discharge of treated effluent and disposal of bio-solids is permitted by the corresponding Regional Water Quality Control Board (RWQCB) (either the North Coast or the San Francisco Bay). Rural areas not served by centralized systems use onsite septic systems subject to regulation by the Sonoma County Permit and Resource Management Department (PRMD), with larger systems subject to the approval of the RWQCBs.

Wastewater Treatment Plants

Conventional wastewater treatment plants typically receive and treat wastewater either from multiple parcels and land uses or agricultural processing facilities on a single parcel and produce secondary or tertiary-treated effluent. In the first case, the facility is typically owned and operated by a public agency, usually a sanitation district, and is built to service large to very large wastewater flows. Wastewater management for the incorporated portions of the County is provided by each local jurisdiction. In addition, there are 12 wastewater treatment plants in unincorporated Sonoma County: Sea Ranch Central, Sea Ranch North, Bodega Bay, Occidental, Geyserville, Forestville, Russian River, Airport-Larkfield-Wikiup, Graton, Sonoma Valley, South Santa Rosa, and Penngrove. The North Coast or San Francisco Bay RWQCB, depending on the location of the plant, regulates discharge from each treatment plant.

With the exception of South Santa Rosa and Penngrove, all districts serving Urban Service Areas in the unincorporated County maintain independent facilities to collect, treat, and/or dispose of wastewater. South Santa Rosa receives sewer service from the South Park County Sanitation District, which contracts with the City of Santa Rosa for wastewater treatment and disposal. The Penngrove Sanitation Zone contracts with the City of Petaluma for sewer service. The Sonoma Valley County Sanitation District treatment facility is within the jurisdiction of the San Francisco Bay RWQCB. The remaining facilities are under the jurisdiction of the North Coast RWQCB.

Septic Systems

Most residences and some small educational, public, commercial, and industrial facilities in unincorporated areas of the County rely upon individual septic systems to treat and dispose of wastewater. Although the total number of septic systems in use in Sonoma County is not known, it is estimated by PRMD to be approximately 35,000. Assuming that each of the estimated 35,000 residential septic systems serves a household averaging 2.8 people, some 95,000 residents of Sonoma County utilize onsite systems for wastewater disposal. This represents approximately 75%
of the residents in the unincorporated areas of the County and about 20% of the total County population.

**Solid Waste Management Services**

Solid waste is generated from a mix of residential, commercial, and industrial sources in the County. In 2014, a solid waste characterization study showed that for the unincorporated areas of the County, there were 262,500 tons of solid waste. Approximately 77% of the total tons of solid waste generated was divertible, compostable, or potentially divertible (Sonoma County Waste Management Agency 2014).

The existing solid waste management system in Sonoma County includes a mix of public and private sector haulers, facilities, and facility operators. Solid waste transfer and disposal facilities are owned by the County and serve the cities and unincorporated portions of the County. These include four transfer stations (Healdsburg, Annapolis, Guerneville, and Sonoma), and the Central Disposal Site. The County system is managed by the Sonoma County Integrated Waste Division of the Department of Transportation and Public Works.

The Central Landfill is the only operating landfill within Sonoma County. The landfill is owned by the County, and is operated by a private operator (Republic Services of Sonoma Co.). It is permitted to accept up to 2,500 tons per day of non-hazardous municipal solid waste. Approximately 75% of the waste disposed at the landfill is generated by the nine incorporated cities in the County. In 2010, the average daily tonnage was 1,250 tons per day (Sonoma County Waste Management Agency 2010).

**Energy Use and Providers**

Residential, commercial, industrial, and agricultural uses in unincorporated and incorporated areas of the County consume approximately 2,960 mega kilowatt-hour per year (MkWh/y) of electricity.

The majority of the County’s electricity is provided by Sonoma Clean Power, a year-old public agency. In the past, Pacific Gas and Electric Company (PG&E) was the major supplier for the County. Sonoma Clean Power now provides electricity for about 90%, or 204,000, of the residential and commercial customers. PG&E draws on a variety of energy sources to feed its regional power grids. Sonoma Clean Power has secured long-term contracts with Geysers Geothermal Power Plants. Energy under Sonoma Clean Power would also be provided by two large solar panel arrays under development in Sonoma County and the Central Valley. Sonoma Clean Power supplies 33% of its energy from renewable sources, predominantly from these solar and geothermal projects.

### 3.13.2 Regulatory Setting

#### 3.13.2.1 Federal

Federal regulations relevant to water quality are described in Section 3.10, *Hydrology and Water Quality*. There are no additional federal regulations for public services, utilities, and energy applicable to the implementation of the CAP.

#### 3.13.2.2 State

State of California regulations relevant to water quality are described in Section 3.10, *Hydrology and Water Quality*. The following are state regulations relevant to public services, utilities, and energy.
California Government Code Section 65996

California Government Code Section 65996 describes the exclusive methods of considering and mitigating impacts on school facilities that result or could result from any state or local agency action, including development of real property. One of these methods is through Education Code Section 17620, described below.

Education Code Section 17620

Education Code Section 17620 authorizes school districts to levy a fee, charge, dedication, or other form of requirement against any development project for the construction or reconstruction of school facilities provided the district can show justification for levying of fees.

Senate Bill 610

Senate Bill (SB) 610 requires local water providers to conduct a water supply assessment (WSA) for projects proposing over 500 housing units, 250,000 square feet of commercial office space (or more than 1,000 employees), a shopping center or business establishment with over 500,000 square feet (or more than 1,000 employees), or equivalent usage. A WSA is not required for the CAP because it does not include any site-specific designs or proposals, or grant any entitlements for development.

Assembly Bill 939 and SB 1016

The California Integrated Waste Management Act of 1989, or Assembly Bill (AB) 939, established the Integrated Waste Management Board, required the implementation of integrated waste management plans, and mandated that local jurisdictions divert at least 50% of all solid waste generated (from 1990 levels) from going to landfills, beginning January 1, 2000, and to divert at least 75% by 2010.

In 2006, SB 1016 updated the requirements. The new per capita disposal and goal measurement system shifted the emphasis from an estimated diversion measurement number to an actual disposal measurement number as a factor, along with evaluating program implementation efforts. These two factors will help determine each jurisdiction's progress toward achieving AB 939 diversion goals. The 50% diversion requirement is now measured in terms of per capita disposal expressed as pounds per person per day.

Assembly Bill 75

AB 75, passed in 1999, took effect on January 1, 2000, and mandated state agencies to develop and implement an integrated waste management plan (IWMP). The changes brought about by AB 75 required each state agency or large state facility—e.g., state universities, community colleges, prisons within the Department of Corrections, facilities of the Department of Transportation, and any other agencies identified by the California Integrated Waste Management Board (CIWMB)—to develop an IWMP by July 1, 2000; to divert at least 25% of its solid waste from landfills or transformation facilities by January 1, 2002; and to divert 50% by January 1, 2004. In addition to the waste diversion goals, all state agencies are required to buy recycled materials from 12 different categories, ranging from paper and plastic to paint, solvents, and lubricating oils.
3.13.2.3 Local

Appendix C, *Local General Plan Goals, Objectives, and Policies*, provides a list of the goals, objectives, and policies in the local general plans of the participating jurisdictions including those related to public services, utilities, and energy. These goals, objectives, and policies were reviewed to assess whether the project is consistent with the general plans of participating jurisdictions. Disclosure of this consistency analysis is for informational purposes. An additional purpose of providing a list of relative local policies is, where appropriate, to provide the context within which the CAP will be locally implemented. As described in the CAP, most of the CAP measures represent implementation of many of the priorities outlined in existing local policies.

Inconsistencies with general plan policies are not necessarily considered significant impacts under CEQA unless they are related to physical impacts on the environment that are significant in their own right.

Implementation of the CAP is consistent with the applicable general plan goals, objectives, and policies of the participating jurisdictions in relation to public services, utilities, and energy.

3.13.3 Impacts Analysis

3.13.3.1 Methodology

This analysis is based on a review of the public services, utilities and service systems, and energy information available for the County. Impacts related to public services, utilities and service systems, and energy are analyzed qualitatively and are focused on the CAP’s potential to increase the demand for public services, utilities and service systems, and energy significantly beyond the existing resources in the County.

3.13.3.2 Significance Criteria

The California Environmental Quality Act (CEQA) Guidelines Appendix G and Appendix F (California Code of Regulations [CCR], Title 14, Section 15000 et seq.) has identified significance criteria to be considered for determining whether a project could have significant impacts on existing public services, utilities and service systems, and energy.

An impact would be considered significant if construction or operation of the project would have any of the following consequences.

**Public Services**

- Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services.
  - Fire protection
  - Police protection
  - Schools
Utilities and Service Systems

- Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board.
- Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.
- Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.
- Have insufficient water supplies available to serve the project from existing entitlements and resources, or new or expanded entitlements are needed.
- Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project’s projected demand in addition to the providers existing commitments.
- Be served by a landfill with insufficient permitted capacity to accommodate the project’s solid waste disposal needs.
- Not comply with federal, state, and local statutes and regulations related to solid waste.

Energy

- Result in land use locations and patterns causing wasteful, inefficient, and unnecessary consumption of energy.
- Result in the construction of new or retrofitted buildings that would have excessive energy requirements for daily operation.
- Result in increased energy demand and the need for additional energy resources.

3.13.3.3 Impacts and Mitigation Measures

Impact PSU-1: Implementation of the CAP could reduce service ratios or response times for fire protection or police protection services or require new or physically altered governmental facilities to maintain acceptable service ratios and response times (less than significant).

The CAP is a policy and program-level document that does not include any site-specific designs or proposals, or grant any entitlements for development that would have the potential to generate a new residential or employment population that would require new fire protection or police protection services. As a policy document, the CAP would have no direct impact on fire protection and police protection services, but future implementation activities could increase the demand for such services.

There are several CAP measures that promote and could include the construction of new facilities aimed at improving energy efficiency, increasing renewable energy use, increasing solid waste diversion, reducing water use, expanding recycled water and greywater use, and increasing
capture/use of methane from landfills and dairies. These facilities would not be within the jurisdiction of the Regional Climate Protection Authority. Most of these new facilities would be constructed within or on existing buildings (e.g., rooftops, wastewater treatment plants, and dairies). Their installation within or on existing buildings would likely not result in new employees and associated increases in population that would require additional fire protection and police protection services. New recycled water, solid waste, or other facilities promoted by the CAP may generate a limited number of new employees but would only minimally change the demand for public services. However all future development projects would be subject to applicable local regulations, requirements, and development impact fees, as well as state and federal laws.

New waste-to-energy facilities at landfills, new methane gas digesters, and new cogeneration facilities could entail new potential fire risks. However, all new facilities would be required to comply with all applicable fire codes, and the addition of such facilities is not expected to substantially change the demand for fire protection services.

Further, the CAP also promotes mixed-use and transit-oriented development in city centers consistent with existing land use plans. These new structures could generate a new employee and residential population that may increase the demand for fire protection and police protection services; however, the CAP would not change existing land use plans, and thus these service demands would not result in an additional impact from CAP adoption and implementation.

With compliance with local regulations and requirements, and state and federal laws, impacts on fire protection and police protection services would be less than significant.

**Impact PSU-2: Implementation of the CAP could increase student enrollment at schools or increase level of service required at other public facilities resulting in an adverse physical impact to these facilities (less than significant).**

As noted above, the CAP would promote the development of a limited number of new commercial or industrial facilities. These new structures could generate a new employee (and related residential) population that may slightly increase the demand for schools or other public facilities. However, the amount of new employment would be limited, and thus is not likely to substantially change the demand for schools or other public facilities that would demand new facilities.

The CAP does call for certain public facilities, such as traffic calming, transit access improvements, pedestrian and bicycle facilities, and public EV charging facilities; and the secondary physical impacts of such facilities is analyzed throughout the rest of this draft EIR.

New mixed-use and transit-oriented development could generate a residential population that may increase the localized demand for schools or other public facilities in city centers due to a denser population. As noted previously, the CAP is only promoting existing land use policy and thus such development, consistent with existing land use plans, would not present an additional impact from implementation of the CAP. All future development projects would be subject to applicable local and state regulations, requirements, and development impact fees for schools or other public facilities. With compliance with local and state regulations and requirements, impacts on schools or other public facilities in city centers would be less than significant.
Impact PSU-3: Implementation of the CAP could decrease the demand for water supply and thus would reduce the demand for additional water supplies but would increase demand for water facilities infrastructure related to water efficiency, renewable energy, recycled water and greywater use (less than significant).

There are several CAP measures that promote and could include the construction of new facilities aimed at increasing recycled water and greywater use, increasing the efficiency of the existing water infrastructures, and increasing the use of renewable energy in water systems. CAP measures that support the expansion of water treatment facilities and distribution lines and expanded greywater use would require plumbing and fixture alterations within or on existing buildings. Water efficiency improvements would require modifications of existing water treatment facilities. CAP measures that promote renewable energy in water systems may result in the expansion of renewable energy installations at water treatment facilities. These improvements are expected to be minor and would be constructed within the existing water facilities and are not likely to cause significant secondary environmental effects.

Specifically, to reduce greenhouse gas (GHG) emissions associated with water supply and conveyance, the CAP includes measures that would reduce water consumption within existing and new developments and increase recycled water and greywater (reducing potable water use). Thus, implementation of the CAP would reduce potable water consumption in the County through water efficiency measures, and impacts would be beneficial.

As discussed throughout this draft EIR, the CAP would increase demand for water efficiency improvements at water treatment facilities and in existing and new development as well as providing additional facilities for recycled water and greywater. The secondary physical effects of such infrastructure are discussed throughout this draft EIR.

Impact PSU-4: Implementation of the CAP could decrease wastewater generation and thus would not exceed wastewater treatment requirements, but would require the expansion or modification of existing wastewater facilities (less than significant).

As discussed above, the CAP does not directly involve the construction of any structures that would require wastewater services. Any structures that could be constructed consistent with the CAP would be subject to further CEQA analysis of project-specific impacts on wastewater generation and facilities.

There are several CAP measures that promote, and could include, the construction of new facilities aimed at increasing the efficiency of the existing wastewater infrastructures and increasing the use of renewable energy in wastewater systems. Wastewater efficiency improvements would require modifications of existing wastewater treatment facilities. CAP measures that promote renewable energy in wastewater systems may result in the expansion of renewable energy installations at wastewater treatment facilities. CAP measures that promote capture and use of methane from wastewater treatment plants would require modification of existing wastewater treatment plants to capture and burn methane for energy production. These improvements are expected to be minor and would be constructed within the existing water facilities and are not likely to cause significant environmental effects.

The CAP would also promote the reduction of GHG emissions associated with water use and wastewater generation that would reduce the wastewater generated from water consumption within existing and new developments. Thus, implementation of the CAP would reduce wastewater generation in the County through efficiency measures, and impacts would be beneficial.
The secondary physical effects of wastewater treatment efficiency upgrades and recycled water treatment facilities are discussed throughout this draft EIR.

**Impact PSU-5: Implementation of the CAP could require the construction of new storm water drainage facilities or expansion of existing facilities (less than significant).**

There are several CAP measures that promote and could include the construction of new facilities, most of which would be constructed within or on existing buildings (e.g., rooftops, wastewater treatment plants, dairies), and would not require the construction of new storm water drainages to serve these facilities. The CAP also promotes mixed-use and transit-oriented development in city centers; however, such development is already called for in local land use plans and would not be a new impact of the CAP. These new structures could require the construction of new storm water drainage facilities or the expansion of existing facilities if there is no existing infrastructure or if the capacity of the storm water drainage is exceeded.

Any structures that could be constructed consistent with the CAP would be subject to further CEQA analysis of project-specific impacts on the storm water system. New solid waste or other facilities promoted by the CAP may require new or expanded storm water drainage facilities depending on the siting of the building and new structures. All future development projects would be subject to applicable federal, state, and local regulations, requirements, and development impact fees for storm water drainage facilities. With compliance with local regulations and requirements, impacts on storm water drainage facilities would be less than significant.

**Impact PSU-6: Implementation of the CAP would reduce solid waste generation and would not conflict with federal, state, and local statutes and regulations related to solid waste diversion (beneficial impact).**

One of the intentions of the CAP is to reduce GHG emissions associated with solid waste generation, and the CAP includes measures that would increase solid waste diversion, reducing the amount of solid waste that would be in landfills. Implementation of the CAP would reduce solid waste generation in the County, and impacts would be beneficial. Any new facilities needed to support increased waste diversion (such as transfer facilities or composting facilities) would be required to comply with existing regulations for the handling of solid waste, including the applicable permitting requirements of CalRecycle.

**Impact PSU-7: Implementation of the CAP would not result in land use locations and patterns causing wasteful, inefficient, and unnecessary consumption of energy (beneficial impact).**

As discussed above, the CAP does not directly involve the construction of any structures that would directly result in land use locations and patterns that cause wasteful, inefficient, and unnecessary consumption of energy. Any structures that could be constructed consistent with the CAP would be subject to further CEQA analysis of project-specific impacts on energy.

Further, the intention of the CAP is to reduce GHG emissions within the County through targeted reductions in sectors of building energy, transportation and land use, solid waste generation, water conveyance and wastewater treatment, agriculture, and new development.

The CAP includes numerous measures to improve the efficiency of energy use, including energy efficient improvements for new and existing buildings and water and wastewater infrastructure. The CAP promotes expanded transit and alternatives to passenger vehicle use, which would help reduce the consumption of transportation fuels.
The CAP supports existing land use plans that promote mixed-use development, transit accessibility, and transit-oriented development in city centers where development already exists and where the provisions of public services, utility systems, and transportation would be most efficient.

Thus, implementation of the CAP would promote the efficient use of land use locations and patterns, and impacts would be beneficial.

**Impact PSU-8: Implementation of the CAP would not result in the construction of new or retrofitted buildings that would have excessive energy requirements for daily operation (beneficial impact).**

As discussed above, the CAP does not directly involve the construction of any structures that would directly result in the construction of new or retrofitted buildings that would have excessive energy requirements for daily operation. Any structures that could be constructed consistent with the CAP would be subject to further CEQA analysis of project-specific impacts on energy.

The CAP promotes efficient use of energy in new and existing buildings through retrofit requirements and programs. Also, there are several CAP measures that promote and could include the construction of new facilities aimed at increasing renewable energy use, increasing solid waste diversion, increasing capture/use of methane from landfills, and reducing emission from livestock operations. Most of these new facilities would be constructed within or on existing buildings, and these minor improvements would not have excessive energy requirements for daily operations. The CAP also promotes infill development in city centers, which would result in more compact growth that would foster energy efficiency.

Thus, implementation of the CAP would promote energy efficiency in existing and new buildings, and impacts would be beneficial.

**Impact PSU-9: Implementation of the CAP would not result in increased energy demand and the need for additional energy resources overall (beneficial impact).**

As discussed above, the CAP does not directly involve the construction of any structures that would directly result in increased energy demand and the need for additional energy resources. Any structures that could be constructed consistent with the CAP would be subject to further CEQA analysis of project-specific impacts on energy.

Specifically, to reduce GHG emissions from energy use, the CAP includes measures that would increase the energy efficiency of buildings and water and wastewater infrastructure, and reduce transportation and equipment fossil fuel use through increased vehicle efficiency, alternative fuel use (such as electricity), and vehicle-miles-traveled reduction strategies. The CAP also promotes increased capture and use of methane from landfills and dairies to offset fossil fuel use to generate electricity. The overall effect of the CAP is to decrease demand for energy derived from fossil fuels, which would otherwise result in GHG emissions.

The CAP would result in both a decrease in energy demands overall (through improvements in efficiency in buildings, vehicles, and infrastructure) and an increase in renewable energy production (through promotion of solar for new and existing development, use of renewable energy for water and wastewater treatment plants, and increase of methane capture and use for energy generation). Overall energy demand is expected to go down relative to what would occur without the CAP-supported investments in energy efficiency.

Thus, implementation of the CAP would not result in increased energy demand and the need for additional energy resources, and impacts would be beneficial.
3.13.3.4 Cumulative Impacts

Impact C-PSU-1: Implementation of the CAP, in combination with other foreseeable development in the surrounding area, could have a significant cumulative impact on public services, utilities, and energy (less than considerable contribution and usually beneficial).

The geographic context for the evaluation of cumulative impacts on public services, utilities and service systems, and energy is the service area of the service in question. The evaluation addresses the effects of the CAP in combination with other development in Sonoma County.

Implementation of the CAP would not result in a population increase greater than projected for the buildout of local land use plans because the CAP would not change local land use plans, and the additional facilities supported by the CAP would result in only minor employment increases and associated population growth. Rather, the CAP supports existing land use plans and policies that seek to concentrate the expected population growth in city centers and along transit corridors. Densifying the population in city centers could result in a localized incremental increase demand for fire protection, police protection, schools, and other public facilities within the area; however, this would be the result of existing land use plans and policies and not an incremental change brought about by the CAP.

In terms of utilities and service systems and energy, the intention of the CAP is to reduce GHG emissions within the County in part through reducing energy and utility demands. The CAP seeks to reduce electricity and natural gas demand through improving building energy efficiency. The CAP includes measures that would reduce water consumption and the wastewater generated from this consumption as well as energy used within existing and new developments. In addition, the CAP also includes measure to increase diversion of solid waste from landfills. Overall, implementation of the CAP would promote water conservation, energy efficiency, and the diversion of solid waste. Thus, although cumulative impacts on utilities and service systems and energy may be significant due to increasing consumption of these resources from cumulative development in the County, the CAP’s contribution would be beneficial as it would reduce consumption of water and energy and generation of wastewater and solid waste.
3.14 Transportation/Traffic

This section describes the regulatory and environmental setting for transportation and traffic. It also describes the impacts on transportation and traffic that would result from implementation of the Climate Action 2020: Community Climate Action Plan (CAP) and includes mitigation for significant impacts, where feasible and appropriate.

3.14.1 Environmental Setting

This section describes the existing transportation and traffic system in Sonoma County. This information has been primarily drawn and modified from the Sonoma County General Plan 2020, Draft Environmental Impact Report (Sonoma County 2006) and the 2009 Comprehensive Transportation Plan for Sonoma County (Sonoma County Transportation Authority 2009). The Sonoma County Transportation Authority (SCTA) is in the process of updating the Comprehensive Transportation Plan (CTP). Updated current conditions of the County’s transportation system that will be part of the updated CTP are drawn from SCTA’s Staff Report, 2015 CTP Performance Measures, Current Conditions and Performance Target Recommendations dated October 13, 2014 (Sonoma County Transportation Authority 2014).

Sonoma County has a variety of transportation systems, including local roads, public transit, a railroad right-of-way, airports, and bicycle and pedestrian facilities. These are discussed in detail below.

3.14.1.1 Highway and Roadway Network

Historically, travel and trade routes have been developed parallel to the north/south orientation of County valleys, as they offered the least resistance. For that reason, even today east/west road development (and travel) is poorer than in the north/south direction. Many roads today follow the routes of former Native American paths, which in turn were created by animal paths over many centuries. Roads were often developed to follow water routes, e.g., the Russian River, or to connect to the ocean.

Sonoma County has approximately 2,700 centerline miles of publicly owned and maintained roadways. Table 3.14-1 depicts the owner and maintenance responsibility of the public roads within Sonoma County. The County owns and maintains over half of the roadway system, due to large unincorporated areas with low-density urban development. The California State Department of Transportation (Caltrans) owns and maintains more than 235 centerline miles of highway, with more than 75% in the rural portions of the County. The major Caltrans highways in Sonoma County include: State Routes (SR) 1, 12, 37, 116, 121, and 128, as well as U.S. Highway 101 (U.S. 101). The state highways are among the most heavily traveled routes (e.g., U.S. 101), accounting for 50% or more of the daily vehicle miles traveled (VMT) in the County.
Table 3.14-1. Sonoma County Centerline Mileage of Public Roads

<table>
<thead>
<tr>
<th>Owner/Maintenance Responsibility</th>
<th>Miles</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>County of Sonoma</td>
<td>1,387</td>
<td>52%</td>
</tr>
<tr>
<td>Incorporated Cities</td>
<td>943</td>
<td>35%</td>
</tr>
<tr>
<td>Caltrans (State)</td>
<td>235</td>
<td>9%</td>
</tr>
<tr>
<td>State Parks Department</td>
<td>92</td>
<td>3%</td>
</tr>
<tr>
<td>Federal Agencies</td>
<td>20</td>
<td>1%</td>
</tr>
<tr>
<td>Total</td>
<td>2,677</td>
<td>100%</td>
</tr>
</tbody>
</table>

Source: Sonoma County Transportation Authority 2009.

Physical Conditions

Physically, the County road system suffers from a number of problems (Sonoma County Transportation Authority 2009).

- Poor pavement conditions: Sonoma County’s roads average a Pavement Condition Index (PCI) of 46, whereas a PCI of 80 is considered optimum. This is the lowest of any county in the Bay Area, and the County has one of the largest deferred maintenance backlogs in the Bay Area.
- Lack of shoulder or pedestrian walking areas: any County roads lack standard shoulders or pedestrian walking areas to enhance the safety and pleasure of walking and cycling.
- Flooding issues: roads, including state highways and freeways, were subject to serious flooding problems in the 1990s.
- Poor sight distances: portions of some County roads do not meet current safe sight stopping distance standards.

Existing Traffic Conditions

Freeway Congestion

Freeway congestion is defined as conditions where vehicle speeds regularly drop below 35 miles per hour (mph) for at least 15 minutes each weekday. Metropolitan Transportation Commission (MTC) freeway congestion monitoring data indicate that congestion delay in the San Francisco Bay Area increased 18% in 2013 to an average of 2.6 minutes per commuter each weekday in 2013 from 2.2 minutes in 2012 (Metropolitan Transportation Commission 2015a).

In Sonoma County, the individual freeway sections of U.S. 101 experience the most recurring congestion on weekdays (Metropolitan Transportation Commission 2015b). According to MTC, the following are the most congested freeway segments in the County.

- U.S. 101 southbound, from Hopper Avenue to Baker Avenue
- U.S. 101 southbound, from Redwood Highway to Petaluma Boulevard South
- U.S. 101 northbound, from Santa Rosa Avenue to Colgan Avenue
- U.S. 101 northbound, from Santa Rosa Avenue to Yolanda Avenue
- U.S. 101 northbound, from Petaluma Boulevard South to Washington Street
- U.S. 101 northbound, from CA-12 to 6th Street
Incorporated Jurisdiction Areas

A description of the existing traffic conditions in each jurisdiction is summarized below. Overall, the incorporated cities within the County generally tend to experience traffic congestion at the city center and downtown locations.

- City of Cloverdale: Of the 17 intersections identified as the primary intersections in Cloverdale along the main arterial network, all intersections are operating acceptably at level of service (LOS) C or better (City of Cloverdale 2005).
- City of Cotati: Of the 20 intersections identified as the most critical to Cotati’s local circulation system and its connectivity to the regional transportation network, 18 are operating acceptably at LOS D or better (City of Cotati 2014).
- City of Healdsburg: Of the 28 primary intersections identified in the City of Healdsburg, 25 are operating at LOS C or better overall. The three intersections operating at LOS D or worse would be unacceptable during the PM peak periods (City of Healdsburg 2009).
- City of Petaluma: Of the 46 intersections identified as most likely to be impacted by future development in the city, the majority of intersections would operate at LOS C or better during AM and PM peak hours. Nine intersections would operate at LOS D or worse during either peak hour (City of Petaluma 2006).
- City of Rohnert Park: Many Rohnert Park city streets have relatively little traffic congestion and operate at LOS C or better during the PM peak commute hour. Several roadway segments experience congestion and exceed the acceptable level of service during the PM peak period. These roadways include portions or Commerce Boulevard, Seed Farm Road, Petaluma Hill Road, Stony Point Road, Millbrae Avenue, and Wilfred Road (City of Rohnert Park 2000).
- City of Sebastopol: Of the 18 intersections identified as those most critical to Sebastopol’s local circulation system and its connectivity to the regional transportation network, 17 are operating acceptably at LOS D or better (City of Sebastopol 2014).
- City of Sonoma: The current travel pattern within Sonoma is dominated by SR 12 (comprised of Broadway, West Napa Street, and the Sonoma Highway), with the highest volumes occurring along West Napa Street. Supporting arterials such as Napa Road, Fifth Street West, MacArthur Street, Second Street West, and West Spain Street experience the most traffic congestion. Of the 16 primary intersections identified in the City of Sonoma, 11 are operating at LOS D or better overall (City of Sonoma 2006).
- Town of Windsor: Of the 33 intersections identified as those most critical to the Town of Windsor’s local circulation system and its connectivity to the regional transportation network, all are operating acceptably at LOS D or better (Town of Windsor 2015).

3.14.1.2 Transit Service

Municipal Bus Transit Services

Several jurisdictions along the U.S. 101 corridor provide local transit service within their communities, including the cities of Santa Rosa, Petaluma, Healdsburg, and Cloverdale. Of the local jurisdictions, the City of Santa Rosa’s CityBus provides the most comprehensive level of service, with 19 numbered routes. Petaluma Transit provides scheduled service along five separate routes using a fleet of modern, 35-foot low-floor transit coaches. The City of Rohnert Park contracts with Sonoma
County transit for local bus service. Most of these systems operate a few small vehicles over a very limited route system, providing service mostly to the transit dependent (i.e., those without access to a car).

**Countywide and Regional Bus Transit Services**

Sonoma County Transit (SCT) operates inter-city and local routes throughout the County, including all cities along the U.S. 101 corridor, the Sonoma Valley to the east, and the City of Sebastopol and Russian River areas to the west. The Sonoma County Transit fleet size is a total of 49 vehicles with 45 heavy-duty buses and 4 mini-buses. SCT operates 23 weekday routes and 14 weekend routes. The system links most small towns and communities and all nine incorporated cities in the County including Cloverdale, Healdsburg, Windsor, Santa Rosa, Sebastopol, Rohnert Park, Cotati, Sonoma, and Petaluma.

Golden Gate Transit (GGT) offers regional transit service and commuter routes from Sonoma County to Marin County and San Francisco. GGT operates seven transit routes: five routes that commute to/from San Francisco and two basic bus service routes. The basic routes (Routes 80 and 101) offer all-day service between Santa Rosa and San Francisco. The other routes are commuter routes that offer only peak hour and peak direction service during morning and evening commute periods. Peak direction is defined as toward San Francisco in the morning and from San Francisco in the afternoon.

Mendocino Transit Authority (MTA) provides inter-county service between Santa Rosa and Ukiah in Mendocino County, and to several communities along the Sonoma/Mendocino Coast. MTA operates two infrequent service routes along SR 1 and into Santa Rosa. Route 65 operates from Mendocino, via Fort Bragg, Willits, to Santa Rosa via U.S. 101. Route 95 operates from Point Arena to Santa Rosa via SR 1, with stops in Bodega Bay and Sebastopol.

**Sonoma-Marin Rail Transit**

The State Legislature established the Sonoma-Marin Area Rail Transit (SMART) District in January 2003 to plan, construct, and operate a commuter rail line in Marin and Sonoma Counties. The proposed SMART project includes building and operating a 14-station, 70-mile passenger rail line from Larkspur to Cloverdale using the publicly owned right-of-way of the former Northwestern Pacific (NWP) Railroad line, and a Class I multi-use pedestrian and bicycle path parallel to much of the line. Stations in Sonoma County would include: Petaluma Downtown, Petaluma Corona Road, Cotati, Rohnert Park, Santa Rosa Downtown, Santa Rosa Jennings Avenue, Windsor, Healdsburg, and Cloverdale. A maintenance facility for the entire line would be constructed in southern Windsor. The SMART project would utilize new “light” self-powered diesel trains.

The first phase of the SMART, which includes a 42-mile rail and trail project connecting San Rafael and Santa Rosa, is currently under construction, and passenger rail service is anticipated to begin in 2016. Extensions of SMART to the north and south will be developed and constructed as additional funding is identified.

**3.14.1.3 Pedestrian and Bicycle Facilities**

**Pedestrian System**

The countywide pedestrian system includes: sidewalks, pathways, recreational trails, Class I multiuse trails, and informally, roadway shoulders. Sidewalks or pathways are present in older
neighborhoods of cities and are also in place in almost all of the most recently developed residential, civic, and business developments. System gaps are frequently found in locations between the oldest and the newest development. In areas that were developed during the 1950s to 1980s, the focus was on access by motorists, and pedestrian facilities were frequently not required (Sonoma County Transportation Authority 2008).

Bicycle System

The countywide bicycle system includes, but is not limited to, the following facilities: Class I, Class II, Class III, bicycle boulevards, multi-use trails, traffic calming, signage, bicycle-activated signal detection, and bicycle parking infrastructure. The following is a description of the bikeways in the County.

- Class I bikeways are known as multi-use paths and provide bicycle travel on an all-weather surface within a right-of-way that is for exclusive use by pedestrians, bicyclists, and other non-motorized modes.
- Class II bikeways are referred to as "bike lanes" and provide a striped and stenciled lane for one-way travel on either side of a street or highway.
- Class III bikeways are intended to provide continuity to the County bicycle network. Bike routes are established along through-routes not served by Class I or Class II bikeways or to connect discontinuous segments of Class I or Class II bikeways together.

The bicycle system of Sonoma County is composed of both on-road and off-road facilities; however, many gaps still exist that break the continuity of bicycle travel. Throughout the County, Class I, II, and III facilities have been implemented. There are also unpaved recreational trails. Table 3.14-2 lists the miles of each bicycle facility provided in each local jurisdiction.

The off-road facilities consist of separated bike paths (Class I), and many of the Class I facilities have been, or will be, constructed along creek alignments owned by cities or the County (e.g., Sonoma County Water Agency) and along prior or existing railroad rights-of-way (e.g., existing Joe Rodota Trail; proposed SMART Pathway). The on-road facilities consist of bike lanes (Class II) and shared lane facilities, such as sharrows (Class III).
Table 3.14-2. Sonoma County Bicycle Facilities by Class

<table>
<thead>
<tr>
<th>Jurisdiction</th>
<th>Class I (miles)</th>
<th>Class 2 (miles)</th>
<th>Class 3 (miles)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cloverdale</td>
<td>1.72</td>
<td>4.69</td>
<td>0.23</td>
</tr>
<tr>
<td>Healdsburg</td>
<td>0.55</td>
<td>10.25</td>
<td>4.73</td>
</tr>
<tr>
<td>Windsor</td>
<td>2.68</td>
<td>7.67</td>
<td>--</td>
</tr>
<tr>
<td>San Rosa</td>
<td>23.00</td>
<td>54.00</td>
<td>33.00</td>
</tr>
<tr>
<td>Cotati</td>
<td>1.63</td>
<td>2.85</td>
<td>--</td>
</tr>
<tr>
<td>Rohnert Park</td>
<td>7.10</td>
<td>9.90</td>
<td>4.60</td>
</tr>
<tr>
<td>Petaluma</td>
<td>19.0</td>
<td>20.30</td>
<td>0.90</td>
</tr>
<tr>
<td>Sebastopol</td>
<td>1.23</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Sonoma</td>
<td>3.91</td>
<td>0.97</td>
<td>--</td>
</tr>
<tr>
<td>County</td>
<td>16.77</td>
<td>13.86</td>
<td>1.45</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>77.59</strong></td>
<td><strong>119.48</strong></td>
<td><strong>44.91</strong></td>
</tr>
</tbody>
</table>

Source: Sonoma County Transportation Authority 2009.

The SCTA is in the process of developing a Countywide Primary Bikeway Network, a continuous countywide network of on- and off-street bikeways that extend between and through communities. The Primary Bikeway Network would consist of a selection of existing and proposed Class I, Class II, and Class III bikeways that provide inter-city and inter-county routes along with connections to other transportation modes, major destinations, jobs, neighborhoods, recreation, and local bicycle networks. The intention of the network is to focus and collaborate on a set of basic routes that will provide access to major destinations and activity areas. Approximately 65 miles of Primary Bikeway Network currently exist and approximately 514 miles of bikeways are proposed on the Primary Bikeway Network.

### 3.14.1.4 Airports

There are six airports in Sonoma County open for public use: two are privately owned (Sonoma Skypark and Sonoma Valley), three are owned by cities (Cloverdale, Healdsburg, and Petaluma airports), and the Sonoma County Airport is County-owned. The Sonoma County Airport is the only airport within the County offering commercial airline service. The Sonoma County Airport Land Use Commission (ALUC) adopted the Sonoma County Comprehensive Airport Land Use Plan (CALUP), which identifies compatible land uses in the areas adjacent to the airports as related to noise, airspace, and safety. All six Sonoma County airports are subject to the regulations of the ALUC and the CALUP.

Sonoma Skypark and Sonoma Valley airports are located south of the City of Sonoma. The three city-owned airports are within their respective localities, and the Sonoma County Airport is south of the Town of Windsor.

### 3.14.2 Regulatory Setting

#### 3.14.2.1 Federal

There are no relevant federal regulations for transportation and traffic.
3.14.2.2 State

State agencies, counties, and cities use various criteria to determine acceptable LOS on their roadway systems. LOS is a scale used to determine the operating quality of a roadway segment or intersection based on volume-to-capacity (V/C) ratios or average delay experienced by vehicles on the facility. The levels range from A to F, with LOS A representing free-flow traffic and LOS F representing severe traffic congestion. Agencies adopt LOS standards that define the levels of operations that are acceptable within their jurisdictions.

California Department of Transportation

Caltrans is the responsible agency for management of transportation infrastructure and transportation improvements in California. Caltrans manages the state highway system, and works with federal and local transportation agencies to coordinate funding for highway and transit improvements.

Each Caltrans district prepares a Transportation Concept Report for every state highway, or portion thereof, in its jurisdiction, to facilitate long-term planning and to determine how a highway will be developed and managed to deliver the targeted LOS and quality of service envisioned. Local jurisdictions (counties and cities) have the option of adopting a higher LOS standard for freeway segments within their limits.

State Transportation Improvement Program

The California Transportation Commission (CTC) administers transportation programming, which is the public decision-making process that sets priorities and funds projects that have been envisioned in long-range transportation plans. The CTC commits expected revenues for transportation projects over a multiyear period. The State Transportation Improvement Program (STIP) is a multi-year capital improvement program for transportation projects both on and off the State Highway System. The STIP is funded with revenues from the State Highway Account and other sources. STIP programming typically occurs every 2 years.

The California Transportation Plan 2025 was adopted in 2006 and updated in 2007. The California Transportation Plan 2025, which is overseen by Caltrans, serves as a blueprint for California’s transportation system, as defined by goals, policies, and strategies to meet the state’s future mobility needs. The goals defined in the plan fall into three categories: social equity, prosperous economy, and quality environment. Each goal is tied to performance measures. In turn, members from regional and metropolitan planning agencies report these performance measures to Caltrans (State of California 2007). The California Transportation Plan 2025 2030 addendum (2007) updated the California Transportation Plan 2025 to comply with the Safe, Accountable, Flexible, Efficient, Transportation Equity Act – A Legacy for Users (SAFETEA-LU). This federal law authorized transportation funding through 2009 and established new requirements for statewide and metropolitan transportation planning. Caltrans is presently working on an update to the California Transportation Plan 2025 that would extend to 2040. The 2040 update is expected to be approved in 2016.

Assembly Bill 32 and Senate Bill 375

With the passage of Assembly Bill (AB) 32, the Global Warming Solutions Act of 2006, the State of California committed itself to reducing greenhouse gas (GHG) emissions to 1990 levels by 2020. The
California Air Resources Board (ARB) is coordinating a response to comply with AB 32. In 2008, ARB defined its 1990 baseline level of emissions. On December 11, 2008, ARB adopted its Proposed Scoping Plan for AB 32. This scoping plan included the approval of Senate Bill (SB) 375 as the means for achieving regional transportation-related GHG targets. In 2011, ARB completed its major rule making for reducing GHG emissions. Rules on emissions, as well as market-based mechanisms, such as the cap-and-trade program, took effect on January 1, 2012.

SB 375 provides guidance regarding curbing emissions from cars and light trucks to help the state comply with AB 32. There are four major components to SB 375. First, SB 375 requires regional GHG emissions targets. ARB’s Regional Targets Advisory Committee will guide the adoption of targets to be met by 2020 and 2035 for each Metropolitan Planning Organization (MPO) in the state. These targets, which MPOs may propose themselves, must be updated every 8 years in conjunction with the revision schedule of the housing and transportation elements of local general plans. Second, MPOs are required to create a Sustainable Communities Strategy (SCS) that provides a plan for meeting regional targets. The SCS and the Regional Transportation Plan (RTP) must be consistent, including action items and financing decisions. If the SCS does not meet the regional target, the MPO must produce an Alternative Planning Strategy that details an alternative plan for meeting the target. Third, SB 375 requires regional housing elements and transportation plans to be synchronized on 8-year schedules. In addition, Regional Housing Needs Assessment (RHNA) allocation numbers must conform to the SCS. If local jurisdictions are required to rezone land as a result of changes in the housing element, rezoning must take place within 3 years of adoption of the housing element. Finally, MPOs must use transportation and air emissions modeling techniques that are consistent with the guidelines prepared by the CTC. Regional Transportation Planning Agencies, cities, and counties are encouraged, but not required, to use travel demand models that are consistent with CTC guidelines.

The adopted RTP, per SB 375 (Plan Bay Area) is discussed below.

**Complete Streets (AM 1358)**

AB 1358, also known as the California Complete Streets Act of 2008, requires cities and counties to include “complete street” policies in their general plans. These policies address the safe accommodation of all users, including bicyclists, pedestrians, motorists, public transit vehicles and riders, children, the elderly, and the disabled. These policies can apply to new streets as well as the redesign of corridors.

3.14.2.3 Regional

**Metropolitan Transportation Commission**

MTC is the Bay Area’s regional transportation planning agency and federally designated MPO. MTC is responsible for preparing the RTP, a comprehensive blueprint for the development of mass transit, highway, airport, seaport, railroad, bicycle, and pedestrian facilities. The RTP is a 20-year plan that is updated every 3 years to reflect new planning priorities and changing projections of future growth and travel demand. The long-range plan must be based on a realistic forecast of future revenues, and the transportation projects taken as a whole must help improve regional air quality. The MTC also screens requests from local agencies for state and federal grants for transportation projects to determine compatibility with the RTP.
**Plan Bay Area**

*Plan Bay Area* is overseen by the MTC and the Association of Bay Area Governments (ABAG). It serves as the region's SCS and the 2040 RTP (preceded by *Transportation 2035*), integrating transportation and land use strategies to manage GHG emissions and plan for future population growth. The RTP and SCS include policies that call for shifting more travel demand to transit and accommodating growth along transit corridors in Priority Development Areas (PDAs). In July of 2013, *Plan Bay Area* was adopted by ABAG and the MTC. Major transit projects included in the plan include the SMART commuter rail and multi-use pathway, the SMART extension from San Rafael to Larkspur, and expanded and enhanced bus service for Golden Gate Transit and Santa Rosa CityBus (Association of Bay Area Governments 2013).

**Focusing Our Vision Program: Priority Development Areas**

The Bay Area’s regional agencies (i.e., ABAG, Bay Area Air Quality Management District [BAAQMD], San Francisco Bay Conservation and Development Commission, MTC) initiated the Focusing Our Vision (FOCUS) Program. The purpose of this program is to encourage growth and revitalization near transit facilities in existing communities. The program provides planning and construction funding for projects in PDAs with high transit accessibility and potential for redevelopment. The Downtown Station area in Santa Rosa, Central Petaluma, Sonoma Mountain Village in Rohnert Park, Downtown/SMART transit area in Cloverdale, Downtown Cotati, and areas of Windsor and Sebastopol all have the potential to be PDAs in Sonoma County (Association of Bay Area Governments 2012).

3.14.2.4  Local

This section discusses the SCTA, the countywide planning and programming agency for transportation of Sonoma County.

In addition, Appendix C, *Local General Plan Goals, Objectives, and Policies*, provides a list of the goals, objectives, and policies in the local general plans of the participating jurisdictions including those related to transportation and traffic. These goals, objectives, and policies were reviewed to assess whether the project is consistent with the general plans of participating jurisdictions. Disclosure of this consistency analysis is for informational purposes. An additional purpose of providing a list of relative local policies is, where appropriate, to provide the context within which the CAP will be locally implemented. As described in the CAP, most of the CAP measures represent implementation of many of the priorities outlined in existing local policies.

Inconsistencies with general plan policies are not necessarily considered significant impacts under CEQA unless they are related to physical impacts on the environment that are significant in their own right.

Implementation of the CAP is consistent with the applicable general plan goals, objectives, and policies of the participating jurisdictions in relation to transportation and traffic.

**Sonoma County Transportation Authority**

The SCTA is the countywide planning and programming agency for transportation in Sonoma County. The SCTA was formed as a result of legislation passed in 1990 to serve as the coordinating and advocacy agency for transportation funding in Sonoma County. The SCTA partners with other
agencies to improve transportation in the County via U.S. 101, state routes, local streets, transit facilities, and bicycle and pedestrian facilities. SCTA prepares the County’s CTP, which serves as the vision for transportation in the County. The goals of the CTP are to maintain the transportation system, relieve traffic congestion, reduce GHG emissions, plan for safety and health, and promote economic vitality in the County. The projects identified in the CTP are included in future RTP/SCS (Plan Bay Area), which aids in prioritizing future program funding for these endeavors.

SCTA is currently in the process of updating the 25-year CTP (Moving Forward 2040). There are 93 bike/walk projects, 31 transit maintenance and expansion projects, and 108 highway and local road projects included in the updated CTP (Sonoma County Transportation Authority 2015).

### 3.14.3 Impacts Analysis

#### 3.14.3.1 Methodology

This analysis is based on a review of the transportation and traffic information contained in the relevant planning documents for Sonoma County and the eight incorporated cities. Planning documents considered in the analysis of potential land use impacts included the Sonoma County General Plan 2020, and the general plans for the cities of Cloverdale, Cotati, Healdsburg, Petaluma, Rohnert Park, Sebastopol, and Sonoma, and the town of Windsor. Effects related to transportation and traffic are analyzed qualitatively and are focused on the CAP’s potential to impact existing transportation and traffic systems in the County during construction and operation.

#### 3.14.3.2 Significance Criteria

The State CEQA Guidelines Appendix G (California Code of Regulations, Title 14, Section 15000 et seq.) has identified significance criteria to be considered for determining whether a project could have significant impacts on existing transportation and traffic.

An impact would be considered significant if construction or operation of the project would have any of the following consequences.

- 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.
- 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.
- 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.
- Substantially increase hazards because of a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).
- Result in inadequate emergency access.
- Conflict with adopted policies, plans, or programs regarding public transit, bicycle or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.
3.14.3.3 Impacts and Mitigation Measures

Impact TR-1a: Implementation of the CAP could conflict with applicable plans, ordinances, or policies related to the transportation circulation system during construction (less than significant with mitigation).

The CAP is a policy-level document that does not include any site-specific designs or proposals, or grant any entitlements for development that would have the potential to conflict with applicable plans, ordinances, or policies related to the transportation circulation system. As a policy document, the CAP would have no direct impact related to transportation, but future implementation of activities supported by the CAP could conflict with applicable plans, ordinances, or policies related to the transportation circulation system.

The CAP promotes mixed-use and transit-oriented development in city centers consistent with existing land use plans. Further, several CAP measures promote the construction of minor changes to the existing streetscape, such as traffic calming roadways improvements; and additional transit, pedestrian, and bicycle facilities to promote increased transit accessibility.

Although specific details are unknown, construction of these facilities may temporarily disrupt traffic flows on area roadways by increasing the amount of heavy-duty construction vehicles sharing the roadways with normal vehicle traffic, disrupt alternative modes of transportation by blocking bicycle or pedestrian pathways or public transit lanes on area roadways, or result in lane closures that could delay the movement of emergency vehicles. Construction that involve minor changes to the existing streetscape could result in the temporary closure of pedestrian and bicycle facilities. Depending on the intensity and magnitude of such activities, construction of facilities promoted by the CAP could conflict with applicable plans, ordinances, or policies related to the transportation circulation system during the construction period. This would be a significant impact.

Construction impacts are outside of the scope of the CAP, and outside of the Regional Climate Protection Authority’s jurisdiction to address. Nonetheless, there is no reason to anticipate future significant construction-related transportation impacts as these impacts can normally be mitigated to less-than-significant levels. As required by CEQA, this EIR identifies potential mitigation measures that lead agencies could and should impose in their consideration of particular projects. Recommended Mitigation Measure TR-1 would require the construction contractor to implement a traffic control plan to minimize disruptions to the transportation circulation system during construction activities promoted by the CAP. In addition, any structures that could be constructed consistent with the CAP would be subject to further CEQA analysis of project-specific impacts. Thus, with implementation of recommended Mitigation Measure TR-1, potential construction impacts on the transportation circulation system would be less than significant.

Mitigation Measure TR-1: Traffic control plan implementation during construction activities.

The lead agencies will require project sponsors and construction contractors to coordinate with the local jurisdiction, transit providers, and emergency service providers to develop a traffic control plan to minimize the effects of construction traffic on transit service, roadway operations, emergency responses, pedestrian and bicycle facilities, and public safety in the surrounding area. (A traffic control plan may not be required for minor construction activities.) The project sponsor will be responsible for monitoring to ensure that the plan is effectively implemented by the construction contractor(s). Measures that may be employed throughout the course of the construction period include, but are not limited to, the following.
- Provide advance notice of lane and sidewalk closures, durations, and alternative routes to emergency service providers, motorists, bicyclists, and pedestrians.
- Provide clearly marked pedestrian detours if any sidewalk or pedestrian walkway closures are necessary.
- Provide clearly marked bicycle detours if heavily used bicycle routes must be closed, or if bicyclist safety may otherwise be comprised.
- Provide crossing-guards and/or flag persons as needed to avoid traffic conflicts and ensure pedestrian and bicyclist safety.
- Locate all stationary equipment as far as possible from areas used heavily by vehicles, bicyclists, and pedestrians.
- Use nonskid traffic plates over open trenches to minimize hazards.
- Implement traffic control measures to minimize vehicle travel delays through construction zones.
- Maintain acceptable response times and performance objectives for emergency response services.
- Avoid routing construction traffic through residential areas to the extent feasible. Prohibit mobilization and demobilization of heavy construction equipment during AM and PM peak traffic hours.
- Maintain access for driveways and private roads outside the immediate construction zone by using steel plates or temporary backfill, as necessary.
- Provide designated areas for construction worker parking wherever feasible to minimize use of parking on streets or in city center areas.

**Impact TR-1b: Implementation of the CAP could conflict with applicable plans, ordinances, or policies related to the transportation circulation system during operation (less than significant).**

The CAP promotes a reduction of VMT in general, which would reduce regional traffic, thus reducing congestion on major arterials and highways. In turn, this would improve overall traffic conditions compared to unabated VMT growth and continued congestion.

Several CAP measures that promote and could include the construction of additional facilities or retrofits to existing buildings aimed at improving energy efficiency and increasing renewable energy use, increasing solid waste diversion, increasing recycled water treatment and use, and increasing capture/use of methane from landfills and dairies. Most of these new facilities would be constructed within or on existing buildings (e.g., rooftops, wastewater treatment plants, landfills, dairies), and these improvements would not generate new trips, as there would be no new uses.

The CAP also includes measures that would promote mixed-use and transit-oriented development in city centers consistent with existing land use plans. The County and incorporated cities have already adopted policies aimed at promoting city-centered development patterns to direct future growth to cities and protect the surrounding agricultural and resource lands. Policies would also result in GHG reduction benefits. As local plans already promote such development, the mixed-use and transit-oriented development within city centers supported by the CAP would not result in new trips or
increased traffic beyond that already anticipated in local general plans. Furthermore, the CAP would not represent a change in local land use policies.

Increased transit operations and additional pedestrian and bicycle facilities promoted by the CAP could increase transit ridership as well as decrease vehicle, bicyclists, and pedestrian conflicts in the vicinity of city centers. With additional pedestrian and bicycle facilities, the number of vehicles on roadways could also potentially be reduced, resulting in an overall benefit to the transportation circulation in city-center area roadways. Adding mixed-use or residential use near SMART stations is part of existing land use policies in local cities with proposed SMART stations, and SMART is an adopted project. Therefore, the CAP would not change the potential for associated impacts on the transportation circulation system. The additional transit facilities and developments in city centers supported by the CAP would not likely conflict with applicable plans, ordinances, or policies related to the transportation circulation system above that already anticipated in existing land use plans and approved transit projects.

The CAP also promotes the construction of solid waste facilities to increase waste diversion, reuse of materials, and recycling. During operating hours at solid waste disposal and transfer sites, heavy trucks deliver solid waste to the transfer site to be sorted and diverted prior to disposal at a landfill. Heavy trucks also pick up sorted solid waste to be disposed of at landfills. Access roads for transfer stations usually experience a greater proportion of heavy truck traffic. Operations associated with a solid waste facility could require substantial amounts of truck trips impacting roadways shared with normal vehicle traffic. The siting of these facilities is currently unknown and would be subject to further CEQA analysis of project-specific impacts regarding new trips generated by the solid waste facility. Thus, potential operational impacts on the transportation circulation system are considered to be less than significant at this time.

**Impact TR-2: Implementation of the CAP could conflict with an applicable congestion management program established by the Sonoma County Transportation Authority for designated roads or highways (less than significant).**

As noted above, the CAP promotes a reduction of VMT in general, which would reduce regional traffic, thus reducing congestion on major arterials and highways, which is consistent with the intent of SCTA congestion management.

As discussed under Impact TR-1b, several CAP measures promote additional transit facilities and operations as well as pedestrian and bicycle facilities to reduce vehicle fuel use by encouraging a shift in the mode of transportation used. The CAP also includes measures that would promote mixed-use and transit-oriented development in city centers consistent with existing land use plans. The County and incorporated cities have already adopted policies aimed at promoting city-centered development patterns to direct future growth to cities and protect the surrounding agricultural and resource lands. Policies also point toward reduced GHGs. As many local plans already promote such development, the mixed-use and transit-oriented development within city centers supported by the CAP would not result in increased traffic or conflict with SCTA’s congestion management program beyond that already anticipated in local general plans. Furthermore, the CAP would not represent a change in local land use policies. Additional transit operations and pedestrian and bicycle facilities promoted by the CAP could increase transit ridership and promote alternative forms of transportation, reducing the overall number of vehicles on roadways. Thus, the additional transit facilities and developments in city centers supported by the CAP would not likely conflict with SCTA’s congestion management program above that already anticipated in existing land use plans, and impacts would be less than significant.
Impact TR-3: Implementation of the CAP could change air traffic patterns resulting in substantial safety risks (less than significant).

Implementation of the CAP would be consistent with existing land use policies, and construction of any facilities promoted by the CAP would not change air traffic patterns resulting in aviation safety risks. Further, any structures that would be constructed or projects that would be undertaken consistent with the CAP would be subject to further CEQA analysis of project-specific impacts and applicable federal, state, and local aviation safety regulations. Local regulations require compliance with the adopted Sonoma County CALUP, which identifies compatible land uses in the areas adjacent to the airports as related to noise, airspace, and safety. With compliance with local regulations, impacts from changing air traffic patterns resulting in aviation safety risks would be less than significant.

Impact TR-4a: Implementation of the CAP could substantially increase hazards due to design features or incompatible uses during construction (less than significant with mitigation).

As described in Impact TR-1a, construction of facilities promoted by the CAP may temporarily disrupt traffic flows on area roadways by increasing the amount of heavy-duty construction vehicles sharing the roadways with normal vehicle traffic, disrupt alternative modes of transportation by blocking bicycle or pedestrian pathways or public transit lanes on area roadways, or result in lane closures that could delay the movement of emergency vehicles. During the construction period, the presence of construction or the increased amount of heavy-duty construction vehicles on roadways could substantially increase hazards due to incompatible uses with normal vehicles on roadways. This could result in a significant impact. Implementation of recommended Mitigation Measure TR-1, which requires the preparation of a traffic control plan, would minimize hazards due to incompatible uses during the construction period, and impacts would be less than significant.

Impact TR-4b: Implementation of the CAP could substantially increase hazards due to design features or incompatible uses during operation (less than significant).

There are several CAP measures that promote the construction of new facilities aimed at increasing renewable energy use, increasing solid waste diversion, increasing capture/use of methane from landfills, and reducing emission from livestock operations. Most of these new facilities would be constructed within or on existing buildings (e.g., rooftops, wastewater treatment plants, landfills, and dairies) and would not change the existing area roadways causing a substantial increase in hazards due to design features or incompatible uses.

Several CAP measures encourage a shift in the mode used for transportation and to reduce travel demand. These CAP measures promote minor changes to the existing streetscape, such as traffic calming roadways improvements; and adding transit, pedestrian, and bicycle facilities to promote increased transit accessibility. In general, these roadways and transit improvements would decrease vehicle, bicyclists, and pedestrian conflicts. Any streetscape improvements involving transit, pedestrian, and bicycle facilities would be required to comply with Caltrans and local design guidelines for roadways and transportation facilities as applicable. With compliance with state and local regulations and design guidelines, roadways and transit improvements promoted by the CAP would not substantially increase hazards due to design features or incompatible uses.

Further, the CAP also promotes the construction of mixed-use and transit-oriented development in city centers as well as solid waste facilities to increase waste diversion, reuse of materials, and recycling. Infill mixed-use and transit-oriented development in city centers would be located near existing similar uses and would also be consistent with local land use plans. These mixed-use and
transit-oriented developments would not likely change the existing area roadways causing a substantial increase in hazards due to design features or incompatible uses. The siting of these facilities is currently unknown and would be subject to further CEQA analysis of project-specific impacts regarding new trips generated by the solid waste facility and compatibility with adjacent land uses. Thus, impacts related to potential hazards due to incompatible uses during operation are considered to be less than significant at this time.

**Impact TR-5a: Implementation of the CAP could result in inadequate emergency access during construction (less than significant with mitigation).**

As described under Impact TR-1a, construction of facilities promoted by the CAP may temporarily disrupt traffic flows on area roadways by increasing the amount of heavy-duty construction vehicles sharing the roadways with normal vehicle traffic, disrupt alternative modes of transportation by blocking bicycle or pedestrian pathways or public transit lanes on area roadways, or result in lane closures that could delay the movement of emergency vehicles. During the construction period, construction activities or the increased amount of heavy-duty construction vehicles on roadways could result in inadequate emergency access. This could result in a significant impact. Implementation of recommended Mitigation Measure TR-1, which requires the preparation of a traffic control plan, would minimize delays to emergency access during the construction period, and impacts would be less than significant.

**Impact TR-5b: Implementation of the CAP could result in inadequate emergency access during operation (less than significant).**

Operationally, most of the new facilities promoted by CAP measures would have been constructed within or on existing buildings (e.g., rooftops, wastewater treatment plants, landfills, and dairies) and would not result in inadequate emergency access as these facilities would be additions to the existing structure. The CAP also promotes the construction of mixed-use and transit-oriented development in city centers; and solid waste facilities to increase waste diversion, reuse of materials, and recycling. Infill mixed-use and transit-oriented development in city centers would be consistent with existing local land use plans, and the CAP would not result in new impacts because it would not change existing land use plans. Although the siting and location of the solid waste facilities are unknown, these facilities are generally structures that are located on a continuous parcel of land and would not change access on public right-of-way or result in inadequate emergency access.

Further, there are several CAP measures that encourage a shift in the mode used for transportation and reducing travel demand. These CAP measures promote minor changes to the existing streetscape, such as traffic calming roadways improvements; and additional transit, pedestrian, and bicycle facilities to promote increased transit accessibility. In general, these roadways transit, pedestrian, and bicycle improvements would not deteriorate accessibility or result in inadequate emergency access but instead would promote alternatives to single-occupancy vehicle travel. Moreover, the CAP promotes a reduction of VMT in general, which would reduce regional traffic, thus reducing congestion on major arterials and highways, which will ease response times for emergency vehicles in general compared to unabated VMT growth. Thus, impacts would be less than significant.
Impact TR-6: Implementation of the CAP could conflict with adopted policies, plans, or programs related to public transit, bicycle, or pedestrian facilities or could otherwise decrease the performance or safety of such facilities (beneficial impact).

Several CAP measures promote additional transit facilities and operations as well as pedestrian and bicycle facilities to reduce vehicle fuel use by encouraging a shift in the mode of transportation used. As discussed above, these improvements could increase transit ridership as well as decrease vehicle, bicyclist, and pedestrian conflicts in the vicinity of city centers. With additional pedestrian and bicycle facilities, the number of vehicles on roadways could also potentially be reduced resulting in an overall increase in the safety of these facilities. Further, CAP measures promoting additional transit facilities and bicycle and pedestrian facilities are consistent with the goals, objectives, and policies of local land use and general plans. Thus, implementation of the CAP would be consistent with policies, plans, or programs related to public transit, bicycle, or pedestrian facilities, and impacts would be beneficial.

3.14.3.4 Cumulative Impacts

Impact C-TR-1: Implementation of the CAP, in combination with other foreseeable development in the surrounding area, could have a significant cumulative impact to transportation and traffic (less than cumulatively considerable with mitigation).

The geographic context for the evaluation of cumulative construction traffic impacts is localized to the truck routes and nearby roadways for a project. For cumulative operational transportation and traffic impacts, the geographic context is generally larger; thus, the overall growth of the County is considered when assessing potential cumulative impacts. The context of cumulative transportation and traffic impacts addresses the effects of the CAP in combination with other development in Sonoma County.

Implementation of the CAP policies to reduce GHG emissions could promote the construction of new facilities. Although the siting and location of facilities promoted by the CAP are unknown, if the construction of a nearby project occurs at the same time as the construction for a CAP-promoted facility, cumulative construction transportation and traffic effects could occur. As discussed under Impact TR-1a, construction of facilities promoted by the CAP could affect existing roadways and bicycle and pedestrian facilities. However, with implementation of recommended Mitigation Measure TR-1, potential construction transportation and traffic impacts are expected to be less than significant. Although specific construction transportation and traffic mitigation measures for other projects are unknown, construction of these projects would be required to be compliant with applicable local standards. Given this, it is not anticipated that the CAP would contribute considerably to significant cumulative construction transportation impacts.

With regards to cumulative operational transportation and traffic impacts, the implementation of cumulative development projects would have the potential to increase traffic due to additional vehicles and vehicle trips associated with growth and development in the County. However, implementation of the CAP would not result in a population increase greater than projected for the buildout of local land use plans because the CAP would not change local land use plans, and the additional facilities supported by the CAP would result in only minor employment increases and associated population growth. Rather, the CAP supports existing land use plans and policies that seek to concentrate the expected population growth in city centers and along transit corridors. Densifying the population in city centers could result in a localized incremental increases in traffic within the area, but this would be the result of existing land use plans and policies and not an
incremental change brought about by the CAP. Overall, the CAP should help to reduce VMT regionally, which would be beneficial for general traffic conditions. Further, although specific details of other projects are unknown, all projects would be required to be compliant with applicable local standards regarding traffic and transportation. Thus, although cumulative impacts on operational transportation and traffic may be significant due to increasing vehicles and vehicle trips from cumulative development in the County, the CAP’s contribution would be less than considerable and in many cases beneficial.
This chapter includes the following other discussions and analyses required by the California Environmental Quality Act (CEQA).

- Cumulative impacts
- Significant and unavoidable impacts
- Significant irreversible environmental changes
- Growth-inducing impacts

4.1 Cumulative Impacts

4.1.1 Approach to Impact Analysis

4.1.1.1 Legal Requirements

State CEQA Guidelines require that the cumulative impacts of a project be addressed in an environmental impact report (EIR) when the cumulative impacts are expected to be significant and when the project's incremental effect is cumulatively considerable (State CEQA Guidelines Section 15130(a)). Cumulative impacts are impacts on the environment that result from the incremental impacts of a proposed action when added to other past, present, and reasonably foreseeable future actions (State CEQA Guidelines Section 15355(b)). Such impacts can result from individually minor but collectively significant actions taking place over time.

State CEQA Guidelines Section 15130 states that the discussion of cumulative impacts need not provide as much detail as the discussion of effects attributable to the project alone. The level of detail should be guided by what is practical and reasonable.

4.1.1.2 Methodology

According to the State CEQA Guidelines Section 15130, an adequate discussion of significant cumulative impacts should contain the following discussions.

- An analysis of related future projects or planned development that would affect resources in the project area similar to those affected by the project
- A summary of the expected environmental effects to be produced by those projects, with specific reference to additional information stating where that information is available
- A reasonable analysis of the cumulative impacts of the relevant projects

An EIR must examine reasonable, feasible options for mitigating or avoiding the project’s contribution to any significant cumulative impacts.

When evaluating cumulative impacts, CEQA recommends one of the following two methods.
1. The cumulative analysis would consider any past, present, and probable future projects producing related or cumulative impacts, including projects outside the control of the lead agency (i.e., project list approach).

2. The cumulative analysis would consider projections contained in an adopted local, regional, or statewide plan, or would use a prior environmental document which has been adopted or certified for such a plan (i.e., plan approach).

The present EIR uses the latter approach. The adopted general plans for the County and the incorporated cities of Cloverdale, Cotati, Healdsburg, Petaluma, Rohnert Park, Sebastopol, and Sonoma, and town of Windsor are used as the basis for consideration of reasonably probable future projects for most of the resource topics. Exceptions include air quality, energy, and greenhouse gas emissions, which use the plans of the North Coast Air Basin and the Bay Area Air Quality Management District; and hydrology and water quality, which uses the basin plan of the Bay Area Regional Water Quality Control Board and the North Coast Regional Water Quality Control Board.

The cumulative analysis is limited to those impacts that are cumulatively significant and to which the Climate Action 2020: Community Climate Action Plan (CAP) would contribute. Put another way, where the CAP in conjunction with past, present, and reasonably probable future projects would not result in a significant cumulative impact, no analysis is undertaken. Where there is the potential for a significant cumulative impact, the CAP’s incremental contribution to that impact is examined to determine whether the contribution is considerable. If a contribution is found to be feasible, the EIR recommends mitigation to reduce the CAP’s contribution, when feasible.

4.1.2 Analysis of Cumulative Impacts

The project would not contribute to cumulative impacts concerning minerals or population and housing. Therefore, these resources will not be discussed further in this context.

The cumulative impact analysis for each of the resource topics analyzed in the EIR (aesthetics; agriculture and forestry resources; air quality; biological resources; cultural resources; geology and soils; greenhouse gas emissions; hazards and hazardous materials; hydrology and water quality; land use and recreation; noise; public services, utilities, and energy; and traffic and transportation) is presented in Sections 3.2 through 3.14. These sections describe the potential for the CAP, in combination with the cumulative projects, to result in cumulatively significant environmental impacts. Each analysis considers the cumulative setting of the potential impacts. The evaluations identify whether the cumulative impact would be significant, and whether the CAP’s contribution to a significant cumulative impact would be considerable.

Overall, with mitigation, the CAP’s contribution to cumulative impacts would not be substantial and thus are considered less than significant, with the exception of its contribution to cultural resources. The CAP could substantially change character-defining features of individual historic buildings that cannot be fully mitigated. Thus, the CAP may contribute to a cumulatively considerably impact to historic resources even with mitigation.

4.2 Significant and Unavoidable Impacts

Section 21067 of CEQA and Sections 15126(b) and 15126.2(b) of the State CEQA Guidelines require that an EIR describe any significant impacts, including those that can be mitigated but not reduced...
to a less-than-significant level. Furthermore, where there are impacts that cannot be alleviated without imposing an alternative design, their implications and the reasons why the CAP is being proposed, notwithstanding their effect, should also be described.

Table 4-1 shows the significant and unavoidable impacts resulting from implementation of the CAP and mitigation measures that would be required but would not reduce the impact to a less-than-significant level. This impact is related to historic resources and how implementation of CAP-promoted rooftop solar facilities could substantially change the character-defining features of historic buildings.

Due to this significant and unavoidable environmental impact, approval of the CAP would require that a Statement of Overriding Considerations be adopted, indicating that the Regional Climate Protection Authority (RCPA) is aware of the significant environmental consequences and believe that the benefits of approving the CAP outweigh its unavoidable significant environmental impact.

<table>
<thead>
<tr>
<th>Impact</th>
<th>Significance before Mitigation</th>
<th>Mitigation</th>
<th>Significance after Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impact CUL-1: Implementation of the CAP (solar roof installations) could result in the potential disturbance of historical resources</td>
<td>Significant</td>
<td>Mitigation Measure CUL-1a: Review of alternatives for solar roofs on historic buildings Mitigation Measure CUL-1b: Studies documenting the presence/absence of historical resources Mitigation Measure CUL-1c: Historical resources investigations</td>
<td>Significant and unavoidable</td>
</tr>
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### 4.3 Significant Irreversible Environmental Changes

Section 15126.2(c) of the State CEQA Guidelines requires that an EIR consider any significant irreversible environmental changes that would be caused by the CAP should it be implemented. Section 15126.2(c) reads as follows.

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.

A project would result in significant irreversible environmental changes if any of the following criteria are met.

- The primary and secondary impacts would generally commit future generations to similar uses.
- The project would involve a large commitment of nonrenewable resources.
- The project would involve uses in which irreversible damage could result from any potential environmental accidents associated with the project.
The proposed consumption of resources is not justified (e.g., the project involves the wasteful use of energy).

The CAP would not involve uses in which irreversible damage could result from any potential environmental accident associated with the project. The CAP proposes to reduce greenhouse gas (GHG) emissions in the County. In general, the CAP and the co-benefits of reducing GHG emissions (e.g., improving air quality, reducing electricity and gas usage, reducing water use, protecting the long-term viability of natural landscapes) are beneficial to the environment and would not result in irreversible damages in the event of environmental accidents.

As discussed throughout the draft EIR, the CAP does not propose any changes to land use or zoning designations that would alter the planned population or job growth anticipated under the local general plans such that there would be additional growth. The project does not propose new development; the CAP encourages transit-oriented and mixed-use development consistent with the policies adopted by the County and local jurisdictions. The CAP also encourages construction of energy-efficient retrofits, new facilities aimed at increasing renewable energy use, solid waste facilities to increase waste diversion, and transit/transportation facilities to encourage a shift in the mode of transportation used, all of which would entail a small commitment of energy and building materials. This commitment of energy and building materials would be commensurate with that of other projects of similar magnitude. Operation of new energy-generating facilities and solid waste facilities may entail a further commitment of energy resources in the form of natural gas, electricity, and water resources. However, this commitment would be minimal, consisting of routine maintenance of the facilities.

In fact, the CAP would be beneficial in the conservation of energy and nonrenewable resources. The CAP measures would reduce energy use though increasing energy-efficiency of buildings; reduce fossil fuel use through switching equipment to electricity, increasing vehicle and equipment efficiency, and encouraging a shift toward low-carbon fuels; and increase forest conservation and afforestation through enhancing open and working lands and increasing carbon sequestration. The CAP does not propose any development that would entail a wasteful commitment of energy or non-renewable resources. The CAP would reduce long-term energy demand and the corresponding impacts.

4.4 Growth-Inducing Impacts

Section 21100(b)(5) of CEQA requires an EIR to discuss how a project, if implemented, may induce growth and the impacts of that induced growth (see also State CEQA Guidelines Section 15126). CEQA requires the EIR to discuss specifically “the ways in which the project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment” (State CEQA Guidelines Section 15126.2(d)). The State CEQA Guidelines do not provide specific criteria for evaluating growth inducement and state that “it must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment.” CEQA does not require separate mitigation for growth inducement, as it is assumed that these impacts are already captured in the analysis of environmental impacts (see Chapter 3, Setting, Impacts, and Mitigation Measures). Furthermore, the State CEQA Guidelines require that an EIR “discuss the ways” a project could be growth inducing and that it “discuss the characteristic of some projects which may encourage and facilitate other activities that could significantly affect the environment.”
According to the State CEQA Guidelines, a project would have potential to induce growth if it would result in either of the following.

- Remove obstacles to population growth (e.g., through the expansion of public services into an area that does not currently receive these services), or through the provision of new access to an area, or a change in a restrictive zoning or General Plan land use designation.
- Result in economic expansion and population growth through employment opportunities and/or construction of new housing.

In general, a project could be considered growth-inducing if it directly or indirectly affects the ability of agencies to provide needed public services, or if it can be demonstrated that the potential growth significantly affects the environment in some other way. However, the State CEQA Guidelines do not require a prediction or speculation of where, when, and in what form such growth would occur (State CEQA Guidelines, Section 15145).

Typically, the growth-inducing potential of a project is considered significant if it fosters growth or a concentration of population in a different location or in excess of what is assumed in pertinent general plans or land use plans, or projections made by regional planning agencies such as the Association of Bay Area Governments.

As described in Chapter 2, *Project Description*, implementation of the CAP would not result in a population increase greater than projected for the buildout of local land use plans. The CAP would not change local land use plans, and the additional facilities supported by the CAP would result in only minor employment increases and associated population growth. Rather, the CAP supports existing land use plan and policies that seek to concentrate the expected population growth in city centers and along transit corridors. Densifying the population in city centers could result in localized incremental impacts, but this is the result of existing land use plans and policies and not an incremental change with the CAP. Thus, the CAP would not be growth inducing.
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Chapter 5
Alternatives Analysis

5.1 Introduction

The California Environmental Quality Act (CEQA) (Public Resources Code [PRC], Section 21000 et seq.) and the State CEQA Guidelines (California Code of Regulations, Title 14, Section 15000 et seq.) require that an environmental impact report (EIR) "describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives" (State CEQA Guidelines Section 15126.6(a)). If mitigation measures or a feasible project alternative that would meet most of the basic project objectives would substantially lessen the significant environmental effects of a proposed project, then the lead agency should not approve the proposed project unless it determines that specific technological, economic, social, or other considerations make the mitigation measures and the project alternative infeasible (PRC Section 21002, State CEQA Guidelines Section 15091(a)(3)). The EIR must also identify alternatives that were considered by the lead agency but rejected as infeasible during the scoping process and briefly explain the reasons underlying the lead agency's determination (State CEQA Guidelines Section 15126.6(c)). Therefore, pursuant to the State CEQA Guidelines, this chapter briefly explains the reasons why certain identified alternatives were rejected as infeasible.

One of the alternatives that must be analyzed is the No Project Alternative. The analysis must consider the existing conditions at the time the notice of preparation (NOP) was published as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved and development continued to occur in accordance with existing plans and consistent with available infrastructure and community services (State CEQA Guidelines Section 15126.6(e)(2)). The No Project Alternative is not required to be feasible, nor is it required to meet any of the project objectives or reduce the project's expected impacts to any degree.

In addition to the No Project Alternative, this chapter describes additional alternatives (Zero Net Energy Buildings Alternative and Carbon Offset Alternative) to the proposed Climate Action 2020: Community Climate Action Plan (CAP) and analyzes the impacts of each. It compares the significant impacts of the alternatives to the significant environmental impacts of the project as proposed.

5.2 Alternatives Selection Process

As allowed by CEQA, an EIR needs to analyze only alternatives that are feasible, that meet most of the project objectives, and that reduce one or more of the significant impacts of the project. Thus, it is important to establish project objectives and profile the significant impacts of the project.

The NOP for the project was available for review and comment during a 30-day period between September 28 and October 27, 2015. One suggestion regarding the alternatives was received in response to the NOP. This alternative (Increased Employment Alternative) is discussed below in Section 5.5, Alternatives Considered but Rejected.
5.2.1 Project Objectives

As discussed in Chapter 2, Project Description, the proposed CAP would include both regional measures, to be implemented by the Regional Climate Protection Authority (RCPA) and other regional agencies (with local government support), and local measures, to be implemented by local governments (with RCPA and regional agency support and on their own). The RCPA, other regional agencies, and local governments in Sonoma County (County) have identified the following project objectives, which are relevant to the physical impacts considered in this Draft EIR:

- Identify specific and implementable actions that the RCPA, other regional agencies, each participating community, and individual residents and businesses can take to reduce greenhouse gas (GHG) emissions, consistent with, and even exceeding, the goals established in Assembly Bill (AB) 32. **Specifically, the CAP target is to reduce countywide GHG emissions to 25% below 1990 levels by 2020.**
- Promote consistency with the land use policy direction and growth anticipated in local general plans.
- Allow for continued economic growth to provide opportunities for businesses and residents.

As stated above, the alternatives to a proposed project are meant to feasibly attain most of the basic project objectives while avoiding or substantially lessening significant impacts. Significant project-specific and cumulative impacts related to implementation of the CAP are discussed below.

5.2.2 Project Features

The CAP seeks to reduce GHG emissions through the approaches listed below.

- **Building Energy** emissions-reduction strategies include:
  - Increasing the energy efficiency of buildings
  - Increasing renewable energy use
  - Switching equipment from fossil fuel to electricity

- **Transportation and Land Use** emissions-reduction strategies include:
  - Reducing travel demand through focused growth
  - Encouraging a shift toward low-carbon transportation options
  - Increasing vehicle and equipment fuel efficiency
  - Encouraging a shift toward low-carbon fuels in vehicles and equipment
  - Reducing idling

- **Solid Waste Generation** emissions-reduction strategies include:
  - Increasing solid waste diversion
  - Increasing the capture and use of methane from landfills

- **Water Conveyance and Wastewater Treatment** emissions-reduction strategies include:
  - Reducing water consumption
  - Increasing recycled water and greywater use
  - Increasing water and wastewater infrastructure efficiency
  - Increasing the use of renewable energy in water and wastewater systems
Livestock and Fertilizer emissions-reduction strategies include:

a. Reducing emissions from livestock operations
b. Reducing emissions from fertilizer use

Advanced Climate Initiatives aim to reduce emissions by:

a. Protecting and enhancing the value of open and working lands
b. Promoting sustainable agriculture
c. Increasing carbon sequestration
d. Educating residents about emissions from the consumption of goods and services

5.2.3 Significant Impacts of the Project (Before Mitigation)

The significant impacts, prior to mitigation, that would result from implementation of the CAP are provided below for each environmental resource area. This impact analysis is provided in Chapter 3, Environmental Setting, Impacts, and Mitigation Measures, and summarized in Table ES-1 of the Executive Summary. All significant impacts, except one, can be reduced to a less-than-significant level with mitigation measures, as described in Chapter 3. Implementation of the CAP would result in one significant and unavoidable impact (Impact CUL-1) on historic resources from the installation of solar rooftops.

Aesthetics

- The project could result in daytime glare impacts for motorists while traveling in the project vicinity as well as residents in the area if reflections from the rooftop photovoltaic solar panels are directed toward a roadway or residence, thereby affecting public safety (Impact AES-2). These impacts can be mitigated to a less-than-significant level with mitigation identified in Section 3.2, Aesthetics.

Air Quality

- The project could increase emissions of ozone-precursor pollutants (i.e., reactive organic gases [ROGs] and oxides of nitrogen [NOX]) and fugitive dust (i.e., particulate matter [PM]) during new or remodeled construction of solid waste facilities, mixed-use and transit-oriented development in city centers, wastewater plant upgrades, recycled water line extensions, and transportation facilities (Impact AQ-2a). These impacts can be mitigated to a less-than-significant level with mitigation identified in Section 3.4, Air Quality.

Biological Resources

- The project could affect sensitive and special-status species, their habitat, migratory corridors, and wetlands or riparian habitat if solid waste facilities, recycled water line extensions, and transportation facilities (that are not part of existing roadways) are sited in areas with these resources (Impacts BIO-1 and BIO-2). These impacts can be mitigated to a less-than-significant level with mitigation identified in Section 3.5, Biological Resources.

- The project could conflict with local tree ordinances if the construction of solid waste facilities, recycled water line extensions, or transportation facilities or the installation of rooftop photovoltaic solar panels (if overhanging trees substantially hinder access) would
result in the removal of protected trees (Impact BIO-3). These impacts can be mitigated to a less-than-significant level with mitigation identified in Section 3.5, Biological Resources.

- **Cultural Resources**
  - The project could alter a historic resource’s physical characteristics if energy-efficient retrofits; electric charging or alternative fueling facilities; transit, pedestrian, bicycle, or traffic-calming facilities; solid waste facilities; wastewater plant upgrades; recycled water line extensions; methane digesters; or mixed-use and transit-oriented developments in city centers are located at the site of a historic resource, thereby resulting in an adverse change in the significance of the resource itself. Although unlikely, for the reasons also discussed in Section 3.2, Aesthetics, future projects in furtherance of the plan could alter the character-defining feature of a historic building if rooftop photovoltaic solar panels are installed on the structure (Impact CUL-1). These impacts can be mitigated with mitigation identified in Section 3.6, Cultural Resources, but not necessarily to a less-than-significant level related to potential impacts of solar roofs on historic buildings.
  - The project could disturb archaeological resources, paleontological resources, and human remains through ground-disturbing activities associated with the construction of solid waste facilities, recycled water line extensions, transportation facilities, and mixed-use and transit-oriented development in city centers (Impacts CUL-2 and CUL-3). These impacts can be mitigated to a less-than-significant level with mitigation identified in Section 3.6, Cultural Resources.

- **Hazards and Hazardous Materials**
  - The project could result in the accidental release of hazardous materials during the installation of rooftop photovoltaic solar panels or the construction of energy-efficient retrofits; electric charging or alternative fueling facilities; transit, pedestrian, bicycle, or traffic-calming facilities; solid waste facilities; wastewater plant upgrades; recycled water line extensions; methane digesters; or mixed-use and transit-oriented development in city centers (Impacts HAZ-1a and HAZ-2). These impacts can be mitigated to a less-than-significant level with mitigation identified in Section 3.9, Hazards and Hazardous Materials.

- **Transportation and Traffic**
  - The project could temporarily disrupt traffic flows on area roadways, substantially increase hazards due to incompatible uses, or delay emergency access by increasing the number of heavy-duty construction vehicles on roadways with normal vehicle traffic during the installation of rooftop photovoltaic solar panels or the construction of energy-efficient retrofits; electric charging or alternative fueling facilities; transit, pedestrian, bicycle, or traffic-calming facilities; solid waste facilities; wastewater plant upgrades; recycled water line extensions; methane digesters; or mixed-use and transit-oriented development in city centers (Impacts TRA-1a, TRA-4a, and TRA-5a). These temporary impacts can be mitigated to a less-than-significant level with mitigation identified in Section 3.5, Transportation/Traffic.
5.3 Description of Alternatives Considered

Given the goal of reducing significant environmental impacts, as listed above, alternatives were developed for evaluation in the Draft EIR:

- No Project Alternative
- Zero Net Energy Buildings Alternative
- Carbon Offset Alternative.

5.3.1 No Project Alternative

The No Project Alternative, which is required to be analyzed under CEQA, assumes that the County will not adopt and implement a countywide CAP. The No Project Alternative scenario would include already-adopted (as of September 28, 2015, when the NOP was published) plans and programs related to reducing GHG emissions.

The nine statewide measures for reducing GHG emissions related to building energy and transportation would remain in effect as part of the No Project Alternative. These statewide measures to reduce GHG emissions include the following and would result in 582,364 MTCO$_2$e of GHG emissions reductions in 2020:

- **Title 24 Energy Efficiency Standards for Commercial and Residential Buildings (Title 24)** requires that new and remodeled buildings be designed to conserve energy and water.
- **Lighting Efficiency and Toxics Reduction Act (AB 1109)** requires a reduction in electricity used for lighting in new buildings through regulation and lighting standards.
- **Industrial Boiler Efficiency** requires an annual tuning of all boilers or the installation of controls and systems to maximize efficiency.
- **Renewable Portfolio Standard (RPS)** requires electric utilities, including Pacific Gas and Electric (PG&E), Healdsburg, and Sonoma Clean Power (SCP), to procure an increasing amount of their electricity from eligible renewable sources of up to 33% by 2020.
- **Residential Solar Water Heater Program (AB 1470)** provides incentives to encourage the installation of solar water-heating systems.
- **Pavley Emissions Standards for Passenger Vehicles and the Low-Carbon Fuel Standard** requires increasing the efficiency of automobiles and light-duty trucks by 30% from 2002 levels by 2016. This also requires a reduction in the carbon intensity of transportation fuels sold in California for on-road vehicles.
- **Advanced Clean Cars** requires that vehicle manufacturers increase the average fuel efficiency of their new vehicles beyond the Pavley requirements.
- **Vehicle Efficiency Measures in AB 32** requires increasing the efficiency of vehicles through proper tire inflation, aerodynamic designs for heavy-duty vehicles, hybrid technology for heavy-duty vehicles, and other measures.
- **Low Carbon Fuel Standard (LCFS)** requires a minimum 10% reduction in the carbon intensity of transportation fuels sold in California for off-road vehicles.
Additional measures that would be implemented as part of the No Project Alternative include the following:

- **Measure 1-C1, Community Energy Efficiency Retrofits for Existing Buildings**, includes existing programs and would result in 3,954 MTCO$_2$e of reductions.
- **Measure 2-C1, Community Choice Aggregation (Sonoma Clean Power)**, is an adopted program and would result in 48,004 MTCO$_2$e of reductions.
- **Measure 5-C3, SMART**, is an adopted project and is already included in the base forecast for 2020.
- **Measure 11-L1, SB X7-7 – Water Conservation Act of 2009** is a mandatory state requirement being implemented locally and would result in 16,653 MTCO$_2$e of reductions.
- **Measure 14-C1, Sonoma County Water Agency Carbon-Free Water by 2015** is an adopted project and would result in 2,145 MTCO$_2$e of reductions.

This alternative would avoid the generation of approximately 1.21 million MTCO$_2$e in 2020 solely as a result of implementation of the state, regional, and local measures noted above, which would remain in effect as part of the No Project Alternative. In addition, new development projects would be required to comply with CEQA concerning GHG emissions and thus would still be required to reduce their emissions compared with inmitigable levels. However, GHG emissions reduction from new development has not been quantified because of insufficient information.

The GHG emissions avoided under the No Project Alternative would represent approximately a 20% reduction in GHG emissions, compared with 1990 levels, by 2020. This alternative is feasible and would lessen the severity of the project’s environmental impacts but would not meet the basic objective of the project to reduce countywide GHG emissions to 25% below 1990 levels by 2020.

### 5.3.2 Zero Net Energy Buildings Alternative

In 2007, the California Energy Commission adopted in Title 24 the goal to achieve zero net energy (ZNE) by 2020 for homes and zero net energy by 2030 for commercial buildings. Under this alternative, in addition to adopting the CAP, the County would also adopt an updated green building ordinance, requiring ZNE for all new commercial and residential buildings in the County beginning in 2017. ZNE buildings produce enough renewable energy to meet their own annual energy consumption requirements, thereby reducing the use of non-renewable energy in the building sector. These buildings achieve ZNE first though high levels of energy efficiency to minimize energy use, then through the addition of on-site renewable power generation. Energy-efficiency measures include building design strategies and features that reduce energy demand such as high-performance building envelopes, air barrier systems, daylighting, sun control and shading design, select windows and glazing, passive solar heating, natural ventilation, and water conservation. Energy use could be managed with efficient equipment and systems, such as energy-efficient lighting; electric lighting controls; high-performing heating, ventilation, and air-conditioning (HVAC); geothermal heat pumps; and energy-conversion devices. Once efficiency measures have been incorporated, the remaining energy needs of the building can be met with renewable generation on-site. Common on-site electricity generation strategies include photovoltaics, solar water heating, and wind turbines.

This measure would avoid the generation of approximately 35,000 MTCO$_2$e by 2020. With the increased GHG emissions reductions from ZNE, the CAP measures that could result in significant
secondary environmental impacts would be modified. The CAP measures incentivizing rooftop photovoltaic solar panels on existing residential and non-residential buildings (e.g., PACE financing) would be modified to not include installations on historic buildings, although permitting for rooftop solar would remain ministerial under AB 2188 and SB 226 (Government Code 65850.5; PRC 21080.35). A major issue discussed at the California Energy Commission regarding phasing in ZNE requirements is economic feasibility. While it is technically feasible to construct ZNE buildings using current technology, the cost of constructing such buildings would be substantially higher than the cost of constructing current new buildings; therefore, it is uncertain whether it would be financially feasible for private and public project proponents to require all new construction to meet such a higher standard immediately starting in 2017. Operationally, ZNE buildings would be much more efficient than buildings that meet the current 2013 Title 24 requirements and therefore would have lower energy demands and associated costs. No assessment has been done of the financial tradeoffs of the higher upfront costs vs. the operational reduction in energy costs.

This alternative would lessen the severity of the project's environmental impacts, and would meet the basic objective of the project to reduce countywide GHG emissions to 25% below 1990 levels by 2020, although it would likely involve major costs. This alternative could potentially have negative impacts on the availability of new housing within the County.

5.3.3 Carbon Offset Alternative

Under the Carbon Offset Alternative, the County would reduce GHG emissions through the purchase of valid carbon offsets. Carbon offsets represent reductions in GHG that compensate (or offset) emissions from somewhere else. Offset projects could range from sequestration to investments in energy or water efficiency, wind or solar farms, methane capture at animal farms or landfills, preservation of forested lands subject to development, planting of forests, replacement of high-global warming potential gas use, carbon farming, or other measures.

The offsets could be purchased locally (i.e., within the County), outside the County in California, elsewhere in the United States, or in other countries. If offsets are purchased outside the County, the offsets would provide little to no economic or environmental co-benefits to the County, except the cost savings that might occur if the specific offsets purchased would be less costly than implementing direct GHG reduction measures locally.

With increased reliance on carbon offsets, CAP measures that could result in significant secondary environmental impacts would be modified or not adopted. The CAP measures incentivizing rooftop photovoltaic solar panels on existing residential and non-residential buildings would be modified to not include installations on historic buildings. It is unknown where and to what extent solar might be proposed on historic buildings, but for the sake of this analysis it is assumed that 10 percent of the proposed new solar installations would be on historic buildings. In order to meet the reduction target and replace the GHG emissions reductions that the above-mentioned CAP measures would achieve, the County would need to purchase approximately 3,600 MTCO$_2$e of offsets in 2020 (and for every year thereafter for the equivalent lifetime of solar panels, nominally assumed to be 20 years).

At present, the cost of offsets and carbon allowances in California can range from approximately $4 per MTCO$_2$e on the voluntary market to $13 per MTCO$_2$e on the regulated market (California Cap and Trade price as of March 2016). Using this range, the 2020 purchase of 3,600 MTCO$_2$e of offsets could range from approximately $14,000 to $47,000 per year. Although it is difficult to predict the cost of offsets in the future, one way of estimating future costs is by using the range of allowable
allowance credit prices (floor of $10 per MTCO$_2$e to a ceiling of $40 per MTCO$_2$e) in the California cap-and-trade system, which is the largest market in California. Using this range, the 2020 purchase of 3,600 MTCO$_2$e of offsets could range from about $36,000 to $144,000 per year.

In concept, offsets could be used to replace any of the new regional or local measures proposed in the CAP, but costs would increase if measures with larger GHG reduction values were to be offset instead of being implemented. Under this alternative, the RCPA and the implementing cities would need to decide how these offsets would be funded. Possibilities could include payment through city or county general funds, through fees imposed on existing and/or new development, or other requirements.

This alternative is feasible, would lessen the severity of the project's secondary environmental impacts, and would meet the basic objective of the project to reduce countywide GHG emissions to 25% below 1990 levels by 2020. Given the ongoing nature of emissions for projects, and the uncertain life of projects, this alternative would have a significant administrative overhead and it could also lead to a significant amount of money leaving the County.

### 5.4 Alternatives Considered but Rejected

State CEQA Guidelines Section 15126.6(f)(2) states that a Draft EIR must consider off-site alternatives if such alternatives are deemed to be feasible by the lead agency. As stated in State CEQA Guidelines Section 15126.6(f)(1), factors that may be considered when a lead agency is assessing the feasibility of an alternative include:

- site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries (projects with a regionally significant impact should consider the regional context), and whether the proponent can reasonably acquire, control, or otherwise have access to the alternative site (or the site is already owned by the proponent).

The RCPA also considered other alternatives but dismissed the alternatives from further analysis in this Draft EIR because the alternatives were determined to be infeasible, would not meet the basic project objectives, or would not reduce one or more of the significant impacts of the project. The reasons for their dismissal are described briefly below.

#### 5.4.1 Growth Moratorium Alternative

Under this alternative, the County would reduce GHG emissions by placing a moratorium on new wineries/vineyard expansions or new housing until the jobs-housing balance in the County is more equitable. A moratorium on new growth, although reducing emissions compared with a business-as-usual (BAU) scenario, would hinder the economic growth of the County and would not be consistent with the existing general plans adopted by the County or the incorporated cities. Thus, this alternative is not analyzed further in this EIR because it would not meet the objective of the project to allow for continued economic growth and provide opportunities for businesses and residents in the County.

#### 5.4.2 Reduced Density Alternative

Under this alternative, the CAP measures that promote mixed-use and transit-oriented development in city centers would not be implemented. Although the infill impacts of existing land use policies that
promote such growth would be lessened, this alternative would result in greater impacts on natural
resources (such as agricultural and forestry resources and biological resources) because of potential
development in areas where these resources currently exist. This alternative would most likely result
in fewer GHG emissions reductions compared with the project and thus would not meet the project
objective of reducing countywide GHG emissions. Furthermore, this alternative would not be
consistent with the existing land use policies and general plans that promote mixed-use and transit-
oriented development within the participating jurisdictions. Thus, this alternative is not analyzed
further in this EIR because it would most likely result in greater environmental impacts than the
project and would not meet the project’s objective of being consistent with land use policy direction,
including reducing countywide GHG emissions to 25% below 1990 levels by 2020, and the growth
anticipated in local general plans.

5.4.3 Greater Density Alternative

Under this alternative, the County would reduce GHG emissions through the promotion of new
changes to existing zoning and land use policies to provide for substantially increased levels of high-
density and mixed-use development within the participating jurisdictions’ current city limits. This
alternative would implement firm urban limit lines and contracted spheres of influences for the
participating jurisdictions to prevent further annexations and edge development. With a strict urban
limit line, this alternative would promote a more compact city form than is currently called for in
local land use plans. As with the project, development would be concentrated in city centers and
located near transit options. This alternative would place a greater emphasis on emissions
reductions in the transportation sector through a greater reduction in VMT.

This alternative would result in greater secondary physical impacts (air quality, noise,
transportation/traffic) in city centers than the project because of the intensification of infill under
this alternative compared with the project. Furthermore, this alternative would require
participating jurisdictions to change their current land use policies and thus would not meet the
project objective of promoting consistency with the land use policy direction and growth anticipated
in local general plans. Given the large-scale land use policy changes in this alternative, there may be
substantial concern and controversy about pursing such an alternative. This would require major
updates to the adopted general plans and a new public debate about the future of land use in the
County and participating jurisdictions. There could be major opposition to this alternative from
landowners with land that is located outside of the implemented urban limit line. Whether that
opposition and level of controversy would make this alternative politically infeasible is unknown.
Thus, this alternative is not analyzed further in this EIR because it is most likely infeasible, would
most likely result in greater environmental impacts than the project, and would not meet the
project’s objective of being consistent with the land use policy direction and growth anticipated in
local general plans.

5.4.4 Increased Sonoma Clean Power Renewable Alternative

This alternative would require SCP, the official electricity provider of the County, to procure an
increasing amount of its electricity from eligible renewable sources. Under this alternative, SCP
would increase renewable sources in its CleanStart service to 50% by 2020. SCP’s current renewable
sources include solar, wind, and geothermal; approximately 36% of SCP’s CleanStart service is
currently procured from renewable sources. This alternative and the decision to increase SCP’s
eligible renewable sources are independent of the RCPA and participating jurisdictions, and for SCP
involves a variety of considerations, including the likelihood that ratepayers will continue to participate in SCP. This alternative is not analyzed further in this EIR because it cannot be implemented by the RCPA or participating jurisdictions.

5.4.5 Expanded Transit Service Alternative

Under this alternative, the County and local jurisdiction would substantially expand transit service levels by improving bus headway, routes, and operations. This alternative would also expand Sonoma Marin Area Rail Transit (SMART) operations in the County and to Marin County beyond those currently proposed. Local municipal bus services in Santa Rosa, Petaluma, Healdsburg, and Cloverdale and countywide bus transit services (such as Sonoma County Transit) would also be expanded. However, the feasibility of expanding the transit services of local municipal and countywide bus services is uncertain because of the financial constraints in expansion beyond what is currently planned for by the local transit agencies. In addition, SMART is an adopted project, with the first phase (connecting San Rafael and Santa Rosa) currently under construction, with service anticipated to begin in 2016. The feasibility of additional expansion phases of SMART, with extension to the north and south, is uncertain and unknown because of the lack of identified funding. Thus, this alternative is not analyzed further in this EIR because of the uncertainty of what could be achieved in terms of GHG emissions reductions from expanded transit service by 2020.

5.4.6 1990 Levels by 2020 (AB 32) Alternative

Under this alternative, the County would adopt a reduction target plan that would be less stringent than the project. This alternative, which would be consistent with AB 32, would set the GHG emissions reduction target to 1990 levels by 2020 and be the "minimum plan" alternative. Although this alternative is feasible, it would not meet the basic objective of the project (i.e., to reduce countywide GHG emissions to 25% below 1990 levels by 2020). Furthermore, this alternative would result in greater GHG impacts than the project because of fewer GHG emissions reductions under this alternative compared with the project. There would also be fewer economic or environmental co-benefits (i.e., less air pollution) in the County compared with the project. Thus, this alternative is not analyzed further in this EIR because it would result in greater environmental impacts than the project and would not meet the basic objective of the project to reduce countywide GHG emissions to 25% below 1990 levels by 2020.

5.4.7 80% Below 1990 Levels by 2020 Alternative

Under this alternative, the County would adopt a more aggressive reduction target than that of the project. The alternative would surpass the target in Executive Order S-03-05 of 80% below 1990 levels by 2050 by accelerating the target date (i.e., to 2020). As discussed in Section 3.8, Greenhouse Gas Emissions, this target is in excess of the minimum target necessary to be consistent with AB 32. This alternative would require substantially more aggressive reduction measures, which would most likely result in an increase in secondary physical effects compared with those of the project. Furthermore, although the County can influence some emissions, it does not have the jurisdiction that the federal government has with respect to some of the larger sources (e.g., vehicle technology and fuels), jurisdiction that is necessary to achieve such aggressive goals. At this time, this alternative is considered infeasible in the short run (by 2020) and the medium term (by 2030), although it is a long-term GHG emissions reduction goal for the County by 2050. Thus, this alternative is not analyzed further in this EIR because it is infeasible, would result in greater
environmental impacts than the project, and is not necessary to meet the basic objective of the project to reduce countywide GHG emissions to 25% below 1990 levels by 2020.

5.5 Impact Assessment of Alternatives

The following analysis emphasizes a comparison of the adverse effects of each alternative with those identified for the project in order to make a determination regarding whether an alternative would avoid or substantially lessen any of the significant effects of the project. Because each of the action alternatives (Zero Net Energy Buildings Alternative and Carbon Offset Alternative) would include similar policies and would focus, enhance, or accelerate certain policy areas, no new significant impact categories not already identified in the discussion of the project are anticipated.

5.5.1 No Project Alternative

As discussed above, the No Project Alternative is required to be analyzed under CEQA and assumes that the County would not adopt the CAP. The statewide measures that reduce GHG emissions related to building energy and transportation would remain in effect. Additionally, several regional and local GHG emissions reduction measures would also remain in effect (existing retrofit programs, Sonoma Clean Power, SMART, SB X 7-7 water conservation, and SCWA carbon free water). Since statewide measures would be the same as those for the proposed project and would occur with or without CAP adoption, they are not addressed further.

The regional and local measures that would be implemented with the No Project Alternative would result in impacts limited to existing buildings (energy efficiency retrofits), water conservations, carbon free water, in relation to SCP, and due to the SMART facilities. All of these impacts would occur with the proposed project as well. The No Project Alternative would not result in any new facilities that the proposed project would not.

The environmental impacts of the No Project Alternative relative to the project are summarized below.

- **Aesthetics:** Under this alternative, impacts on scenic views or vistas, scenic resources, and existing visual character would be less than those of the project. The No Project Alternative would not include measures that would promote rooftop solar energy installations and thus would avoid potential daytime glare impacts related to public safety.

- **Agriculture and Forest Resources:** Under this alternative, impacts on agriculture and forestry resources may be less than those of the project. The No Project Alternative would not include measures that may promote construction of facilities that may be located in areas with agricultural or forest resources. However, the No Project Alternative does not include the land conservation measures or the agricultural supporting measures included in the CAP, and thus may have less of a benefit in terms of preserving open space and working lands. The project’s benefits to agricultural and forest resources is expected to more than compensate for potential new facility effects; therefore, the No Project Alternative is expected to result in similar overall impacts on agriculture and forestry resources.

- **Air Quality:** The No Project Alternative does not promote as much construction of new facilities and therefore would result in fewer air quality impacts during construction and operation than the project. However, compared with the project, the No Project Alternative would result in
greater air pollution because it would implement only a few of the CAP measures that are already mandated. In particular, the No Project Alternative would have higher vehicle travel and associated criteria pollutant emissions. Under the No Project Alternative, the co-benefits of reducing GHG emissions and, consequently, air pollution would not be realized. Therefore, overall, under this alternative, impacts on air quality would be higher than those of the project.

- **Biological Resources**: Under this alternative, direct impacts on biological resources would be less than those of the project due to fewer facilities necessary to implement GHG measures. However, because the No Project Alternative would have higher VMT, it would result in greater amounts of air pollution and water pollution that would adversely affect habitats for terrestrial and aquatic biological resources.

- **Cultural Resources**: The No Project Alternative would require fewer ground-disturbing activities and therefore would have less potential to encounter archaeological and paleontological resources or human remains. Energy-efficient retrofits promoted by the No Project Alternative would be constructed within existing buildings. These improvements would be minor and unlikely to alter the character-defining features of a historic building. Therefore, impacts on cultural resources would be less than those of the project.

- **Geology and Soils**: The No Project Alternative would require less construction of new facilities and therefore would encounter less geological and soil hazards. Under this alternative, impacts from geologic and soil hazards would be less than those of the project.

- **Greenhouse Gas Emissions**: GHG emissions would be approximately five percent higher than for the project; therefore, co-benefit of reducing GHG emissions would not be as beneficial under the project. Thus, under this alternative, GHG emissions impacts would be more than those of the project.

- **Hazards and Hazardous Materials**: The No Project Alternative would promote less construction of new facilities and result in less public exposure to hazardous materials during construction and operation of facilities. However, this alternative would result in higher VMT and therefore greater use of petroleum and vehicle fluids than the proposed project and greater risk of spills of such materials. Although potential exposure resulting from new facilities would be less, due to the higher petroleum use and associated risks of spills, impacts related to hazards and hazardous materials would be higher than those of the project.

- **Hydrology and Water Quality**: The No Project Alternative would promote less construction of new facilities and thus would result in reduced hydrology and water quality impacts during construction of new facilities. However, this alternative would result in higher VMT and therefore greater use of petroleum and vehicle fluids than the proposed project and greater potential for indirect effects on water quality due to urban runoff containing petroleum. Although potential direct effects on water quality resulting from new facilities would be less, due to the higher petroleum use and associated water quality effects, impacts on water quality would be higher than those of the project.

- **Land Use and Recreation**: The No Project Alternative would promote less construction of new facilities and therefore may have less inconsistency with land use plans, policies, or regulations or land use compatibility issues than the project. However, as discussed in Chapter 3, the CAP measures are consistent with existing land use policies and represent the fulfillment of many of the purposes of such policies, whereas the No Project Alternative would result in a lesser level of accomplishment of many land use policies. In addition, the No Project Alternative would result
in fewer pedestrian and bicycle facilities than the project and would have fewer benefits for recreation. Therefore, while the No Project Alternative would result in fewer direct impacts on land use and recreation from new facilities, it would represent a lesser fulfillment of many land use and recreational priorities.

- **Noise**: The No Project Alternative would promote less construction of new facilities and therefore fewer noise impacts during construction. The No Project Alternative would result in higher VMT than the project overall and therefore would in general result in higher traffic noise levels, although the project may have higher transit noise levels in certain areas. Under this alternative, impacts on the existing noise environment overall would be higher than those for the project because of overall higher traffic levels; however, in certain areas with increased transit noise the project may have higher noise levels.

- **Public Services, Utilities, and Energy**: The No Project Alternative would promote less construction of new facilities and therefore would require fewer additional public services and utilities for new facilities. However, compared with the project, the No Project Alternative would not include GHG-reduction measures to increase solid waste diversion, reduce water consumption, and increase recycled water and greywater use. The co-benefits of the project in terms of reducing demand for public utilities would not be realized. The project also includes regional and local measures to reduce building energy use. Although the No Project Alternative would include some measures to reduce building energy use, the benefits to energy resources would not be as great as compared to those for the project. Overall, under this alternative, impacts on public services would be fewer than those of the project, but impacts on public utilities and energy would be more than those of the project.

- **Transportation and Traffic**: The No Project Alternative would promote less construction of new facilities and therefore would result in fewer direct traffic impacts during construction. However, the No Project Alternative would result in higher VMT and worse traffic than the project because it would not include many of the measures to promote transit and alternatives to individual personal vehicle travel. Under this alternative, impacts on traffic and transportation would therefore be higher than those of the project.

### 5.5.2 Zero Net Energy Buildings Alternative

As discussed above, under the Zero Net Energy Buildings Alternative, the County would adopt an updated green building ordinance, requiring ZNE for all new commercial and residential buildings in the County beginning in 2017. ZNE buildings employ high levels of energy efficiency to minimize energy use and typically include on-site renewable power generation. With the increased GHG emissions reductions from ZNE, the CAP measures in support of the rooftop photovoltaic solar panels on existing residential and non-residential building would be modified to preclude installation on historic buildings.

The environmental impacts of the Zero Net Energy Building Alternative relative to the project are summarized below.

- **Aesthetics**: Under this alternative, impacts on scenic resources and existing visual character would be similar to those for the project. Although this alternative would preclude rooftop photovoltaic solar panels from being installed on historic buildings, impacts from solar installations on non-historic existing buildings and new buildings could create daytime glare impacts related to public safety. With the ZNE requirement, there would likely be more
renewable energy installations for new development; however, since the ZNE requirement would only apply to new development it would not change the visual character of existing development.

- **Agriculture and Forestry Resources**: Similar to the project, this alternative would promote concentrated growth in city centers and most likely divert development from non-urbanized areas with agricultural and forestry resources. The alternative, similar to the project, would promote the construction of facilities that could be located in areas with agricultural and forestry resources. Therefore, under this alternative, impacts on farmlands, agricultural lands, and forestlands would be the same as under the project.

- **Air Quality**: Under this alternative, impacts on the air quality would be similar to those for the project. This alternative, similar to the project, promotes the construction of new facilities, which could result in temporary localized air quality impacts during construction. Operationally, this project would result in similar air quality benefits from reduced vehicle emissions and reduced energy demands for buildings. Therefore, under this alternative, impacts on air quality would be the same as under the project.

- **Biological Resources**: Similar to the project, this alternative would promote concentrated growth in city centers and most likely divert development from non-urbanized areas with biological resources. The alternative, similar to the project, would promote the construction of facilities that could be located in areas with biological resources. ZNE buildings may require additional renewable energy facilities than Title 24-compliant-only buildings, which could result in additional footprints of development that might increase slightly the impacts on biological resources. Therefore, under this alternative, impacts on biological resources would be similar to, but possibly slightly higher than, those for the project.

- **Cultural Resources**: Under this alternative, impacts on archaeological resources, paleontological resources, and human remains would be the same as under the project. However, under this alternative, CAP measures supporting rooftop photovoltaic solar panels on existing buildings would be modified to preclude installation on historic buildings. Therefore, compared to the project, this alternative would avoid significant and unavoidable impacts on historic resources.

- **Geology and Soils**: Under this alternative, impacts from geologic and soil hazards would be the same as under the project. This alternative, similar to the project, promotes the construction of new facilities that could be located in geological hazard areas.

- **Greenhouse Gas Emissions**: This alternative would reduce the same amount of GHG emissions as the project. Because all the measures would be implemented locally (i.e., within the County), the co-benefits of reducing GHG emissions would be received locally as well.

- **Hazards and Hazardous Materials**: Under this alternative, impacts from hazards and hazardous materials would be the same as under the project. This alternative, similar to the project, promotes the construction of new facilities, which could result in public exposure to hazardous materials during construction and operation.

- **Hydrology and Water Quality**: Under this alternative, impacts on hydrology and water quality would be the same as under the project. This alternative, similar to the project, promotes the construction of new facilities, which could result in hydrology and water quality impacts during construction.
• **Land Use and Recreation:** Similar to the project, this alternative would promote concentrated growth in city centers, which is consistent with local land use plans of the incorporated jurisdictions. The alternative, similar to the project, would promote the construction of facilities that could be located on land uses not zoned for the particular use and result in land use compatibility issues with existing adjacent uses. Therefore, under this alternative, land use and recreation impacts would be the same as under the project.

• **Noise:** This alternative, similar to the project, promotes the construction of new facilities, which could result in temporary noise increases during construction. Therefore, under this alternative, noise impacts would be the same as under the project.

• **Public Services, Utilities, and Energy:** Similar to the project, this alternative would not create a new population; rather, it would divert growth to city centers where development already exists. Under this alternative, impacts on public services and utilities would be the same as under the project. However, under this alternative, all new commercial and residential development would be required to be ZNE in 2017 rather than in 2020 (residential) and 2030 (commercial). ZNE buildings employ high levels of energy efficiency to minimize energy use combined with on-site renewable energy. This alternative might result in slightly less energy demand overall than the project because more of the GHG reductions would likely be met through energy efficiency due to the ZNE requirement.

• **Transportation and Traffic:** This alternative, similar to the project, promotes the construction of new facilities, which could result in temporary localize traffic impacts during construction. Thus, under this alternative, traffic impacts would be the same as under the project.

### 5.5.3 Carbon Offset Alternative

As discussed above, under the Carbon Offset Alternative, the County would reduce GHG emissions through the purchase of valid carbon offsets. The offsets could be purchased locally (i.e., within the County), outside of the County in California, or outside California. With increased reliance on carbon offsets, CAP measures that could result in significant secondary impacts would be modified or not adopted.

While in concept any local or regional CAP measure could be replaced with offsets, for the purpose of impact analysis, the CAP measures supporting rooftop photovoltaic solar panels on existing residential and non-residential buildings would be modified to preclude installation on historic buildings. Using this assumption, the environmental impacts of the Carbon Offset Alternative relative to the project are summarized below.

• **Aesthetics:** Under this alternative, impacts on scenic resources and existing visual character would be the same as under the project. Although this alternative would preclude rooftop photovoltaic solar panels from being installed on historic buildings, impacts from solar installations on non-historic existing buildings and new buildings could create daytime glare impacts related to public safety. The impacts of offset projects on aesthetics could range widely depending on the specific offsets funded; while many offset projects have little to no aesthetic impacts, some, such as solar or wind farms, could have substantial aesthetic effects. However, it is speculative to conclude what those effects might be without identification of the specific offset projects.

• **Agriculture and Forestry Resources:** Similar to the project, this alternative would promote concentrated growth in city centers and most likely divert development from non-urbanized
areas with agricultural and forestry resources. The alternative, similar to the project, would promote the construction of facilities, which could be located in areas with agricultural and forestry resources. While many offset projects (such as energy efficiency or water efficiency projects) may have little to no impact on agriculture or forestry, or may be beneficial (such as carbon farming or afforestation), it is possible that some offset projects could adversely affect agriculture or forestry resources. It is speculative to conclude what those effects might be.

- **Air Quality:** This alternative, similar to the project, promotes the construction of new facilities that could result in temporary localized air quality impacts during construction and would have similar operational air quality benefits locally. Most offset projects would likely have air quality benefits as well. This alternative would replace the air quality benefits of lowering utility electricity generation with solar panels with some form of carbon offsets. Thus, under this alternative, impacts on air quality would be the same as under the project.

- **Biological Resources:** Similar to the project, this alternative would promote concentrated growth in city centers and most likely divert development from non-urbanized areas with biological resources. The alternative, similar to the project, would promote the construction of facilities, some of which may be located in areas with biological resources. While many offset projects (such as energy efficiency or water efficiency projects) may have little to no impact on biological resources, or may be beneficial (such as land conservation or afforestation), it is possible that some offset projects could adversely affect biological resources. It is speculative to conclude what those beneficial or adverse effects might be without identification of the specific offset projects.

- **Cultural Resources:** Under this alternative, impacts on archaeological resources, paleontological resources, and human remains would be similar to those under the project. However, under this alternative, CAP measures supporting rooftop photovoltaic solar panels on existing buildings would be modified to preclude installation on historic buildings. Therefore, compared with the project, this alternative would avoid direct significant and unavoidable impacts on historic resources. While many offset projects (such as energy efficiency or water efficiency projects) may have little to no impact on cultural resources, it is possible that some offset projects could adversely affect cultural resources. It is speculative to conclude what those adverse effects might be without identification of the specific offset projects.

- **Geology and Soils:** Under this alternative, impacts from geologic and soil hazards would be the same as under the project. This alternative, similar to the project, promotes the construction of new facilities that could be located in geological hazard areas. Offset projects are unlikely to result in significant geology or soils impacts.

- **Greenhouse Gas Emissions:** This alternative would reduce the same amount of GHG emissions as the project.

- **Hazards and Hazardous Materials:** Under this alternative, impacts from hazards and hazardous materials would be the same as under the project relative to measures implemented in Sonoma County. This alternative, similar to the project, promotes the construction of new facilities that could result in public exposure to hazardous materials during construction and operation and helps to reduce VMT and associated hazards with petroleum use and handling during operation. While many offset projects (such as energy efficiency or water efficiency projects) may have little to no impact on hazards or hazardous materials, it is possible that some offset projects could require the use of hazardous materials. It is speculative to conclude what those effects might be without identification of the specific offset projects.
• **Hydrology and Water Quality**: Under this alternative, impacts on hydrology and water quality would be the same as under the project. This alternative, similar to the project, promotes the construction of new facilities that could result in hydrology and water quality impacts during construction and helps to reduce VMT and associated water quality impacts. While many offset projects (such as energy efficiency or water efficiency projects) may have little to no impact on hydrology or water quality, it is possible that some offset projects may have effects, especially during construction. It is speculative to conclude what those effects might be without identification of the specific offset projects.

• **Land Use and Recreation**: Similar to the project, this alternative would promote concentrated growth in city centers, which is consistent with local land use plans of the incorporated jurisdictions. Therefore, under this alternative, direct land use and recreation impacts would be the same as under the project. While many offset projects (such as energy efficiency or water efficiency projects) would not have the potential to result in significant conflicts with land use or recreational use, it is possible that some offset projects may require rezoning or other changes in land use policies to facilitate their implementation. It is speculative to conclude what those effects might be without identification of the specific offset projects.

• **Noise**: This alternative, similar to the project, promotes the construction of new facilities, which could result in temporary noise increases during construction. Therefore, under this alternative, direct noise impacts would be the same as under the project. While many offset projects (such as energy efficiency or water efficiency projects) may have little to no noise or vibration impacts, it is possible that some offset projects, such as wind farms, could result in certain noise impacts. It is speculative to conclude what those effects might be without identification of the specific offset projects.

• **Public Services, Utilities, and Energy**: This alternative, similar to the project, would have the same beneficial impacts on energy as the project. Similar to the project, this alternative would not create a new population; rather, it would focus growth to city centers where development already exists. Under this alternative, impacts on public services and utilities in Sonoma County would likely be the same as under the project. Offset projects would likely result in reduced energy demands as well and are not likely to result in substantial new public service demands. However, offset projects consisting of renewable energy generation may require additional utility line connections and facilities.

• **Transportation and Traffic**: This alternative, similar to the project, promotes the construction of new facilities, which could result in temporary localized traffic impacts during construction. Operationally, this alternative would result in the same reductions in VMT as the project within Sonoma County. Therefore, under this alternative, direct traffic impacts would be the same as under the project locally. Offset projects are not likely to result in substantial new traffic where they are proposed.

### 5.6 Environmentally Superior Alternative

Section 21002 of the State CEQA Guidelines requires lead agencies to adopt feasible mitigation measures or feasible environmentally superior alternatives in order to substantially lessen or avoid otherwise significant adverse environmental effects, unless specific social or other conditions make such mitigation measures or alternatives infeasible. CEQA also requires that an environmentally superior alternative be identified among the alternatives analyzed. In general, the environmentally
superior alternative is the project that avoids or substantially lessens some or all of the significant and unavoidable impacts of the proposed project (State CEQA Guidelines Section 15126.6).

Table 5-1 compares the potential differences in the level of environmental impacts under the alternatives considered in this EIR. The key areas of differences between the alternatives are as follows:

- The No Project Alternative would not result in direct additional significant impacts on any resources from construction of new facilities and would not result in worse impacts related to air quality, GHGs, water quality, public utilities, and energy compared to the project and the other action alternatives.

- The Zero Net Energy Buildings Alternative would result in similar impacts as the project but would potentially avoid some significant and unavoidable impacts on historical resources. In addition, the Zero Net Energy Buildings Alternative would result in greater beneficial effects related to energy.

- The Carbon Offset Alternative would result in similar impacts as the project but would avoid significant and unavoidable impacts on historical resources. Although the Carbon Offset Alternative would result in the same amount of GHG emissions reductions as compared to the project, because the offsets could be purchased anywhere, the co-benefits of the emissions reductions may not be realized locally. Further, the secondary environmental effects of carbon offset projects cannot be identified at this time because such effects are project specific; therefore, funded offset projects may result in other adverse effects heretofore not identified.

There are notable tradeoffs between the different alternatives. When considering the full range of potential environmental impacts, the Zero Net Energy Buildings Alternative is considered the environmentally superior alternative because it would have lower impacts on historical resources compared with the project and greater benefits related to energy compared with all alternatives. Further, the co-benefits of GHG emissions reductions would be realized locally (compared to the Carbon Offset Alternative).
Table 5-1. Comparison of Alternative Impacts with the Project

<table>
<thead>
<tr>
<th></th>
<th>Alternative 1: No Project</th>
<th>Alternative 2: Zero Net Energy Buildings</th>
<th>Alternative 3: Carbon Offset (Due to CAP measures/Due to offset projects) (1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aesthetics</td>
<td>Lower</td>
<td>Same</td>
<td>Same/Unknown</td>
</tr>
<tr>
<td>Agriculture and Forest Resources</td>
<td>Similar</td>
<td>Same</td>
<td>Same/Unknown</td>
</tr>
<tr>
<td>Air Quality</td>
<td>Greater</td>
<td>Same</td>
<td>Same/Same</td>
</tr>
<tr>
<td>Biological Resources</td>
<td>Greater</td>
<td>Similar</td>
<td>Same/Unknown</td>
</tr>
<tr>
<td>Cultural Resources</td>
<td>Lower</td>
<td>Lower</td>
<td>Lower/Unknown</td>
</tr>
<tr>
<td>Geology and Soils</td>
<td>Lower</td>
<td>Same</td>
<td>Same/Same</td>
</tr>
<tr>
<td>Greenhouse Gas Emissions</td>
<td>Greater</td>
<td>Same</td>
<td>Same/Same</td>
</tr>
<tr>
<td>Hazards and Hazardous Materials</td>
<td>Greater</td>
<td>Same</td>
<td>Same/Unknown</td>
</tr>
<tr>
<td>Hydrology and Water Quality</td>
<td>Greater</td>
<td>Same</td>
<td>Same/Same</td>
</tr>
<tr>
<td>Land Use and Recreation</td>
<td>Lower</td>
<td>Same</td>
<td>Same/Unknown</td>
</tr>
<tr>
<td>Noise</td>
<td>Greater</td>
<td>Same</td>
<td>Same/Unknown</td>
</tr>
<tr>
<td>Public Services, Utilities, and Energy</td>
<td>Less for public services; Higher for public utilities and energy</td>
<td>Same for public services and utilities; Lower for energy</td>
<td>Same for Energy and Public services; Same/Unknown for utilities</td>
</tr>
<tr>
<td>Transportation and Traffic</td>
<td>Greater</td>
<td>Same</td>
<td>Same/Same</td>
</tr>
</tbody>
</table>

(1) As discussed in text, the offset alternative would allow elimination of CAP measures with secondary environmental effects. The analysis uses the example of excluding solar installation on historic buildings. The impact comparisons above are presented separately for the CAP measures vs. offset projects. As offset measures are not known at this time, many of the impacts cannot be determined.
The CEQA lead agency is the Sonoma County Regional Climate Protection Authority (RCPA). ICF International prepared this Program Environmental Impact Report (PEIR) on the lead agency's behalf. This chapter lists the individuals who prepared the report.

### 6.1 ICF International

#### 6.1.1 Project Management

<table>
<thead>
<tr>
<th>Role</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Director</td>
<td>Rich Walter</td>
</tr>
<tr>
<td>Project Manager</td>
<td>Brian Schuster</td>
</tr>
</tbody>
</table>

#### 6.1.2 Technical Analyses

<table>
<thead>
<tr>
<th>Role</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Authors</td>
<td>Elizabeth Antin</td>
</tr>
<tr>
<td></td>
<td>Jessie Shen</td>
</tr>
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<td></td>
<td>Liza Farr</td>
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<td>Elizabeth Irvin</td>
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<td>Kenneth Cherry</td>
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<td>Jenelle Mountain-Castro</td>
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<td></td>
<td>Mindy Farnsworth</td>
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<td></td>
<td>Saadia Byram</td>
</tr>
<tr>
<td></td>
<td>John Mathias</td>
</tr>
</tbody>
</table>
Chapter 7

References

7.1 Chapter 2, Project Description


7.2 Chapter 3, Environmental Setting, Impacts, and Mitigation Measures

7.2.1 Aesthetics


7.2.2 Agriculture and Forest Resources


7.2.3  Air Quality


7.2.4  Biological Resources


7.2.5  Cultural Resources


7.2.6  Geology and Soils


7.2.7  Greenhouse Gas Emissions


7.2.8 Hazards and Hazardous Materials


7.2.9 Hydrology and Water Quality


### 7.2.10 Land Use and Recreation


### 7.2.11 Noise


### 7.2.12 Public Services, Utilities, and Energy


### 7.2.13 Transportation/Traffic


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Appendix A:

Notice of Preparation and Scoping Comments
NOTICE OF PREPARATION OF DRAFT ENVIRONMENTAL IMPACT REPORT

NOTICE OF PUBLIC SCOPING MEETING

AB 52 PROJECT NOTIFICATION

Climate Action 2020: Community Climate Action Plan

Date: September 24, 2015
To: Responsible Agencies, Trustee Agencies, and Other Interested Parties
From: Sonoma County Regional Climate Protection Authority
Subject: Notice of Preparation of a Program Environmental Impact Report

The Sonoma County Regional Climate Protection Authority (RCPA), as the lead agency under the California Environmental Quality Act (CEQA), will prepare a Program Environmental Impact Report (PEIR) for the proposed Climate Action 2020: Community Climate Action Plan (CAP) and would like your views regarding the scope and content of the environmental information to be addressed in the PEIR. This PEIR may be used by your agency when considering approvals for this CAP. The CAP location, description, and a brief summary of potential environmental effects are attached.

Due to the time limits mandated by state law, your response must be sent at the earliest possible date, but no later than 30 days after the receipt of this notice. Written comments will be accepted until October 28, 2015, at 5:00 PM.

The scoping meeting will be held on Tuesday, October 13th, 2015, at 4:00 p.m. at the Permit Resource Management Department (PRMD), County of Sonoma, 2550 Ventura Ave, Santa Rosa, CA.

This NOP also serves as notification to California Native American tribes that are traditionally and culturally affiliated with the geographic area of the proposed project, pursuant to Public Resources Code 21080.3.1 (Assembly Bill 52). If your tribe wishes to consult on this project, please note you have 30 days to request consultation.

If you are a responsible agency, please identify a contact person for your agency with your comments. Questions and comments should be addressed to:

Sonoma County Regional Climate Protection Authority, Attn: Lauren Casey
490 Mendocino Ave, Ste 306
Santa Rosa, CA 95407
707-565-5379, lcasey@sctainfo.org
A. Introduction

The purpose of an EIR is to inform decision makers and the general public of the environmental effects of a proposed project. The EIR process is intended to provide environmental information sufficient to evaluate a proposed project and its potential for significant impacts on the environment; to examine methods of reducing adverse environmental impacts; and to consider alternatives to the project. Although an EIR is one of the first documents to be reviewed when considering a project, the document itself, including its certification, does not constitute project approval. Upon finding the PEIR is complete and in compliance with CEQA, the RCPA will consider certification of the PEIR at a public hearing.

The PEIR for the CAP will be prepared and process in accordance with CEQA and will include:

- A summary of the CAP goals and objectives;
- A description of the CAP;
- An environmental setting, impact analyses and mitigation measures;
- Feasible alternatives to the proposed CAP that would lower one or more significant impacts of the proposed CAP, if available; and
- Other CEQA considerations, including:
  - any significant environmental effect which cannot be avoided if the CAP is implemented,
  - the growth-inducing impacts of the proposed CAP, and
  - cumulative impacts.

B. Project Location

The proposed CAP would establish goals, priorities, and methods for achieving countywide greenhouse gas (GHG) emission reductions that would apply to eight of the nine incorporated cities (Cloverdale, Cotati, Healdsburg, Petaluma, Rohnert Park, Sebastopol, Sonoma, and Windsor) and unincorporated areas within Sonoma County (County). Some of the regional actions would also occur in the City of Santa Rosa. The City of Santa Rosa has already adopted a separate Climate Action Plan, but may decide at some point to merge some or all of their GHG reduction efforts into the regional plan efforts and thus some RCPA CAP actions will also take place in Santa Rosa.

C. Proposed CAP Background, Objectives, and Goals

Sonoma County has a deep-rooted history of taking action regarding climate change. This was made possible by the leadership of local community leaders, forward-thinking elected leaders at all city and county government levels, the actions of interested non-governmental organizations, and most importantly, the individual actions of Sonoma County residents and businesses.

Some of the milestones in climate action planning in Sonoma County include the following:
2001: All Sonoma County communities committed to the International Council for Local Environment Initiatives campaign called Cities for Climate Protection.

2005: The elected leadership in all Sonoma County communities adopted a countywide GHG emissions reduction target of 25% below 1990 levels by 2015. The City of Cotati sought to achieve an even more aggressive goal of 30% below 1990 levels by 2015.

2008: A local community non-profit group, the Center for Climate Protection (formally the Climate Protection Campaign) developed a CAP, which was the first community-wide examination of strategies to reduce community-wide GHG emissions. Though this plan was not formally adopted by any jurisdiction, many of the goals and strategies within the plan have been accomplished, most notably the Sonoma County Energy Independence Program's Property Assessed Clean Energy (PACE) energy efficiency and renewable energy financing program and the Sonoma Clean Power, the local Community Choice Aggregation electricity provider.

2009: The RCPA was formed to coordinate countywide climate change protection efforts among Sonoma County's nine cities and multiple county agencies and to establish a clearinghouse for efforts to reduce GHG emission throughout the county. The RCPA is comprised of 10 jurisdictions including Sonoma County and all nine incorporated cities.

2012: The City of Santa Rosa was the first in the county to adopt its own CAP and adopt a new GHG emissions target of 25% below 1990 levels by 2020.

By 2010, the combined actions of all Sonoma County communities have reduced countywide GHG emissions to approximately 7% below 1990 levels, even while the county's population and economy grew substantially. Per capita county GHG emissions were approximately 26% less in 2010 than 1990. However, the county is not expected to meet the 2015 target of 25% below 1990 levels. Furthermore, the county's population and economy will continue to grow and, without additional actions, GHG emissions in 2020 and beyond could actually increase.

The proposed CAP would include both regional measures (to be implemented by the RCPA and other regional agencies with local government support) and local measures to be implemented by local governments (with RCPA and regional agency support and on their own). The proposed objective of the CAP is to:

- Identify specific and implementable actions that the RCPA, other regional agencies, each participating community and individual residents and businesses can take to reduce GHG emissions consistent with and even exceeding the goals established in Assembly Bill 32; specifically the CAP target is to reduce countywide GHG emissions by 25% below 1990 levels by 2020;

- Promote consistency with the land use policy direction and growth anticipated in local General Plans; and

- Allow for continued economic growth to provide opportunities for businesses and residents.

The draft CAP is being prepared by the RCPA, in consultation with each of the participating jurisdictions and
other regional agencies and programs. Those other regional agencies and programs, which are already implementing and which will have a role in future implementation of certain regional measures include Sonoma Clean Power, Sonoma County Water Agency, Sonoma County Transportation Authority, the Sonoma County Energy Independence Program, and the Sonoma County Waste Management Agency.

As part of the CAP, the RCPA is estimating GHG emissions for 1990 and 2010 and forecasting future emissions for 2020 and beyond. The community inventory includes greenhouse gas emissions occurring in association with the land uses within a jurisdictional boundary, and consists of sources of emissions that a community can more readily influence or control. Emissions sectors analyzed include Building Energy, On-Road Transportation, Off-Road Transportation and Equipment, Solid Waste Generation, Wastewater Treatment, Water Conveyance, and Agriculture.

The draft CAP will be released before or during the public review period for the draft EIR and will be revised in response to public input as it goes through the review process prior to consideration by the RCPA and by the participating jurisdictions.

D. CAP Summary Description

GHG Measures

The CAP would include a range of regional and local measures to reduce GHG. The GHG reduction element of the CAP involves an assessment of GHG-reduction strategies, engagement of the public in planning efforts, and creation of a framework to maintain reductions in the future. In order to develop the GHG reduction measures, the RCPA and the participating jurisdictions, in consultation with regional agencies and stakeholders, compiled a list of candidate GHG reduction measures. For each measure, the amount of GHG emissions that could be avoided in 2020 is being calculated wherever feasible. Costs and savings associated with certain measures are also being quantified, as feasible, to help identify the financial and economic impact of the measures. Other benefits, such as reduction in air pollution, are also being identified for all measures. The CAP would evaluate whether each measure should be implemented through regional approaches, incentive-based voluntary approaches, flexible performance-based measures, or through new local mandates.

Statewide efforts to reduce GHG emissions are a fundamental part of the CAP. For example, the state’s Renewables Portfolio Standard (RPS) will reduce the carbon content of electricity throughout the state. Electricity provided to Sonoma County will therefore be cleaner and less GHG intensive than if the RPS had not been established.

Regional measures concerning various emissions sectors are also being considered. A primary example of a regional measure is Community Choice Aggregation (CCA) which encourages county residents to subscribe to electricity service that goes beyond the RPS in terms of reducing carbon content. These regional measures are also a critical part of the CAP.
In addition to the statewide and regional measures, a series of local community measures are under consideration for inclusion in the CAP. Each individual community will select the measures that they would like to include as part of their community commitments (this will be identified in the draft CAP). Thus, the suite of measures that a community will implement will vary by each community. Although each community may not implement all potential local measures, the individual community commitments will, in conjunction, act as a comprehensive GHG emissions reduction program and help the county overall achieve its region-wide goal.

Some of the local measures include voluntary, incentive-based programs that would reduce emissions from both existing and new development in the communities. Some measures would establish mandates for new development. Regional measures would be implemented by regional agencies with appropriate coordination with the communities.

Successful implementation of the local and regional strategies will rely on the combined participation of local and regional agency staff along with residents, businesses, and community leaders throughout the county. Coordinating GHG reduction programs within and across communities would streamline CAP implementation and potentially boost GHG reduction outcomes through synergies created among measures.

Additional information about the CAP is provided at: <http://www.sctainfo.org/climate_action_2020.htm>

**Climate Adaptation**

The CAP provides a broad analysis of the vulnerability of the County to the effects of future climate change. As a result of this analysis, the CAP would include climate adaptation objectives to increase the resiliency of the communities and identifies potential next steps to address climate change hazards in Sonoma County. However, since the Climate Adaptation element of the CAP will not propose specific adaptation actions at this time, the focus of the PEIR will be limited to the potential secondary impacts of the GHG emissions reductions measures only.

**E. Potential Environmental Effects**

The CAP is a planning document and its adoption will not directly result in any physical changes, but the goal of the CAP is to facilitate reductions in greenhouse gas emissions. This is its chief anticipated environmental effect. While the actions called for in the CAP will result in a number of environmental benefits, some of the actions may also result in adverse secondary impacts on the environment which will be analyzed in the PEIR. Subsequent CEQA compliance will be required at a project level for any physical improvements necessary to implement the CAP measures, but the likely impacts will be analyzed at a planning level.

While state measures will be discussed in the CAP, these state measures will apply whether or not the CAP is implemented. Thus, state measures will not be the focus of the environmental analysis in the PEIR. The PEIR will focus on the potential environmental impacts of regional and local measures.

The physical changes resulting from the likely actions called for in the proposed CAP can be broadly categorized as follows:
• Building Energy
  o 1. *Increase the energy efficiency of buildings.* Likely CAP measures focus on retrofits of existing buildings, greater energy efficiency in new development and installation of shade trees. Physical changes would be primarily associated with and located within existing and new buildings.
  o 2. *Increase renewable energy use.* Likely CAP measures focus on increasing the use and production of renewable energy through increasing the renewable portfolio for community electricity and supporting distributed solar installations on existing and new buildings as well as fuel switching and cogeneration. New energy facilities may result from these measures.

• On-Road Transportation, Land Use, and Off-Road Equipment
  o 3. *Reduce fossil fuel use by encouraging a shift in the fuel used for transportation and off-road equipment.* Likely CAP measures in this category focus on reducing the carbon intensity of transportation fuels, promotion of alternative fuel use (including electric vehicles and equipment), and reduction of idling. These measures may require new facilities such as electric charging or alternative fueling facilities. These measures would also increase demand for alternative fuels, the production of which may have impacts on the environment.
  o 4. *Reduce vehicle fuel use by encouraging a shift in the mode used for transportation:* Likely CAP measures support a shift to transit, trip reduction, carsharing, bicycle and pedestrian linkages, and other strategies. These measures may result in additional transit facilities and operations as well as bicycle and pedestrian facilities.
  o 5. *Increase the fuel efficiency of vehicles.* Likely CAP measures in this category are all previously adopted state measures. As such, any associated environmental impacts would not be impacts of CAP adoption.
  o 6. *Reduce travel demand through smart land use and development.* Likely CAP measures focus on reducing travel demand by promoting mixed use development, transit accessibility, and transit-oriented development. While many local plans already promote such development, CAP measures will indirectly support increased transit facilities and operations by fostering better linkage between new development and transit. Traffic calming included in this category would also result in roadway improvements.
  o 7. *Reduce idling off-road equipment.* Likely CAP measures support reduction of heavy-vehicle idling which would result in changes to heavy-vehicle operations, but likely not require new facilities.

• Solid Waste Generation
  o 8. *Increase solid waste diversion.* Likely CAP measures would increase waste diversion from landfills, reuse of materials and recycling. In order to achieve increased diversion, additional solid waste facilities and operations may be necessary.
9. Increase capture and use of methane from landfills. These measures would require modification to landfill control and gas collection systems and addition, modification, or expansion of waste to energy facilities.

Water Conveyance and Wastewater Treatment

10. Reduce water consumption: Likely CAP measures to increase water efficiency will primarily involve improvements within existing and new development as well as modifications to landscaping and landscaping irrigation systems. Some of these measures are already required by existing state law (such as SB X 7-7) and would occur with or without CAP adoption.

11. Increase recycled water and greywater use. Likely CAP measures would require expansion of recycled water treatment facilities and distribution lines and expanded greywater use would require plumbing and fixture alterations.

12. Increase the efficiency of water and wastewater infrastructure. Likely efficiency improvements would require modification of existing water and wastewater treatment facilities.

13. Increase the use of renewable energy in water and wastewater systems. Likely CAP measures in this category would result in expansion of renewable energy installations, primarily at existing water and wastewater treatment locations, but also indirectly through potential purchase of renewable energy for use at such facilities.

14. Increase the capture and use of methane from wastewater treatment plants. Likely CAP measures would require modification of existing wastewater treatment plants to capture and burn methane for energy production.

Agriculture

15. Reduce emissions from livestock operations. Likely CAP measures support additional methane collection and methane gas digestion facilities at dairies as well as exploration of methods to reduce enteric fermentation through modification of feed or feed supplements.

16. Expand sustainable agricultural best practices. Likely CAP measures support continued replacement of fossil-fuel based fertilizer with alternative fertilizer or agricultural practices, changes in farming and grazing practices to increase carbon sequestration, support of certification programs and local sustainable and organic foods and products, urban agriculture, and conservation of open space and agricultural lands. These measures could result in changes in land management practices and agricultural inputs and outputs.

New Development

17. Reduce project-wide emissions from new development. Adoption of a performance standard for development would result in additional GHG reductions implemented by discretionary development which could include improvements related to building energy, transportation, solid waste, water and land conservation (such as those discussed above), or other measures.
The PEIR will evaluate whether any of the physical changes outlined above would potentially result in significant environmental effects. These effects could potentially fall in many of the standard CEQA "checklist" categories found in Appendix G to the State CEQA Guidelines. The PEIR will also consider feasible alternatives to the proposed CAP with a focus on potential alternatives with the potential to avoid or substantially reduce significant impacts identified for the proposed CAP.

F. How the proposed Regional CAP would be used

The RCPA would use the regional CAP to guide its actions in implementing regional measures and supporting local jurisdictions in implementing their local measures.

Regional agencies and programs (such as Sonoma Clean Power, Sonoma County Water Agency, Sonoma County Transportation Authority, Sonoma County Energy Independence Program, and the Sonoma County Waste Management Agency) may use the regional CAP to guide their implementation of regional measures.

The participating local jurisdictions may use the CAP as the basis for their local CAPs. Jurisdictions may choose to adopt specific portions of the regional CAP relevant to their jurisdiction, or they may modify some aspects of the GHG reduction measures as part of their local adoption process.

G. How the PEIR would be used for Adoption of GHG Reduction Plans

The PEIR will be used by the RCPA and a host of other agencies.

The RCPA as the lead agency, will consider the environmental impacts of the proposed CAP based on the Final EIR and certify the adequacy of the EIR prior considering approval of the CAP. As part of this certification and adoption process, the RCPA will commit to implement all feasible mitigation measures within its authority, as identified in the PEIR.

Participating regional agencies and local jurisdictions will act as Responsible Agencies under CEQA and utilize the PEIR as their CEQA document for any specific measures or local implementation plans they seek to adopt, provided these local plans are consistent with the CAP. Since this is a programmatic EIR, and some of the site-specific and project-level review cannot be conducted, some of the GHG reduction measures may require additional project-level analysis under CEQA before being implemented. That additional review may be conducted by RCPA, individual jurisdictions, or regional agencies, depending on the lead agency for a particular action.

H. How the PEIR can be used for CEQA “Tiering”

In addition, local jurisdictions can use the CAP to comply with project-level GHG emission impact review requirements pursuant to CEQA. The State CEQA Guidelines (Section 15183.5) specify that project-specific evaluation of GHG emissions can “tier off” a programmatic analysis of GHG emissions, provided that the programmatic analysis (or CAP) does the following:
• Quantify GHG emissions, both existing and projected over a specified time period, resulting from activities within a defined geographic area.

• Establish a level, based on substantial evidence, below which the contribution to GHG emissions from activities covered by the plan would not be cumulatively considerable.

• Identify and analyze the GHG emissions resulting from specific actions or categories of actions anticipated within the geographic area.

• Specify measures or a group of measures, including performance standards that substantial evidence demonstrates, if implemented on a project-by-project basis, would collectively achieve the specified emissions level.

• Monitor the plan’s progress.

• Adopt the GHG emissions reduction strategy in a public process following environmental review.

The proposed CAP will meet the requirements of State CEQA Guidelines Section 15183.5

Tiering from the CAP and PEIR potentially eliminates the need to prepare a project-specific assessment of project-level GHG emissions.
Thank you for the opportunity to review and comment on the PEIR. My comments are not intended to be critical; instead are intended to be brief and specific and reflect my observations from attending SoCo/GHG meetings, my review of pertinent studies by government agencies, experience as a public servant as well as a SoCo resident. I welcome the opportunity to elaborate on these comments as should be deemed necessary.

It is not surprising that SoCo will "not meet goals" as stated in the report. I suggest that this is the result of:

Insufficient focused effort to recognize the realities of the SoCo commuting issue (GHG, 58% from vehicles); the two way AM/PM
  HOV actually results in unnecessary stop/go increased pollution particulates; further, the onramp metering systems continue
  to operate well beyond HOV lane times/traffic demands further increasing idling/stop-go increased emissions. When 2 of 3
  available lanes are congested due to extended operation of underutilized HOV lanes, it is clear that a review needs to be conducted
  to change times, etc. Published studies and metrics by the Federal Hiway Admin. and the EPA are specific as to the impact of idling/stop/go emissions. I suggest that addressing these traffic management practices in SoCowould go a long way to reduce the highest impacting GHG cause.

Additionally, I suggest that a root cause of the volume of commute traffic out of SoCo can be the result of insufficient SoCo efforts
  to create viable employment opportunities in SoCo; also, by numerous accounts it is financially burdensome for companies to start
  up and remain in SoCo. The necessity to leave SoCo on a daily basis is a significant impact on GHG; increased focus should be placed upon the attraction, creation, and maintenance of employment within SoCo; there should be a direct measurable strategic initiative established between GHG reduction efforts and initiative for and insufficient employment in SoCo. Neither challenge can be independent of the other; there is an opportunity for SoCo to integrate disciplines (for instance Environment and Employment) in a 'systems approach' which is recognition of these dependencies.

The report does not address the impact of emissions from wine industry fermentation (not the same as enteric). Pg 7, Item 15
  Agriculture is remiss in the specific recognition of its contribution to our air quality. Further mandates should be placed upon
  expectations to resolve fermentation (sustainability production methods) and other agriculture emissions controls (recycle gases to
  create electricity) such as is already successfully practiced by dairies in Marin in a more timely approach.

The report does not address the impact of the drought on air quality. I suggest that the metrics on SoCo air quality improvement
are influenced by the drought and as such adherence to SoCo plan objectives will not accurately reflect the impact of agency and community efforts to reduce emissions. A failure to acknowledge the impact of the drought will likely result (as cited in the document) in further mandates for building and other emissions controls that increase costs and impacts on business growth in SoCo.

I am truly concerned by the extended schedule and absence of accomplishment that is evident when reading through the document provided. Continued (year after year) use of terms such as "Plan" "Analysis" "Schedule" "Feasibility Study" are indicative of a paralysis in achieving measurable accomplishment toward critical environmental priority objectives. There is no luxury of time when it comes to our GHG challenge(s); as such I suggest that the top two impacts on our air quality (such as motor vehicles 58%) should be addressed in a concerted manner with well stated goal/objectives/metrics/dependencies/schedule to be achieved by qualified personnel who are empowered by SoCo leadership to be successful. I suggest there clearly are 'low hanging fruit' (those that can be achieved by modifying current practices and inter-department coordination) as I've suggested in this communication to be made a priority in curbing our GHG issues. Anything less than this will, without a doubt, continue the delay in actions and improvement to resolve the GHG issue and a continued call for more Draft documents to be created and commented upon by the community.

Thank you.
Edward Kinney, MS. MPA.

-----Original Message-----
From: Regional Climate Protection Authority <Brant.Arthur@sonoma-county.org>
To: Edward <edwardjkinney@aol.com>
Sent: Fri, Oct 9, 2015 5:00 pm
Subject: Climate Action 2020: Public Scoping Meeting and Preparation of Draft Environmental Impact Report

Hi Edward,

The Sonoma County Regional Climate Protection Authority (RCPA), as the lead agency under the California Environmental Quality Act (CEQA), will prepare a Program Environmental Impact Report (PEIR) for the proposed Climate Action 2020: Community Climate Action Plan (CAP) and would like your views regarding the scope and content of the environmental information to be addressed in the PEIR. This PEIR may be used by your agency when considering approvals for this CAP. The CAP location, description, and a brief summary of potential environmental effects are online.

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If you are a responsible agency, please identify a contact person for your agency with your comments.

Questions and comments should be addressed to:

Sonoma County Regional Climate Protection Authority, Attn: Lauren Casey
490 Mendocino Ave, Ste 306
Santa Rosa, CA 95407
707-565-5379, lcasey@sctainfo.org

All the best,
Brant Arthur | Community Affairs Specialist
Sonoma County Regional Climate Protection Authority (RCPA)
Working to reduce the impacts of climate change
Our mailing address is:
Regional Climate Protection Authority
490 Mendocino Ave Suite 206
Santa Rosa, CA 95401 USA

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update your info or unsubscribe
We appreciate the opportunity to comment on the Scoping Document for the preparation of the EIR for the Climate Action Plan for Sonoma County.

The likely actions in the proposed CAP listed in the NOP do not provide much detail at this point. Our comments, however, are at a more detailed level. The intention of our comments, therefore, is to ensure that these specific alternatives are included in the eventual scope of the EIR so that they can be considered for the CAP.

Regarding the Building Energy Section, Item 2: Increase renewable energy use, we advocate for an aggressive approach to increasing the use of solar power, including considering building codes that require solar installations on new residential, commercial, and industrial buildings where feasible.

Specific to Item 3 under On-Road Transportation, etc.: Encourage a shift in ... fuel used: we ask that the CAP include best practices EV adoption support actions such as a streamlined permit process for the installation of charging stations across jurisdictions, preferential parking, requiring charging stations in new parking lots, and a specific plan to support the public-access EV charging network.

In response to two related sections, Solid Waste Generation: Increase solid waste diversion, and Agriculture: Expand sustainable agricultural best practices (items 8 and 16), we strongly request that the green waste/compost issue be addressed. The cities and counties are currently struggling to ensure that green waste composting returns to the county. The current situation has an unacceptably high impact on the air quality, GHG emissions, the roads, and the agricultural community that depends on compost to implement sustainable methods. This issue is a high priority, not just for the CAP, but to meet the objectives of Sonoma County’s existing General Plan.

Regarding the On-Road Transportation, Land Use and Off-Road Equipment category, we encourage adding a section: Increase residential density, and commercial and industrial infill. Creative residential zoning measures could encourage an increased density in single family neighborhoods by allowing granny units and tiny houses, in addition to transit-oriented development and other multi-family solutions. We encourage the CAP to recommend continued strict urban boundaries and open space, even to identify key carbon sink and adaptation lands (eg, marshlands) for protection.

Thank you for your consideration.

Sincerely,

Laura Neish
Climate Policy & Action Coordinator, Sonoma County Conservation Action

Denny Rosatti
Executive Director, Sonoma County Conservation Action
Table B-1. State, Regional, and Local Measures to Reduce GHG Emissions

<table>
<thead>
<tr>
<th>CAP Measure Number</th>
<th>Name and Description</th>
<th>Responsible Entity</th>
<th>2020 GHG Reductions (MTCO₂e/year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-S1</td>
<td><strong>Title 24 Standards for Commercial and Residential Buildings</strong>&lt;br&gt;Requires that new and remodeled buildings be designed to conserve energy and water.</td>
<td>Developed by: California Energy Commission (CEC)&lt;br&gt;&lt;br&gt;Enforced by: local building departments and the California Building Standards Commission</td>
<td>X</td>
</tr>
<tr>
<td>1-S2</td>
<td><strong>Lighting Efficiency and Toxics Reduction Act (AB 1109)</strong>&lt;br&gt;Will decrease electricity used for lighting in new buildings through regulation and lighting standards.</td>
<td>Developed by: CEC&lt;br&gt;&lt;br&gt;Enforced by: local building departments and the CEC</td>
<td>X</td>
</tr>
</tbody>
</table>

1 CAP Measure Number abbreviations: S = state measures, C= regional measures, and L = local measures.

2 Refer to Appendix C of the draft CAP for a description of the assumptions and methodology used to calculate the 2020 GHG reductions.
<table>
<thead>
<tr>
<th>CAP Measure Number</th>
<th>Name and Description</th>
<th>Responsible Entity</th>
<th>2020 GHG Reductions2 (MTCO(\text{e})/year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-S3</td>
<td><strong>Industrial Boiler Efficiency</strong>&lt;br&gt;Requires an annual tuning of all boilers, or the installation of controls and systems to maximize efficiency.</td>
<td>Developed by: California Air Resources Board (ARB)&lt;br&gt;Enforced by: ARB and local air districts</td>
<td>X X X X X X X 345</td>
</tr>
<tr>
<td>1-C1</td>
<td><strong>Community Energy Efficiency Retrofits for Existing Buildings</strong>&lt;br&gt;Includes all existing programs to improve the energy efficiency of community buildings (including homes and businesses) through retrofits.</td>
<td>Implemented by: Energy Independence Office, RCPA, Sonoma Clean Power</td>
<td>X X X X X X X 3,954</td>
</tr>
<tr>
<td>1-C2</td>
<td><strong>Expand Community Energy Efficiency Retrofits Program</strong>&lt;br&gt;Expands programs to promote energy efficiency in existing residential buildings and commercial buildings, and removes funding barriers for energy efficiency improvements.</td>
<td>Implemented by: Energy Independence Office, RCPA, Sonoma Clean Power</td>
<td>X X X X X X X 7,776</td>
</tr>
</tbody>
</table>
## Appendix B. CAP Measures

<table>
<thead>
<tr>
<th>CAP Measure Number</th>
<th>Name and Description</th>
<th>Responsible Entity</th>
<th>2020 GHG Reductions² (MTCO₂e/year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-L1</td>
<td><strong>Expand the Green Building Ordinance Energy Code</strong>&lt;br&gt;Requires new residential and nonresidential development to exceed CALGreen Tier 1 voluntary standards by complying with CALGreen Tier 2 standards.</td>
<td></td>
<td>X 80</td>
</tr>
<tr>
<td>1-L2</td>
<td><strong>Outdoor Lighting</strong>&lt;br&gt;Adopts outdoor lighting standards in the Zoning Ordinance to reduce electricity consumption above and beyond the requirements of AB 1109.</td>
<td>X X X X X X X X</td>
<td>1,561</td>
</tr>
<tr>
<td>1-L3</td>
<td><strong>Shade Tree Planting</strong>&lt;br&gt;Expands on current urban tree planting policies and programs to establish a shade tree planting goal for each community.</td>
<td>X X X X X X X X</td>
<td>45</td>
</tr>
<tr>
<td>1-L4</td>
<td><strong>Co-Generation Facilities</strong>&lt;br&gt;Encourages co-generation facilities to supply a certain amount of energy in new commercial and industrial facilities greater than 100,000 square feet.</td>
<td>X X</td>
<td>3</td>
</tr>
</tbody>
</table>

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² MTCO₂e: Metric Tonne of Carbon Dioxide Equivalent
<table>
<thead>
<tr>
<th>CAP Measure Number</th>
<th>Name and Description</th>
<th>Responsible Entity</th>
<th>2020 GHG Reductions&lt;sup&gt;2&lt;/sup&gt; (MTCO&lt;sub&gt;e&lt;/sub&gt;/year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-S1</td>
<td><strong>Renewable Portfolio Standard (RPS)</strong>&lt;br&gt;Requires electric utilities (including PG&amp;E, Healdsburg, and SCP) to procure an increasing amount of their electricity from eligible renewable sources up to 33% by 2020.</td>
<td>Developed by: California Public Utilities Commission (CPUC)&lt;br&gt;Enforced by: CPUC</td>
<td>X X X X X X X X 181,793</td>
</tr>
<tr>
<td>2-S2</td>
<td><strong>Residential Solar Water Heater Program (AB 1470)</strong>&lt;br&gt;Provides incentives to encourage the installation of solar water heating systems.</td>
<td>Developed by: CPUC&lt;br&gt;Enforced by: CPUC</td>
<td>X X X X X X X X 800</td>
</tr>
<tr>
<td>2-C1</td>
<td><strong>Sonoma Clean Power</strong>&lt;br&gt;SCP is a community choice aggregation (CCA) program and electricity provider that works with PG&amp;E to provide their customers between 33% and 100% renewable energy.</td>
<td>Implemented by: Sonoma Clean Power</td>
<td>X X X X X X X X 48,203</td>
</tr>
<tr>
<td>CAP Measure Number</td>
<td>Name and Description</td>
<td>Responsible Entity</td>
<td>2020 GHG Reductions&lt;sup&gt;2&lt;/sup&gt; (MTCO&lt;sub&gt;e&lt;/sub&gt;/year)</td>
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<tr>
<td>--------------------</td>
<td>------------------------------------------------------------</td>
<td>--------------------</td>
<td>--------------------------------------------------------</td>
</tr>
<tr>
<td>2-L1</td>
<td>Solar in New Residential Development</td>
<td></td>
<td>X X X X X X X X 246</td>
</tr>
<tr>
<td>2-L2</td>
<td>Solar in Existing Residential Buildings</td>
<td></td>
<td>X X X X X X X X 9,942</td>
</tr>
<tr>
<td>2-L3</td>
<td>Solar in New Non-Residential Developments</td>
<td></td>
<td>X X X X X X X 528</td>
</tr>
<tr>
<td>2-L4</td>
<td>Solar in Existing Non-Residential Buildings</td>
<td></td>
<td>X X X X X X X 25,573</td>
</tr>
<tr>
<td>CAP Measure Number¹</td>
<td>Name and Description</td>
<td>Responsible Entity</td>
<td>2020 GHG Reductions² (MTCO₂e/year)</td>
</tr>
<tr>
<td>---------------------</td>
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<td>----------------------------------</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Adopted by Cloverdale</td>
<td>Adopted by Cotati</td>
</tr>
<tr>
<td>Goal 3.</td>
<td>Switch equipment from fossil fuel to electricity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3-C1</td>
<td>Stationary Fuel Switching Incentives</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Will provide incentives and financing options for fuel switching from fossil fuel use to electricity.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3-L1</td>
<td>Convert to Electric Water Heating</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Replaces residential natural gas water heating equipment with electric heating equipment.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Goal 4.</td>
<td>Reduce travel demand through focused growth</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4-L1</td>
<td>Mixed-Use Development in City Centers and along Transit Corridors</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Identifies specific areas for transit-oriented, city-centered, mixed-use development, focusing on identified existing and planned transit corridors.</td>
<td></td>
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</tr>
</tbody>
</table>

¹CAP Measure Number
²2020 GHG Reductions (MTCO₂e/year)
<table>
<thead>
<tr>
<th>CAP Measure Number</th>
<th>Name and Description</th>
<th>Responsible Entity</th>
<th>2020 GHG Reductions&lt;sup&gt;2&lt;/sup&gt; (MTCO&lt;sub&gt;e&lt;/sub&gt;/year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4-L2</td>
<td>Increase Transit Accessibility</td>
<td>Adopted by Cloverdale, Cotati, Healdsburg, Petaluma, Sebastopol, Sonoma, Windsor</td>
<td>1,057</td>
</tr>
<tr>
<td></td>
<td>Encourages new residential projects consisting of 25 units or more to be located within 1/2 mile of a transit node, shuttle service, or bus route with regularly scheduled daily service.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4-L3</td>
<td>Supporting Land Use Measures</td>
<td>Adopted by Cloverdale, Healdsburg, Petaluma, Sebastopol, Sonoma, Windsor</td>
<td>NQ&lt;sup&gt;3&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td>Undertakes actions that will support transportation-related land use.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4-L4</td>
<td>Affordable Housing Linked to Transit</td>
<td>Adopted by Cloverdale, Healdsburg, Petaluma, Sebastopol, Sonoma, Windsor</td>
<td>166</td>
</tr>
<tr>
<td></td>
<td>Provides affordable housing developments near transit corridors, transit hubs, and downtown cores.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Goal 5.</td>
<td>Encourage a shift toward low-carbon transportation options</td>
<td></td>
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</tr>
<tr>
<td>5-C1</td>
<td>Improve and Increase Transit Service</td>
<td>Adopted by SCTA, Sonoma County Transit, Petaluma Transit, and Santa Rosa Transit</td>
<td>147</td>
</tr>
<tr>
<td></td>
<td>Increases bus service, implements bus preferential treatments, implements bus rapid transit (BRT) and/or express service, improves transit marketing, and improves transit amenities.</td>
<td></td>
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</tr>
</tbody>
</table>

<sup>3</sup> These measures were not quantified (NQ) for GHG reductions because they are qualitative supporting measures. Refer to Appendix C for more information.
<table>
<thead>
<tr>
<th>CAP Measure Number</th>
<th>Name and Description</th>
<th>Responsible Entity</th>
<th>Adopted by Cloverdale</th>
<th>Adopted by Cotati</th>
<th>Adopted by Healdsburg</th>
<th>Adopted by Petaluma</th>
<th>Adopted by Rohnert Park</th>
<th>Adopted by Sebastopol</th>
<th>Adopted by Sonoma</th>
<th>Adopted by Windsor</th>
<th>Adopted by County of Sonoma</th>
<th>2020 GHG Reductions² (MTCO₂e/year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>5-C2</td>
<td><strong>Supporting Transit Measures</strong>&lt;br&gt;Implements measures designed to improve the County's transit system.</td>
<td>Implemented by: SCTA, Sonoma County Transit, Petaluma Transit, and Santa Rosa Transit</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>NQ³</td>
<td></td>
</tr>
<tr>
<td>5-C3</td>
<td><strong>Sonoma-Marin Area Rail Transit (SMART)</strong>&lt;br&gt;Ensures policies support planned SMART corridor, such as transit-oriented development at planned SMART stations, future local transit planning for SMART, and pedestrian and bicycle facilities to connect to SMART stations.</td>
<td>Implemented by: SMART and local communities with SMART stations</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>NQ³</td>
</tr>
<tr>
<td>5-C4</td>
<td><strong>Trip Reduction Ordinance</strong>&lt;br&gt;Develops and implements a mandatory Trip Reduction Ordinance (TRO) for employers with 50+ employees by offering pre-tax transit expenses, transit or vanpool subsidy, free or low-cost shuttle, or an alternate benefit (with a non-trip reduction option of purchasing equivalent GHG offset credits).</td>
<td>Implemented by: SCTA</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>6,113</td>
<td></td>
</tr>
<tr>
<td>CAP Measure Number</td>
<td>Name and Description</td>
<td>Responsible Entity</td>
<td>2020 GHG Reductions[^2] (MTCO\textsubscript{e}/year)</td>
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</tbody>
</table>
| 5-C5               | Supporting Measures for the Transportation Demand Management Program  
|                    | Implements TDM measures to support the TRO.  
|                    | Reduced Cost Transit Passes  
|                    | Provides reduced cost transit passes to encourage commuters to take transit (with a non-transit pass option of purchasing equivalent GHG offset credits). | Implemented by: SCTA | NQ[^3] |
| 5-C6               | Reduced Cost Transit Passes  
|                    | Provides reduced cost transit passes to encourage commuters to take transit (with a non-transit pass option of purchasing equivalent GHG offset credits). | Implemented by: SCTA, Sonoma County Transit, Petaluma Transit, and Santa Rosa Transit | 5,660 |
| 5-C7               | Alternative Travel Marketing and Optimize Online Service  
|                    | Conducts countywide marketing efforts (and consistent community-wide efforts) to provide information on alternate travel modes.  
|                    | Safe Routes to School  
|                    | Creates safe routes to school programs for communities where they currently do not exist. | Implemented by: SCTA, SMART, Sonoma County Transit, Petaluma Transit, and Santa Rosa Transit | 4,528 |
| 5-C8               | Safe Routes to School  
<p>|                    | Creates safe routes to school programs for communities where they currently do not exist. | Implemented by: SCTA | 14,234 |</p>
<table>
<thead>
<tr>
<th>CAP Measure Number</th>
<th>Name and Description</th>
<th>Responsible Entity</th>
<th>Adopted by Cloverdale</th>
<th>Adopted by Cotati</th>
<th>Adopted by Healdsburg</th>
<th>Adopted by Petaluma</th>
<th>Adopted by Rohnert Park</th>
<th>Adopted by Sebastopol</th>
<th>Adopted by Sonoma</th>
<th>Adopted by Windsor</th>
<th>Adopted by County of Sonoma</th>
<th>2020 GHG Reductions(^2) (MTCO(_{2}e/)year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>5-C9</td>
<td>Carsharing Program</td>
<td>Implemented by: SCTA</td>
<td>X X X X X X X</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>NQ(^3)</td>
</tr>
<tr>
<td>5-C10</td>
<td>Create a Countywide Public Bike Share Program</td>
<td>Implemented by: SCTA</td>
<td>X X X X X X X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>NQ(^3)</td>
</tr>
<tr>
<td>5-L1</td>
<td>Local Transportation Demand Management Program</td>
<td></td>
<td>X X X X X X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2,975</td>
</tr>
<tr>
<td>CAP Measure Number</td>
<td>Name and Description</td>
<td>Responsible Entity</td>
<td>2020 GHG Reductions $^2$ (MTCO$_2$e/year)</td>
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</tr>
</tbody>
</table>
| 5-L2               | **Carpool Incentives & Ride-Sharing Program**  
Creates or promotes a countywide ride-sharing program and encourages participation by local employers through their TDM programs.  
**Guaranteed Ride Home**  
Creates a guaranteed ride home program that could provide a free car share, shuttle, or taxi ride home to employees in case of an emergency. | X X X X X X X X | 5,709 |
| 5-L3               | **Supporting Bicycle/Pedestrian Measures**  
Implements local actions to support bicycle use and pedestrians.  
**Traffic Calming**  
Implements traffic calming measures in downtown cores, at accident hotspot locations, near schools and libraries, etc. | X X X X X X X X | NQ$^3$ |
| 5-L4               | **Supporting Bicycle/Pedestrian Measures**  
Implements local actions to support bicycle use and pedestrians.  
**Traffic Calming**  
Implements traffic calming measures in downtown cores, at accident hotspot locations, near schools and libraries, etc. | X X X X X X X X | NQ$^3$ |
| 5-L5               | **Supporting Bicycle/Pedestrian Measures**  
Implements local actions to support bicycle use and pedestrians.  
**Traffic Calming**  
Implements traffic calming measures in downtown cores, at accident hotspot locations, near schools and libraries, etc. | X X X X X X X X | 1,205 |
<table>
<thead>
<tr>
<th>CAP Measure Number</th>
<th>Name and Description</th>
<th>Responsible Entity</th>
<th>2020 GHG Reductions² (MTCO₂e/year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>5-L6</td>
<td>Parking Policies</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>5-L7</td>
<td>Supporting Parking Policy Measures</td>
<td></td>
<td>X X X X X X X X X</td>
</tr>
</tbody>
</table>

**Goal 6. Increase vehicle and equipment fuel efficiency**

| 6-S1               | Pavley Emissions Standards for Passenger Vehicles and the Low Carbon Fuel Standard | Enforced by: ARB | Implemented by: ARB, vehicle manufacturers, and fuel producers | X X X X X X X X | 333,030 |
|                   | Will increase the efficiency of automobiles and light-duty trucks by 30% from 2002 by 2016. This also includes the Low Carbon Fuel Standard for on-road vehicles. |                     |                                                               |                  |
| 6-S2               | Advanced Clean Cars | Enforced by: ARB    | Implemented by: ARB and vehicle manufacturers | X X X X X X X X | 9,679  |
|                   | Requires that vehicle manufacturers increase the average fuel efficiency of their new vehicles beyond the Pavley requirements. |                     |                                                               |                  |
### CAP Measure
**CAP Measure Number**
<table>
<thead>
<tr>
<th>CAP Measure Number</th>
<th>Name and Description</th>
<th>Responsible Entity</th>
<th>2020 GHG Reductions(^2) (MTCO\text{e}/year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>6-S3</td>
<td>AB 32 Vehicle Efficiency Measures</td>
<td>Enforced by: ARB</td>
<td>16,010</td>
</tr>
<tr>
<td></td>
<td>Increases the efficiency of vehicles through proper tire inflation, aerodynamic efficiency for heavy-duty vehicles, hybrid technology for heavy-duty vehicles, and other measures.</td>
<td>Implemented by: ARB, vehicle service facilities, and vehicle manufacturers</td>
<td>X X X X X X X</td>
</tr>
<tr>
<td>7-S1</td>
<td>Low Carbon Fuel Standard: Off-Road</td>
<td>Enforced by: ARB</td>
<td>5,182</td>
</tr>
<tr>
<td></td>
<td>Requires a minimum 10% reduction in the carbon intensity of transportation fuels sold in California by 2020.</td>
<td>Implemented by: ARB and fuel producers</td>
<td>X X X X X X X</td>
</tr>
<tr>
<td>7-C1</td>
<td>Shift Sonoma County (Electric Vehicles)</td>
<td>Implemented by: RCPA, SCTA, and SCP</td>
<td>10,634</td>
</tr>
<tr>
<td></td>
<td>Countywide electric vehicle promotion program, in partnership with SCP.</td>
<td></td>
<td>X X X X X X X</td>
</tr>
<tr>
<td></td>
<td>Alternative Fuels for Transit Vehicles</td>
<td>Implemented by: SCTA, Sonoma County Transit, Petaluma Transit, and Santa Rosa Transit</td>
<td>40</td>
</tr>
<tr>
<td>7-C2</td>
<td>Replaces diesel and gasoline buses with hybrid buses or compressed natural gas (CNG) buses.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAP Measure Number</td>
<td>Name and Description</td>
<td>Responsible Entity</td>
<td>2020 GHG Reductions² (MTCO₂e/year)</td>
</tr>
<tr>
<td>--------------------</td>
<td>---------------------------------------------------------------------------------------</td>
<td>---------------------</td>
<td>-----------------------------------</td>
</tr>
<tr>
<td>7-L1</td>
<td>Electric Vehicle Charging Station Program</td>
<td>X X X X X X X X X</td>
<td>60</td>
</tr>
<tr>
<td></td>
<td>Develops local charging stations to support electric vehicles.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7-L2</td>
<td>Electrify Construction Equipment</td>
<td>X X X X X X X</td>
<td>365</td>
</tr>
<tr>
<td></td>
<td>Incentivizes replacement of fossil-fuel construction equipment with alternatively fueled or electric equipment.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7-L3</td>
<td>Reduce Fossil Fuel Use in Equipment through Efficiency or Fuel Switching</td>
<td>X X X X X X X</td>
<td>NQ³</td>
</tr>
<tr>
<td></td>
<td>Reduces fuel use in agricultural equipment by converting equipment currently using gasoline, diesel, or liquefied petroleum gas (LPG) to alternative fuels with lower GHG intensity (such as natural gas, biofuels, or solar electricity).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAP Measure Number</td>
<td>Name and Description</td>
<td>Responsible Entity</td>
<td>2020 GHG Reductions² (MTCO₂e/year)</td>
</tr>
<tr>
<td>--------------------</td>
<td>--------------------------------------------------------------------------------------</td>
<td>--------------------</td>
<td>----------------------------------</td>
</tr>
<tr>
<td>8-L1</td>
<td>Idling Ordinance</td>
<td>X X X X X X X X</td>
<td>13,120</td>
</tr>
<tr>
<td></td>
<td><strong>Idling Ordinance for Construction Equipment</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Adopts an ordinance that limits idling time to 3 minutes for heavy-duty construction equipment.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8-L2</td>
<td>Waste Diversion Goal</td>
<td>X X X X X X X X X X</td>
<td>256</td>
</tr>
<tr>
<td></td>
<td><em>Implemented by: SCWMA with cooperation from local communities</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Goal 9.</td>
<td>Increase solid waste diversion</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9-C1</td>
<td>Waste Diversion Goal</td>
<td>X X X X X X X X X X</td>
<td>26,229</td>
</tr>
<tr>
<td></td>
<td><em>Implemented by: SCWMA with cooperation from local communities</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9-L1</td>
<td>Create Construction and Demolition Reuse and Recycling Ordinance</td>
<td>X X X X X X X X X X</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Implements goal for construction and demolition waste.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAP Measure Number¹</td>
<td>Name and Description</td>
<td>Responsible Entity</td>
<td>2020 GHG Reductions² (MTCO2e/year)</td>
</tr>
<tr>
<td>---------------------</td>
<td>----------------------</td>
<td>--------------------</td>
<td>-----------------------------------</td>
</tr>
<tr>
<td>10-C1</td>
<td>Create New Waste-to-Energy Facilities</td>
<td>Implemented by: SCWMA, landfill owners/operators</td>
<td>X X X X X X X X 39,132</td>
</tr>
<tr>
<td>11-C1</td>
<td>Countywide Water Conservation Support and Incentives</td>
<td>Implemented by: SCWA, supported by local communities</td>
<td>X X X X X X X X NQ³</td>
</tr>
<tr>
<td>11-L1</td>
<td>SB X7-7 – Water Conservation Act of 2009</td>
<td></td>
<td>X X X X X X X X 16,653</td>
</tr>
<tr>
<td>11-L2</td>
<td>Water Conservation for New Construction</td>
<td></td>
<td>X X X X X X 295</td>
</tr>
</tbody>
</table>

Goal 10. Increase capture and use of methane from landfills

Goal 11. Reduce water consumption
<table>
<thead>
<tr>
<th>CAP Measure Number</th>
<th>Name and Description</th>
<th>Responsible Entity</th>
<th>2020 GHG Reductions&lt;sup&gt;2&lt;/sup&gt; (MTCO&lt;sub&gt;e&lt;/sub&gt;/year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>measures for new residential and nonresidential construction.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11-L3</td>
<td><strong>Water Conservation for Existing Buildings</strong>&lt;br&gt;Incentivizes renovation of existing buildings to achieve higher levels of water efficiency; encourages existing buildings to retrofit with CALGreen Tier 1 water efficiency measures.</td>
<td>X X X X X</td>
<td>2,172</td>
</tr>
<tr>
<td>Goal 12.</td>
<td><strong>Increase recycled water and greywater use</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12-C1</td>
<td><strong>Recycled Water</strong>&lt;br&gt;Encourages use of recycled water instead of potable water.</td>
<td>Implemented by: Water/wastewater service providers</td>
<td>X X X X X X X X</td>
</tr>
<tr>
<td>CAP Measure Number(^1)</td>
<td>Name and Description</td>
<td>Responsible Entity</td>
<td>(2020) GHG Reductions(^2) (MTCO(_2)e/ year)</td>
</tr>
<tr>
<td>---------------------------</td>
<td>----------------------</td>
<td>--------------------</td>
<td>----------------------------------</td>
</tr>
<tr>
<td>12-L1</td>
<td>Greywater Use</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Incentivizes greywater use instead of potable water for residential non-potable uses.</td>
<td>X X X X X X</td>
<td>36</td>
</tr>
</tbody>
</table>

**Goal 13. Increase water and wastewater infrastructure efficiency**

| 13-C1                     | Infrastructure and Water Supply Improvements | Implemented by: SCWA and other water/wastewater service providers | X X X X X X X X X X | 233 |
|                           | Reduces energy demand from water supply infrastructure, investigates new water supply sources, and increases local water production. | | | |

| 13-C2                     | Wastewater Treatment Equipment Efficiency | Implemented by: Wastewater service providers | X X X X X X X X | 529 |
|                           | Reduces energy demand from wastewater treatment operations. | | | |
## Goal 14. Increase use of renewable energy in water and wastewater systems

<table>
<thead>
<tr>
<th>CAP Measure Number</th>
<th>Name and Description</th>
<th>Responsible Entity</th>
<th>2020 GHG Reductions² (MTCO₂e/year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>14-C1</td>
<td><strong>Sonoma County Water Agency Carbon Free Water by 2015</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>SCWA has contracted to procure 100% of its electricity needs through renewable and carbon-free resources, thus achieving a carbon-neutral electricity supply.</td>
<td><strong>Implemented by: SCWA</strong></td>
<td>X X X X X 2,145</td>
</tr>
<tr>
<td>14-L1</td>
<td><strong>Green Energy for Water Production and Wastewater Processing in Healdsburg and Cloverdale</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Healdsburg will use 100% renewable energy for a certain percentage of its water production and/or conveyance. Cloverdale has implemented solar energy arrays at the city water and wastewater plants.</td>
<td>X X</td>
<td>412</td>
</tr>
<tr>
<td>CAP Measure Number</td>
<td>Name and Description</td>
<td>Responsible Entity</td>
<td>Adopted by Cloverdale</td>
</tr>
<tr>
<td>--------------------</td>
<td>----------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------</td>
<td>------------------------</td>
</tr>
<tr>
<td>15-L1</td>
<td>Methane Capture and Combustion at Dairies</td>
<td>Implemented by: Sonoma County, dairies, resource conservation districts, and Natural Resources Conservation Service (NRCS)</td>
<td>n/a</td>
</tr>
<tr>
<td></td>
<td>Reduce Emissions from Enteric Fermentation</td>
<td>Implemented by: Sonoma County, dairy/livestock operators, RCDs, and NRCS</td>
<td>n/a</td>
</tr>
<tr>
<td>16-L1</td>
<td>Optimize Nitrogen Fertilizer Use</td>
<td>Implemented by: Sonoma County, farmers, RCDs, and NRCS</td>
<td>n/a</td>
</tr>
<tr>
<td>CAP Measure Number¹</td>
<td>Name and Description</td>
<td>Responsible Entity</td>
<td>Adopted by Cloverdale</td>
</tr>
<tr>
<td>---------------------</td>
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<td>-----------------------</td>
</tr>
<tr>
<td>Goal 17.</td>
<td>Protect and enhance the value of open and working lands</td>
<td>17-L1 Conserve Open and Working Lands</td>
<td>Conserves open space and agricultural land from conversion to urban uses.</td>
</tr>
<tr>
<td>Goal 18.</td>
<td>Promote sustainable agriculture</td>
<td>18-L1 Certification Programs</td>
<td>Promotes carbon-beneficial practices through sustainable agricultural certification programs, such as the 100% sustainable wine region commitment.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>18-L2 Promote the Sale of Local, Sustainable, and Organic Grown Foods and/or Products</td>
<td>Supports local farmer’s markets to provide community residents with local, sustainable, and organic (or equivalent) sources of food.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>18-L3 Urban Agriculture</td>
<td>Amends zoning code to allow for small-scale urban farming areas and gardens.</td>
</tr>
<tr>
<td>CAP Measure Number</td>
<td>Name and Description</td>
<td>Responsible Entity</td>
<td>2020 GHG Reductions² (MTCO₂e/year)</td>
</tr>
<tr>
<td>-------------------</td>
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<td>-----------------------------------</td>
</tr>
<tr>
<td>19-L1</td>
<td>Rangeland Carbon Farming</td>
<td>Implemented by: Sonoma County, ranchers and farmers, and RCDs</td>
<td>n/a</td>
</tr>
</tbody>
</table>
Appendix C

Local General Plan Goals, Objectives, and Policies

C.1 Aesthetics

The following presents a list of goals and policies related to aesthetics from relevant participating jurisdiction’s general plans.

1. City of Cloverdale

The following goals and policies from the City of Cloverdale General Plan (City of Cloverdale 2009) are applicable to the implementation of the CAP.

Policy LU 3-6. Minimize the impacts of urban lighting by providing adequate light for safety but not creating the glare of an urban area.

Policy LU 4-2. Protect and enhance views from the Highway 101 corridor.

Goal UL 1. Maintain night time lighting levels that provide security and safety but also preserve and maintain views of night time skies.

Policy UL 1-1. Require that all new development projects and public improvements maintain night time lighting levels at the minimum necessary to provide security and safety, using fixtures which shield the light source so that light is directed downward, with height and power limited to the minimum necessary to provide adequate lighting.

Policy UL 1-2. Minimize light spillage that carries off the property where lights are located.

Policy UL 1-7. Avoid the use of reflective building materials which can cause daytime and nighttime glare.

City of Cotati

The following policies from the Cotati General Plan Update (City of Cotati 2015) are applicable to the implementation of the CAP.

Policy CI 1.11. Retain the viewpoint of pedestrians and bicyclists as the primary perspective when identifying hub-related traffic improvements.

Policy CI 2.4. When it can be shown that construction of a sidewalk would be at odds with an existing neighborhood’s aesthetic and the historic nature of the areas, alternatives such as an off-street path or wider paved shoulders may be considered, particularly on low-volume local streets.

Policy CON 1.6. Avoid removal of large, mature trees that provide wildlife habitat or contribute to the visual quality of the environment to the greatest extent feasible through appropriate project design and building siting. If full avoidance is not possible, prioritize planting of replacement trees on-site over off-site locations.
Policy CON 1.17. Preserve and protect prominent views of scenic resources, including the Sonoma Mountains, 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 LU 3.11. Require adequate buffers and/or architectural consideration to protect residential areas, developed or undeveloped, from intrusion of non-residential activities that may degrade the quality of life in such residential areas.

Policy OS 1.12. Consider existing scenic resources, including views of the Sonoma Mountains, the Laguna de Santa Rosa, local hills, ridgelines, and open space areas surrounding the City, as resources critical to Cotati’s community identity and character.

Policy OS 1.13. Reduce light and glare from artificial lighting within open space and agricultural areas to ensure that such lighting does not adversely impact the County's rural character.

Policy OS 1.14. Ensure that the site layout and design of development adjacent to scenic roads is consistent with the natural character of such roads.

City of Healdsburg

The following policies and implementation measures from the Healdsburg 2030 General Plan (City of Healdsburg 2009) are applicable to the implementation of the CAP.

Policy NR-C-3. Development shall be allowed only in a manner that protects important views and landmarks such as Fitch Mountain, Russian River, and the foothills to the north, west and east of the city.

Policy NR-C-5. Major scenic ridgelines designated on General Plan Figure 8 and highly visible hillsides shall be protected from visually obtrusive development.

Policy NR-C-7. The viewshed along scenic highways, roads and streets shall be protected and enhanced. The following road segments are declared scenic roads for the purposes of the Healdsburg General Plan and City land use regulations as depicted on General Plan Figure 9:

A. Highway 101 – Entire length within the Planning Area
B. Healdsburg Avenue – North of Grove Street
C. North Fitch Mountain Road – East of Benjamin Way
D. South Fitch Mountain Road – East of Heron Drive
E. Healdsburg Avenue – South of the Russian River Bridge

Policy NR-C-8. City scenic road and street efforts shall be coordinated with the County’s scenic highway program.

Implementation Measure NR-10. Require a visibility analysis for the creation of new lots, new structures or significant additions and other projects over which the City exercises discretionary authority located within 200 feet on either side (based on a horizontal projection) of the center line of major scenic ridgelines as shown on General Plan Figure 8, Major Scenic Ridgelines. Only developments that are shown to be unobtrusive based on this analysis may be approved. Structural
projections above the ridgeline shall not be allowed unless it can be demonstrated that existing natural features will screen the projection.

**Policy CD-A-1.** The City will encourage building design of high quality that is in scale with adjacent development and that harmonizes with surrounding development.

**Policy CD-A-4.** The City will discourage visual clutter.

**Policy CD-A-5.** City project approvals and other actions relating to physical development shall be consistent with design guidelines set forth in the Design Review Manual, in addition to General Plan policies, the Zoning Ordinance and any specific plan design guidelines.

**Policy CD-A-7.** The City will require the undergrounding of utilities as new development occurs to the extent that this does not adversely impact trees or cause similar undesirable consequences.

**Policy CD-A-11.** Landscaping shall be used in public and private development projects to enhance the city’s visual qualities, provide shade and minimize glare.

**Implementation Measure CD-1.** Continue to apply the City’s design review guidelines by requiring their incorporation into the design of development projects.

**City of Petaluma**

The following policies from the *City of Petaluma: General Plan 2025* (City of Petaluma 2008) are applicable to the implementation of the CAP.

**Policy 2-P-5.** Strengthen the visual and aesthetic character of major arterial corridors.

**Policy 6-P-1-F.** Require land development along designated trails and pathway corridors to provide sufficient right-of-way for trails and amenities and to ensure that adjacent new development does not detract from the scenic and aesthetic qualities of the corridor.

**City of Rohnert Park**

The following goals and policies from the *City of Rohnert Park General Plan* (City of Rohnert Park 2000) are applicable to the implementation of the CAP.

**Policy CD-4.** Designate Petaluma Hill Road as a scenic corridor throughout its stretch along Rohnert Park.

**Policy CD-5.** Ensure that any landscape treatment along Petaluma Hill Road does not obstruct views of the eastern ridgelines from the street.

**Policy CD-7.** Minimize disruption of existing views by new development.

**Policy CD-8.** Maintain streets as “view corridors” by:

- Where appropriate, keeping the northern and eastern terminus “open” by not allowing buildings or tall trees to be placed at street ends; and

- Either leaving the eastern edge of the north-south streets at the city’s eastern edge to remain unplanted, or ensuring that tall-branching trees that permit views from vehicles.
• Reinforce the dramatic framed views of the ridgeline along the Rohnert Park Expressway by ensuring that if the road is widened, landscaping reinforces the framing of the view.

**Goal CD-I.** Ensure that neighborhood streets provide an attractive physical environment for motorists, pedestrians, and cyclists.

**Policy CD-18.** Prepare a design standards checklist for design reviews.

**Policy CD-53.** Ensure that new development in existing neighborhoods is respectful of the character of existing uses and causes minimal design intrusion.

**Goal OS-B.** Maintain land surrounding the city as open space for the enjoyment of scenic beauty, recreation, and protection of natural resources of the community.

**Goal OS-D.** Maintain and enhance the Petaluma Hill Road scenic corridor.

**City of Sebastopol**

The following policies from the *City of Sebastopol General Plan* (City of Sebastopol 1994) are applicable to the implementation of the CAP.

**Policy Community-P.1.** Design Guidelines: Ensure that new development is constructed in a manner consistent with the City's Design Guidelines.

**Policy Community-P.2.** Compatibility of Development With Surroundings: Ensure that new residential development is sensitive to the surrounding architecture, topography, landscaping, and to the character, scale, and ambiance of the surrounding neighborhood.

**Policy Community-P.17.** Prevent Glare: Prevent on-site lighting from casting glare onto adjacent parcels and streets.


**Policy Community-P.40.** Preserve scenic views of the natural landscape.

**City of Sonoma**

The following policy from the *City of Sonoma 2020 General Plan* (City of Sonoma 2006) is applicable to the implementation of the CAP.

**Policy CD-5.3.** Protect important scenic vistas and natural resources, and incorporate significant views and natural features into project designs.

**Town of Windsor**

The following policies and implementation programs from the *Town of Windsor General Plan – 2015* (Town of Windsor 1996) are applicable to the implementation of the CAP.

**Policy CD-A.1.4.** The Town should protect Windsor's unique natural settings by conserving valuable habitats, establishing linear open spaces or “greenways”, and recognizing scenic features, including hillsides, creeks, woodlands or other significant natural features.
**Policy CD-A.6.3.** Within existing neighborhoods, new residential development should be compatible with the scale, massing, and heights of the existing homes and promote pleasant walking environments. Criteria for determining compatible development should be defined in design guidelines for the Town.

**Policy CD-A.7.3.** The Town should encourage residential development to provide the opportunity for views into the surrounding landscape through the preservation of strategic view corridors and innovative site planning.

**Implementation Program CD-B.3.** Design Review. The Town shall review development proposals for their adherence to this General Plan’s policies regarding the location, intensity, and character of development. The Planning Commission shall have primary responsibility in the review of development applications.

**Implementation Program CD-B.4.** Residential Infill Design Standards. The Town should develop design standards for new development in residential neighborhoods to conserve existing residential character. The standards should define appropriate building heights, massing, and other features to ensure that infill development will be compatible with the design characteristics of surrounding residential uses. These standards may include requiring minimum residential densities.

**Policy ER-A.1.1.** The Town shall seek to preserve open space resources (i.e., productive farmlands, outdoor recreation areas, biological habitats, visually prominent landforms, Alquist-Priolo Special Study Zones, and flood hazard areas) using the techniques identified in Table 6-1 [in the General Plan]. The first option for properly managing these resources should be avoidance of development in these open space resources.

**Policy ER-A.1.2.** The Town shall encourage the preservation of sensitive environmental resource areas, such as oak woodlands, productive farmlands, riparian (creekside) corridors, and visually prominent hillsides and ridgelines through measures such as clustering development and conservation easements.

**Implementation Program ER-A.3.** Project and Environmental Review. The Town shall use its discretionary review authority to ensure the protection of its natural, scenic, and cultural resources and to protect public health and safety from hazards associated with hillsides, ridgelines, soils, steep slopes, and seismic and geologic hazard areas. In particular, the Town shall impose, as necessary, conditions of project approval to conserve these resources or protect public health and safety. Determination of these conditions or measures to minimize impacts to these open space resources can also be defined through the Town’s environmental review process which is mandated by the California Environmental Quality Act (CEQA).

**Policy ER-I.1.1.** The Town should recognize the roads shown in Figure 6-3 [in the General Plan] as scenic corridors (also referred to as scenic routes) which enhance the visual experience for Town residents and non-residents. Additional scenic corridors may be recognized based on the following criteria:

1. leads to a recreational area, or
2. exhibits unusual natural or man-made features of interest, such as close-up to mid-range views of rock outcroppings, waterways, or oak woodlands.

**Policy ER-I.1.2.** Development proposals along scenic corridors should not detract from the visual and recreational experience, but should seek to be harmonious and subordinate to the natural
features that comprise the scenic viewshed. Components of project design that should be considered in making this assessment should include building height, massing, orientation, color, building materials, rooftop appurtenances, storage areas, signage, lighting, and landscaping. The purpose of close development review along these corridors is to ensure that development within the viewshed preserves and enhances attractive natural and man-made vistas.

**Policy ER-I.1.3.** Development along Rural Lanes shall preserve significant views of the surrounding foothills as well as mature vegetation which contribute to the rural atmosphere.

### Sonoma County

The following goals, objectives, and policies from the *Sonoma County General Plan 2020* (Sonoma County 2008) are applicable to the implementation of the CAP.

**Goal OSRC-1.** Preserve the visual identities of communities by maintaining open space areas between cities and communities.

**Objective OSRC-2.2.** Protect the ridges and crests of prominent hills in Scenic Landscape Units from the silhouetting of structures against the skyline.

**Objective OSRC-2.3.** Protect hills and ridges in Scenic Landscape Units from cuts and fills.

**Policy OSRC-2h.** For development on parcels located both within Scenic Landscape Units and adjacent to Scenic Corridors, apply the more restrictive siting and setback policies to preserve visual quality.

**Goal OSRC-3.** Identify and preserve roadside landscapes that have a high visual quality as they contribute to the living environment of local residents and to the County’s tourism economy.

**Policy OSRC-3b.** For development on parcels located both within Scenic Landscape Units and adjacent to Scenic Corridors, apply the more restrictive siting and setback policies to preserve visual quality.

**Policy OSRC-3h.** Design public works projects to minimize tree damage and removal along Scenic Corridors. Where trees must be removed, design replanting programs so as to accommodate ultimate planned highway improvements. Require revegetation following grading and road cuts.

**Goal OSRC-4.** Preserve and maintain views of the night time skies and visual character of urban, rural and natural areas, while allowing for nighttime lighting levels appropriate to the use and location.

**Objective OSRC-4.1.** Maintain night time lighting levels at the minimum necessary to provide for security and safety of the use and users to preserve night time skies and the night time character of urban, rural and natural areas.

**Objective OSRC-4.2.** Ensure that night time lighting levels for new development are designed to minimize light spillage offsite or upward into the sky.

**Policy OSRC-4a.** Require that all new development projects, County projects, and signage utilize light fixtures that shield the light source so that light is cast downward and that are no more than the minimum height and power necessary to adequately light the proposed use.
Policy OSRC-4b. Prohibit continuous all night exterior lighting in rural areas, unless it is demonstrated to the decision making body that such lighting is necessary for security or operational purposes or that it is necessary for agricultural production or processing on a seasonal basis. Where lighting is necessary for the above purposes, minimize glare onto adjacent properties and into the night sky.

Policy OSRC-4c. Discourage light levels that are in excess of industry and State standards.

C.2 Agriculture and Forest Resources

The following presents a list the goals and policies related to agricultural and forest resources from relevant jurisdictions’ general plans.

City of Cloverdale

The following policies from the City of Cloverdale General Plan (City of Cloverdale 2009) are applicable to implementation of the CAP.

Policy LU 3-3. Maintain the compact form and natural setting of Cloverdale by protecting hillsides, protecting land outside the Urban Growth Boundary from urban development, and protecting Prime Farmland, Unique Farmland, and Farmland of Statewide Importance from urban development, with conditions that allow for economic and rational infill growth.

Policy CDO 1-1. Urban development in the city will be on the valley floor, defined generally as the land below the 400-foot elevation. Development will be framed by and contained within agricultural lands to the north and south, the Russian River to the east, and below the 400-foot elevation.

Policy CDO 1-2. “Conservation Features” areas outside the Urban Growth Boundary, as shown on the General Plan Land Use Map, shall be reserved for agricultural uses. “Conservation Features” areas in hillsides to the west of the city shall be reserved for protection of forested hillsides.

City of Cotati

The following policies from the Cotati General Plan Update (City of Cotati 2015) are applicable to implementation of the CAP.

Policy OS 1.2. Preserve designated open space for conservation, recreational, and agricultural uses.

Policy OS 1.3. Protect rural (Agricultural and Rural Residential) and natural open space lands from urbanization (see Figure 9.1 [in the general plan]).

City of Healdsburg

The following policies and implementation measures from the Healdsburg 2030 General Plan (City of Healdsburg 2009) are applicable to implementation of the CAP.

Policy NR-C-2. The City will encourage Sonoma County to retain surrounding lands in very low-density residential, agricultural, open space, and natural resource uses that provide contrast to urbanized Healdsburg.
**Policy NR-D-2.** The City will encourage the County to retain agricultural uses on lands surrounding the Urban Service Area/Urban Growth Boundary.

**Implementation Measure NR-13.** Support efforts in Sonoma County to retain local agricultural land use activities.

**City of Petaluma**

The following policies from the *City of Petaluma: General Plan 2025* (City of Petaluma 2008) are applicable to implementation of the CAP.

**Policy 1-P-24.** Support designation of land uses in the unincorporated area beyond the Urban Growth Boundary as rural, agricultural, and/or open space.

**Policy 2-P-61.** Protect existing agricultural uses, wildlife, historic and cultural resources, and natural vegetation.

**Policy 4-P-4.** Continue to support rural land use designations and Agricultural Best Management Practices within the *Sonoma County General Plan*.

**City of Rohnert Park**

The following policies from the *City of Rohnert Park General Plan* (City of Rohnert Park 2000) are applicable to implementation of the CAP.

**Policy LU-34.** Areas in the City planning area, outside the Urban Growth Boundary, should be maintained in agricultural and open space uses, consistent with the land use designation in the *Sonoma County General Plan*.

**Policy OS-6.** Require property developers adjacent to sites where agricultural use is permitted or being conducted to inform subsequent buyers of potential continued agricultural production and the lawful use of agricultural chemicals, including pesticides and fertilizers.

**City of Sebastopol**

The following policy from the *City of Sebastopol General Plan* (City of Sebastopol 1994) is applicable to implementation of the CAP.

**Policy Conservation-P.9.** Encourage agriculture in the Referral Area. Encourage the continuation and strengthening of agricultural practices that are compatible with the surrounding wetlands in the Referral Area.

**City of Sonoma**

The following policies from the *City of Sonoma 2020 General Plan* (City of Sonoma 2006) are applicable to implementation of the CAP.

**Policy CD-1.4.** Coordinate planning efforts with the County to protect adjacent agricultural land and open space.
Policy LE-1.3. Support efforts by the County and other organizations to ensure the long-term viability of the agricultural economy in Sonoma Valley, including by preventing urban development from encroaching into agricultural areas.

Policy ER-1.3. Support community programs that preserve and promote agriculture.

Town of Windsor

The following policies and implementation program from the *Town of Windsor General Plan – 2015* (Town of Windsor 1996) are applicable to implementation of the CAP.

Policy CD-A.1.1. The Town should create a strong sense of transition at Windsor's boundaries by encouraging the preservation of agriculturally productive lands outside the proposed Sphere of Influence and by announcing entry into the Town through appropriate design of the Town's gateways.

Policy CD-A.1.3. The Town should preserve valuable natural features, such as oaks and waterways, within urbanized areas and clearly define the Town's form to distinguish between urban areas and the surrounding rural and agricultural areas.

Implementation Program CD-A.18. Agricultural Preservation. The Town shall work with the County to encourage land use and other policies directed at maintaining agricultural uses outside of the Urban Growth Boundary, except where nonagricultural uses exist, such as the Sonoma Airport industrial area and existing large-lot residential areas.

Policy CD-B.1.3. Areas that have limited potential to accommodate urban development are not included in Windsor's Urban Growth Boundary. Such areas may include those that have extensive sensitive biological habitats supporting rare and endangered species, oak woodlands, and wetlands; active and viable agricultural production; or extensive areas of community separators.

Policy ER-A.1.1. The Town shall seek to preserve open spaces resources (i.e., productive farmlands, outdoor recreation areas, biological habitats, visually prominent landforms, Alquist-Priolo Special Study Zones, and flood hazard areas) using the techniques identified in Table 6-1 [in the general plan]. The first option for properly managing these resources should be avoidance of development in these open space resources.

Policy ER-A.1.2. The Town shall encourage the preservation of sensitive environmental resource areas, such as oak woodlands, productive farmlands, riparian (creekside) corridors, and visually prominent hillsides and ridgelines, through measures such as clustering development and conservation easements.

Policy ER-B.1.1. The Town shall encourage the County to preserve agricultural activities on state-designated important farmlands and on prime soils outside the Urban Growth Boundary in recognition that prime agricultural land (defined as Class I and II soils by the U.S. Soil Conservation Service) is an irreplaceable natural resource.

Policy ER-B.2.1. The Town should allow and encourage the ongoing use of land for productive agriculture. New development adjacent to such areas should be informed of the routine practices and operations that are associated with agriculture. Avoiding any nuisances or impacts resulting from the agricultural activities should be the responsibility of the new, proposed use.
Sonoma County

The following goals, objectives, and policies from the Sonoma County General Plan 2020 (Sonoma County 2008) are applicable to implementation of the CAP.

**Goal LU-9.** Protect lands currently in agricultural production and lands with soils and other characteristics that make them potentially suitable for agricultural use. Retain large parcel sizes and avoid incompatible non-agricultural uses.

**Objective LU-9.1.** Avoid conversion of lands currently used for agricultural production to nonagricultural use.

**Objective LU-9.3.** Agricultural lands not currently used for farming but that have soils or other characteristics that make them suitable for farming shall not be developed in a way that would preclude future agricultural use.

**Objective LU-9.4.** Discourage uses in agricultural areas that are not compatible with long-term agricultural production.

**Policy LU-9d.** Deny general plan amendments that convert lands outside of designated Urban Service Areas with Class I, II, or III soils (USDA) to an urban or rural residential, commercial, industrial, or public/quasi-public category unless all of the following criteria, in addition to the designation criteria for the applicable land use category, are met:

1. The land use proposed for conversion is not in an agricultural production area and will not adversely affect agricultural operations,

2. The supply of vacant or underutilized potential land for the requested use is insufficient to meet projected demand,

3. No areas with other soil classes are available for non-resource uses in the planning area, and

4. An overriding public benefit will result from the proposed use.

**Policy LU-11f.** Encourage conservation of undeveloped land, open space, and agricultural lands; protection of water and soil quality; restoration of ecosystems; and minimization or elimination of the disruption of existing natural ecosystems and floodplains.

**Policy AR-1e.** Encourage and support farms and ranches, both large and small, that are seeking to implement programs that increase the sustainability of resources, conserve energy, and protect water and soil in order to bolster the local food economy, increase the viability of diverse family farms, and improve the opportunities for farmworkers.

**Goal AR-2.** Maintain for the timeframe of this plan agricultural production on farmlands at the edges but beyond the Urban Service Areas to minimize the influence of speculative land transactions on the price of farmland and provide incentives for long-term agricultural use.

**Objective AR-2.1.** Limit intrusion of urban development into agricultural areas.

**Objective AR-2.2.** Maintain the Urban Service Boundaries to protect agricultural lands at the urban fringe for continued agricultural production.

**Policy AR-2d.** Use voluntary purchase or voluntary transfer of development rights programs to limit intrusion of residential development into agricultural lands. If these programs are used,
amendments of the Land Use Map or rezonings shall not be used to lower density in anticipation of conferring transfer or purchase rights.

**Objective AR-3.1.** Avoid the conversion of agricultural lands to residential or nonagricultural commercial uses.

**Policy AR-3f.** Avoid amendments of the land use map from an agricultural to a non-agricultural use category for the purpose of allowing increased residential density, which may conflict with agricultural production.

**Policy AR-3g.** Develop regulations restricting the size and extent of nonagricultural development on agricultural lands to be included in the Development Code.

**Policy AR-4c.** Protect agricultural operations by establishing a buffer between an agricultural land use and residential interface. Buffers shall generally be defined as a physical separation of 100 to 200 feet and/or may be a topographic feature, a substantial tree stand, watercourse, or similar feature. In some circumstances, a landscaped berm may provide the buffer. The buffer shall occur on the parcel for which a permit is sought and shall favor protection of the maximum amount of farmable land.

**Objective OSRC-10.1.** Preserve lands containing prime agricultural and productive woodland soils and avoid their conversion to incompatible residential, commercial, or industrial uses.

**Goal OSRC-12.** Preserve, sustain, and restore forestry resources for their economic, conservation, recreation, and open space values.

**Objective OSRC-12.1.** Identify and preserve areas with timber soils and commercial timber stands for timber production. Reduce incompatible uses and the conversion of timberlands to agriculture and other uses that effectively prevent future timber production in these areas.

### C.3 Air Quality

The following presents a list of goals and policies related to air quality from the relevant jurisdiction’s general plans.

**City of Cloverdale**

The following goal and policies from the *City of Cloverdale General Plan* (City of Cloverdale 2009) are applicable to the implementation of the CAP.

**Goal CDO 8.** Conserve energy and minimize resource depletion by encouraging alternative energy, solar power, and green building techniques.

**Policy CDO 8-1.** Use energy and resource efficient methods in daily City operation.

**Policy CDO 8-2.** Use, support, and encourage energy and resource efficient methods in private construction.
City of Cotati

The following goal and policies from the *Cotati General Plan Update* (City of Cotati 2015) are applicable to the implementation of the CAP.

**Goal CON 2.** Reduce Air Pollutants and Greenhouse Gas Emissions.

**Policy CON 2.1.** 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 alternative modes of transportation, and requiring projects to mitigate significant air quality impacts.

**Policy CON 2.4.** Require new development or significant remodels to install fireplaces, stoves, and/or heaters which meet current BAAQMD standards.

**Policy CON 2.5.** Continue to require all construction projects and ground disturbing activities to implement BAAQMD dust control and abatement measures.

**Policy CON 2.8.** Support the development and implementation of a GHG reduction plan, or Climate Action Plan that addresses and reduces GHG emissions associated with community operations, including but not limited to: mobile sources (vehicle traffic), energy consumption, and solid waste.

**Policy CON 2.10.** Encourage local businesses and industries to engage in voluntary efforts to reduce GHG emissions and energy consumption.

**Policy CON 3.1.** Continue to require all new public and privately constructed buildings to meet and comply with CALGreen Tier 1 standards.

**Policy CON 3.2.** Support innovative and green building best management practices, including LEED certification, for all new development, and encourage project applicants to exceed CALGreen Tier 1 standards, if feasible.

**Policy CON 3.3.** Promote the use of alternative energy sources in new development.

**Policy CON 3.4.** Incorporate innovative green building techniques and best management practices in the site design, construction, and renovation of all public projects.

**Policy CON 3.5.** Ensure protection of solar access.

**Policy CON 3.6.** Ensure that street layout and design minimizes the use of pavement to the greatest extent feasible in order to reduce cooling and energy needs.

**Policy CON 3.7.** Encourage tree planting, including widespread use of trees as windbreaks to maximize the effects of cooling westerly winds and planting deciduous trees to help reduce summer temperatures, either in conjunction with new developments or through private sector participation.

**Policy LU 1.5.** Use sustainable, best management practices in green building, stormwater management, and conservation to mitigate infrastructure impacts, while minimizing effects on water, sewer, and energy resources.
City of Healdsburg

The following goal, policies, and implementation measures from the Healdsburg 2030 General Plan (City of Healdsburg 2009) are applicable to the implementation of the CAP.

**Goal NR-F.** Protection and improvement of air quality in the Healdsburg area.

**Policy NR-F-3.** The City will seek to minimize particulate matter emissions from woodburning fireplaces and stoves, and construction activities.

**Implementation Measure NR-27.** Enforce the requirements of the Northern Sonoma County Air Pollution Control District to ensure that installation of all new or replacement wood burning fireplaces or stoves meet the District’s regulations.

**Implementation Measure NR-28.** Require the use of best management practices, such as those promulgated by the Bay Area Air Quality Management District, during construction to minimize emissions.

City of Petaluma

The following policies from the City of Petaluma: General Plan 2025 (City of Petaluma 2008) are applicable to the implementation of the CAP.

**Policy 4-P-6.** Improve air quality through required planting of trees along streets and within park and urban separators, and retaining tree and plant resources along the river and creek corridors.

**Policy 4-P-7.** Reduce motor vehicle related air pollution.

**Policy 4-P-8.** Support, where feasible, the development of alternative fuel stations.

**Policy 4-P-9.** Require a percentage of parking spaces in large parking lots or garages to provide electrical vehicle charging facilities.

**Policy 4-P-10.** Require electric vehicle charging and alternative fuel facilities at all new and remodeled gas stations.

**Policy 4-P-11.** Promote ride-sharing and car-sharing programs.

**Policy 4-P-15.** Improve air quality by reducing emissions from stationary point sources of air pollution (e.g. equipment at commercial and industrial facilities) and stationary area sources (e.g. wood-burning fireplaces & gas powered lawn mowers) which cumulatively emit large quantities of emissions.

**Policy 4-P-16.** To reduce combustion emissions during construction and demolition phases, the contractor of future individual projects shall encourage the inclusion in construction contracts of the following requirements or measures shown to be equally effective:

- Maintain construction equipment engines in good condition and in proper tune per manufacturer’s specification for the duration of construction;
- Minimize idling time of construction-related equipment, including heavy-duty equipment, motor vehicles, and portable equipment;
• Use alternative fuel construction equipment (i.e., compressed natural gas, liquid petroleum gas,
  and unleaded gasoline);
• Use add-on control devices such as diesel oxidation catalysts or particulate filters;
• Use diesel equipment that meets the ARB’s 2000 or newer certification standard for off-road
  heavy-duty diesel engines;
• Phase construction of the project;
• Limit the hours of operation of heavy duty equipment.

Policy 4-P-17. To avoid potential health effects and citizen complaints that may be caused by
sources of odors, dust from agricultural uses, or toxic air contaminants the following measures may
be considered:
• Locate new stationary sources of air pollutants, such as industrial facilities, at sufficient
distances away from residential areas and facilities that serve sensitive receptors to avoid
significant impacts caused by odors, dust, and toxic air contaminants.
• Include buffer zones within new residential and sensitive receptor site plans to separate those
uses from potential sources of odors, dust from agricultural uses, and stationary sources of toxic
air contaminants.

Policy 4-P-19. Encourage use and development of renewable or nontraditional sources of energy.
A. Participate in state and local efforts to develop appropriate policies and review procedures
for the institution of renewable energy sources such as solar, wind, geothermal, and
hydroelectric power.
B. Implement green building code to allow use of alternative building materials and methods.
C. Work with the Petaluma Area Chamber of Commerce and PG&E in encouraging local
businesses to undertake energy audits and implement energy reduction improvements.
D. Consider the feasibility of requiring a percentage of new development to meet 50% of their
energy needs from fossil fuel alternatives (e.g. solar panels, etc.).

Policy 2-P-118. As part of the Development Code and Standards Updates, incorporate sustainable
site planning, development, and maintenance standards and procedures, reflecting conditions in the
variety of Petaluma settings (such as hillsides and floodplains).
A. Prepare, periodically update, and implement green building guidelines and/or standards,
appropriate to the Petaluma context, to ensure high level of energy efficiency and reduction
of life-cycle environmental impacts associated with construction and operations of
buildings.

Policy 4-P-33. Investigate the feasibility of developing a City sponsored program to subsidize or
assist homeowners in purchasing solar water heating or passive solar systems, or other forms of
renewable energy, through low-interest loans or property tax assessments.

Policy 6-P-21. Develop an Urban Forestry Program to consolidate the various City policies and
ordinances regarding tree planting and removal and to incorporate the goals of the California
Climate Action Team Report to plant 5 million trees in urban areas by 2020 to provide energy
conservation and reduce greenhouse gas emissions.
City of Rohnert Park

The following goals and policies from the City of Rohnert Park General Plan (City of Rohnert Park 2000) are applicable to the implementation of the CAP.

**Goal TR-J.** Reduce peak-hour traffic congestion and associated impacts, including air pollution, energy consumption, and noise.

**Goal EC-K.** Continue to work toward improving air quality and meeting all federal and State ambient air quality standards and by reducing the generation of air pollutants both from stationary and mobile sources, where feasible.

**Goal EC-L.** Encourage land use and transportation strategies that promote use of alternatives to the automobile for transportation, including bicycling, bus transit, and carpooling.

**Policy EC-23.** Use the City's development review process and the California Environmental Quality Act (CEQA) regulations to evaluate and mitigate the local and cumulative effects of new development on air quality.

**Policy EC-24.** Adopt the standard construction dust abatement measures included in BAAQMD’s CEQA Guidelines.

**Policy EC-26.** Encourage new residential development and remodeled homes to install clean-burning fireplaces and wood stoves.

City of Sebastopol

The following goals and policies from the City of Sebastopol General Plan (City of Sebastopol 1994) are applicable to the implementation of the CAP.

**Policy Transportation-P.11.** Reduce Pollution. Reduce the air, water, and noise pollution that results from vehicular traffic by reducing the number of trips.

**Policy Conservation-P.16.** Reduce Vehicle Trips: Reduce the number of single-occupant vehicle trips and the number of vehicle miles travelled within the Planning Area.

**Policy 6.17.** Development Review Process: Make energy conservation an important criterion in the development review process.

**Goal Conservation 7.** Protect and Improve Air Quality

**Policy Conservation-P.18.** Participate in Regional Planning to Improve Air Quality: Continue to cooperate with the Bay Area Air Quality Management District in implementing the regional Clean Air Plan.

**Policy Conservation-P.19.** Enforce Air Quality Standards: Continue to enforce air quality standards in collaboration with the BMQMD.

**Policy Conservation-P.20.** Reduce Vehicle Trips: Encourage transportation facilities and modes which minimize motor vehicle use.

**Policy Conservation-P.21.** Local Efforts. Encourage local efforts to improve air quality.
Policy Conservation-P.25. Impacts of Waste-to-Energy Projects: The City will not endorse or support solid waste-to-energy projects until it has been fully demonstrated that such projects will not have detrimental environmental impacts, particularly to air quality.

City of Sonoma

The following policies from the City of Sonoma 2020 General Plan (City of Sonoma 2006) are applicable to the implementation of the CAP.

Policy ER-2.9. Require development to avoid potential impacts to wildlife habitat, air quality, and other significant biological resources, or to adequately mitigate such impacts if avoidance is not feasible.

Policy 3.2. Encourage construction, building maintenance, landscaping, and transportation practices that promote energy and water conservation and reduce green-house gas emissions.

Town of Windsor

The following policies from the Town of Windsor General Plan – 2015 (Town of Windsor 1996) are applicable to the implementation of the CAP.

Policy ER-G.1.1. Through its discretionary review authority, the Town shall require that development proposals comply with federal and state air quality standards, or make findings that the project has overriding benefits to the community that outweigh nonattainment of the standards.

Policy ER-G.2.6. The Town should promote energy conservation/energy efficiency improvement programs which have the added benefit of reducing energy demand from power-generating facilities which contribute to background levels of regional air emissions.

Policy H.1. Encourage land use patterns and management practices that conserve energy resources.

Policy H.1.1. The Town should promote creation of a land use pattern that reduces operational energy requirements, especially for transportation purposes, by:

A. Avoiding land use configurations and siting decisions which result in single-purpose automobile trips, and instead encourage patterns which result in multi-purpose trips.

B. Promoting land use patterns which may be easily served by local transit and linked with regional transit. Promoting land use patterns which provide employment opportunities for Windsor residents.

Policy H.1.2. New development in Windsor should provide for solar access, both for residential and non-residential land uses, and should encourage the use of solar easements to guarantee access.

Policy H.1.3. Energy conservation standards for new residential construction, as contained in Title 24 of the California Code of Regulations, shall be periodically reviewed to identify opportunities for adopting standards which more closely respond to local conditions, especially in the area of passive design to reduce cooling loads.

Policy H.1.4. New residential development including subdivisions should be required to consider opportunities for passive heating and cooling.
Policy H.1.5. Parking lots should be landscaped to provide shade in the summertime and allow solar access to adjacent buildings and sidewalks in the wintertime.

Policy H.1.6. Energy conservation measures, such as insulation and weather-stripping, should be encouraged in existing structures through public education and financial assistance to low-and moderate-income families.

Policy H.1.7. Energy conservation measures should be encouraged in new commercial and industrial complexes, and opportunities to increase energy efficiency and the use of renewable resources should be promoted.

Policy H.1.8. The Town government should be in the forefront of energy conservation efforts by undertaking and publicizing energy efficiency and renewable energy resource programs.

Sonoma County

The following goals and policies from the Sonoma County General Plan 2020 (Sonoma County 2008) are applicable to the implementation of the CAP.

Policy AR-1e. Encourage and support farms and ranches, both large and small, that are seeking to implement programs that increase the sustainability of resources, conserve energy, and protect water and soil in order to bolster the local food economy, increase the viability of diverse family farms and improve the opportunities for farm workers.

Policy HE-3l. Continue to consider adding the Affordable Housing (-AH) Combining Zone to sites in light industrial and/or commercial zones where the following conditions are met:

3. The site must be located a safe distance from major roadways as determined by the Bay Area Air Quality Management District’s Highway Screening Analysis Tool.

Goal HE-6. Improve Conservation of Energy and Natural Resources.

Policy HE-6a. Encourage improvements that result in conservation of energy, water, and other natural resources in existing residential development, particularly in renter-occupied units by offering workshops, individual consultations, and financial assistance for weatherization and other conservation measures. Support and expand existing programs administered by the Community Development Commission.

Policy HE-6b. Continue to provide funding through the Community Development Commission for retrofits of existing affordable housing units that result in conservation of energy, water, or other natural resources.

Policy HE-6c. Encourage residents and developers to increase energy conservation and improve energy efficiency. Continue to support education programs that promote energy conservation and energy efficiency.

Policy HE-6d. Support project applicants in incorporating cost-effective energy efficiency that exceeds State standards.

Policy HE-6e. Promote the use of straw bale, rammed-earth, and other energy-efficient types of construction methods. Encourage use of the County’s Alternative Building Materials review process by publishing educational and promotional materials.
**Policy HE-6h.** Continue to review and develop energy conservation, green building, and energy efficient design programs for new residential and mixed-use development.

**Policy LU-11b.** Encourage all types of development and land uses to use alternative renewable energy sources and meaningful energy conservation measures.

**Policy OSRC-13b.** Review projects for environmental impact and land use conflicts and consider the following minimum factors when approving mining permits: topsoil salvage, vegetation, fisheries and wildlife impacts, noise, erosion control, roadway conditions and capacities, reclamation and bonding, air quality, energy consumption, engineering and geological surveys, aggregate supply and replenishment, drainage, and the need for economical aggregate materials.

**Goal OSRC-14.** Promote energy conservation and contribute to energy demand reduction in the County.

**Policy OSRC-14a.** Continue to support education programs that promote energy conservation; energy efficiency; and solid waste reduction, reuse, and recycling opportunities for County operations, residents and businesses, and local utilities.

**Policy OSRC-14b.** Continue to provide strategic planning for energy conservation and efficiency in County operations.

**Policy OSRC-14d.** Support project applicants in incorporating cost effective energy efficiency that may exceed State standards

**Policy OSRC-14e.** Develop energy conservation and efficiency design standards for new development.

**Policy OSRC-14f.** Use the latest green building certification standards, such as the Leadership in Energy and Environmental Design (LEED) standards, for new development.

**Policy OSRC-14j.** Encourage the Sonoma County Water Agency and other water and wastewater service providers to reduce energy demand from their operations.

**Goal OSRC-15.** Contribute to the supply of energy in the County primarily by increased reliance on renewable energy sources.

**Policy OSRC-15a.** Develop a Sonoma County Energy Strategic Plan that addresses the activities and operations of both County government and private residents and businesses.

**Policy OSRC-15b.** Encourage and promote the development of renewable energy and distributed energy generation systems and facilities for County operations.

**Policy OSRC-15c:** Encourage and promote the use of renewable energy and distributed energy generation systems and facilities that are integral to and contained within existing and new development (e.g., solar thermal installations to provide space and water heating or solar electric installations for small commercial buildings or residences in rural areas, small wind energy systems to provide electricity to agricultural accessory structures, etc.).

**Policy OSRC-15d.** Incorporate energy facility siting policies into the Sonoma County Development Code that would:
(1) Define accessory renewable energy systems as those designed to primarily serve on-site energy demand, and commercial renewable energy facilities as providing energy for off-site use.

(2) Allow accessory renewable energy systems close to the end energy users in all zoning districts where visual and other environmental impacts can be mitigated.

(3) Allow commercial renewable energy facilities on lands designated for commercial, industrial, resource or public use. Avoid in agricultural areas mapped as Prime, Statewide or Unique Farmlands, and in areas designated as Scenic and Biotic Resources. Limit their use to compatible scale in rural residential, and agricultural areas.

(4) Notwithstanding Policy AR-4a, consider allowing commercial renewable energy as a primary use facilities on agricultural lands only where a Renewable Energy (RE) Combining District is applied, when the history of the site demonstrates that it is of low value for agricultural production, and agricultural operations on surrounding agricultural parcels are not compromised, consistent with Policies AR 4d, 4e and 4f.

(5) Discourage commercial renewable energy facilities in designated Biotic Resource Areas, Scenic Resource Areas, and Geologic Hazard Areas.

Policy OSRC-15f. Review and condition proposed natural gas wells through the use permit.

Objective OSRC-16.1. Minimize air pollution and greenhouse gas emissions.

Objective OSRC-16.2. Encourage reduced motor vehicle use as a means of reducing resultant air pollution.

Policy OSRC-16a. Require that development projects be designed to minimize air emissions. Reduce direct emissions by utilizing construction techniques that decrease the need for space heating and cooling.

Policy OSRC-16b. 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 OSRC-16h. Require that development within the Bay Area Air Quality Management District that generates high numbers of vehicle trips, such as shopping centers and business parks, incorporate air quality mitigation measures in their design.

Policy OSRC-16i. Ensure that any proposed new sources of toxic air contaminants or odors provide adequate buffers to protect sensitive receptors and comply with applicable health standards. Promote land use compatibility for new development by using buffering techniques such as landscaping, setbacks, and screening in areas where such land uses abut one another.

Policy OSRC-16j. Require consideration of odor impacts when evaluating discretionary land uses and development projects near wastewater treatment plant or similar uses.

Policy OSRC-16k. Require that discretionary projects involving sensitive receptors (facilities or land uses that include members of the population sensitive to the effects of air pollutants such as children, the elderly, and people with illnesses) proposed near the Highway 101 corridor include an analysis of mobile source toxic air contaminant health risks. Project review should, if necessary, identify design mitigation measures to reduce health risks to acceptable levels.
C.4 Biological Resources

The following presents a list of goals and policies related to biological resources from the relevant jurisdiction’s general plans.

City of Cloverdale

The following policies from the City of Cloverdale General Plan (City of Cloverdale 2009) are applicable to the implementation of the CAP.

Policy CE 3-3. Provide trees or other shade sources along pedestrian routes. Where street widening would remove substantial shade trees, investigate alternative roadway configurations that would preserve the shade trees.

Policy CDO 5-1. For areas that are not constrained by levees within the City, riparian areas shall be provided adjacent to the Russian River when development projects are proposed to restore native grassland habitat for raptors.

Policy CDO 6-1. Maintain and expand the tree canopy within and outside the developed areas of the City, including old growth and newly planted trees. Prepare tree protection standards that can be implemented with or without a tree preservation ordinance.

Policy CDO 6-2. Protect distinctive natural vegetation such as oak woodlands, riparian corridors and mixed evergreen forests by maintaining the natural features as a whole. Preservation of individual trees or features rather than the larger habitat does not satisfy this policy.

Policy CDO 6-3. Large or otherwise significant trees shall be maintained both in residential, non-residential, and open space areas by:

- Revising development plans that would remove significant trees so that those trees are saved.
- Developing standard conditions of approval to minimize damage during construction and provisions to assure that building foundations, utilities, walkways, irrigation, or use patterns will not damage root structures, trunks or crowns.

Policy CDO 6-4. New private and public development, including public street, sidewalk, utility, and park construction, shall provide a mix of trees with a crown that can provide shade and summer cooling and trees with height to create a silhouette against the skyline.

Policy CDO 6-5. New public and private development shall provide street trees parallel to streets - in planter strips, in sidewalks, or at back of sidewalks, spaced at regular intervals along the street. Tree intervals shall provide a canopy with leaves touching at maturity. Tree locations shall be identified prior to design of utilities, drainage, hydrants, electrical equipment boxes, vaults, etc., and those features should be subservient to tree locations.

Policy CDO 7-1. Conserve and protect the area’s natural vegetation by:

- Ensuring that drainage and runoff from City sources is not impairing the water quality of the Russian River.
- Retaining existing riparian vegetation within the conservation buffers along all natural watercourses to preserve riparian vegetation and habitat.
- Restoring degraded riparian habitats where feasible.
- Prohibiting agricultural activities within the conservation buffers along all natural watercourses.
- Avoiding the contamination of groundwater supplies.

**Policy CDO 7-2.** Conserve and protect the area's natural wildlife and endangered species by:
- Requiring the restoration of fisheries through habitat improvement and resource management.
- Establishing long-term conservation zones, including possible use of incentives and credits to create easements and open space.
- Requiring the use of native and drought-tolerant plant species in landscaping and in the replanting of cut slopes.
- Developing classroom and on-site education programs to promote preservation of wildlife and vegetation resources.

**Policy LU 3-4.** Maintain and expand the tree canopy within and outside the developed areas of the City, including old growth and newly planted trees. Prepare tree protection standards that can be implemented with a tree preservation ordinance.

**City of Cotati**

The following policies from the *Cotati General Plan Update* (City of Cotati 2015) are applicable to the implementation of the CAP.

**Policy CSF 1.9.** Require new utility infrastructure to be designed and constructed to avoid sensitive natural and cultural resources to the greatest extent feasible.

**Policy CON 1.2.** Preserve and enhance 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, oak woodlands, and agricultural lands.

**Policy CON 1.4.** Focus conservation efforts on high priority conservation areas that contain suitable habitat for endangered, threatened, migratory, or special-status species and that can be managed with minimal interference with nearby urban land uses.

**Policy CON 1.5.** Conserve existing native vegetation where possible and integrate plant species native to the region into development and infrastructure projects where appropriate.

**Policy CON 1.6.** Avoid removal of large, mature trees that provide wildlife habitat or contribute to the visual quality of the environment to the greatest extent feasible through appropriate project design and building siting. If full avoidance is not possible, prioritize planting of replacement trees on-site over off-site locations.

**Policy CON 1.7.** Consult with all resource agencies during the California Environmental Quality Act (CEQA) review process for proposed developments to help identify wetland and vernal pool 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 and provides opportunities for mitigation banking.
Policy CON 1.8. Conserve riparian habitat along local creeks, including but not limited to the Laguna de Santa Rosa and Cotati Creek, in order to maintain suitable habitat for native fish and plant species.

Policy CON 1.9. 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 OS 1.6. Support regional and local natural resource preservation plans of public agencies that retain and protect open space within the City, Sphere of Influence, and Urban Growth Boundary.

City of Healdsburg

The following policies from the Healdsburg 2030 General Plan (City of Healdsburg 2009) are applicable to the implementation of the CAP.

Policy NR-B-2. Large, mature trees that contribute to the visual quality of the environment or provide important wildlife habitat shall be protected.

Policy NR-B-3. New development shall be sited to maximize the protection of native tree species, riparian vegetation, important concentrations of native plants, and important wildlife habitat.

Policy NR-C-6. Protection of distinctive natural vegetation such as oak woodlands, riparian corridors, and mixed evergreen forest is encouraged.

City of Petaluma

The following goals and policies from the City of Petaluma: General Plan 2025 (City of Petaluma 2008) are applicable to the implementation of the CAP.

Policy 1-P-42. Development on lands affected by the Petaluma River Corridor designation shall be subject to a discretionary review process beyond that required by CEQA.

Policy 1-P-46. New development shall acknowledge, preserve, protect, and enhance the ecological and biological health and diversity of the Petaluma River.

Policy 1-P-49. Preserve existing tree resources and add to the inventory and diversity of native/indigenous species.

Policy 1-P-50. Preserve and expand the inventory of trees on public property.

Policy 2-P-61. Protect existing agricultural uses, wildlife, historic and cultural resources, and natural vegetation.

Policy 2-P-85. Preserve existing and plant additional trees in the Washington Creek area between North McDowell Boulevard and Sonoma Mountain Parkway.

Policy 6-P-20. Where trees, larger than 8” in diameter, must be removed to accommodate development, they shall be replaced at a ratio established in the Development Code. Replacement trees may be planted on, or in the vicinity of, the development site, subject to approval by the Community Development Department or through the discretionary approval process.
Policy 4-P-1. Protect and enhance the Petaluma River and its tributaries through a comprehensive river management strategy.

Policy 4-P-2. Conserve wildlife ecosystems and sensitive habitat areas in the following order of protection preference: 1) avoidance, 2) on-site mitigation, and 3) off-site mitigation.

Policy 4-P-3. Protect special status species and supporting habitats within Petaluma, including species that are State or Federal listed as endangered, threatened, or rare.

Policy 4-P-5. Support wetland mitigation and oak woodlands restoration in the unincorporated areas outside the UGB.

City of Rohnert Park

The following goals and policies from the City of Rohnert Park General Plan (City of Rohnert Park 2000) are applicable to the implementation of the CAP.

Goal OS-B. Maintain land surrounding the city as open space for the enjoyment of scenic beauty, recreation, and protection of natural resources of the community.

Policy OS-8. Explore the feasibility of integrating natural and restored wetlands and vernal pool areas with new development or open space areas.

Goal EC-B. Protect special status species and supporting habitats within Rohnert Park, including species that are State or federally listed as Endangered, Threatened, or Rare.

Goal EC-C. Protect sensitive habitat areas and wetlands in the following order of protection preference: 1) avoidance, 2) on-site mitigation, and 3) off-site mitigation.

Goal EC-D. Maintain existing native vegetation and encourage planting of native plants and trees.

Policy EC-4. Cooperate with State and federal agencies to ensure that development does not substantially affect special status species appearing on any State or federal list of rare, endangered, or threatened species. Require assessments of biological resources prior to approval of any development within 300 feet of any creeks, high potential wetlands, or habitat areas of identified special status species, as depicted in Figure 6.2-1 [in the General Plan].

Policy EC-5. Require development in areas with high and moderate wetlands potential and habitat areas delineated in Figure 6.2-1 [in the General Plan], as well as other areas where wetland or habitat for special-status species is present, to complete assessments of biological resources.

Policy EC-12. Protect oaks and other native trees that are of significant size through the establishment of a Heritage Tree Preservation Ordinance.

Policy EC-13. Maintain creek protection zones extending a minimum of 50 feet (measured from the tops of the banks and a strip of land extending laterally outward from the top of each bank) for creeks, with extended buffers where significant habitat areas or high potential wetlands exist.

City of Sebastopol

The following goals and policies from the City of Sebastopol General Plan (City of Sebastopol 1994) are applicable to the implementation of the CAP.
**Goal 1 Conservation.** Preserve areas with important biotic resources such as wetlands, riparian corridors, and areas with scenic features.

**Policy Conservation-P.6.** Protect environmentally sensitive areas.

**Goal 3 Conservation.** Protect, maintain and restore wetland areas.

**Goal 5 Conservation.** Conserve, protect and enhance trees and native vegetation.

**Policy Conservation-P.13.** Preserve and Plant Trees: 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 Conservation-P.14.** Preserve and Plant Trees: Require new commercial and industrial development to incorporate trees in landscape plans.

**Policy Conservation-P.47.** Buffer Areas are Minimum Requirements: The buffer areas described in Program 1.1 [in the General Plan] are intended to be the minimum required. Development proposals for land within or adjacent to natural lands are to develop a resource analysis of the property to determine the boundary of wetlands, upland habitat, the presence and location of endangered plant and animal species, and any other information relevant to the preservation of biotic resources and sensitive habitats or natural lands.

**Policy Conservation-P.55.** Protect Oaks: Protect all oaks on City owned land from grazing and irrigation impacts.

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**City of Sonoma**

The following policies from the *City of Sonoma 2020 General Plan* (City of Sonoma 2006) are applicable to the implementation of the CAP.

**Policy ER-2.2.** Preserve habitat that supports threatened, rare, or endangered species identified by State or federal agencies.

**Policy ER-2.3.** Protect and, where necessary, enhance riparian corridors.

**Policy ER-2.6.** Preserve existing trees and plant new trees.

**Policy ER-2.9.** Require development to avoid potential impacts to wildlife habitat, air quality, and other significant biological resources, or to adequately mitigate such impacts if avoidance is not feasible.

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**Town of Windsor**

The following policies and implementation programs from the *Town of Windsor General Plan – 2015* (Town of Windsor 1996) are applicable to the implementation of the CAP.

**Policy CD-A.1.4.** The Town should protect Windsor's unique natural settings by conserving valuable habitats, establishing linear open spaces or "greenways", and recognizing scenic features, including hillsides, creeks, woodlands or other significant natural features.
**Policy CD-A.7.1.** The Town should respect valuable natural features including hillsides, creeks, significant woodlands, and significant trees through sensitive site planning, building placement, and other measures.

**Policy CD-B.1.3.** Areas that have limited potential to accommodate urban development are not included in Windsor's Urban Growth Boundary. Such areas may include those that have extensive sensitive biological habitats supporting rare and endangered species, oak woodlands, and wetlands; active and viable agricultural production; or extensive areas of community separators.

**Policy ER-A.1.1.** The Town shall seek to preserve open spaces resources (i.e., productive farmlands, outdoor recreation areas, biological habitats, visually prominent landforms, Alquist-Priolo Special Study Zones, and flood hazard areas) using the techniques identified in Table 6-1 [in the General Plan]. The first option for properly managing these resource should be avoidance of development in these open space resources.

**Policy ER-A.1.2.** The Town shall encourage the preservation of sensitive environmental resource areas, such as oak woodlands, productive farmlands, riparian (creekside) corridors, and visually prominent hillsides and ridgelines through measures such as clustering development and conservation easements.

**Implementation Program ER-A.3.** Project and Environmental Review. The Town shall use its discretionary review authority to ensure the protection of its natural, scenic, and cultural resources and to protect public health and safety from hazards associated with hillsides, ridgelines, soils, steep slopes, and seismic and geologic hazard areas. In particular, the Town shall impose, as necessary, conditions of project approval to conserve these resources or protect public health and safety. Determination of these conditions or measures to minimize impacts to these open space resources can also be defined through the Town’s environmental review process which is mandated by the California Environmental Quality Act (CEQA).

**Policy ER-D.1.1.** Significant biological and ecological resources in the Windsor Planning Area should be protected. These include wetlands; rare, threatened and endangered species and their habitats; vernal pools, oak groves and heritage trees. Other sensitive resources, as shown in Figure 6-2 [in the General Plan], include oak and riparian woodlands. To accomplish this, development proposals for projects in these areas must include a detailed inventory of the sensitive resources conducted by an independent, professionally qualified biologist, plant ecologist, arborist, or appropriately qualified specialist. If sensitive resources are identified on the project site, proposals to protect them shall conform with applicable state and federal regulations regarding their protection and may include avoidance of the resource, installing vegetative buffers, providing setbacks, clustering development onto less sensitive areas, preparing restoration plans, and offsite mitigation.

**Policy ER-D.1.2.** The development potential from those portions of a project site that are considered inappropriate for development because of the presence of sensitive biological resources may be transferred to other portions of the site, unless otherwise restricted by policies of this Plan.

**Policy ER-D.1.3.** Development projects, which would fill wetlands or vernal pools, shall be required to conform with applicable state and federal regulations regarding the protection of these resources.

**Policy ER-D.1.4.** Protection or restoration of sensitive biological resources that is required as a condition or mitigation of a development project should be closely monitored at the cost of the project applicant to determine compliance with the condition or mitigation and to evaluate the effectiveness of the measure.
**Policy ER-D.1.5.** In significant riparian areas (including the watercourse itself and an area of land extending laterally at least 50 feet from each bank), the Town should prohibit dumping or disposal of refuse; confinement of livestock; and structural improvements except necessary water supply projects, flood control projects, fish and wildlife enhancement projects, trail projects, road and bridge projects, and utility projects.

**Policy ER-D.1.6.** The Town should encourage the preservation of oak woodlands and significant stands of oaks and heritage trees. Development plans should indicate preservation of these resources to the fullest extent feasible and restrict pavement and other encroachments within the root zones of oak trees to ensure their long-term survival. Should removal be necessary, the project applicant should be required to plant replacement trees.

**Policy ER-D.1.7.** During construction activities, the Town should require proper measures be implemented to assure the long-term survival of oaks and heritage trees. Fencing around individual trees or groups of trees shall be required to protect them from compaction and mechanical injury.

**Sonoma County**

The following goals, objectives, and policies from *the Sonoma County General Plan 2020* (Sonoma County 2008) are applicable to the implementation of the CAP.

**Policy LU-7b.** Limit development in wetlands designated on Figure OSRC-3 [in the General Plan] of the Open Space and Resource Conservation Element.

**Goal LU-10.** The uses and intensities of any land development shall be consistent with preservation of important biotic resource areas and scenic features.

**Policy LU-10c.** Develop programs for preservation and enhancement of important biotic resource areas.

**Policy LU-11f.** Encourage conservation of undeveloped land, open space, and agricultural lands, protection of water and soil quality, restoration of ecosystems, and minimization or elimination of the disruption of existing natural ecosystems and flood plains.

**Goal OSRC-7.** Protect and enhance the County’s natural habitats and diverse plant and animal communities.

**Objective OSRC-7.1.** Identify and protect native vegetation and wildlife, particularly occurrences of special status species, wetlands, sensitive natural communities, woodlands, and areas of essential habitat connectivity.

**Policy OSRC-7a.** Designate as Biotic Habitat Areas in the Open Space and Resource Conservation Element the known locations shown on Figures OSRC-5a through OSRC 5i [in the General Plan] and identified as Special Status Species Habitat, Marshes and Wetlands, Sensitive Natural Communities, and Habitat Connectivity Corridors.

**Policy OSRC-7f.** Support acquisition of conservation easements or fee title by the Sonoma County Agricultural Preservation and Open Space District (SCAPOSD) of designated Biotic Habitat Areas.

**Policy OSRC-7k.** Require the identification, preservation and protection of native trees and woodlands in the design of discretionary projects, and, to the maximum extent practicable, minimize the removal of native trees and fragmentation of woodlands, require any trees removed to be
replaced, preferably on the site, and provide permanent protection of other existing woodlands where replacement planting does not provide adequate mitigation.

**Policy OSRC-7m.** Designate important valley oak habitat areas, reevaluate current designations, and apply a Valley Oak Habitat combining district zoning that requires adequate mitigation for trees removed and monitoring of replacement tree survival.

**Policy OSRC-7s.** Develop comprehensive programs for preservation and restoration of the San Pablo Bay area and shoreline habitats, including mechanisms for preservation and enhancement such as acquisition, zoning and easements and avoiding activities such as filling, grading or construction that would be detrimental to the biotic resources or historic water retention functions.

**Policy OSRC-7u.** Identify and consider designation of old growth Redwood and Douglas Fir as sensitive natural communities. Encourage preservation and public acquisition of remaining old growth Redwood and Douglas Fir forests in private ownership with the County. Because of their rarity and biological importance, these sensitive natural community types should be made priorities for protection through conservation easements, fee title purchase, or other mechanisms.

**Goal OSRC-8.** Protect and enhance Riparian Corridors and functions along streams, balancing the need for agricultural production, urban development, timber and mining operations, and other land uses with the preservation of riparian vegetation, protection of water resources, flood control, bank stabilization, and other riparian functions and values.

**Policy OSRC-8e.** Prohibit, except as otherwise allowed by Policy OSRC-8d, grading, vegetation removal, agricultural cultivation, structures, roads, utility lines, and parking lots within any streamside conservation area.

**Goal OSRC-9.** Protect and conserve the quality of ocean, marine and estuarine environments for their scenic, economic and environmental values.

**Policy OSRC-9a.** Incorporate policies for protection and conservation of ocean marine and estuarine environments into the Local Coastal Plan.

**Objective OSRC-19.4.** Identify and preserve heritage and landmark trees.

### C.5 Cultural Resources

The following presents a list of goals and policies related to cultural resources from the relevant jurisdiction's general plans.

**City of Cloverdale**

The following goal and policies from the *City of Cloverdale General Plan* (City of Cloverdale 2009) are applicable to the implementation of the CAP.

**Policy LU 3-5.** Conserve or preserve historic buildings and the character of the older parts of town using conservation and form based zoning ordinances, while also allowing change of use of the properties where allowed by General Plan land use and density standards.

**Policy LU 4-4.** Encourage elimination of blighted and visually undesirable conditions Citywide to enhance affordable housing, job opportunities, and historical preservation.
**Goal CDO 4.** Investigate historic, archaeological, and paleontological resources and preserve or conserve resources that help residents and visitors understand the history of Cloverdale.

**Policy CDO 4-1.** Conserve or preserve historic buildings and the character of the older parts of town using conservation zoning and form based zoning ordinances, while also allowing change of use of the properties where allowed by General Plan land use and density standards.

**Policy CDO 4-2.** Preserve remaining prehistoric camps, villages, and use sites. Identify areas that may be used by the Pomo Indians for resource procurement or religious purposes.

**Policy CDO 4-3.** Identify historically significant structures or groups of structures that help residents and visitors understand what Cloverdale was like historically. Identify historic materials such as structural remains.

**Policy CDO 4-4.** Preserve paleontological resources if identified by discovery or if the area is found to have resources by other investigations or databases.

**City of Cotati**

The following policies from the *Cotati General Plan Update* (City of Cotati 2015) are applicable to the implementation of the CAP.

**Policy CI 2.4.** When it can be shown that construction of a sidewalk would be at odds with an existing neighborhood’s aesthetic and the historic nature of the areas, alternatives such as an off-street path or wider paved shoulders may be considered, particularly on low-volume local streets.

**Policy CSF 1.9.** Require new utility infrastructure to avoid sensitive natural and cultural resources to the greatest extent feasible.

**Policy CON 4.1.** 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 CON 4.2.** Ensure that human remains are treated with sensitivity and dignity and ensure compliance with the provisions of California Health and Safety Code Section 7050.5 and California Public Resources Code Section 5097.98.

**Policy CON 4.3.** 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 CON 4.4.** Consistent with State local and tribal intergovernmental consultation requirements such as SB18, the City shall consult with Native American tribes that may be interested in proposed new development and land use policy changes.

**City of Healdsburg**

The following policies and implementation measures from the *Healdsburg 2030 General Plan* (City of Healdsburg 2009) are applicable to the implementation of the CAP.
Policy HCR-A-1. The City will promote the protection and enhancement of Healdsburg’s historically significant districts, buildings and landscape features.

Policy HCR-A-3. The City will support the efforts of property owners to preserve and renovate historically significant structures.

Policy HCR-B-1. The City will consult with culturally-affiliated Native American tribes prior to amending the General Plan and adopting or amending specific plans, and when a sacred site is to be placed in permanent open space, consistent with state law.

Policy HCR-B-2. The City will work with culturally-affiliated Native American tribes to identify and appropriately address cultural resources and tribal sacred sites through the development review process.

Policy HCR-B-3. The City will avoid or mitigate to the maximum feasible extent impacts of development on Native American archaeological and cultural resources.

Policy HCR-B-4. The City will encourage voluntary landowner efforts to protect cultural resources and tribal sacred sites of culturally-affiliated tribes consistent with state law.

Implementation Measure HCR-8. Refer proposals for projects that are not categorically exempted from the California Environmental Quality Act to the Northwest Information Center for evaluation and a recommendation as to whether further study is required to determine the presence of archaeological resources. If further study is recommended, the project applicant shall contract with a qualified professional to conduct the study and make recommendations designed to avoid or minimize adverse impacts on cultural or historic resources and indicate whether further investigation is needed. All studies shall be completed and submitted to the City of Healdsburg prior to the completion of any environmental document for the project.

Implementation Measure HCR-9. Contact the Native American Heritage Commission for a Sacred Lands File Check and a list of appropriate Native American contacts for consultation concerning projects that are not categorically exempted from the California Environmental Quality Act and to assist in the development of appropriate mitigation measures.

Implementation Measure HCR-10. Refer draft environmental documents, including any studies and recommended mitigation measures, to the appropriate Native American tribes for review and comment as part of the public review process for such documents. Mitigation measures to avoid or minimize impacts on Native American cultural resources may include the execution of a Cultural Resources Treatment Agreement between the developer and the appropriate tribe(s) that address the treatment and disposition of cultural resources and human remains, and tribal monitoring during earth-disturbing activities.

Implementation Measure HCR-11. Consult with culturally-affiliated Native American tribes prior to designating open space in order to protect the identity of any cultural places that exist on the proposed open space and develop a treatment plan and management plan for any such cultural places.

Implementation Measure HCR-12. Work with culturally-affiliated Native American tribes to acquire and hold conservation easements on terms mutually satisfactory to the tribe and landowner for purposes of protecting the tribe’s cultural places.
Implementation Measure HCR-13. Require plans for grading and building permits that propose the disturbance of soil to include a note that requires the permit holder to notify the City if archaeological resources are discovered during construction in order to identify and evaluate the resources, if appropriate.

City of Petaluma

The following policies from the *City of Petaluma: General Plan 2025* (City of Petaluma 2008) is applicable to the implementation of the CAP.

**Policy 2-P-3.** Maintain landmarks and aspects of Petaluma’s heritage that foster its unique identity.

**Policy 2-P-11.** Encourage and support the rehabilitation and development of buildings and structures reflective of the history of Petaluma’s rich agricultural and river-oriented industrial past and present.

**Policy 2-P-61.** Protect existing agricultural uses, wildlife, historic and cultural resources, and natural vegetation.

**Policy 3-P-1.** Protect historic and archaeological resources for the aesthetic, cultural, educational, environmental, economic, and scientific contribution they make to maintaining and enhancing Petaluma’s character, identity and quality of life.

**Policy 3-P-5.** The protection of historic resources shall be a key consideration and an equal component in the development review process.

**Policy 3-P-6.** Ensure that new development adjacent to eligible historic and cultural resources is compatible with the character of those resources.

City of Rohnert Park

The following goal and policies from the *City of Rohnert Park General Plan* (City of Rohnert Park 2000) are applicable to the implementation of the CAP.

**Goal EC-A.** Conserve historic and archaeological resources for the aesthetic, educational, economic, and scientific contribution they make to Rohnert Park’s identity and quality of life.

**Policy EC-2.** Insure the protection of known archaeological resources in the city by requiring a records review for any development proposed in areas that are considered archaeologically sensitive for Native American and/or historic remains. Require construction activities and development adjacent to sites of historic or archaeological resources to avoid degradation

**Policy EC-3.** In accordance with CEQA and the State Public Resources Code, require the preparation of a resource mitigation plan and monitoring program by a qualified archaeologist in the event that archaeological resources are discovered.

City of Sebastopol

The following policies from the *City of Sebastopol General Plan* (City of Sebastopol 1994) are applicable to the implementation of the CAP.
Policy Conservation-P.73. Avoid Impact on Archaeological Resources: Develop detailed designs to avoid impact on archaeological resources where these are shown to exist.

Policy Community-P.38. Preserve Archaeological Resources: Continue to protect archaeological resources.

Policy Community-P.39. Historic Buildings. Sites and Districts: Identify, recognize and protect sites, buildings, structures and districts with significant cultural, aesthetic and social characteristics which are part of Sebastopol’s heritage.

City of Sonoma

The following policies from the City of Sonoma 2020 General Plan (City of Sonoma 2006) is applicable to the implementation of the CAP.

Policy CD-5.4. Preserve and continue to utilize historic buildings as much as feasible.

Policy CD-5.8. Encourage the designation and preservation of local historic structures and landmarks, and protect cultural resources.

Town of Windsor

The following policies and implementation programs from the Town of Windsor General Plan – 2015 (Town of Windsor 1996) is applicable to the implementation of the CAP.

Policy CD-A.7.4. The Town should encourage the conservation of structures with architectural or historic significance and use them to reinforce Windsor’s unique sense of place.

Implementation Program ER-A.3. Project and Environmental Review. The Town shall use its discretionary review authority to ensure the protection of its natural, scenic, and cultural resources and to protect public health and safety from hazards associated with hillsides, ridgelines, soils, steep slopes, and seismic and geologic hazard areas. In particular, the Town shall impose, as necessary, conditions of project approval to conserve these resources or protect public health and safety. Determination of these conditions or measures to minimize impacts to these open space resources can also be defined through the Town’s environmental review process which is mandated by the California Environmental Quality Act (CEQA).

Policy ER-E.1.2. Significant archaeological and historical resources should be identified and protected from destruction. If evidence of such resources appears after development begins, the developer shall prepare an assessment of appropriate actions to preserve or remove the resources, subject to review and approval of the actions by the Town.

Policy ER-E.2.1. The Town should encourage the reuse of architecturally interesting or historical buildings in a manner that preserves their historic architectural merit.

Sonoma County

The following objectives and policies from the Sonoma County General Plan 2020 (Sonoma County 2008) are applicable to the implementation of the CAP.

Objective OSRC-19.1. Encourage the preservation and conservation of historic structures by promoting their rehabilitation or adaptation to new uses.
**Objective OSRC-19.3.** Encourage protection and preservation of archaeological and cultural resources by reviewing all development projects in archaeologically sensitive areas.

**Objective OSRC-19.5.** Encourage the identification, preservation, and protection of Native American cultural resources, sacred sites, places, features, and objects, including historic or prehistoric ruins, burial grounds, cemeteries, and ceremonial sites. Ensure appropriate treatment of Native American and other human remains discovered during a project.

**Policy OSRC-19l.** If a project site is determined to contain Native American cultural resources, such as sacred sites, places, features, or objects, including historic or prehistoric ruins, burial grounds, cemeteries, and ceremonial sites, notify and offer to consult with the tribe or tribes that have been identified as having cultural ties and affiliation with that geographic area.

**Policy OSRC-19n.** Develop procedures for complying with the provisions of State Health and Safety Code Section 7050.5 and Public Resources Code Section 5097.98, if applicable, in the event of the discovery of a burial or suspected human bone. Develop procedures for consultation with the Most Likely Descendant as identified by the California Native American Heritage Commission, in the event that the remains are determined to be Native American.

### C.6 Geology and Soils

The following presents a list of goals and policies related to geology and soil from the relevant jurisdiction’s general plans.

**City of Cloverdale**

The following goal and policies from the *City of Cloverdale General Plan* (City of Cloverdale 2009) are applicable to the implementation of the CAP.

**Goal PS 1.** Prevent unnecessary exposure of people and property to risks of damage or injury from earthquakes, landslides and other geologic hazards.

**Policy PS 1-2.** Continue to utilize studies of geologic hazards prepared during the development review process.

**Policy PS 1-4.** Require and review geologic reports prior to decisions on any project which would subject property or persons to significant risks from the geologic hazards shown on County of Sonoma General Plan Public Safety Element Figures PS-1a through PS-1i [in the General Plan] and related file maps and source documents. Geologic reports shall describe the hazards and include mitigation measures to reduce risks to acceptable levels. Where appropriate, require an engineer’s or geologist’s certification that risks have been mitigated to an acceptable level and, if indicated, obtain indemnification or insurance from the engineer, geologist, or developer to minimize City exposure to liability.

**Policy PS 1-6.** Require dynamic analysis of structural response to earthquake forces prior to City approval of building permits for structures whose irregularity or other factors prevent reasonable load determination and distribution by static analysis.

**Policy PS 1-8.** Roads, public facilities and other Public Agency projects should incorporate measures to mitigate identified geologic hazards to acceptable levels.
Policy PS 5-12. Require development adjacent to hillside areas to minimize geologic and fire hazards. Require all new development, including single-family residential, to provide built-in fire protection (i.e. automatic fire sprinklers).

City of Cotati

The following goal and policies from the Cotati General Plan Update (City of Cotati 2015) are applicable to the implementation of the CAP.

Policy CSF 1.8. Require new utility infrastructure to be designed and constructed to meet the most current State standards for seismic safety.

Policy SA 1.8. Ensure critical facilities in the Cotati Planning Area are designed and constructed to withstand the “maximum probable” earthquake and remain in service.

Policy SA 1.9. The structural integrity of all existing City facilities will be reviewed and those facilities found unsatisfactory will be strengthened.

Goal SA 2. Reduce risks to human life and property from seismic and geologic hazards.

Policy SA 2.1. Require new land development proposals to avoid unreasonable exposure to geologic hazards, including earthquake damage, subsidence, liquefaction, and expansive soils.

Policy SA 2.2. Ensure that all development and construction proposals are reviewed by the City to ensure conformance with applicable building standards.

Policy SA 2.3. Require geotechnical investigations to be completed prior to approval of any schools, hospitals, fire stations, and police stations, as a means to ensure that these critical facilities are constructed in a way that mitigates site-specific seismic and/or geological hazards.

Policy SA 2.4. Development in areas subject to liquefaction, such as along East and West Cotati Avenues and Gravenstein Highway shall be reviewed by qualified soil engineers and geologists prior to development in order to ensure the safety and stability of all construction (See Figure 7.1-2 in the General Plan Background Report).

Policy SA 2.5. Ensure that development on slopes over 10% grade complies with special building and grading restrictions specified in Chapter 17.53 of the Municipal Code.

Policy SA 2.6. Development and grading on slopes greater than 15% shall be prohibited, unless the conditions specified in Chapter 17.53 of the Municipal Code are met.

Policy SA-2.8. Where alterations such as grading and tree removal are made to hillside sites, rendering slopes unstable, planting of vegetation shall be required to protect structures at lower elevations.

Policy SA-2.9. The use of drought-tolerant plants for landscaping in hillside areas shall be required as a means to eliminate the need for supplemental watering, which can promote erosion and earth movement.

Policy SA-2.10. An erosion and sediment control plan prepared by a civil engineer or other professional who is qualified to prepare such a plan, shall be submitted as part of a grading permit application. 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 Chapter 14.36 of the Municipal Code.

Policy SA-2.11. Prior to the development of any new structures and any addition greater than 500 square feet in areas of moderate to high potential for expansive soils as identified in Figure 7.1-5 of the General Plan Background Report, a site-specific soils study shall be prepared. 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 Building Standards Code.

City of Healdsburg

The following policies and implementation measures from the Healdsburg 2030 General Plan (City of Healdsburg 2009) are applicable to the implementation of the CAP.

Policy LU-C-2. Intensive urban development shall be allowed only in areas that are relatively free of topographic, geologic and environmental limitations.

Policy S-A-1. Lands with significant, identified geological hazards shall be designated for open space or low-intensity uses.

Policy S-A-2. The City will ensure that public and private development in areas with significant geologic hazards are sited to minimize the exposure of structures and improvements to damage and to minimize the aggravation of off-site geologic hazards. Development may be clustered on lots smaller than required by the Zoning Ordinance to avoid areas with identified hazards.

Policy S-B-2. The City will ensure that all public facilities, such as buildings, water tanks, and reservoirs, are structurally sound and able to withstand seismic shaking and the effects of seismically-induced ground failure.

Implementation Measure S-3. Continue to require geotechnical reports and plans to be submitted for all projects within slope hazard zones, seismic hazard areas and in high liquefaction potential areas.

City of Petaluma

The following policies from the City of Petaluma: General Plan 2025 (City of Petaluma 2008) are applicable to the implementation of the CAP.

Policy 10-P-1. Minimize risks of property damage and personal injury posed by natural hazards.

Policy 10-P-2. Protect the community from risks associated with seismically induced surface ruptures, ground-shaking, ground failure, slope instability leading to mudslides and landslides, subsidence, liquefaction, and other seismic, geologic, and fire hazards.

City of Rohnert Park

The following policies from the City of Rohnert Park General Plan (City of Rohnert Park 2000) are applicable to the implementation of the CAP.

Policy HS-1. Require new construction to utilize site preparation, grading, and foundation designs in accordance with site specific soil conditions. Require submittal of a preliminary soils report, prepared by a registered civil engineer.
**Policy HS-2.** Continue requiring all new buildings in the city to be built under the seismic requirements of the Uniform Building Code and Uniform Plumbing Code.

**Policy HS-4.** Ensure that the City’s regulations pertaining to subdivision design, zoning, building, and grading ordinances and policies continue to include measures to minimize erosion and sedimentation.

**City of Sebastopol**

The following policies from the *City of Sebastopol General Plan* (City of Sebastopol 1994) are applicable to the implementation of the CAP.

**Policy Safety-P.1.** Reduce Risk of Seismic Hazards: Reduce the risk of loss of life, personal injury and damage to property resulting from seismic hazards.

**Policy Safety-P.2.** Limit Building in Areas with Significant Risk Potential: Discourage construction of high density residential, and other critical, high-occupancy or essential services buildings in high-risk zones.

**Policy Safety-P.3.** Slope Instability: Continue to enforce existing regulations and procedures to identify potential hazards relating to geologic and soils conditions.

**Policy Safety-P.21.** Uniform Building Code: Continue to enforce the Uniform Building Code (UBC) for all new construction and renovation and when occupancy or use changes occur.

**City of Sonoma**

The following policy and implementation measures from the *City of Sonoma 2020 General Plan* (City of Sonoma 2006) are applicable to the implementation of the CAP.

**Policy ER-2.5.** Require erosion control and soil conservation practices that support watershed protection.

**Policy PS-1.1.** Require development to be designed and constructed in a manner that reduces the potential for damage and injury from natural and human causes to the extent possible.

**Policy PS-1.2.** Comply with State-mandated upgrades of unreinforced masonry structures.

**Implementation Measure PS-1.1.1.** Require development to incorporate measures that mitigate risks associated with seismic, geologic, fire, or flood hazards to acceptable levels.

**Implementation Measure PS-1.2.1.** Require all development—including post-earthquake building replacement, reconstruction, and rehabilitation—to be constructed in accordance with the latest State- and City-adopted seismic and building codes.

**Town of Windsor**

The following policies and implementation programs from the *Town of Windsor General Plan – 2015* (Town of Windsor 1996) are applicable to the implementation of the CAP.

**Policy ER-A.1.1.** The Town shall seek to preserve open spaces resources (i.e., productive farmlands, outdoor recreation areas, biological habitats, visually prominent landforms, Alquist-Priolo Special
Study Zones, and flood hazard areas) using the techniques identified in Table 6-1 [in the General Plan]. The first option for properly managing these resources should be avoidance of development in these open space resources.

Implementation Program ER-A.3. Project and Environmental Review. The Town shall use its discretionary review authority to ensure the protection of its natural, scenic, and cultural resources and to protect public health and safety from hazards associated with hillsides, ridgelines, soils, steep slopes, and seismic and geologic hazard areas. In particular, the Town shall impose, as necessary, conditions of project approval to conserve these resources or protect public health and safety. Determination of these conditions or measures to minimize impacts to these open space resources can also be defined through the Town’s environmental review process which is mandated by the California Environmental Quality Act (CEQA).

Policy PHS-A.1.1. The Town shall require development proposals on slopes of 20 percent or greater (hereafter referred to as “steep slopes”) to include assessments of slope stability, susceptibility to landslide, and erodibility, prepared by certified engineering geologists. The purpose of such assessments shall be to identify the areas most capable of tolerating grading, road and building construction, and utilities, and to define the measures needed to avoid or mitigate hazards.

Policy PHS-A.1.2. In all areas with steep slopes, grading practices for drainage purposes shall restore natural drainage patterns of surface water runoff so that any diversions will not induce or accelerate natural channel grading, sheet erosion, gully, and other forms of erosion.

Policy PHS-A.1.3. The Town shall regulate development on hillsides to minimize exposure to slope instability. Allowable densities should be related to the slope of hillsides, such that densities diminish with increasing slope.

Policy PHS-A.2.1. The Town shall consider the potential danger to health, safety, and welfare of Windsor residents and businesses in its review of development applications and seek to have hazardous conditions mitigated to an acceptable level. The Town should use Table 7-1 [in the General Plan] as a guideline for determining acceptable levels of exposure to risk.

Policy PHS-A.2.2. The Town shall not locate public improvements and utilities in areas with identified geologic or seismic hazards (see Figure 7-1 and Figure 7-2 in the General Plan) to avoid any extraordinary maintenance and operating expenses. When the location of public improvements and utilities in such areas cannot be avoided, effective measures should be implemented to minimize potential damage and public inconvenience.

Policy PHS-A.2.3. The Town shall discourage the County from siting any facilities necessary for emergency services, major utility lines and facilities, manufacturing plants using or storing hazardous materials, high occupancy structures (such as multi-family residences and large public assembly facilities), or facilities housing dependent populations (such as schools and convalescent centers) within the Alquist-Priolo Special Studies Zone.

Policy PHS-A.2.5. For parcels which partially lie within a designated seismic or geologic hazard area, a geotechnical hazards report, prepared by a certified engineering geologist, shall be required to identify the most appropriate
Sonoma County

The following goals, objectives, and policies from the Sonoma County General Plan 2020 (Sonoma County 2008) are applicable to the implementation of the CAP.

**Goal LU-7.** Prevent unnecessary exposure of people and property to environmental risks and hazards. Limit development on lands that are especially vulnerable or sensitive to environmental damage.

**Policy LU-11f.** Encourage conservation of undeveloped land, open space, and agricultural lands, protection of water and soil quality, restoration of ecosystems, and minimization or elimination of the disruption of existing natural ecosystems and flood plains.

**Objective OSRC-11.1.** Ensure that permitted uses are compatible with reducing potential damage due to soil erosion.

**Objective OSRC-11.2.** Establish ways to prevent soil erosion and restore areas damaged by erosion.

**Policy OSRC-11a.** Design discretionary projects so that structures and roads are not located on slopes of 30 percent or greater. This requirement is not intended to make any existing parcel unbuildable if Health and Building requirements can be met.

**Policy OSRC-11b.** Include erosion control measures for any discretionary project involving construction or grading near waterways or on lands with slopes over 10 percent.

**Policy OSRC-11d.** Require a soil conservation program to reduce soil erosion impacts for discretionary projects that could increase waterway or hillside erosion. Design improvements such as roads and driveways to retain natural vegetation and topography to the extent feasible.

**Policy OSRC-11e.** Retain natural vegetation and topography to the extent economically feasible for any discretionary project improvements near waterways or in areas with a high risk of erosion as noted in the Sonoma County Soil Survey.

**Goal PS-1.** Prevent unnecessary exposure of people and property to risks of damage or injury from earthquakes, landslides, and other geologic hazards.

**Objective PS-1.2.** Regulate new development to reduce the risks of damage and injury from known geologic hazards to acceptable levels.

**Policy PS-1a.** Continue to use all available data on geologic hazards and related risks from the appropriate agencies.

**Policy PS-1b.** Continue to use studies of geologic hazards prepared during the development review process.

**Policy PS-1c.** Consider amendments of this Element to incorporate new data which significantly change the hazard assessments contained herein.

**Policy PS-1d.** Support and integrate research on geologic hazards, their probabilities, and their effects within Sonoma County.

**Policy PS-1e.** Continue to implement the "Geologic Hazard Area" combining district which establishes regulations for permissible types of uses and their intensities and appropriate development standards.
Policy PS-1f. Require and review geologic reports prior to decisions on any project which would subject property or persons to significant risks from the geologic hazards areas shown on Public Safety Element hazard maps and related file maps and source documents. Geologic reports shall describe the hazards and include mitigation measures to reduce risks to acceptable levels. Where appropriate, require an engineer's or geologist's certification that risks have been mitigated to an acceptable level and, if indicated, obtain indemnification or insurance from the engineer, geologist, or developer to minimize County exposure to liability.

Policy PS-1g. Prohibit structures intended for human occupancy (or defined as a "project" in the Alquist-Priolo Special Studies Zones Act and related Administrative Code provisions) within 50 feet of the surface trace of any fault.

Policy PS-1h. Adopt, upon approval by the International Code Council (ICC) and the State of California, revisions to the Uniform Building Code which increase resistance of structures to groundshaking and other geologic hazards.

Policy PS-1i. Require dynamic analysis of structural response to earthquake forces prior to County approval of building permits for structures whose irregularity or other factors prevent reasonable load determination and distribution by static analysis.

Policy PS-1j. Encourage strong enforcement of State seismic safety requirements for design and construction of buildings and facilities subject to State and Federal standards such as bridges, dams, power plants, hospitals and schools.

Policy PS-1k. Incorporate measures to mitigate identified geologic hazards for all County roads, public facilities, and other County projects to an acceptable level.

Policy PS-1l. Use the following criteria in siting and design of essential service buildings and facilities, particularly those of high public occupancy:

1. To the extent feasible, avoid siting such buildings and facilities in areas subject to a Modified Mercalli Index (MMI) Groundshaking Intensity Level of Very Violent (X), Violent (IX), or Very Strong (IIX) as shown on Figures PS-1a [in the General Plan].

2. Where such buildings and facilities must be located in the above areas, design and construct them to the highest feasible safety standard.

Policy PS-1m. Make readily available to property owners and the public all maps identifying geologic hazards in Sonoma County, particularly the MMI Groundshaking Intensity Level maps noted above.

Policy PS-1n. Develop a Strategic Plan for damage assessment and recovery of essential service buildings and facilities, particularly those of high public occupancy, as part of the County's emergency response planning, focused in areas subject to an MMI Groundshaking Intensity level of Very Violent (X), Violent (IX), or Very Strong (IIX).

C.7 Greenhouse Gas Emissions

The following presents a list of goals and policies related to greenhouse gas emissions from the relevant jurisdiction’s general plans.
City of Cloverdale

The following policy from the City of Cloverdale General Plan (City of Cloverdale 2009) is applicable to the CAP.

**Policy CDO 8-3.** Inventory and work to reduce Greenhouse Gas Emissions (GHG) Implementation CDO 8-3.a. The City shall work with the Sonoma County Air Pollution Control District, California Air Resources Board and/or other responsible agencies to prepare a Climate Action Plan. The Climate Action Plan shall include at a minimum:

- An inventory of current (2008) GHG emissions within the Sonoma County Air Pollution Control District consistent with methodologies developed by the International Environmental Agency for Local Governments (ICLEI) and California Air Resources Board (ARB).
- An inventory of 1990 GHG emission levels within the Sonoma County Air Pollution Control District consistent with methodologies developed by ICLEI and ARB.
- Estimated inventory of 2020 GHG emission levels within the Sonoma County Air Pollution Control District consistent with methodologies developed by ICLEI and ARB.
- Specific targets for reductions of the current and projected 2020 GHG emissions inventory from those sources reasonably attributable to the City’s discretionary land use decisions and the City’s internal government operations.
- Specific and general tools and strategies to reduce the current and projected 2020 GHG inventories and to meet the Plan’s targets for GHG reduction by 2020.

City of Cotati

The following goal and policies from the Cotati General Plan Update (City of Cotati 2015) are applicable to the CAP.

**Goal CI 3.** Reduce Vehicle Miles Traveled (VMT) in Order to Reduce Congestion and Help Achieve Regional Efforts to Reduce Greenhouse Gas (GHG) Emissions

**Policy CI 3.1.** Actively support the Regional Climate Protection Authority (RCPA) in its efforts to reduce GHG emissions to a level that is 25% below 1990 levels by 2015 and 40% below 1990 levels by 2035.

**Policy CI 3.3.** Work with major employers and representatives from Sonoma State University to implement Transportation Demand Management (TDM) programs. 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, and preferential parking for carpools and/or low-emission vehicles.

**Policy CON 2.6.** Reduce GHG emissions from City facilities and operations to 30 percent below 1990 levels by 2015, consistent with the goals stated in the 2008 Cotati Greenhouse Gas Emissions Reduction Action Plan.

**Policy CON 2.7.** Continue to aggressively implement the greenhouse gas (GHG) reduction measures contained in the 2008 Cotati Greenhouse Gas Emissions Reduction Action Plan.
**Policy CON 2.8.** Support the development and implementation of a GHG reduction plan, or Climate Action Plan, that addresses and reduces GHG emissions associated with community operations, including but not limited to: mobile sources (vehicle traffic), energy consumption, and solid waste.

**Policy CON 2.9.** Coordinate with Sonoma County and nearby cities to implement regional GHG reduction plans and consolidate efforts to reduce GHGs throughout the County.

**Policy CON 2.10.** Encourage local businesses and industries to engage in voluntary efforts to reduce GHG emissions and energy consumption.

**Policy CON 2.11.** 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 CON 2.12.** 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.

**City of Healdsburg**

The following goal, policies, and implementation measures from the *Healdsburg 2030 General Plan* (City of Healdsburg 2009) are applicable to the CAP.

**Goal NR-E.** Reduce greenhouse gas emissions and increase energy efficiency communitywide.

**Policy NR-E-1.** The City will reduce GHG emissions produced communitywide

**Policy NR-E-2.** The City will reduce GHG emissions produced by internal municipal operations.

**Policy NR-E-3.** The City will comply with California’s Publicly Owned Electric Utilities’ *Principles Addressing Greenhouse Gas Reduction Goals*.

**Policy NR-E-4.** The City will support sustainable development and building practices and lead by example in municipal projects.

**Policy NR-E-5.** The City will encourage the use of large-scale trees in new development to lessen heat build-up from solar radiation.

**Policy NR-E-6.** The City will comply with state climate protection goals and programs to the maximum extent allowed by the City's jurisdictional authority.

**Implementation Measure NR-14.** Promote the conservation of energy and natural resources by:

1. Allowing the use of alternative materials, designs and methods of construction not specifically prescribed by the Uniform Building Code to conserve energy and/or natural resources, if they have been approved and their use authorized by the City Building Official.

2. Waiving design review approval for most solar installations for existing buildings.

3. Granting rebates for such items as energy-efficient residential and commercial lighting, appliances, heat pumps, air conditioning, weatherization and photovoltaic systems.

4. Adopting and implementing a green building program.
**Implementation Measure NR-15.** Employ “green” building design and practices in the construction and renovation of city facilities whenever feasible.

**Implementation Measure NR-16.** Implement greenhouse gas emissions reduction measures adopted by the City Council.

**Implementation Measure NR-17.** The City will:

1. Develop a community GHG reduction plan, consistent with the State’s reduction goals. The plan shall be reviewed and updated at least once per year to identify progress and incorporate new information, regulatory standards, and technologies.
2. Acquire all available energy efficiency and demand reduction resources that are cost-effective, reliable and feasible.
3. Pursue renewable energy supplies and non-greenhouse gas-emitting energy resources and clean fossil resources.
4. Provide education for its customers on ways that they can reduce their greenhouse gas emissions, and provide assistance where feasible.

**City of Petaluma**

The following policies from the *City of Petaluma: General Plan 2025* (City of Petaluma 2008) are applicable to the CAP.

**Policy 4-P-23.** Fund and/or designate a Green Program Manager to oversee implementation of all Greenhouse Gas Emissions policies and programs identified in the Greenhouse Gas Emissions section as well as the City's Climate Action Plan. The policies and programs will need to be reviewed and updated periodically as new information, regulatory standards, and technologies develop. A report shall be provided to the City Council biannually, reporting on the status of the City's efforts to reduce greenhouse gases, and recommendations for any changes that are deemed necessary.

**Policy 4-P-24.** Comply with AB 32 and its governing regulations to the full extent of the City’s jurisdictional authority.

**Policy 4-P-25.** To the full extent of the City's jurisdictional authority, implement any additional adopted State legislative or regulatory standards, policies and practices designed to reduce greenhouse gas emissions, as those measures are developed.

**Policy 4-P-26.** Implement all measures identified in the municipal Climate Action Plan to meet the municipal target set in Resolution 2005-118 (20% below 2000 levels by 2010).

**Policy 4-P-27.** The City shall prepare a Community Climate Action Plan to identify and prioritize programs, projects, and procedural policies that will help the City achieve the community greenhouse gas emission goals of Resolution 2005-118 (25% below 1990 levels by 2015).

**Policy 4-P-28.** Prepare a feasibility report for the City of Petaluma forming a Community Choice Aggregation (through AB 117, permits any city or county to aggregate the electric loads of residents, businesses and municipal facilities to facilitate the purchase and sale of electrical energy) as a way of supplying renewable energy to the community.
Policy 4-P-29. Train appropriate City staff on new technology and look for opportunities to improve energy efficiency in public facilities.

Policy 4-P-30. Continue to monitor new technology and innovative sustainable design practices for applicability to insure future development minimizes or eliminates the use of fossil fuel and GHG-emitting energy consumption.

Policy 4-P-31. Provide information and tips on reducing greenhouse gas emissions to the community.

Policy 4-P-32. Develop and implement a municipal Environmentally Preferable Purchasing Program.

Policy 4-P-33. Investigate the feasibility of developing a City sponsored program to subsidize or assist homeowners in purchasing solar water heating or passive solar systems, or other forms of renewable energy, through low-interest loans or property tax assessments.

Policy 6-P-21. Develop an Urban Forestry Program to consolidate the various City policies and ordinances regarding tree planting and removal and to incorporate the goals of the California Climate Action Team Report to plant 5 million trees in urban areas by 2020 to provide energy conservation and reduce greenhouse gas emissions.

City of Rohnert Park

The City of Rohnert Park has taken many actions to reduce its impact on the environment by becoming more sustainable. Recent efforts include the following resolutions.

- City Council–adopted resolution 2004-111, which set a goal for greenhouse gas reductions of 20% by the year 2010 for internal city operations (baseline year 2000) (May 2004).

City of Sebastopol

There are no goals or policies from the City of Sebastopol General Plan (City of Sebastopol 1994) related to greenhouse gas emissions that are applicable to the CAP.

City of Sonoma

The following policy from the City of Sonoma 2020 General Plan (City of Sonoma 2006) is applicable to the CAP.

Policy ER-3.2. Encourage construction, building maintenance, landscaping, and transportation practices that promote energy and water conservation and reduce greenhouse gas emissions.

Town of Windsor

The following policies from the Town of Windsor General Plan – 2015 (Town of Windsor 1996) are applicable to the CAP.
**Policy CD-D.1.3.** The Town shall consider flexible Level of Service (LOS) standards or alternative traffic impact measurements, as part of a multimodal system approach, for projects that increase transit-ridership, biking, and walking in order to reduce air pollution, energy consumption, and greenhouse gas emissions.

**Policy ER-G.2.6.** The Town should promote energy conservation/energy efficiency improvement programs which have the added benefit of reducing energy demand from power-generating facilities which contribute to background levels of regional air emissions.

## Sonoma County

The following goal and policies from the Sonoma County General Plan 2020 (Sonoma County 2008) are applicable to the Project.

**Policy LU-11a.** Encourage reduction in greenhouse gas emissions, including alternatives to use of gas-powered vehicles. Such alternatives include public transit, alternatively fueled vehicles, bicycle and pedestrian routes, and bicycle and pedestrian friendly development design.

**Objective OSRC-14.4.** Reduce greenhouse gas emissions by 25 percent below 1990 levels by 2015.

**Policy OSRC-14a.** Continue to support education programs that promote energy conservation; energy efficiency; and solid waste reduction, reuse, and recycling opportunities for County operations, residents and businesses, and local utilities.

**Policy OSRC-14b.** Continue to provide strategic planning for energy conservation and efficiency in County operations.

**Policy OSRC-14c.** Continue to purchase and utilize hybrid, electric, or other alternative fuel vehicles for the County vehicle fleet; and encourage County residents and businesses to do the same.

**Policy OSRC-14d.** Support project applicants in incorporating cost effective energy efficiency that may exceed State standards.

**Policy OSRC-14e.** Develop energy conservation and efficiency design standards for new development.

**Policy OSRC-14f.** Use the latest green building certification standards, such as the Leadership in Energy and Environmental Design (LEED) standards, for new development.

**Policy OSRC-14g.** Develop a Greenhouse Gas Emissions Reduction Program, as a high priority, to include the following:

1. A methodology to measure baseline and future VMT and greenhouse gas emissions
2. Targets for various sectors including existing development and potential future development of commercial, industrial, residential, transportation, and utility sources
3. Collaboration with local, regional, and State agencies and other community groups to identify effective greenhouse gas reduction policies and programs in compliance with new State and Federal standards
4. Adoption of development policies or standards that substantially reduce emissions for new development
(5) Creation of a task force of key department and agency staff to develop action plans, including identified capital improvements and other programs to reduce greenhouse gases and a funding mechanism for implementation

(6) Monitoring and annual reporting of progress in meeting emission reduction targets

**Policy OSRC-14i:** Manage timberlands for their value both in timber production and offsetting greenhouse gas emissions.

**Goal OSRC-15.** Contribute to the supply of energy in the County primarily by increased reliance on renewable energy sources.

**Objective OSRC-15.1.** Increase the development of renewable energy and distributed energy generation systems and facilities for County operations.

**Objective OSRC-15.2.** Promote the use of renewable energy and distributed energy generation systems and facilities in new development in the County.

**Objective OSRC-16.1.** Minimize air pollution and greenhouse gas emissions.

**Objective CT-1.4.** Reduce the need for future automobile use by a combination of improvements and land development policies that give equal favor to alternate modes as to automobile use.

**Objective CT-1.5.** Reduce greenhouse gas emissions by minimizing future increase in VMT, with an emphasis on shifting short trips by automobile to walking and bicycling trips.

**Goal CT-3.** Establish a viable transportation alternative to the automobile for residents of Sonoma County through a safe and convenient bicycle and pedestrian transportation network, well integrated with transit that will reduce greenhouse gas emissions, increase outdoor recreational opportunities, and improve public health.

**Objective CT-3.2.** Reduce Sonoma County’s greenhouse gas emissions by achieving a non-motorized trips mode share of 5% for all trips and 10% for trips under five miles long by 2020.

**Policy CT-3g:** Revise County Traffic Guidelines to require that traffic studies identify impacts to existing and planned bicycle and pedestrian facilities. Consider development of bicycle and pedestrian facilities as mitigation measures for congestion and greenhouse gas emission impacts.

**Policy CT-3k:** Consider establishing greenhouse gas impact fees for new development. Use a portion of this fee to fund planning, design, and construction of bikeways and pedestrian facilities.

### C.8 Hazards and Hazardous Materials

The following presents a list of goals and policies related to hazards and hazardous materials from the relevant jurisdiction’s general plans.

**City of Cloverdale**

The following goals and policies from the *City of Cloverdale General Plan* (City of Cloverdale 2009) are applicable to the implementation of the CAP.
**Goal LU 8.** Maintain the Cloverdale Airport and allow only airport-compatible land uses near the airport.

**Policy 8-1.** Future development and use of the City Airport shall be consistent with the policies and programs as established in the Cloverdale Municipal Airport Master Plan.

**Goal PS 3.** Prevent unnecessary exposure of people and property to risks of damage or injury from wildland and structural fires.

**Policy PS 3-2.** Consider the severity of natural fire hazards, potential damage from wildland and structural fires, adequacy of fire protection and mitigation measures consistent with this element in the review of projects.

**Goal PS 4.** While maintaining the autonomy granted to it pursuant to state zoning laws, implement state and county requirements for the storage, transport, disposal and use of hazardous materials, including requirements for management plans, security precautions, and contingency plans.

**Policy PS 4-1.** Where allowed by law, regulate the transportation of hazardous materials to minimize the potential for damage. Seek regulation by other agencies consistent with adopted City policies.

**Policy PS 5-3.** Ensure that roadways are adequate in terms of width, radius, and grade to facilitate access by emergency vehicles.

**Policy PS 5-7.** Require all new development in areas of potential fire hazards to provide for clearance around structures, the use of fire resistant ground cover materials, and require installation of automatic fire sprinkler systems.

**Policy PS 5-12.** Require development adjacent to hillside areas to minimize geologic and fire hazards. Require all new development, including single-family residential, to provide built-in fire protection (i.e. automatic fire sprinklers).

**Policy PS 6-4.** Require a use permit for any commercial or industrial use involving significant quantities of hazardous materials. Hazardous materials management plans shall be required as a condition of approval for such permits.

**Goal PS 7.** Provide appropriate regulations for land use and airport operations to ensure that the safety of airport operations and personnel and the general public and adjacent structures are protected.

**Policy PS 7-6.** Discourage residential, noise-sensitive developments or significant expansions thereto located near the airstrip or under an overfly route. The area of concern with future development lies within “referral area” delineated by the County Airport Land Use Commission. (See Exhibit 10 [in the General Plan]) Until future annexation, the City will work with the County in unincorporated areas to ensure that developments are required to dedicate airport easements, deed restrictions or file "buyer beware" notifications to ensure that prospective buyers are aware of the airport’s influence. The notifications/restrictions shall include the following as appropriate.

**Policy PS 7-12.** Prohibit objects or structures to be erected in critical areas which, because of height or other factors, would result in an increase in the minimum ceiling or visibility criteria for an existing or proposed instrument approach procedure.
City of Cotati

The following policies from the *Cotati General Plan Update* (City of Cotati 2015) are applicable to the implementation of the CAP.

**Policy CSF 3.7.** Continue to coordinate with Sonoma County to require all businesses and residents to comply with the local and State requirements regarding the proper disposal of toxic and hazardous materials and waste.

**Policy SA 1.3.** Keep emergency access routes free of traffic impediments.

**Policy SA 3.15.** Require hazardous waste generated within the City of Cotati to be disposed of in a safe manner, consistent with all applicable local, state and federal laws.

**Policy SA 3.16.** Hazardous materials shall be stored on site in a safe manner.

**Policy SA 3.17.** Coordinate with the Sonoma County Fire and Emergency Services Department to ensure that businesses in Cotati that handle hazardous materials prepare and file a Hazardous Materials Business Plan (HMBP). The HMBP shall consist of general business information; basic information on the location, type, quantity and health risks of hazardous materials; and emergency response and training plans.

**Policy SA 3.18.** Require compliance with Sonoma County’s Countywide Integrated Waste Management Plan (CoWMP) as well as all of the Consolidated Unified Protection Agency (CUPA) program elements.

City of Healdsburg

The following policies and implementation measures from the *Healdsburg 2030 General Plan* (City of Healdsburg 2009) are applicable to the implementation of the CAP.

**Implementation Measure PS-15.** All plans for new streets shall be reviewed by the Fire Department to ensure minimum standards for width, turning radius, and grade to facilitate access by City firefighting apparatus are met.

**Policy S-D-1.** Areas of high fire hazard as determined by Cal Fire shall be designated for open space or low-intensity uses.

**Policy S-D-2.** All new development designated as being in a wildland high fire hazard zone shall:

- A. Be constructed to meet wildland urban interface standards as required by the California Fire & Building Code.
- B. Implement and maintain vegetation management plans around all structures in accordance with state and local standards.

**Policy S-H-1.** The City shall regulate the production, use, storage and transport of hazardous materials.

**Policy S-H-2.** The City shall protect new development from existing hazardous materials.
City of Petaluma

The following policies from the *City of Petaluma: General Plan 2025* (City of Petaluma 2008) are applicable to the implementation of the CAP.

**Policy 10-P-4.** Minimize the risk to life and property from the production, use, storage, and transportation of hazardous materials and waste by complying with all applicable State and local regulations.

City of Rohnert Park

The following goals and policies from the *City of Rohnert Park General Plan* (City of Rohnert Park 2000) are applicable to the implementation of the CAP.

**Policy HS-13.** As part of development review and environmental analysis, ensure that new multifamily residential and all non-residential development comply with the City's Source Reduction and Recycling Element (SRRE) and Household Hazardous Waste Element (HHWE), as well as the Sonoma CoIWMP.

**Goal HS-E.** Minimize the risk to life and property from the generation, storage, and transportation of hazardous materials and waste in Rohnert Park and assure the proper disposal of all hazardous waste that may be generated in Rohnert Park.

**Goal HS-F.** Comply with all applicable regulations and provisions for the storage, use and handling of hazardous substances as established by federal (EPA), State (DTSC, RWQCB, Cal OSHA, Cal EPA), and local (County of Sonoma, City of Rohnert Park) regulations.

**Goal HS-G.** Protect groundwater and soil from contamination by hazardous materials.

**Policy HS-24.** Require adequate access for emergency vehicles, including adequate street width and vertical clearance, on new streets.

City of Sebastopol

The following goals and policies from the *City of Sebastopol General Plan* (City of Sebastopol 1994) are applicable to the implementation of the CAP.

**Policy Conservation-P.11.** Reduce Soil Contamination: Reduce soil contamination from chemicals through careful regulation of the storage, transportation and use of chemicals.

**Goal Conservation 9.** Responsibly manage hazardous wastes to protect the health and safety of residents and the environment.

**Policy Conservation-P.26.** The Sonoma County Hazardous Waste Management Plan is incorporated by reference into the Sebastopol General Plan and shall be used to guide decision-making regarding the use, handling, storage, transfer, and proper disposal of hazardous waste.

**Policy Safety-P.19.** Review Development Projects for Fire Risk: Review all development proposals for fire risk and require mitigation measures to reduce the probability of fire.
**Policy Safety-P.33.** Measures to Reduce Hazards: Provide measures to protect the public health from the hazards associated with the transportation, storage and disposal of hazardous wastes (TSD Facilities).

**Policy Safety-P.34.** CEQA Review of proposed TSD Facilities: Support thorough environmental review for Hazardous Waste Transportation, Storage and Disposal (TSD) Facilities proposed in the Sebastopol Planning Area and throughout the County, since the potentially significant, widespread and long-term impacts on public health and safety of these facilities do not respect jurisdictional boundaries.


**Policy Safety-P.36.** Truck Routes for Hazardous Materials Transport: 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.

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**City of Sonoma**

The following policies from the *City of Sonoma 2020 General Plan* (City of Sonoma 2006) are applicable to the implementation of the CAP.

**Policy PS-1.1.** Require development to be designed and constructed in a manner that reduces the potential for damage and injury from natural and human causes to the extent possible.

**Policy PS-1.6.** Ensure that all operations that use, store, and/or transport hazardous materials to comply with all applicable regulations.

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**Town of Windsor**

The following policies from the *Town of Windsor General Plan − 2015* (Town of Windsor 1996) are applicable to the implementation of the CAP.

**Policy CD-E.4.13.** The Town shall eliminate prohibited wastes, including household hazardous waste, from the municipal solid waste stream.

**Policy ER-C.1.5.** The Town shall control and monitor the use and disposal of hazardous materials, the extraction of resources, and the disposal of wastes into injection wells to protect water quality.

**Policy PHS-A.2.1.** The Town shall consider the potential danger to health, safety, and welfare of Windsor residents and businesses in its review of development applications and seek to have hazardous conditions mitigated to an acceptable level. The Town should use Table 7-1 [in the General Plan] as a guideline for determining acceptable levels of exposure to risk.

**Policy PHS-C.1.1.** New development adjacent to heavily grassed and semi-arid hillsides should be designed to minimize fire hazards to life and property, including the use of fire preventive site design, landscaping and building materials, and fire suppression techniques such as sprinklering.

**Policy PHS-E.1.1.** The Town should require proper storage and disposal of hazardous materials to prevent leakage, potential explosions, fires, or the escape of harmful gases, and to prevent individually innocuous materials from combining to form hazardous substances, especially at the time of disposal.
Policy PHS-E.1.3. Land uses and structures that propose to use hazardous materials or generate wastes which may be a health risk for nearby areas should be located away from existing and planned populated areas.

Policy PHS-E.1.4. In future land use decisions, the Town should consider the constraints imposed by the potential for site contamination by present or past activities that used, stored, or disposed hazardous materials. Any use that that could allow human exposure to such contamination should be restricted or remediation efforts should be initiated to reduce the health risks to acceptable levels prior to issuance of a building permit.

Policy PHS-F.1.3. Adequate primary and alternative access for emergency vehicles should be provided to all new developments and maintained for existing development.

Sonoma County

The following policies from the Sonoma County General Plan 2020 (Sonoma County 2008) are applicable to the implementation of the CAP.

Goal LU-7. Prevent unnecessary exposure of people and property to environmental risks and hazards. Limit development on lands that are especially vulnerable or sensitive to environmental damage.

Objective LU-7.1. Restrict development in areas that are constrained by the natural limitations of the land, including but not limited to, flood, fire, geologic hazards, groundwater availability and septic suitability.

Policy LU-7d. Avoid new commercial, industrial, and residential land use designations in areas subject to "high" or "very high" fire hazards, as identified in the Public Safety Element, unless the combination of fuel load, access, water supply, and other project design measures will reduce the potential fire related impacts of new development to insignificant levels.

Policy LU-11c. Encourage the use of alternatives to harmful chemicals, heavy metals, and synthetic compounds.

Policy PS-4c. Require a use permit for any commercial or industrial use involving hazardous materials in threshold planning quantities as determined by Federal and State laws. Hazardous materials management plans shall be required as a condition of approval for such permits.

Policy PS-4h. Avoid siting of hazardous waste repositories, incinerators, facilities that use a substantial quantity of hazardous materials, or other similar facilities intended primarily for hazardous waste disposal in any area subject to a very strong ground shaking hazard identified on Figures PS-1a through PS-1i [in the General Plan] or within one quarter mile of schools.

Policy PS-4i. Avoid siting of hazardous waste repositories, incinerators, or similar facilities intended primarily for hazardous waste disposal in any area designated for urban residential or rural residential use or on agricultural lands or at County approved solid waste disposal facilities.

Policy PS-4j. Site hazardous waste facilities which have the primary purpose of reuse, recycling, or source reduction of hazardous wastes in areas designated for industrial use in close proximity to users of hazardous materials and/or generators of hazardous wastes.
**Policy PS-4n.** Encourage the private sector to reduce the use of potentially hazardous pesticides and to use alternatives such as best management practices.

**Policy PS-4o.** Encourage reduction in the use of potentially hazardous pesticides and increased use of alternatives, such as best management practices, in County operations, including but not limited to maintenance of roads, parks, and facility grounds. Emphasize the use of alternatives to potentially hazardous pesticides in areas likely to drain to waterways. Coordinate with the cities in this effort.

## C.9 Hydrology and Water Quality

The following presents a list of goals and policies related to hydrology and water quality from the relevant jurisdiction’s general plans.

### City of Cloverdale

The following goals and policies from the *Cloverdale General Plan* (City of Cloverdale 2009) are applicable to the implementation of the CAP.

**Goal PS 2.** Prevent unnecessary exposure of people and property to risks of damage or injury from flooding.

**Policy PS 2-2.** Base land use planning and development review on FEMA maps and data or parcel specific scaled interpretations of these maps and site specific elevation data.

**Policy PS 2-3.** Prepare a comprehensive analysis of the potential flood hazards and drainage impacts associated with adopted land use plans for each major watershed in the City. Encourage the County to work with Cloverdale to develop basin wide drainage studies and development fees for the purpose of identifying and mitigating the direct and cumulative impact of flooding which results from the loss of permeable surfaces. The City shall use proposed annexations, redevelopment agreements, revenue sharing agreements and the CEQA process as tools to ensure that incorporated development pays its fair share toward the studies and mitigation of downstream flooding impacts caused by upstream development.

**Policy PS 2-4.** Pending completion of the above applicable drainage analyses, individual project applications shall be required to analyze and mitigate drainage impacts, based upon the land use plan. If such analysis identified unmitigated and cumulative significant effects, including impact on downstream flooding, further environmental documentation may be required.

**Policy PS 2-5.** In the event that the City determines that the project, when considered cumulatively with other projects to be undertaken in the drainage basin, will result in a significant effect with respect to downstream flooding, the project applicant will either a) prepare a focused environmental impact report on such effect, or b) agree to modify the project to construct improvements or participate in a funding mechanism necessary to mitigate any downstream flooding impacts (such as posting a bond or funds prior to recordation of the final map in an amount to be determined by the Water Agency). Failure to modify the project or to propose further environmental documentation shall be grounds for finding the project inconsistent with the plan.

**Policy PS 2-7.** Onsite and offsite flood-related hazards shall be reviewed for all projects located within areas subject to known flood hazards.
Policy PS 2-8. Regulate development, water diversion, vegetation removal, grading and fills to minimize any increase in flooding and related damage to people and property.

Policy PS 2-9. Payment of costs for drainage facilities to handle the surface runoff from new development shall be the responsibility of developers and others who benefit.

Policy PS 2-10. Require that design and construction of drainage facilities be subject to the review and approval of the Sonoma County Water Agency (SCWA) where appropriate based on project size.

Policy PS 2-11. Require that tentative and final subdivision maps and approved site plans show areas subject to flooding as shown on the FEMA maps.

Policy PS 2-13. Consider the potential risk of damage from flooding in the design and review of projects, including those which could facilitate floodplain development.

Policy PS 2-14. Continue to enforce City code requirements on construction in flood hazard areas and other adopted regulations which implement the National Flood Insurance Program.

Policy PS 2-15. Avoid variances to building setbacks along streams and in 100-year flood plains.

Policy PS 2-16. Limit filling in areas which could retain a significant amount of floodwater.

City of Cotati

The following policies from the Cotati General Plan Update (City of Cotati 2015) are applicable to the implementation of the CAP.

Policy CON 1.14. 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 SA 3.2. Require all development projects to demonstrate how storm water runoff will be detained or retained on-site and/or conveyed to the nearest drainage facility as part of the development review process. Project applicants shall demonstrate that project implementation would comply with all applicable provisions of the City’s MS4 permit, which defines the design storm event for water detention and retention features.

Policy SA 3.3. Ensure that construction activities will not result in adverse impacts to existing flood controls and drainage structures.

Policy SA 3.4. For properties located within a flood hazard zone, as identified on the most recent FEMA 100-year floodplain map or identified by the California Department of Water Resources, the City shall not enter into a development agreement, approve any discretionary entitlement, tentative parcel map, parcel map, final map, or any ministerial permit that would result in the construction of a new residence unless flood protection findings consistent with the requirements of the California Government Code 65865.5, 65962, and 66474.5 can be made and documented.

Policy SA 3.5. All new development within the 100-year flood plain shall be built according to the Federal Flood Insurance Agency standards.

Policy SA 3.6. Require new structures to be located outside of the 100-year floodplain to the greatest extent feasible.
Policy SA 3.10. Continue efforts to eliminate flooding, by upgrading and expanding the storm drainage system.

Policy SA 3.11. Ensure that new development or governmental action does not compound the potential for flooding.

Policy SA 3.12. Require all new development in the city to be designed to minimize vegetation removal, soil compaction, and site coverage.

Policy SA 3.13. Ensure that adequate drainage and erosion control are provided during construction of all new developments.

City of Healdsburg

The following policies and implementation measures from the Healdsburg 2030 General Plan (City of Healdsburg 2009) are applicable to the implementation of the CAP.

Policy NR-A-2. The City will seek to minimize siltation, sedimentation and pollution discharge into receiving waterways from construction activities and ongoing operations.

Implementation Measure NR-1. Develop and apply standard mitigation measures and conditions of approval on development permits to reduce siltation, sedimentation and pollution discharge into receiving waterways, both pre- and post-construction.

Implementation Measure NR-2. Continue to require Storm Water Pollution Prevention Plans (SWPPP) for development projects with a land disturbance of one acre or more that incorporate best management practices to preserve natural drainage systems; provide source control of construction site materials, wastes and chemicals; and control and treat runoff, both during and after construction.

Implementation Measure NR-3. Prepare and distribute to the community guidelines that encourage the use of low impact development techniques to maintain or restore the natural hydrologic functions of a site by detaining water onsite, filtering out pollutants and facilitating the infiltration of water into the ground.

Policy S-C-2. New residential development in flood prone areas shall be constructed so that the lowest floor is at least one foot above the 100-year flood level. Non-residential development in flood prone areas shall be anchored and flood-proofed to prevent damage from the 100-year flood or elevated to at least one foot above the 100-year flood level. Existing development shall comply with these requirements when improvements are made costing at least 50 percent of the current market value of the structure before the improvements.

City of Petaluma

The following policies from the City of Petaluma: General Plan 2025 (City of Petaluma 2008) are applicable to the implementation of the CAP.

Policy 8-P-20. Manage groundwater as a valuable and limited shared resource by protecting potential groundwater recharge areas and stream sides from urban encroachment within the Petaluma watershed.
Policy 8-P-35. Protect private and public properties and capital investments including those designed to minimize flooding potential.

Policy 8-P-36. Require development on sites greater than 1/4 acre in size to demonstrate no net increase in peak day stormwater runoff, to the extent deemed practical and feasible.

Policy 8-P-37. No new inhabited structure or development shall be permitted within that portion of properties containing areas of water depths exceeding one foot as illustrated in Figure 8-2 [in the General Plan], unless mitigation and/or on-site or off-site improvements are constructed to reduce the 100-year flood depth to less than one foot.

Policy 8-P-38. All development activities shall be constructed and maintained in accordance with Phase 2 National Pollutant Discharge Elimination System (NPDES) permit requirements.

City of Rohnert Park

The following goals and policies from the City of Rohnert Park General Plan (City of Rohnert Park 2000) are applicable to the implementation of the CAP.

Goal EC-E. Comply with the Regional Water Quality Control Board’s regulations and standards to maintain and improve the quality of both surface water and groundwater resources.

Goal EC-F. Enhance the quality of surface water and groundwater resources and prevent their contamination.

Goal EC-G. Undertake steps to minimize the depletion of groundwater resources.

Goal EC-I. Ensure that the City’s drinking water continues to meet or exceed water quality standards.

Policy EC-18. Protect waterways by prohibiting the dumping of debris and refuse in and near waterways and storm drains.

Policy EC-19. Require new construction to utilize site preparation, grading, and foundation designs for erosion control to prevent sedimentation and contamination of streams.

Policy EC-21. Establish development standards for new construction adjacent to riparian zones to reduce sedimentation and flooding.

Policy HS-3. Prepare and implement a Storm Water Management Plan to ensure protection of the surface and groundwater resources.

Policy HS-4. Ensure that the City’s regulations pertaining to subdivision design, zoning, building, and grading ordinances and policies continue to include measures to minimize erosion and sedimentation.

Policy HS-5. As part of the building permit process, require all development projects to comply with hydrology and drainage policies incorporated in the applicable Specific Plans. Require the project proponent to design and construct a storm drain system in accordance with the SCWA Flood Control Design Criteria (latest revision), specific to the project. Encourage the use of environmentally sensitive drainage improvements including flow reduction and flood bypass systems in order to ensure protection of surface water quality and stream integrity.
Policy HS-6. As part of the building permit process, require new development greater than five acres in size to prepare and implement a site-specific storm water pollution prevention plan (SWPPP) that effectively reduces discharges of stormwater containing sediment and other pollutants resulting from site construction activities. In addition, require all projects, regardless of size, to comply with any other stormwater provisions of the specific plans for their respective areas.

Policy HS-9. Use the City’s development review process to ensure that proposed development located in 100-year flood zones undertakes measures to provide adequate protection from flood hazards.

City of Sebastopol

The following policies from the City of Sebastopol General Plan (City of Sebastopol 1994) are applicable to the implementation of the CAP.

Policy Conservation-P.10. Control Soil Erosion: Control soil erosion to prevent flooding and destruction of natural waterways, to maintain water quality, and to reduce public costs for flood control and watercourse maintenance.

Policy Conservation-P.11. Reduce Soil Contamination: Reduce soil contamination from chemicals through careful regulation of the storage, transportation and use of chemicals.


City of Sonoma

The following policies and implementation measures from the City of Sonoma 2020 General Plan (City of Sonoma 2008) are applicable to the implementation of the CAP.

Policy PS-1.7. Reduce the potential for local flooding to the extent possible.

Implementation Measure PS-1.7.4. New development shall be evaluated in terms of the adequacy of proposed storm drain improvements, shall contribute, as applicable to the implementation of the Sonoma Area Master Drainage Plan, and shall comply with Water Agency design criteria. Best management practices shall be required, as applicable, to reduce or mitigate the volume, concentration and velocity of run-off.

Town of Windsor

The following policies from the Town of Windsor General Plan – 2015 (Town of Windsor 1996) are applicable to the implementation of the CAP.

Policy ER-A.1.3. Areas that pose significant threats to public health and safety, such as steep slopes, floodways, and the Alquist-Priolo Special Study Zone should be predominantly maintained as open space.

Policy ER-C.1.5. The Town shall control and monitor the use and disposal of hazardous materials, the extraction of resources, and the disposal of wastes into injection wells to protect water quality.
Policy ER-C.1.6. The Town should require that development activities along creeks be conducted using Best Management Practices that seek to minimize the discharge of sediments and urban pollutants into the waterways.

Policy PHS-A.1.2. In all areas with steep slopes, grading practices for drainage purposes shall restore natural drainage patterns of surface water runoff so that any diversions will not induce or accelerate natural channel grading, sheet erosion, gully erosion, and other forms of erosion.

Policy PHS-B.1.1. The Town shall require that new residential, public, commercial, and industrial development be required to have protection from a 100-year flood.

Policy PHS-B.1.5. The Town shall require property owners/developers who benefit from the installation of drainage facilities which handle stormwater runoff from new development to pay for the cost of these improvements.

Policy C.1.6. The Town should require that development activities along creeks be conducted using Best Management Practices that seek to minimize the discharge of sediments and urban pollutants into the waterways.

Policy C.2.2. The Town should encourage development that faces creeks and streams as much as possible.

Sonoma County

The following objective and policies from the Sonoma County General Plan 2020 (Sonoma County 2008) are applicable to the implementation of the CAP.

Goal LU-7. Prevent unnecessary exposure of people and property to environmental risks and hazards. Limit development on lands that are especially vulnerable or sensitive to environmental damage.

Objective LU-7.1. Restrict development in areas that are constrained by the natural limitations of the land, including but not limited to, flood, fire, geologic hazards, groundwater availability and septic suitability.

Policy LU-7c. Prohibit new permanent structures within any floodway. Require that any development that may be permitted within the flood plain to be raised above the 100 year flood elevation.

Policy LU-8f. Increase the role of water conservation, storm water retention, and aquifer recharge for water supply purposes.

Policy LU-11f. Encourage conservation of undeveloped land, open space, and agricultural lands, protection of water and soil quality, restoration of ecosystems, and minimization or elimination of the disruption of existing natural ecosystems and flood plains.

Policy OSRC-11b. Include erosion control measures for any discretionary project involving construction or grading near waterways or on lands with slopes over 10 percent.

Objective WR-1.2. Avoid pollution of stormwater, water bodies and groundwater.
Policy WR-1b. Design, construct, and maintain County buildings, roads, bridges, drainage and other facilities to minimize sediment and other pollutants in stormwater flows. Develop and implement “best management practices” for ongoing maintenance and operation.

Policy WR-1c. Prioritize stormwater management measures in coordination with the RWQCB direction, focusing first upon watershed areas that are urbanizing and watersheds with impaired water bodies. Work cooperatively with the RWQCBs to manage the quality and quantity of stormwater runoff from new development and redevelopment in order to:

1. Prevent, to the maximum extent practicable, pollutants from reaching stormwater conveyance systems.
2. Ensure, to the maximum extent practicable, that discharges from regulated municipal storm drains comply with water quality objectives.
3. Limit, to the maximum extent practicable, stormwater from post development sites to pre-development quantities.
4. Conserve and protect natural areas to the maximum extent practicable.*

Policy WR-1g. Minimize deposition and discharge of sediment, debris, waste and other pollutants into surface runoff, drainage systems, surface water bodies, and groundwater.

Policy WR-1h. Require grading plans to include measures to avoid soil erosion and consider upgrading requirements as needed to avoid sedimentation in stormwater to the maximum extent practicable.

Policy WR-1o. Require that commercial and industrial uses reduce and pretreat wastes prior to their entering sewer systems.

Policy WR-1q. Require new development projects to evaluate and consider naturally-occurring and human caused contaminants in groundwater.

Policy WR-2f. Require that discretionary projects in Urban Service Areas maintain the site’s pre-development recharge of groundwater to the maximum extent practicable. Develop voluntary guidelines for rural development that would accomplish the same purpose.

Objective PS-2.2. Regulate new development to reduce the risks of damage and injury from known flooding hazards to acceptable levels.

Policy PS-2f. Preserve floodplain storage capacity by avoiding fill in areas outside of the 100-year FEMA special flood hazard area that retain or could retain flood waters.

Policy PS-2i. Until such time as the analysis under Policy PS-2h is completed and the regional mitigation measures adopted, each discretionary project located in the above watersheds with major flood problems shall analyze drainage and flooding impacts and include feasible and appropriate mitigation measures to reduce flood hazards from the project. Thereafter, each project shall implement its proportionate fair share of the regional mitigation measures.

Policy PS-2l. On-site and off-site flood related hazards shall be reviewed for all projects located within areas subject to known flood hazards.

Policy PS-2p. Require that design and construction of drainage facilities be subject to the review and approval of the Permit and Resource Management Department.
Policy PS-2q. Require that tentative and final subdivision maps and approved site plans show areas subject to flooding as shown on the FEMA maps.

Policy PS-2s. Consider the potential risk of damage from flooding in the design and review of projects, including those which could facilitate floodplain development.

C.10 Land Use and Recreation

The following is a list of key land use goals and policies from the relevant jurisdictions' general plans.

City of Cloverdale

The following goals and policies from the City of Cloverdale General Plan (City of Cloverdale 2009) are applicable to implementation of the CAP.

Policy LU 1-4. It is the intent the City to have a substantial reserve of industrial land to the south of the existing City limits, to provide for a balance of commercial and industrial lands on areas reserved for non-residential uses, and to insure that there is a buffer between industrial and residential uses so that industrial uses do not affect residential areas.

Policy LU 2.2. Retain existing residential uses and encourage new residential uses in and near the downtown in order to preserve a close-in customer and pedestrian base.

Policy LU 2-4. Discourage the creation of retail commercial areas outside the downtown that would adversely affect the viability of the downtown, including freeway frontages south of the City, freeway frontages east of US 101, and areas around the central US 101 interchange.

Goal LU 3. Preserve and enhance Cloverdale’s small-town character and the experience of its natural boundaries and setting. Cloverdale—a small town on the valley floor with undeveloped hills to the west, north, and south and the Russian River as an urban development boundary to the east, and protect important farmlands from urban development.

Policy LU 3-1. Develop an Urban Growth Boundary that allows urban development within the boundaries and does not allow urban development outside the boundaries except in two existing developed areas (Industrial and Asti Exception Areas).

Policy PR 1-5. Pursue pedestrian trails, bicycle trails, and combined pedestrian/bicycle trails with a goal of providing linked and "looped" trail systems in planning permit approvals (see also Land Use Element and Open Space Element) on sites and trails shown in Exhibit 5-1 [in the General Plan].

Policy CDO 1-1. Urban development in the City will be on the valley floor, defined generally as the land below the 400-foot elevation. Development will be framed by and contained within agricultural lands to the north and south, the Russian River to the east, and below the 400-foot elevation.

Policy CDO 1-3. Land use designations for areas outside the Sphere of Influence are intended as guidelines for County review of projects.
**Policy CDO 1-5.** Encourage the County to retain surrounding lands in very low density residential, agricultural, open space, and natural resource uses that provide contrast to urbanized Cloverdale. Promote the creation of a community separator or open space buffer between Cloverdale and any urban development around the City.

**Policy CDO 3-8.** Develop a design plan for the area around the passenger rail station so that the station is incorporated into a mixed-use community, rather than an isolated facility that is reached only by car. Consider downtown-type design configurations for the properties immediately opposite the station, with features like narrower roads to slow traffic, parking and buildings modeled after the downtown, and high density residential above commercial uses that could serve a transit community and commuter rail passengers.

**City of Cotati**

The following policies from the *Cotati General Plan Update* (City of Cotati 2015) are applicable to implementation of the CAP.

**Policy CI 1.21.** Require development projects to provide land dedications or pay fees in order to provide bike paths, sidewalks, and walkways.

**Policy CI 2.19.** Establish the SMART multi-modal transit station on East Cotati Avenue and Santero Way to provide a link between commuter rail, bus, pedestrian, and bicycle travel and to provide retail and services to serve SMART transit users.

**Policy CI 2.20.** Ensure that effective transit linkages are in place between the SMART commuter rail station and the City’s primary activity and employment centers.

**Policy CI 2.21.** Coordinate with SMART in seeking opportunities to fund and construct improvement that improve multimodal access to the Cotati rail station.

**Policy CON 2.1.** 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 alternative modes of transportation, and requiring projects to mitigate significant air quality impacts.

**Policy CON 3.6.** Ensure that street layout and design minimizes the use of pavement to the greatest extent feasible in order to reduce cooling energy needs.

**Policy CON 3.10.** Ensure that the layout and design of new development and significant remodels encourages the use of transportation modes other than automobiles and trucks.

**Policy EV 2.1.** Continue to implement the Downtown Specific Plan, including standards for land use, building design, public spaces, and traffic circulation.

**Policy EV 2.2.** Prioritize vertical mixed-use and a diversity of retail uses to facilitate pedestrian storefront shopping in the Hub and Downtown Specific Plan.

**Policy LU 1.4.** Require new development to occur in a logical and orderly manner, focusing on infill locations and areas designated for urbanization on the Land Use Map (see Figure 7.1 in the General plan), and be subject to the ability to provide urban services, including paying for any needed extension of services.
City of Healdsburg

The following policies and implementation measures from the *Healdsburg 2030 General Plan* (City of Healdsburg 2009) are applicable to implementation of the CAP.

**Policy LU-C-4.** Development at the interface of different land use designations shall be designed to ensure compatibility between the uses.

**Policy LU-C-5.** Residential neighborhoods shall be protected from encroachments by undesirable non-residential uses.

**Policy LU-F-1.** Land uses adjacent to designated transit facilities should derive maximum benefit from transit facilities and may include retail, office, employment and higher-density residential uses.

**Policy LU-F-2.** The City shall encourage mixed use development, including new housing and employment opportunities, as well as reuse of underutilized or vacant industrial land, around the historic railroad depot to support transit use at the depot.

**Policy H-K-7.** Promote infill development to maximize the use of existing infrastructure and encourage patronage of alternative transportation modes.

**Implementation Measure H-61.** Initiate a planning process for transit-oriented development within walking distance of the Intermodal Transportation Center.

**Policy T-E-1.** Ensure that sufficient land is designated in the General Plan for transit facilities, including park-and-ride lots, bus stations and rail transit facilities.

**Policy T-E-2.** The historic railroad depot shall be the designated multi-modal transit center for Healdsburg. The designation of this facility shall not be deemed to preclude the development of other uses under the General Plan. Other potential transit facility sites may be considered provided they support the railroad depot facility and their effects on circulation and the environment have been fully analyzed.

**Policy T-E-7.** The City will encourage development of a centrally-located common bus terminus equipped with a permanent shelter and will encourage the County's bus system to coordinate its stops at the common terminus.

**Policy PS-H-4.** City park acquisition and development efforts shall be based on a goal of 5 acres of developed neighborhood and community parkland per 1,000 residents within the Urban Service Area.

**Policy PS-H-5.** The City will promote the provision of parks as part of new residential developments by continuing to assess park development fees on these projects, or accepting land for park purposes in lieu of park development fees, in part or in whole, based on a development agreement.

**Policy PS-H-6.** The City will continue to assess park development fees on all new commercial, industrial, and residential development sufficient to fund system-wide park improvements.

**Policy NR-F-2.** The City will promote land use patterns that support the use of transit systems and pedestrian and bicycle facilities.
City of Petaluma

The following policies from the City of Petaluma General Plan 2025 (City of Petaluma 2008) that are applicable to implementation of the CAP.

**Policy 1-P-2.** Use land efficiently by promoting infill development, at equal or higher density and intensity than surrounding land uses.

**Policy 1-P-6.** Encourage mixed-use development, which include opportunity for increased transit access.

**Policy 1-P-11.** Allow land use intensification at strategic locations along the arterial corridors leading to Downtown and Central Petaluma, including aging commercial and industrial sites.

**Policy 1-P-12.** Encourage reuse of under-utilized sites along East Washington Street and Petaluma Boulevard as multi-use residential/commercial corridors, allowing ground-floor retail and residential and/or commercial/office uses on upper floors.

**Policy 2-P-14.** Promote the development and intensification of the Downtown commercial core as both a visitor destination and a neighborhood retail center.

**Policy 2-P-90.** Work with regional and other agencies to create a new light rail transit station near Corona Road with high-intensity, transit-oriented development.

**Policy 2-P-96.** Develop High and Medium Density Residential near the proposed rail transit station on Corona Road.

**Policy 5-P-43.** Support efforts for transit oriented development around the Petaluma Depot and along the Washington Street, Petaluma Boulevard, McDowell Boulevard, Lakeville Street, and other transit corridors.

**Policy 6-P-5.** New parkland or recreation facilities, beyond those identified in the General Plan, may be required as part of a specific project's development review process.

**Policy 9-P-12.** Maintain and expand Downtown as a hub of commercial and retail activity with residential opportunities.

City of Rohnert Park

The following goals and policies from the City of Rohnert Park General Plan (City of Rohnert Park 2000) are applicable to implementation of the CAP.

**Goal LU-A.** Maintain a compact urban form, with a defined urban growth boundary and urban development intensities in land designated for urban uses. Work with other agencies to ensure that land surrounding the city is maintained in open space.

**Goal LU-C.** Promote a balanced land use program and increase the ability of people to live and work in the city.

**Goal LU-D.** Provide for concentrations of activity and mixed-use and pedestrian-oriented development in selected areas.
Goal LU-E. Encourage development of the City Center as a mixed-use activity center with a range of commercial, residential, and civic uses.

Policy LU-3. Develop the University District as a mixed-use, pedestrian-oriented center.

Policy LU-4. Develop the City Center and the Sonoma Mountain Village Planned Development as mixed-use, pedestrian-oriented areas.

Policy LU-5. Encourage development of the northwest growth area along Wilfred Avenue and on the area designated as Mixed Use on Bodway Parkway, south of Canon Manor, as mixed-use centers (that is, with different uses at different levels in a building), while permitting single- or multi-use (that is more than one use on the site, but in separate buildings) development.

Policy LU-6. Locate new Medium and High Density Residential development adjacent to parks, creekways or other open space, in order to maximize residents' access to recreational uses, or adjacent to a Mixed Use or Neighborhood Commercial Center, to maximize access to services.

Goal GM-E. Promote contiguous urban development and maintain a compact form over successive stages of the city's development.

Goal GM-G. Require all urban development in the Rohnert Park Planning Area to be located within the Urban Growth Boundary; prohibit urban development outside the Urban Growth Boundary.

Policy TR-34. Undertake a comprehensive study to evaluate and implement a multi-hub transit corridor along Rohnert Park Expressway.

Goal EC-L. Encourage land use and transportation strategies that promote use of alternatives to the automobile for transportation, including bicycling, bus transit, and carpooling.

City of Sebastopol

The following policies from the City of Sebastopol General Plan (City of Sebastopol 1994) are applicable to implementation of the CAP.


Policy Land Use-P.6. Favor Infill. Encourage development within the city limits; favor infill development over annexation.

Policy Land Use-P.17. Encourage Mixed Use Development. Encourage mixed-use developments in the Downtown and other selected areas of the city; maintain non-residential uses on the ground floor.

Policy Conservation P.26. Parkland Standard: Utilize the standard of five acres of parkland per 1,000 residents for acquisition of additional developed parkland pursuant to the provisions of the Quimby Act [Govt. Code§ 66477] for all new residential development.


Policy Community-P.36. Promote higher density development on the periphery of the Downtown area.
Policy Economic-P.3. Mixed Use Development: Encourage mixed use developments in the Downtown and other selected areas of the city and maintain the ground floor in non-residential uses where needed to stimulate and support the local economy.

City of Sonoma

The following policies from the City of Sonoma 2020 General Plan (City of Sonoma 2006) are applicable to implementation of the CAP.

Policy CD-4.1. Promote innovative design and mixed uses through the Development Code.

Policy CD-5.5. Promote higher density, infill development, while ensuring that building mass, scale, and form are compatible with neighborhood and town character.

Policy LE-1.2. Encourage mixed use development that includes small-scale, local-serving commercial uses, provided it will be compatible with surrounding development.

Policy LE-1.9. Encourage a residential and pedestrian presence in commercial centers through mixed use and multifamily development.

Policy CE-3.2. Encourage a mixture of uses and higher densities where appropriate to improve the viability of transit and pedestrian and bicycle travel.

Town of Windsor

The following policies from the Town of Windsor General Plan – 2015 (Town of Windsor 1996) are applicable to implementation of the CAP.

Policy CD-A.5.3. The Town should allow for the establishment of neighborhood centers within a short walk from most homes to create cultural or social focal points. A range of different land uses appropriate to accomplish this function may be allowed, including activities that provide basic services such as day care, elderly care, upper-story housing, places of worship, mail/office service stores, restaurants and cafes, personal services (e.g., beauty shops), neighborhood-focused retail (e.g., markets, video stores, bakeries, etc.), and transit stops. A common open space amenity should be a part of a Neighborhood Center to allow for neighborhood gathering opportunities and to complement other uses in the Neighborhood Center.

Policy CD-A.5.7. In employment districts, the Town should create walkable streets and destinations to reduce automobile trips for retail, recreation, childcare, or other activities.

Policy CD-A.8.1. The Town shall implement a multimodal transportation system that connects residents to activity centers throughout and near the town, such as commercial centers and corridors, employment centers, transit stops/stations, the airport, schools, parks, recreation areas, and other attractions.

Policy CD-A.8.8. The Town shall require all new development that proposes or is required to construct or extend streets to develop a transportation network that complements and contributes to the town’s multimodal system, maximizes connections, and minimizes barriers to connectivity.

Policy CD-A.8.9. The Town shall ensure that new commercial and residential development projects provide convenient and direct connections to the nearest bikeways, pedestrian ways, and transit facilities.
Policy CD-B.6.1. The Town should encourage higher intensity uses where they would: a. provide market support, within a reasonable walking distance, for Old Town; b. take advantage of excellent access to U.S. 101 and the Town's crosstown streets; c. take maximum advantage of existing and future public transit stops, specifically bus and rail service; or d. take advantage of existing and future public uses. These areas plus other special areas are generally illustrated in Figure 4-2 [in the General Plan].

Policy CD-C.6.1. The Town shall promote a mix of land uses within the Old Town area, including, but not limited to, mutually supportive retail, office, residential, public, and recreational activities.

Policy CD-D.5.2. The Town shall encourage higher density mixed land uses within walking distances of existing and future transit stops.

Policy ER-G.2.1. The Town shall promote a more diversified land use pattern that strikes a better balance between jobs and housing in the community, thereby creating opportunities for Windsor residents to work and shop in Town rather than to travel elsewhere for these purposes.

Policy ER-G.2.2. The Town should encourage higher residential densities and business development intensities at existing and future transit stops in order to promote transit ridership.

Policy ER-H.1.1. Town should promote creation of a land use pattern that reduces operational energy requirements, especially for transportation purposes, by:

1. Avoiding land use configurations and siting decisions which result in single-purpose automobile trips, and instead encourage patterns which result in multi-purpose trips.
2. Promoting land use patterns which may be easily served by local transit and linked with regional transit.
3. Promoting land use patterns which provide employment opportunities for Windsor residents.

Policy ER-H.1.2. New development in Windsor should provide for solar access, both for residential and non-residential land uses, and should encourage the use of solar easements to guarantee access.

Sonoma County

The following goals, objectives, and policies from Sonoma County General Plan 2020 (Sonoma County 2008) are applicable to implementation of the CAP.

Goal LU-3: Locate future growth within the cities and unincorporated Urban Service Areas in a compact manner using vacant "infill" parcels and lands next to existing development at the edge of these areas.

Objective LU-3.3: Encourage "infill" development within the expansion areas of the cities and unincorporated communities.

Policy LU-6i. Provide expanded opportunities for a mix of residential and commercial or industrial use in Urban Service Areas

Policy LU-11a. Encourage reduction in greenhouse gas emissions, including alternatives to use of gas-powered vehicles. Such alternatives include public transit, alternatively fueled vehicles, bicycle and pedestrian routes, and bicycle and pedestrian friendly development design.
Policy LU-11b. Encourage all types of development and land uses to use alternative renewable energy sources and meaningful energy conservation measures.

Policy LU-11e. Encourage use of compact and mixed use development that minimizes the need to drive, re-uses existing infill and brownfield sites that have been reclaimed and remediated before using open land, and avoids sprawl.

Policy LU-11h. Encourage development and land uses that pursue reduction and re-use of by-products and waste, especially approaches that also employ waste as a resource, such as eco-industrial development.

Policy OSRC-15d. Incorporate energy facility siting policies into the Sonoma County Development Code that would:

1. Define accessory renewable energy systems as those designed to primarily serve on-site energy demand, and commercial renewable energy facilities as providing energy for off-site use.

2. Allow accessory renewable energy systems close to the end energy users in all zoning districts where visual and other environmental impacts can be mitigated.

3. Allow commercial renewable energy facilities on lands designated for commercial, industrial, resource or public use. Avoid in agricultural areas mapped as Prime, Statewide or Unique Farmlands, and in areas designated as Scenic and Biotic Resources. Limit their use to compatible scale in rural residential, and agricultural areas.

4. Notwithstanding Policy AR-4a, consider allowing commercial renewable energy as a primary use facilities on agricultural lands only where a Renewable Energy (RE) Combining District is applied, when the history of the site demonstrates that it is of low value for agricultural production, and agricultural operations on surrounding agricultural parcels are not compromised, consistent with Policies AR 4d, 4e and 4f.


Objective CT-3.3. Encourage pedestrian, bicycle, and transit oriented development.

Policy PF-2q. Review projects on or near designated solid waste facilities sites for compatibility with such facilities.

C.11 Noise and Vibration

The following is a list of goals and policies related to noise from the relevant jurisdictions' general plans. Appendix E of the draft EIR contains the local noise and land use compatibility standards for each jurisdiction.

City of Cloverdale

The following policies from the City of Cloverdale General Plan (City of Cloverdale 2009) are applicable to implementation of the CAP.

Policy LU 8-1. Future development and use of the City Airport shall be consistent with the policies and programs as established in the Cloverdale Municipal Airport Master Plan.
**Policy NE 1-1.** Acceptable interior noise levels within Cloverdale shall be as shown in Exhibit 4.2 [in the general plan]. All new developments shall be constructed to meet the interior noise levels shown in Exhibit 4.2 [in the general plan] after a review of existing and potential future noise generation by allowable land uses and transportation corridors.

**Policy NE 1-2.** Acceptable exterior noise levels are shown in Exhibit 4.1 [in the general plan] and shall be met by new development, except school playgrounds during daytime use. Where noise mitigation measures are required to satisfy the noise level standards of this element, emphasis shall be placed on use of setbacks and site design to the extent feasible prior to consideration of noise barriers. Where structures such as sound walls are proposed for noise attenuation, they will be evaluated in the context of community appearance goals. Interior noise levels will still be required to meet Policy NE 1-1 even if a lower standard is allowed for exterior noise levels based on this policy for appearance of sound walls.

**Policy NE 1-3.** Noise from stationary sources such as music, machinery and pumps, air conditioners, shall be contained on the generating site and shall not exceed the standards of Exhibit 4.1 [in the general plan] for the generating and receiving site at the property line.

**Policy NE 1-4.** Mitigate construction noise in project review, environmental review process, and construction inspection process.

**Policy NE 1-5.** Mitigate potential transportation noise, including high traffic streets and truck routes, through proper design of street circulation, coordination of routing, and other traffic control measures.

**Policy PS 7-6.** Discourage residential, noise-sensitive developments or significant expansions thereto located near the airstrip or under an overfly route. The area of concern with future development lies within "referral area" delineated by the County Airport Land Use Commission. Until future annexation, the City will work with the County in unincorporated areas to ensure that developments are required to dedicate airport easements, deed restrictions or file "buyer beware" notifications to ensure that prospective buyers are aware of the airport's influence.

**City of Cotati**

The following policies from the *Cotati General Plan Update* (City of Cotati 2015) are applicable to implementation of the CAP.

**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 [in the general plan] to ensure acceptable noise levels at existing and future uses.

**Policy N 1.3.** Require development to mitigate excessive noise through best practices, including building location and orientation, building design features, placement of noise-generating equipment, placement of noise-tolerant features between noise sources and sensitive receptors, and use of noise-minimizing materials such as rubberized asphalt.

**Policy N 1.4.** Require mixed-use projects to minimize noise exposure within the 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 onsite.
Policy N 1.5. Control non-transportation related noise from site-specific noise sources.


Policy N 1.7. The following criteria shall be used to determine the significance, for projects required by the California Environmental Quality Act to analyze noise impacts, of noise impacts for development, transportation, and other projects that increase noise:

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 Noise Element, or the project will result in an increase in ambient noise levels by more than 3 dB.

Transportation Noise Sources

- Where existing traffic noise levels are less than 60 dB L_{dn} at the outdoor activity areas of noise-sensitive uses, a +5 dB L_{dn} increase in roadway noise levels will be considered significant; and
- Where existing traffic noise levels range between 60 and 65 dB L_{dn} at the outdoor activity areas of noise-sensitive uses, a +3 dB L_{dn} increase in roadway noise levels will be considered significant; and
- Where existing traffic noise levels are greater than 65 dB L_{dn} at the outdoor activity areas of noise-sensitive uses, a +1.5 dB L_{dn} increase in roadway noise levels will be considered significant.

Policy N 1.8. Ensure that new development does not expose indoor sleeping areas to indoor noise levels in excess of 45 dBA L_{dn}.

Policy N 1.11. Require acoustical studies and mitigation measures, where necessary, for new developments and transportation improvements that affect noise sensitive uses such as schools, hospitals, libraries, group care facilities, convalescent homes, and residential areas.

Policy N 1.12. Require construction activities to comply with standard “best practices.”

City of Healdsburg

The following policies and implementation measures from the Healdsburg 2030 General Plan (City of Healdsburg 2009) are applicable to implementation of the CAP.

Policy S-G-1. New development shall not be approved unless it is generally consistent with the Land Use Compatibility for Community Noise Environments guidelines contained in General Plan Figure 10 and it is demonstrated that the new development will not violate the City’s ordinance regulating excessive noise.

Policy S-G-2. The City will require the inclusion of design techniques in new construction that minimize noise impacts, including building location and orientation, building design features, and placement of noise-tolerant components (i.e., parking, utility areas, and maintenance facilities) between noise sources and the sensitive receptor areas where necessary to meet the Land Use Compatibility for Community Noise Environments guidelines contained in General Plan Figure 10.
**Implementation Measure S-16.** Require a noise study, including field noise measurements, for any proposed project that would place a potentially-intrusive noise source near an existing noise-sensitive use or place a noise-sensitive land use near an existing or potentially-intrusive noise source such as a freeway, arterial street or railroad, using the projected future noise contours in Figure 11 [in the general plan] as a guide.

**Implementation Measure S-25.** Where construction occurs that would result in a potentially significant impact on noise-sensitive uses, require use of noise-reducing measures that may include the following:

1. Equip internal combustion engine-driven equipment with intake and exhaust mufflers that are in good condition and are appropriate for the equipment.
2. Locate stationary noise-generating equipment as far as possible from sensitive receptors in the vicinity.
3. Utilize "quiet" air compressors and other stationary noise sources where technology exists.
4. Erect temporary noise control blanket barriers in a manner to shield noise sensitive uses.
5. Control noise levels from workers’ amplified music so that sounds are not audible sensitive receptors in the vicinity.
6. Designate a “disturbance coordinator” responsible for responding to complaints about project construction noise and taking reasonable measures to correct the problem. Conspicuously post a telephone number for the disturbance coordinator at the construction site and include it in any notice sent to neighbors regarding the construction schedule.

**City of Petaluma**

The following policies from the *City of Petaluma: General Plan 2025* (City of Petaluma 2008) are applicable to implementation of the CAP.

**Policy 10-P-3.** Protect public health and welfare by eliminating or minimizing the effects of existing noise problems, and by minimizing the increase of noise levels in the future.

**Policy 10-P-3.E.** As part of development review, use Figure 10-2: Land Use Compatibility Standards [in the general plan] to determine acceptable uses and installation requirements in noise-impacted areas.

**City of Rohnert Park**

The following goals and policies from the *City of Rohnert Park General Plan* (City of Rohnert Park 2000) are applicable to implementation of the CAP.

**Goal NS-A.** Protect public health and welfare by eliminating or minimizing excessive noise levels.

**Goal NS-B.** Minimize the exposure of noise-sensitive uses—including residences, schools, churches, hospitals, and other public uses—to excessive noise levels.

**Policy PF-1.** During project review and approval, use Figure 8.3-1 [in the general plan] to determine acceptable uses and analysis and insulation requirements in noise-impacted areas.
Policy PF-2. For all residential uses, establish 45 dB $L_{dn}$ as the standard for interior noise levels and 60 dB $L_{dn}$ as the standard for exterior noise levels. Require appropriate siting of residential uses and/or mitigation measures to meet the standards.

Policy PF-4. Continue to require control of noise or mitigation measures for any noise-emitting construction equipment or activity.

Policy PF-6. Require buffers or site planning techniques for all new development within 65 dB $L_{dn}$ noise contours. However, avoid visible sound walls except along US 101 and along the Northwestern Pacific (NP) Railroad right-of-way.

Policy PF-7. Require new development within existing or projected 65 dB $L_{dn}$ noise contours to undergo a technical acoustical analysis, which shall serve as the basis for designing mitigation measures. Require the technical analysis to be conducted by a professional acoustical engineer.

City of Sebastopol

The following policies from the City of Sebastopol General Plan (City of Sebastopol 1994) are applicable to implementation of the CAP.

Policy Safety-P.40. Maintain Noise and Land Use Compatibility Standards: Encourage the maintenance of the noise and land use compatibility standards indicated in Table 3 [in the general plan].

Policy Safety-P.42. Noise Standards Applied to Remodel Projects: Noise standards shall be applied to residential remodel projects, where the remodeling is substantial.

Policy Safety-P.43. Protect existing noise environment in residential areas.

City of Sonoma

The following policies from the City of Sonoma 2020 General Plan (City of Sonoma 2006) are applicable to implementation of the CAP.

Policy PS-1.1. Apply the following standards for maximum $L_{dn}$ levels to citywide development:

- 45 $L_{dn}$: For indoor environments in all residential units.
- 60 $L_{dn}$: For outdoor environments around all residential developments and outdoor public facilities (e.g., parks).
- 65 $L_{dn}$: For outdoor environments around commercial and public buildings (libraries and churches).
- 70 $L_{dn}$: For outdoor environments around industrial buildings.

Policy PS-1.3. Require adequate mitigation of potential noise from all proposed development.

Policy PS-1.4. Evaluate proposed development using the Noise Assessment Guide and require an acoustical study when it is not certain that a proposed project can adequately mitigate potential noise impacts.

Policy PS-1.5. Encourage all development to minimize noise intrusions through project design.
Town of Windsor

The following policies from the *Town of Windsor General Plan − 2015* (Town of Windsor 1996) are applicable to implementation of the CAP.

**Policy PHS-D.1.1.** New development should be required to meet acceptable exterior noise level standards as established in the noise and land use compatibility guidelines contained in Figure 7-4 [in the general plan]. For residential areas, these exterior noise guidelines apply to backyards; exceptions may be allowed for front yards where overriding design concerns are identified.

**Policy PHS-D.1.2.** In addition to the above standards, the Town should encourage new development to maintain the ambient sound environment as much as possible. New transportation-related noise sources that cause the ambient sound levels to rise by more than 5 dB should be required to incorporate conditions or design modifications to reduce the potential increase in the noise environment.

**Policy PHS-D.1.3.** The Town should require new residential projects to provide for an interior CNEL of 45 dB or less due to exterior noise sources. To accomplish this, all residential and other noise sensitive land uses within the 60 dB contours as defined in Table 7-2 [in the general plan] should be reviewed to ensure that adequate noise attenuation has been incorporated into the design of the project, or that other measures are proposed to protect future “sensitive receptors.”

**Policy PHS-D.1.4.** The Town should not permit residential development within the 60 dB contour of the Sonoma County Airport.

**Policy PHS-D.1.5.** The Town should encourage new development to identify alternatives to the use of sound walls to attenuate noise impacts. Other techniques that would be viewed more favorably by the Town include modifications to site planning such as incorporating setbacks, revisions to the architectural layout such as changing building orientation providing noise attenuation for portions of outdoor yards, and construction modifications. In the event that sound walls are the only practicable alternative, such walls should be designed to be as visually pleasing as possible, incorporating landscaping, variations in color and patterns, and/or changes in texture or building materials.

**Policy PHS-D.2.1.** The Town should regulate non-vehicular noise sources that are not preempted by state and federal regulations, to minimize disturbances to adjoining uses.

**Policy PHS-D.2.4.** The Town should seek to restrict construction in a manner that allows for efficient construction mobilization and activities, while also protecting the noise environment of noise sensitive land uses.

Sonoma County

The following goals and policies from the *Sonoma County General Plan 2020* (Sonoma County 2008) are applicable to implementation of the CAP.

**Policy HE-3n.** Continue to use indoor noise standards for mixed use and urban infill residential development, including but not limited to Single Room Occupancy, Work-Live, Mixed Use Projects, and Caretaker Units in compliance with Noise Element Policy NE-1b.
Goal AT-1. Assure that land use types and densities in areas adjacent to public use airports are compatible with airport activity so existing and future capabilities of the airports can be preserved.

Policy AT-1a. Proposed development within a noise environment in excess of 55 dBA CNEL, shall comply with the Sonoma County Comprehensive Airport Land Use Plan. For all public use airports, the CALUP forecast of future noise exposures shown in Figures AT-4 through AT-9 [in the General Plan] shall be used for this purpose.

Policy AT-1b. No object, tree, or structure shall be permitted to be erected or maintained which, because of height or other factors, would result in an increase in the minimum ceiling or visibility criteria for an existing or proposed instrument approach procedure.

Policy AT-1c. An object, tree or structure which would penetrate a horizontal or conical surface as defined by the ALUC, and would be 35 feet or less in height above the ground (i.e. is within the height limits prescribed for most Sonoma County zoning districts) shall be considered conditionally acceptable even if it exceeds the prescribed height limit. Appropriate marking and lighting may be conditions for acceptability. Policy AT-1i. Prior to initiation of commuter service to Petaluma Airport, a detailed noise study shall be conducted.

Objective AT-2.1. The height and type of structures adjacent to airports should be restricted or marked so they will not constitute hazards to air navigation as per FAR Part 77 and FAA Order FAA Order 8260.3B – United States Standard for Terminal Instrument Procedures (TERPS).

Policy AT-2a. Comply with ALUC policies regarding height, location, marking and lighting of structures, unless it is determined that an override by appropriate government body is appropriate.

Goal NE-1. Protect people from the adverse effects of exposure to excessive noise and to achieve an environment in which people and land uses may function without impairment from noise.

Policy NE-1b. Avoid noise sensitive land use development in noise-affected areas unless effective measures are included to reduce noise levels. For noise due to traffic on public roadways, railroads, and airports, reduce exterior noise to 60 dB L_{dn} or less in outdoor activity areas and interior noise levels to 45 dB L_{dn} or less with windows and doors closed. Where it is not possible to meet this 60 dB L_{dn} standard using a practical application of the best available noise reduction technology, a maximum level of up to 65 dB L_{dn} may be allowed but interior Occupancy, Work-Live, Mixed Use Projects, and Caretaker Units, exterior noise levels above 65 dB L_{dn} or the Table NE-2 standards may be considered if the interior standards of 45 dB L_{dn} can be met. For schools, libraries, offices, and other similar uses, the interior noise standard shall be 45 dB L_{eq} in the worst-case hour when the building is in use.

Policy NE-1c. Control non-transportation related noise from new projects. The total noise level resulting from new sources shall not exceed the standards in Table NE-2 [in the general plan] as measured at the exterior property line of any adjacent noise sensitive land use. Limit exceptions to the following:

1. If the ambient noise level exceeds the standard in Table NE-2, adjust the standard to equal the ambient level, up to a maximum of 5 dBA above the standard, provided that no measurable increase (i.e. +/- 1.5 dBA) shall be allowed

2. Reduce the applicable standards in Table NE-2 by 5 dBA for simple tone noises, noises consisting primarily of speech or music, or for recurring impulsive noises, such as pile drivers and dog barking at kennels
3. Reduce the applicable standards in Table NE-2 by 5 decibels if the proposed use exceeds the ambient level by 10 or more decibels.

4. For short term noise sources which are permitted to operate no more than 6 days per year, such as concerts or race events, the allowable noise exposures shown in Table NE-2 may be increased by 5 dB. These events shall be subject to a noise management plan including provisions for maximum noise level limits, noise monitoring, complaint response and allowable hours of operation. The plan shall address potential cumulative noise impacts from all events in the area.

5. Noise levels may be measured at the location of the outdoor activity area of the noise sensitive land use, instead of the exterior property line of the adjacent noise sensitive land use where:
   a. The property on which the noise sensitive use is located has already been substantially developed pursuant to its existing zoning, and
   b. There is available open land on those noise sensitive lands for noise attenuation.

This exception may not be used on vacant properties that are zoned to allow noise sensitive uses.

**Policy NE-1d.** Consider requiring an acoustical analysis prior to approval of any discretionary project involving a potentially significant new noise source or a noise sensitive land use in a noise-affected area. The analysis shall:

1. Be the responsibility of the applicant,
2. Be prepared by a qualified acoustical consultant,
3. Include noise measurements adequate to describe local conditions,
4. Include estimated noise levels in terms of $L_{dn}$ and/or the standards of Table NE-2 for existing and projected future (20 years hence) conditions, based on accepted engineering data and practices, with a comparison made to the adopted policies of the Noise Element. Where low frequency noise (ex: blasting) would be generated, include assessment of noise levels and vibration using the most appropriate measuring technique to adequately characterize the impact,
5. Recommend measures to achieve compliance with this Element. Where the noise source consists of intermittent single events, address the effects of maximum noise levels on sleep disturbance,
6. Include estimates of noise exposure after these measures have been implemented, and
7. Be reviewed by the Permit and Resource Management Department and found to be in compliance with PRMD guidelines for the preparation of acoustical analyses.

**Policy NE-1e.** Continue to follow building permit procedures to ensure that requirements based upon the acoustical analysis are implemented.

**Policy NE-1f.** Require development projects that do not include or affect residential uses or other noise sensitive uses to include noise mitigation measures where necessary to maintain noise levels compatible with activities planned for the project site and vicinity.

**Policy NE-1i.** County equipment and vehicles shall comply with adopted noise level performance standards consistent with the best available noise reduction technology.
**Goal NE-2.** Confine the noise impacts from transportation facilities to the smallest feasible land areas and to assure that any development therein be compatible with the level of noise exposure.

**Policy NE-2b.** When not in conflict with Scenic Resource policies, encourage installation of sound barriers, noise reducing pavement types, or other noise reducing solutions on roadways in non industrial urban areas where an exterior noise level of 65 dB $L_{dn}$ or more is attained and residences or other noise sensitive uses exist. Encourage installation of sound barriers or other sound mitigating structures adjacent to roadways in other areas where significant noise sensitive land uses exist.

**Policy NE-2e.** Where practical, select route alignments for new roadways and major improvements to existing highways to avoid or minimize noise impacts on noise sensitive land uses.

**Policy NE-2f.** Where practical, include noise control measures (based on vehicular volume and speed) in County funded construction of new roadways and additional through travel lanes to maintain noise compatibility with noise sensitive land uses. The goal of these measures shall be to prevent the road project from causing the total exterior noise level to increase above 60 dBA $L_{dn}$, as estimated adjacent to dwellings and other noise sensitive primary uses. Where full implementation of such measures is not possible, desirable or appropriate, the reasons for that determination shall be stated clearly by County decision makers.

### C.12 Public Services, Utilities, and Energy

The following is a list of key public services, utilities, and energy goals and policies from the relevant jurisdictions' general plans.

**City of Cloverdale**

The following goals and policies from the *City of Cloverdale General Plan* (City of Cloverdale 2009) are applicable to the implementation of the CAP.

**Goal LU 6.** New development will be coordinated with the provision of infrastructure and public services.

**Policy LU 6-1.** Ensure adequate water and wastewater capacities or improvements are in place prior to granting approval for new development.

**Policy LU 6-3.** Discourage development beyond areas with planned expansions of sewer, water, and road systems. Develop a growth phasing plan that addresses location and timing of development and infrastructure.

**Policy LU 6-4.** Require new development to fund processing costs and necessary infrastructure and services required by such new development.

**Policy LU 9-1.** Maintain waste management contracts and participation in countywide waste disposal facilities to accommodate household waste and to meet or exceed state and countywide recycling goals.

**Goal CDO 8.** Conserve energy and minimize resource depletion by encouraging alternative energy, solar power, and green building techniques.
**Policy CDO 8-2.** Use, support, and encourage energy and resource efficient methods in private construction.

**Policy PS 5-6.** Ensure that fire/police facilities and equipment are adequate for proposed development before granting approval.

### City of Cotati

The following policies from the *Cotati General Plan Update* (City of Cotati 2015) are applicable to the implementation of the CAP.

**Policy CSF 1.1.** Require all development projects to demonstrate, to the satisfaction of the City Engineer, that the City's public services and utilities can accommodate the increased demand for services associated with the project.

**Policy CSF 1.2.** Require new development to offset or mitigate impacts to public 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 Engineer.

**Policy CSF 1.3.** Limit approvals of new development to areas where adequate infrastructure and services are available or will be provided by the development.

**Policy CSF 1.4.** Maintain development fees at a sufficient level to finance infrastructure costs.

**Policy CSF 1.5.** As new areas are considered for annexation and development, priority for public services and facilities shall be given to existing development within the annexation area not currently serviced by City services.

**Policy CSF 1.6.** Require development, infrastructure, and long-term planning projects to be consistent with all applicable City plans and programs related to public services and facilities, including but not limited to the Water Master Plan, the Sanitary Sewer Master Plan and the Capital Improvement Plan. New projects shall assist with the implementation of these plans through the provision of fair-share payments, construction of improvements, or other means identified as appropriate by the City Engineer.

**Policy CSF 2.2.** Prior to the approval of development, infrastructure, Specific Plans, or other projects that would result in increased demand for public water production, conveyance, treatment or storage, project proponents 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 impact on water users and the environment will be addressed.

**Policy CSF 2.10.** Continue efforts to reduce water use and increase water conservation.

**Policy CSF 2.12.** Use recycled water for landscaping irrigation at City parks and City facilities where economically feasible.

**Policy CSF 2.14.** Continue to implement the City's water waste and water conservation requirements established under Chapter 13.30 of the Municipal Code.

**Policy CSF 2.22.** Prior to the approval of development that would result in 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 2.24.** 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, as determined by the City Engineer.

**Policy CSF 2.27.** 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 2.30.** Design and maintain City streets in such a way so as to maintain acceptable emergency vehicle response times.

**Policy CSF 2.32.** Ensure that new development is served with adequate water volumes and water pressure for fire protection.

**Policy CSF 2.33.** Ensure that the Police Department has adequate staff and equipment to accommodate existing and planned population growth in Cotati.

**Policy CSF 3.26.** Continue to promote coordination between land use planning and police and fire protection services through consultation and coordination with the Cotati Police Department and the Rancho Adobe Fire Protection District during the review of new development proposals.

**Policy CSF 3.1.** Provide adequate waste disposal, recycling and reuse services, including programs that improve public access to solid waste collection and recycling facilities.

**Policy CSF 3.2.** Reduce solid waste and increase reduction, reuse, and/or recycling, in compliance with the Countywide Integrated Waste Management Plan.

**Policy CSF 3.5.** City operations shall use recycled materials whenever feasible.

**Policy CSF 3.6.** Support programs that re-use recycled materials and solid waste, such as the use of biomass waste for energy production.

**Policy CSF 3.8.** Require new or significantly remodeled residential and all non-residential development to incorporate sufficient, attractive, and convenient interior and exterior storage areas for recyclables and green waste.

**Policy CON 1.12.** Require discretionary projects, as well as new flood control and stormwater conveyance projects, to integrate 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 CON 2.8.** Support the development and implementation of a GHG reduction plan, or Climate Action Plan, that addresses and reduces GHG emissions associated with community operations, including but not limited to: mobile sources (vehicle traffic), energy consumption, and solid waste.

**Policy CON 3.1.** Continue to require all new public and privately constructed buildings to meet and comply with CALGreen Tier 1 standards.
Policy CON 3.2. Support innovative and green building best management practices, including LEED certification, for all new development, and encourage project applicants to exceed CALGreen Tier 1 standards, if feasible.

Policy CON 3.3. Promote the use of alternative energy sources in new development.

Policy CON 3.4. Incorporate innovative green building techniques and best management practices in the site design, construction, and renovation of all public projects.

Policy CON 3.6. Ensure that street layout and design minimizes the use of pavement to the greatest extent feasible in order to reduce cooling energy needs.

Policy SA 1.5. Ensure that all areas of the City are accessible to emergency response providers.

Policy SA 3.2. Require all development projects to demonstrate how stormwater runoff will be detained or retained on-site and/or conveyed to the nearest drainage facility as part of the development review process. Project applicants shall demonstrate that project implementation would comply with all applicable provisions of the City's MS4 permit, which defines the design storm event for water detention and retention features.

City of Healdsburg

The following policies and implementation measures from the Healdsburg 2030 General Plan (City of Healdsburg 2009) are applicable to the implementation of the CAP.

Policy H-K-1. Promote energy efficiency and conservation measures in existing housing.

Policy H-K-2. Require energy-efficiency performance in new housing that meets or exceeds minimum state standards.


Policy H-K-4. Reduce residential cooling needs associated with the urban heat island effect.

Policy PS-A-5. The City will promote water conservation in both city operations and private development.

Policy PS-A-6. The City will continue to assess a water development fee on all new commercial, industrial, and residential development sufficient to fund systemwide capacity improvements.

Policy PS-A-9. The City will pursue agricultural and urban reuse of recycled water in accordance with state law to minimize the use of potable water in serving existing and planned development.

Policy PS-B-5. The City will continue to assess a sewer development fee on all new commercial, industrial, and residential development sufficient to fund systemwide capacity improvements.

Policy PS-C-3. The City will promote energy conservation in its operations and private development, including programs to reduce dependency on fossil fuels.

Policy PS-D-3. The City will continue to assess a drainage development fee on all new commercial, industrial, and residential development sufficient to fund systemwide capacity improvements.

Policy PS-E-2. The City will offset the need for new Fire Department staff and equipment and improve fire safety by continuing to require built-in fire protection equipment in new development.
Policy PS-E-3. The City Fire Department will ensure that the design of new development facilitates access by firefighting apparatus.

Policy PS-F-2. The City will coordinate residential development information with the Healdsburg Unified School District and assist the District by not issuing building permits until the school district has collected its impact fee as provided for by state law and district resolution.

Policy PS-J-1. Minimize the amount of solid waste deposited in landfills and maximize the amount of waste that is recycled.

Implementation Measure PS-34. Require new or remodeled multi-family residential and non-residential development to incorporate convenient collection areas for recyclables.

Implementation Measure PS-36. Continue to require the City's waste and recycling collection franchisee to promote source reduction and recycling through education and outreach programs.

Implementation Measure PS-37. Purchase goods containing recycled materials for use in City operations, to the extent possible.

City of Petaluma

The following policies from the City of Petaluma: General Plan 2025 (City of Petaluma 2008) are applicable to the implementation of the CAP.

Policy 1-P-48. Ensure all new development provides necessary public facilities to support the development.

Policy 2-P-122. Require development projects to prepare a Construction Phase Recycling Plan that would address the reuse and recycling of major waste materials (soil, vegetation, concrete, lumber, metal scraps, cardboard packaging, etc.) generated by any demolition activities and construction of the project.

Policy 4-P-18. Develop and adopt local energy standards that would result in less energy consumption than standards set by the California Energy Commission's (CEC) Title 24 or updates thereto.

Policy 4-P-19. Encourage use and development of renewable or nontraditional sources of energy.

Policy 4-P-21. Reduce solid waste and increase reduction, reuse and/or recycling, in compliance with the Countywide Integrated Waste Management Plan (CoIWMP).

Policy 8-P-5. Develop alternative sources of water to supplement imported supply.

Policy 8-P-9. Provide tertiary recycled water for irrigation of parks, playfields, schools, golf courses and other landscape areas to reduce potable water demand.

Policy 8-P-10. The City may require the use of recycled water through the City development review process.

Policy 8-P-13. Work to convert existing potable water customers identified under the City’s Recycled Water Master Plan to tertiary recycled water as infrastructure and water supply becomes available.
Policy 8-P-16. Comply with the current Statewide General Waste Discharge Requirements concerning the operation and maintenance of the City's sanitary sewer collection system.

Policy 8-P-18. Reduce potable water demand through conservation measures.

City of Rohnert Park

The following goals and policies from the City of Rohnert Park General Plan (City of Rohnert Park 2000) are applicable to the implementation of the CAP.

Policy PF-9. Require developers to install or pay for new sewer lines and other sewer improvements needed to accommodate new development.

Goal PF-G. Continue to encourage water conservation through use of reclaimed water and reduction of water consumption and discharge, for both existing and new development.

Policy PF-14. Require developers to dedicate new well sites in locations identified by the City and to pay for the cost of new wells, water lines, and other water supply infrastructure needed to accommodate new development.


Policy PF-16. Require non-residential uses to implement water conservation practices as a condition of development.

Policy PF-17. Develop a comprehensive wastewater flow reduction program for existing and new nonresidential uses.

Policy PF-19. In cooperation with the business community, develop best management practices for water conservation for Rohnert Park business, and then make the information available to the public.

Policy PF-21. Continue to use reclaimed wastewater to irrigate parks, recreational facilities, and landscaping.

Policy PF-22. Adopt and implement a comprehensive water conservation program to encourage efficient water use by City employees and other users of City facilities.

Policy PF-23. Commit to implement BMPs of water conservation.

Goal HS-D. Reduce the generation of solid waste and recycle those materials that are used, to slow the filling of local and regional landfills, in accord with the California Integrated Waste Management Act of 1989.

Policy HS-12. Continue to work toward reducing solid waste and increasing recycling, in compliance with the Sonoma County Integrated Waste Management Plan.

Policy HS-13. As part of development review and environmental analysis, ensure that new multifamily residential and all non-residential development comply with the City's Source Reduction and Recycling Element (SRRE) and Household Hazardous Waste Element (HHWE), as well as the Sonoma CoIWMP.
Policy HS-15. Require new multifamily residential and all non-residential development to incorporate attractive and convenient interior and exterior storage areas for recyclables into new or remodeled buildings, to make recycling activities more convenient for those who use the buildings.

Policy HS-24. Require adequate access for emergency vehicles, including adequate street width and vertical clearance, on new streets.

Goal HO-H. Encourage energy conservation in housing.

Policy HO-24. Promote the use of energy conservation features in the design of residential development.

Policy HO-25. Promote energy conservation in the City's older homes.

City of Sebastopol

The following policies from the City of Sebastopol General Plan (City of Sebastopol 1994) are applicable to the implementation of the CAP.

Policy Land Use-P.3. Require new developments to pay their "fair share" of capital improvements for public services and facilities to maintain adequate levels of Service in the city.

Policy Conservation-P.15. Energy Conservation Measures in Buildings: Reduce energy consumption by requiring structures to meet the energy conservation requirements stipulated in the Uniform Building Code and State Title 24 regulations.


Policy Community-P.18. Energy Efficiency: Encourage lighting design that is in conformance with energy saving guidelines.

Policy Safety-P.27. Demand for Police Services: Review development proposals for their demand for police services and implement mitigating measures to maintain the current high standard of police services.

City of Sonoma

The following policies from the City of Sonoma 2020 General Plan (City of Sonoma 2006) are applicable to the implementation of the CAP.

Policy ER-3.1. Increase the conservation-effectiveness and cost-effectiveness of the solid waste source reduction program through expanded recycling and composting.
Policy ER-3.2. Encourage construction, building maintenance, landscaping, and transportation practices that promote energy and water conservation and reduce greenhouse gas (GHG) emissions.

Policy PS-1.3. Ensure that all development projects provide adequate fire protection.

**Town of Windsor**

The following policies from the *Town of Windsor General Plan – 2015* (Town of Windsor 1996) are applicable to the implementation of the CAP.

Policy CD-A.10.3. The Town should encourage building design and architecture that respond to Windsor’s climate, conserve energy, and emulate the region’s building traditions.

Policy CD-B.4.1. Sewer, water, and other Town services shall not be extended to new development outside the Urban Growth Boundary nor shall service to existing development outside the Urban Growth Boundary be expanded unless the Town Council makes each of the following findings:

A) The land use to which the service would be extended or expanded is consistent with all applicable policies of the Town’s General Plan in effect as of October 2, 1997; and

B) The land use to which the sewer service would be extended or expanded is compatible with open space uses as defined in the General Plan in effect as of October 2, 1997, does not interfere with accepted agricultural practices, and does not adversely affect the stability of land use patterns in the area; and

C) The property to which the service would be extended or expanded is immediately adjacent to land already served by the service(s) to be extended; and

D) Specific Circumstances, unique to the property to which the service would be extended or expanded would otherwise deprive the property of privileges enjoyed by other comparable property outside the Urban Growth Boundary and in the vicinity of the property to be served.

Policy CD-E.2.1. The Town should monitor the rate of development against the availability of community services and utilities, especially in the areas of emergency response, schools, water supply, and wastewater services. Prior to approval of development applications, the Town should determine that there is adequate capacity to accommodate the demand generated by the proposed development. If such capacity is not available, the project should be reduced in scale or phased, or increases in capacity should be programmed and funded.

Policy CD-E.2.2. Costs of improvements which are necessary to serve new developments, such as extension of water and sewer lines, pump facilities, storage facilities, and upgrades to existing utility lines, should be financed by the developer/property owner. Facilities shall be constructed to Town standards and dedicated to the Town. This policy does not preclude the use of assessment districts or similar mechanisms to finance improvements. However, existing residents should not have to pay for improvements necessitated only by new development.

Policy CD-E.2.3. Service and utility plans by the school districts, the fire districts, the County Water Agency, and the Town should be prepared and/or modified to be consistent with the location of development, the intensity of development, and the identification of priority development within the Urban Growth Boundary, as recommended by this General Plan.
Policy CD-E.3.7. A contribution of land and/or fees in lieu of dedication for park purposes shall be required of all new residential subdivisions in Windsor. The total contribution shall be equivalent to the provision of 5 acres of land for each 1,000 persons projected to live in the proposed development. Land area for park dedication shall be based on net acreage excluding any streets. Any park or recreation facility constructed as part of a private development, and intended solely for use by residents of the development, is not considered a public park, and the property owner/developer will still be required to contribute in-lieu park fees or land.

Policy CD-E.3.28. The Town should require new development outside the desired five-minute response time to provide onsite fire suppression measures and/or management of surrounding vegetation to provide minimum clearance between the structure and the vegetation. These measures must satisfy the fire districts prior to Town approval of the development application.

Policy CD-E.4.1. The availability of a long-term, reliable potable water supply and adequate wastewater treatment capacity shall be primary determinants in the rate of growth for Windsor. Construction of water supply and wastewater treatment capacity shall be phased to meet the needs of the community. The Town shall assure that there is adequate supply or that such supply would become available with occupation of the proposed structures prior to approving a project.

Policy CD-E.4.4. The Town shall continue to require the use of water-conserving plumbing fixtures, such as low-flow toilets and showerheads, in all new development permitted in the Town.

Policy CD-E.4.5. The Town shall encourage new development to use drought-tolerant vegetation in future landscaping to reduce the need for irrigation.

Policy CD-E.4.7. The Town of Windsor supports the beneficial reuse of recycled water and the joint use of facilities including: reservoir, distribution mains and pumping facilities for the use of recycled water when such joint use benefits the environment.

Policy CD-E.4.11. The Town shall encourage the use of natural or nonstructural stormwater drainage systems, to preserve and enhance the natural features of a site and to assist with the replenishment of the area’s groundwater basin.

Policy CD-E.4.12. The Town shall continue to improve its solid waste management system through emphasis on waste prevention (source reduction), reuse, recycling, composting, and disposal. Opportunities to accomplish this policy shall consider:

1. providing information and assistance to businesses and the public;
2. providing convenient drop-off or curbside collection of recyclables;
3. providing convenient drop-off or curbside collection of yard waste;
4. requiring all Town departments to develop materials acquisition and handling practices that reduce the amount of waste generated in daily operations; and
5. requiring all projects, except single family dwellings, to provide sufficient and accessible space for the storage and collection of recyclable materials separate from, and in addition to, space for refuse storage and collection.

Policy ER-C.1.2. The Town should encourage water conservation through a variety of techniques appropriate for new and existing development including:

1. installing low-flush toilets,
2. installing low-flow showers,
3. repairing leaky water fixtures,
4. promoting drought resistant, low maintenance vegetation, and
5. using tertiary treated wastewater for irrigation purposes on parks and public landscaped areas.

**Policy ER-G.2.6.** The Town should promote energy conservation/energy efficiency improvement programs which have the added benefit of reducing energy demand from power-generating facilities which contribute to background levels of regional air emissions.

**Policy ER-H.1.3.** Energy conservation standards for new residential construction, as contained in Title 24 of the California Code of Regulations, shall be periodically reviewed to identify opportunities for adopting standards which more closely respond to local conditions, especially in the area of passive design to reduce cooling loads.

**Policy ER-H.1.4.** New residential development including subdivisions should be required to consider opportunities for passive heating and cooling.

**Policy ER-H.1.7.** Energy conservation measures should be encouraged in new commercial and industrial complexes, and opportunities to increase energy efficiency and the use of renewable resources should be promoted.

**Sonoma County**

The following goals, objectives, and policies from the *Sonoma County General Plan 2020* (Sonoma County 2008) are applicable to the implementation of the CAP.

**Policy LU-3c.** Avoid urban sprawl by limiting extension of sewer or water services outside of designated Urban Service Areas pursuant to the policies of the Public Facilities and Services Element.

**Goal LU-4.** Maintain adequate public services in both rural and Urban Service Areas to accommodate projected growth. Authorize additional development only when it is clear that a funding plan or mechanism is in place to provide needed services in a timely manner.

**Objective LU-4.1.** Assure that development occurs only where physical public services and infrastructure, including school and park facilities, public safety, access and response times, water and wastewater management systems, drainage, and roads are planned to be available in time to serve the projected development.

**Policy LU-4a.** If necessary, use zoning to assure that development shall occur only if public services are adequate or improvements are made to maintain an acceptable level of service. One such method could involve the use of "dual zoning" which would specify zoning with services and zoning without services.

**Policy LU-4f.** Assure that new development contributes its fair share toward provision of the public services and infrastructure needed for projected growth.

**Policy LU-11b.** Encourage all types of development and land uses to use alternative renewable energy sources and meaningful energy conservation measures.
Policy LU-11h. Encourage development and land uses that pursue reduction and re-use of by-products and waste, especially approaches that also employ waste as a resource, such as eco-industrial development.

Objective LU-8.3. Increase the role of water conservation and re-use in meeting the water supply needs of both urban and rural users.

Policy LU-8f. Increase the role of water conservation, storm water retention, and aquifer recharge for water supply purposes.

Policy LU-11d. Encourage methods of landscape design, landscape and park maintenance, and agriculture that reduce or eliminate the use of pesticides, herbicides, and synthetic fertilizers; and encourage the use of compost and conservation of water.

Policy LU-11g. Encourage development and land uses that reduce the use of water. Where appropriate, use recycled water on site, and employ innovative wastewater treatment that minimizes or eliminates the use of harmful chemicals and/or toxics.

Policy LU-11h. Encourage development and land uses that pursue reduction and re-use of by-products and waste, especially approaches that also employ waste as a resource, such as eco-industrial development.

Objective HE-6.1. Promote conservation of energy, water, and other natural resources as a cost-saving measure in existing residential development.

Objective HE-6.2. Promote energy and water conservation and energy efficiency in new residential and mixed-use construction projects.

Objective HE-6.3. Promote solid waste reduction, reuse, and recycling opportunities in residential and mixed-use construction.

Policy HE-6a. Encourage improvements that result in conservation of energy, water, and other natural resources in existing residential development, particularly in renter-occupied units by offering workshops, individual consultations, and financial assistance for weatherization and other conservation measures. Support and expand existing programs administered by the Community Development Commission.

Policy HE-6f. Reduce the generation of solid waste in residential construction, and increase solid waste reuse and recycling.

Goal OSRC-14. Promote energy conservation and contribute to energy demand reduction in the County.

Objective OSRC-14.1. Increase energy conservation and improve energy efficiency in County government operations.

Objective OSRC-14.2. Encourage County residents and businesses to increase energy conservation and improve energy efficiency.

Objective OSRC-14.3. Reduce the generation of solid waste and increase solid waste reuse and recycling.
**Policy OSRC-14a.** Continue to support education programs that promote energy conservation; energy efficiency; and solid waste reduction, reuse, and recycling opportunities for County operations, residents and businesses, and local utilities.

**Policy OSRC-14b.** Continue to provide strategic planning for energy conservation and efficiency in County operations.

**Policy OSRC-14d.** Support project applicants in incorporating cost effective energy efficiency that may exceed State standards

**Policy OSRC-14e.** Develop energy conservation and efficiency design standards for new development.

**Policy OSRC-14f.** Use the latest green building certification standards, such as the Leadership in Energy and Environmental Design (LEED) standards, for new development.

**Goal OSRC-15.** Contribute to the supply of energy in the County primarily by increased reliance on renewable energy sources.

**Objective OSRC-15.1.** Increase the development of renewable energy and distributed energy generation systems and facilities for County operations.

**Objective OSRC-15.2.** Promote the use of renewable energy and distributed energy generation systems and facilities in new development in the County.

**Policy OSRC-15b.** Encourage and promote the development of renewable energy and distributed energy generation systems and facilities for County operations.

**Policy OSRC-15c.** Encourage and promote the use of renewable energy and distributed energy generation systems and facilities that are integral to and contained within existing and new development (e.g., solar thermal installations to provide space and water heating or solar electric installations for small commercial buildings or residences in rural areas, small wind energy systems to provide electricity to agricultural accessory structures, etc.).

**Goal WR-4.** Increase the role of conservation and safe, beneficial reuse in meeting water supply needs of both urban and rural users.

**Objective WR-4.1.** Increase the use of recycled water where it meets all applicable regulatory standards and is the appropriate quality and quantity for the intended use.

**Objective WR-4.2.** Promote and encourage the efficient use of water by all water users.

**Policy WR-4a.** Encourage disposal methods that minimize reliance on discharges into natural waterways. If discharge is proposed, review and comment on projects and environmental documents and request that projects maximize reclamation, conservation and reuse programs to minimize discharges and protect water quality and aquifer recharge areas.

**Policy WR-4b.** Use water effectively and reduce water demand by developing programs to:

1. Increase water conserving design and equipment in new construction, including the use of design and technologies based on green building principles,

2. Educate water users on water conserving landscaping and other conservation measures,

3. Encourage retrofitting with water conserving devices,
4. Design wastewater collection systems to minimize inflow and infiltration, and
5. Reduce impervious surfaces to minimize runoff and increase groundwater recharge.

**Policy WR-4e.** Require water conserving plumbing and water conserving landscaping in all new development projects and require water conserving plumbing in all new dwellings. Promote programs to minimize water loss and waste by public water suppliers and their customers. Require County operated water systems to minimize water loss and waste.

**Policy WR-4f.** Promote programs for retrofitting plumbing, providing cost rebates, identifying leaks, changing landscaping, irrigating efficiently and other methods of reducing water consumption by existing users.

**Policy WR-4g.** Require that development and redevelopment projects, where feasible, retain stormwater for on-site use that offsets the use of other water.

**Policy WR-4i.** Assess water use by County buildings and facilities and reduce water consumption to the maximum extent practicable.

**Policy WR-4j.** Ensure that public wastewater disposal systems are designed to reclaim and reuse recycled water for agriculture, geothermal facilities, landscaping, parks, public facilities, wildlife enhancement and other uses to the extent practicable, provided that the water meets the applicable water quality standards and is supplied in appropriate quantities for the intended uses.

**Policy WR-4k.** Where consistent with water quality regulations, encourage graywater systems, roof catchment of rainwater and other methods of re-using water and minimizing the need to use potable surface water or groundwater.

**Policy PF-1d.** Require as part of discretionary project applications within a water or sewer service area written certification that either existing services are available or needed improvements will be made prior to occupancy.

**Policy PF-2n.** Require prior to discretionary project approval written certification that fire and related services customarily provided to comparable uses are available or will be available prior to occupancy for projects within the service area of the applicable fire agency.

### C.13 Transportation/Traffic

The following is a list of key transportation and traffic goals and policies from the relevant jurisdictions' general plans.

**City of Cloverdale**

The following goals and policies from the *City of Cloverdale General Plan* (City of Cloverdale 2009) are applicable to the implementation of the CAP.

**Goal LU 8.** Maintain the Cloverdale Airport and allow only airport-compatible land uses near the airport.
**Policy LU 8-1.** Future development and use of the City Airport shall be consistent with the policies and programs as established in the Cloverdale Municipal Airport Master Plan.

**Goal CE 1.** Develop and maintain a balanced vehicular and non-vehicular transportation system to meet the mobility needs consistent with General Plan land use goals and policies. Provide a balance of land uses within the General Plan Study Area for housing, jobs, economic development, recreation, and destination commercial uses.

**Policy CE 1-1.** Develop and maintain the Circulation Plan network of freeways/highways, arterials, collectors, and local streets. The proposed streets should be designed to serve the functions they are intended to serve, with adequate capacity and safety.

**Policy CE 1-2.** Plan and reserve in advance of development, the street alignments and building setbacks necessary to handle anticipated future growth and traffic requirements.

**Policy CE 1-3.** Design street systems in residential areas to minimize through traffic, to encourage internal movement by bicycling and walking, to provide safer and quieter neighborhoods, to minimize vehicular conflicts at intersections and to ensure that the impact of recreational traffic on local residents is minimized.

**Policy CE 2-1.** The City shall strive to maintain mid-Level of Service (LOS) D operation during the weekday morning and evening peak periods at intersections of an arterial street with either another arterial or a collector street and intersections of two collector streets. For public safety, signalization warrants shall be evaluated using Caltrans standards, which are typically based on LOS C. For projected future conditions the LOS is to be calculated using the average traffic demand over the highest 60-minute period. For all types of control the Level of Service standard is to be applied to the average intersection delay, and not that for any single movement or approach. Exceptions to meeting this standard include:

- Stop-controlled minor street approaches to either collector or arterial streets;
  - Locations where the City Engineer deems improvement to be technically, financially, or environmentally infeasible;
  - Locations where improvements are needed to meet LOS standards but are not warranted based on volumes;
- Conditions where the improvement would result in significant adverse impacts to other travel modes, including walking, bicycling, or transit; or
- Locations where attainment would cause loss of the unique character of the downtown, identified historic resources or neighborhood character, distinctive tree canopy, or distinctive watercourses.

**Policy CE 2-2.** Create a "country road" appearance for Cloverdale Boulevard, First Street east of the freeway, and Asti Road where possible, including narrow pavement shade trees adjoining travel lanes, parking only where necessary, and protected bicycle and pedestrian ways, including trails instead of sidewalks and on-street bike lanes where possible.

**Goal CE 3.** Promote bicycle use and walking as an alternative to automobile traffic and for community health and enjoyment.

**Policy CE 3-1.** Provide an extensive network of pedestrian and bicycle pathways to support community health and provide safe alternatives to automobile use.
Policy CE 3-2. Provide continuous sidewalks or pedestrian ways along all streets. Maintain sidewalks in good repair. Integrate sidewalks and the pedestrian trails network in the Recreation and Open Space Element.

Goal CE 4. Promote transit service and use to serve Cloverdale land use goals.

Policy CE 4-2. Develop a Plan around the Cloverdale passenger rail station in order to coordinate pedestrian access with the downtown, provide a source of transit riders within a half-mile radius of the station, and establish destination uses to attract transit riders to Cloverdale.

Policy CE 4-3. Support bus service locally, countywide, and beyond County borders.

Policy CE 4-4. Encourage ridesharing to reduce commute trips.

Policy PR 1-5. Pursue pedestrian trails, bicycle trails, and combined pedestrian/bicycle trails with a goal of providing linked and "looped" trail systems in planning permit approvals (see also Land Use Element and Open Space Element) on sites and trails shown in Exhibit 5-1 [in the General Plan].

Policy PS 5-3. Ensure that roadways are adequate in terms of width, radius, and grade to facilitate access by emergency vehicles.

Goal PS 7. Provide appropriate regulations for land use and airport operations to ensure that the safety of airport operations and personnel and the general public and adjacent structures are protected.

Policy PS 7-6. Discourage residential, noise-sensitive developments or significant expansions thereto located near the airstrip or under an overfly route. The area of concern with future development lies within "referral area" delineated by the County Airport Land Use Commission. (See Exhibit 10 [in the General Plan]) Until future annexation, the City will work with the County in unincorporated areas to ensure that developments are required to dedicate airport easements, deed restrictions or file "buyer beware" notifications to ensure that prospective buyers are aware of the airport's influence. The notifications/restrictions shall include the following as appropriate.

Policy PS 7-12. Prohibit objects or structures to be erected in critical areas which, because of height or other factors, would result in an increase in the minimum ceiling or visibility criteria for an existing or proposed instrument approach procedure.

City of Cotati

The following goals policies from the Cotati General Plan Update (City of Cotati 2015) are applicable to the implementation of the CAP.

Policy CI 1.2. Ensure that the City's circulation network is a well-connected system of street, roads, highways, sidewalks, and bicycle/pedestrian paths that effectively accommodates vehicular and non-vehicular traffic in a manner that considers the context of the surrounding land uses and the needs of all roadway users.

Policy CI 1.3. Establish a minimum motor vehicle LOS standard of LOS D at intersections. The following shall be taken into consideration in applying LOS standards:

- Levels of service shall be calculated using the average hourly delay for all vehicles entering the intersection, and assessed for the entire peak hour (60 minutes) rather than the peak 15-minute period (PHF=1.0).
At unsignalized intersections, levels of service shall be determined for both controlled movements and for the overall intersection. Controlled movements operating at LOS E or LOS F are allowable if 1) the intersection is projected to operate at LOS C or better overall, and 2) the projected traffic volume on the controlled movement is 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.

Level of service standards shall not apply to minor intersections comprised of only local streets.

For projects within the City limits that are consistent with the General Plan, a standard of LOS E is considered to be acceptable for intersections within the boundaries of the Downtown Specific Plan.

Intersection queuing shall be evaluated in tandem with LOS. Projected 95th percentile queues at signalized intersections shall not extend through upstream signalized intersections.

Policy CI 1.5. 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 level of service standards.

Policy CI 1.6. 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 at an equal level to the needs of automobile drivers.

Policy CI 1.8. Maintain safe travel conditions for all modes of travel.

Policy CI 1.9. Consider all transportation improvements as opportunities to improve safety, access, and mobility for all roadway users.

Policy CI 1.12. Enhance the safety of pedestrian crossings in the Hub area while ensuring a delightful downtown experience.

Policy CI 1.17. Consider alternatives to traffic signals where appropriate conditions exist to maximize intersection efficiency, maintain traffic flow, reduce accident severity, and enhance pedestrian and bicyclist circulation.

Policy CI 1.18. Intersections shall be designed to provide adequate and safe access for all users including pedestrian, bicyclists, and motorists of all age and abilities.

Policy CI 1.19. Require new development to include effective linkages to the surrounding circulation system for all modes of travel, to the extent feasible.

Policy CI 1.20. Require new development to contribute its proportional share cost of circulation improvements necessary to address cumulative transportation impacts on roadways throughout the City as well as the bicycle and pedestrian network.

Policy CI 1.21. Require development projects to provide land dedications or pay fees in order to provide bike paths, sidewalks, and walkways.

Policy CI 2.1. Establish and maintain a system of pedestrian facilities and crossing enhancements that are consistent with the City's Bicycle and Pedestrian Master Plan. Require development projects to construct sidewalks and walkways on and off-site in order to maintain consistency with the City's
Bicycle and Pedestrian Master Plan, and as dictated by the location of transit stops and common pedestrian destinations.

**Policy CI 2.10.** Continue to provide secure bicycle racks in the Hub, future and existing commercial areas, park-and-ride transit facilities, schools, and multiple unit residential developments.

**Policy CI 2.11.** Establish and maintain bicycle facilities that are consistent with the network depicted in the City’s Bicycle and Pedestrian Master Plan.

**Policy CI 2.12.** Public road construction projects shall incorporate facilities identified in the Bicycle Master Plan to the greatest extent feasible.

**Policy CI 2.17.** Safe and continuous pedestrian, vehicular, and bicycle access shall be provided at all transit park-and-ride facilities.

**Policy CI 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 Cotati that currently have no public transit.

**Policy CI 2.19.** Establish the SMART multi-modal transit station on East Cotati Avenue and Santero Way to provide a link between commuter rail, bus, pedestrian, and bicycle travel and to provide retail and services to serve SMART transit users.

**Policy CI 2.20.** Ensure that effective transit linkages are in place between the SMART commuter rail station and the City’s primary activity and employment centers.

**Policy CI 2.21.** Coordinate with SMART in seeking opportunities to fund and construct improvement that improve multimodal access to the Cotati rail station.

**Goal CI 3.** Reduce vehicle miles traveled (VMT) in order to reduce congestion and help achieve regional efforts to reduce GHG emissions.

**Policy CI 3.2.** Work with SCTA and/or RCPA to monitor the need for and locations of additional park-and-ride lots in Cotati in order to increase the number of trips made by transit and carpooling.

**Policy CSF 2.30.** Design and maintain City streets in such a way so as to maintain acceptable emergency vehicle response times.

**Policy CON 2.1.** 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 alternative modes of transportation, and requiring projects to mitigate significant air quality impacts.

**Policy CON 2.8.** Support the development and implementation of a GHG reduction plan, or Climate Action Plan, that addresses and reduces GHG emissions associated with community operations, including but not limited to: mobile sources (vehicle traffic), energy consumption, and solid waste.

**Policy CON 2.12.** 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 SA 1.3.** Keep emergency access routes free of traffic impediments.

**Policy SA 1.5.** Ensure that all areas of the City are accessible to emergency response providers.
City of Healdsburg

The following policies and implementation measures from the Healdsburg 2030 General Plan (City of Healdsburg 2009) are applicable to the implementation of the CAP.

**Policy H-K-5.** Accommodate pedestrians, bicyclists and transit in new residential development.

**Policy T-A-1.** The City shall strive to maintain at least a LOS D operation during periods of peak traffic flow at critical intersections, and Level of Service C operation at all other times. These standards shall apply only to intersections of an arterial street with either another arterial or a collector street and intersections of two collector streets. LOS F operation shall be acceptable for a stop-controlled approach to a through street provided the higher levels of delay affect 25 or fewer vehicles per hour. Attainment of these levels of service shall be consistent with the financial resources available and the limits of technical feasibility.

The following table indicates the standards described above based on the methodologies detailed in the Highway Capacity Manual 2000.

Minimum Level of Service Standards, for intersections of two arterials street and intersections of arterial and collector streets:

- Signalized: LOS D for peak periods; LOS C for off-peak periods
- All-way stop controlled: LOS D for peak periods; LOS C for off-peak periods
- Signalized, worst approach: LOS E for peak periods; LOS D for off-peak periods

**Policy T-A-2.** Streets shall be dedicated, modified, extended, and constructed according to the street cross-sections as shown in General Plan Figure 6, Street Standard Cross-Sections with the following exceptions:

8. In areas included in a specific plan adopted by the City, streets shall be dedicated and constructed according to street standards shown in such plans(s).

9. Deviations from these cross-sections may be allowed where such improvements are infeasible or are needed to preserve neighborhood character, enhance pedestrian use or protect significant trees, upon a determination by the City Engineer that safe and adequate public access and circulation are preserved by such deviations.

**Policy T-A-4.** New local streets shall ensure direct and adequate access to properties for emergency service vehicles.

**Policy T-A-5.** Major circulation improvements shall be completed as abutting lands develop or redevelop, with dedication of right-of-way and construction of improvements required as a condition of approval.

**Policy T-A-6.** Development that would necessitate circulation improvements prior to the development of land abutting those improvements to mitigate project traffic impacts shall be prohibited unless the improvements are made a condition of approval.

**Policy T-A-7.** Circulation improvements that are not tied to abutting development, but are necessary to address traffic impacts of the major development, should be completed before or concurrent with construction of the major new development.
Policy T-A-9. Street and traffic control development fees shall be assessed on all new development sufficient to fund system-wide capacity improvements. The fee schedule shall be periodically reviewed and revised as necessary.

Policy T-A-12. The City will strive to complete links in the existing street system to improve continuity and provide emergency vehicle access, consistent with existing neighborhood character, pedestrian safety and subject to fiscal and physical limitations.

Policy T-B-1. The creation or continuance of traffic hazards is prohibited in new development and other proposals requiring discretionary action by the City.

Policy T-B-2. Special attention will be given to providing adequate corner sight distances at intersections and private access drives and roadways.

Policy T-B-4. Traffic calming measures will be considered to maintain reasonable traffic speeds on city streets and to generally improve streets for pedestrian and bicyclist use.

Policy T-D-1. The use of alternative transportation modes shall be encouraged by establishing a safe and convenient bicycle and pedestrian network interconnecting residential areas with recreation, shopping and employment areas.

Policy T-D-3. The City shall develop a citywide system of safe and convenient designated bikeways that serves both experienced and casual bicyclists, and which maximizes bicycle use for commuting, recreation, and local transportation.

Policy T-D-4. Provide bicycle lanes along arterial and collector streets and major access routes to schools and parks where feasible.

Policy T-D-5. The City shall promote and facilitate the use of bicycles with other transportation modes.

Implementation Measure T-15. Continue to improve the pedestrian network interconnecting residential areas with recreation, shopping and employment as opportunities arise, including as part of development projects.

Implementation Measure T-16. Complete gaps in the city's pedestrian and bicycle systems.

Implementation Measure PS-15. All plans for new streets shall be reviewed by the Fire Department to ensure minimum standards for width, turning radius, and grade to facilitate access by City firefighting apparatus are met.

Implementation Measure PS-27. Require specific plans and other development projects to be coordinated with the Healdsburg Bicycle and Pedestrian Master Plan.

Policy NR-F-1. The City will encourage the use of transit systems and other alternatives to automobile use.

City of Petaluma

The following policies from the City of Petaluma: General Plan 2025 (City of Petaluma 2008) are applicable to the implementation of the CAP.
Policy 2-P-16. Enhance linkages between Downtown and the river, and increase street connectivity with the surrounding neighborhoods.


Policy 2-P-25. Improve bicycle circulation through the corridor by adding bicycle lanes on or parallel to East Washington Street (i.e., East D Street and/or Madison Street).

Policy 2-P-43. Provide additional pedestrian/bicycle access to and along the riverfront to connect to existing and future trails toward Downtown.

Policy 2-P-86. Provide enhanced facilities to encourage improved pedestrian and bicycle mobility along East Washington Street and East D Street.

Policy 2-P-88. Provide enhanced pedestrian and bicycle network connections between the industrial, commercial and residential clusters.

Policy 2-P-91. Promote walkability by clustering business parks and increasing pedestrian linkages between office structures and nearby commercial and restaurant uses.

Policy 2-P-93. Work with Caltrans and other agencies to establish a park-and-ride lot close to the new interchange. Include parking spaces with electric vehicle recharging facilities, secure bicycle parking, and reserved spaces for ride-sharing vehicles.

Policy 2-P-99. Improve older streetscapes with added street trees, landscaping and pedestrian amenities.

Policy 5-P-1. Develop an interconnected mobility system that allows travel on multiple routes by multiple modes.

Policy 5-P-4. New development and/or major expansion or change of use may require construction of off-site mobility improvements to complete appropriate links in the network necessary for connecting the proposed development with existing neighborhoods and land uses.

Policy 5-P-10. Maintain an intersection LOS standard for motor vehicle circulation that ensures efficient traffic flow and supports multi-modal mobility goals. LOS should be maintained at Level D or better for motor vehicles due to traffic from any development project.

Policy 5-P-13. Encourage existing major employers to develop and implement Transportation Demand Management programs to reduce peak period trip generation.

Policy 5-P-15. Implement the bikeway system as outlined in the Bicycle and Pedestrian Plan, and expand and improve the bikeway system wherever the opportunity arises.

Policy 5-P-16. If Class II bike lanes are not possible on streets designated as such on the Bicycle Facilities Map, those streets shall become enhanced Class III bike routes using such markings as edge striping, shared lane markings, and signs.

Policy 5-P-17. The City shall discourage using sidewalks as designated bicycle routes.

Policy 5-P-18. The City shall require Class II bike lanes on all new arterial and collector streets.

Policy 5-P-19. All new and redesigned streets shall be bicycle and pedestrian friendly in design.
Policy 5-P-20. Ensure that new development provides connections to and does not interfere with existing and proposed bicycle facilities.

Policy 5-P-22. Preserve and enhance pedestrian connectivity in existing neighborhoods and require a well-connected pedestrian network linking new and existing developments to adjacent land uses.

Policy 5-P-23. Require the provision of pedestrian site access for all new development.

Policy 5-P-25. Establish a network of multi-use trails to facilitate safe and direct off-street bicycle and pedestrian travel. At the minimum, Class I standards shall be applied unless otherwise specified.

Policy 5-P-28. Allow bicyclists and pedestrians use of all emergency access routes required of existing and new developments.

Policy 5-P-31. Make bicycling and walking more desirable by providing or requiring development to provide necessary support facilities throughout the city.

Policy 4-P-18B. Identify energy conservation measures appropriate for retrofitting existing structures. Work with local energy utility to encourage incentive program for retrofitting. Consider the use of alternative transportation fuels among City-owned vehicles and the Petaluma Transit system to reduce dependence on petroleum-based fuels and improve local air quality. Continue to replace traditional fuel vehicles in the City's fleet with alternative fuel vehicles and/or zero/low emission vehicles, as appropriate. When selecting alternative fuel vehicles consider the “full cycle” of emissions for the different fuel types.

City of Rohnert Park

The following goals and policies from the City of Rohnert Park General Plan (City of Rohnert Park 2000) are applicable to the implementation of the CAP.

Policy CD-19. As part of updating the City's zoning regulations or applicable specific plans, adopt standards to foster pedestrian orientation of new development in Mixed-Use and Neighborhood Commercial areas.

Policy CD-25. Use traffic calming measures to reduce traffic speeds in residential areas rather than limiting the street connections.

Policy CD-26. Design local streets to not only accommodate traffic, but also to serve as comfortable pedestrian environments.

Policy CD-55. Require all development within commercial districts to provide pedestrian amenities.


Goal TR-B. Maintain high levels of mobility along all major street segments and at major intersections.

Goal TR-F. Encourage alternative modes of travel—including transit, bicycles, and walking—by coordinating land use planning and development with transportation and by promoting compact, mixed-use development in targeted areas.

Policy TR-1. Establish LOS C as the minimum standard for all arterial and collector roadway segments (“segments”) and intersections, except for (1) those specified segments and intersections
for which allowable LOS standards are otherwise established below [Table 4.1-2 in the General Plan]; and (2) segments and intersections that are operating at LOS D or lower at the time an application for a development project or a specified plan is submitted if no feasible improvements exist to improve the LOS. The then-existing LOS may be permitted to be the standard for those segments and intersections in category (2), provided that the LOS not be permitted to deteriorate further due to the proposed development project or specific plan.

**Policy TR-2.** Require mitigation measures, as needed, for new development that increases traffic such that LOS levels fall below the established minimum standard. Ensure that mitigation measures are coordinated with roadway improvements programmed for funding through transportation-related impact fees.

**Policy TR-10.** Where street widening is proposed and the City owns an existing right-of-way that exceeds the minimum required width, according to the roadway classifications shown in Figure 4.1-3 [in the General Plan], the additional width shall be used for a greenway along one side of the street that has bikeways, pedestrian paths, and landscaping. Create smooth connections between other parts of the roadway that may have a narrower right-of-way or a different street configuration.

**Goal TR-J.** Reduce peak-hour traffic congestion and associated impacts, including air pollution, energy consumption, and noise.

**Goal TR-K.** Reduce the need for roadway improvements by making more efficient use of existing roads, bikeways, transit service, and other transportation facilities and services.

**Policy TR-23.** Allow reductions in transportation impact fees on new non-residential development commensurate with provision of transportation demand management (TDM) measures, and develop reduction parameters.

**Goal TR-L.** Promote local and regional public transit serving Rohnert Park and facilitate transfers between transit routes and operators.

**Policy TR-26.** Work with Sonoma County Transit and Golden Gate Transit to increase bus service between Rohnert Park and other cities in the Bay Area.

**Policy TR-30.** In consultation with Golden Gate Transit and Sonoma County Transit, determine appropriate locations of new bus stops, in conjunction with increased service and expanded routes.

**Policy TR-31.** Require project proponents to provide bus stops and shelters in conjunction with new development.

**Goal TR-N.** Promote safe, efficient, and comfortable circulation for cyclists and pedestrians throughout Rohnert Park.

**Goal TR-O.** Create pedestrian-friendly activity centers that encourage local walking trips between to and from adjacent uses.

**Goal TR-P.** Provide continuous, direct pedestrian routes and bikeways between and through neighborhoods and activity centers, and job centers and residential areas, including the University District, the City Center, and commercial and industrial areas.

**Policy TR-37.** Provide continuous sidewalks along all existing and future streets.
Policy TR-38. Establish pedestrian-friendly amenities along streets that run through or adjacent to areas designated for Mixed Use, High Density Residential, Public, or Parks.

Policy TR-41. Ensure that bikeways are continuous and interconnected, and that access points into bikeways minimize conflicts with pedestrian and traffic circulation.

Policy OS-15. Integrate citywide plans for bicycle and pedestrian paths with park plans.

Goal EC-L. Encourage land use and transportation strategies that promote use of alternatives to the automobile for transportation, including bicycling, bus transit, and carpooling.

Policy HS-24. Require adequate access for emergency vehicles, including adequate street width and vertical clearance, on new streets.

City of Sebastopol

The following goals and policies from the City of Sebastopol General Plan (City of Sebastopol 1994) are applicable to the implementation of the CAP.

Policy Land Use-P.2. Manage growth and infrastructure capacity so that the quantity and capacity of City services and infrastructure will not drop below acceptable Levels of Service as a result of new development.

Policy Land Use-P.3. Require new developments to pay their "fair share" of capital improvements for public services and facilities to maintain adequate levels of service in the city.

Goal 1 Transportation. Reduce regional traffic growth.

Policy Transportation-P.3. Support Regional Alternatives to the Single-Occupant Vehicle: Support regional transportation policies and programs which increase the use of public transit, carpoools, bicycles and other alternative modes of transportation and limit the growth of single-occupant vehicle traffic.

Policy Transportation-P.7. Continuation of Streets. Facilitate the continuation of streets and bicycle and pedestrian paths through new developments wherever possible.

Policy Transportation-P.8. Community Identity Higher Priority than Accommodating Traffic. Place a higher priority on safety and pedestrian-oriented design and scale, as opposed to traffic flow and speed.

Policy Transportation-P.11. Reduce Pollution. Reduce the air, water, and noise pollution that results from vehicular traffic by reducing the number of trips.

Policy Transportation-P.14. New Development Contributes to Traffic Mitigation. Ensure that development contributes to measures to mitigate traffic impacts.

Goal 6 Transportation. Reduce dependence on the automobile.


Policy Transportation-P.21. Comprehensive Bicycle Path System. Establish a comprehensive and safe system of bicycle trails connecting all parts of the City.
Policy Transportation-P.24. Improve Pedestrian Facilities. Create and maintain a safe and convenient pedestrian system.

Policy Transportation-P.25. Pedestrian Paths. Develop a series of continuous pedestrian paths or walkways within Downtown and residential neighborhoods.

Policy Transportation-P.27. Reducing Travel Demand. Promote measures to reduce travel demand.

Policy Transportation-P.28. Balanced Transportation Funding. Promote a shift in transportation funding away from the road system to improvements related to public transit, rail, bicycle, pedestrian, and carpool transportation.

Policy Conservation-P.16. Reduce Vehicle Trips: Reduce the number of single-occupant vehicle trips and the number of vehicle miles travelled within the Planning Area.

City of Sonoma

The following policies from the City of Sonoma 2020 General Plan (City of Sonoma 2006) are applicable to the implementation of the CAP.

Policy CD-4.4. Require pedestrian and bicycle access and amenities in all development.

Policy CD-5.6. Pursue design consistency, improved pedestrian and bicycle access, and right-of-way beautification along the Highway 12 corridor.

Policy ER-3.2. Encourage construction, building maintenance, landscaping, and transportation practices that promote energy and water conservation and reduces greenhouse gas emissions.

Policy CE-1.2. Eliminate gaps and obstructions in the sidewalk system.

Policy CE-2.1. Promote bicycling as an efficient alternative to driving.

Policy CE-2.2. Extend the bike path system, with a focus on establishing safe routes to popular destinations.

Policy CE-2.4. Resolve potential conflicts between bicycles and vehicles and pedestrians.

Policy CE-2.5. Incorporate bicycle facilities and amenities in new development.

Policy CE-3.1. Promote safety for all users of the street system.

Policy CE-3.3. Promote transit use and improve transit services.

Policy CE-3.6. Improve city streets as necessary to preserve safety and expand opportunities for alternative means of transportation.

Policy CE-3.7. Ensure that new development mitigates its traffic impacts.

Town of Windsor

The following policies from the Town of Windsor General Plan – 2015 (Town of Windsor 1996) are applicable to the implementation of the CAP.
Policy CD-A.3.2. Within the Lakewood area, the Town should strengthen existing pedestrian connections to surrounding areas and support the creation of new pedestrian-oriented connections where direct routes do not presently exist.

Policy CD-A.5.7. In employment districts, the Town should create walkable streets and destinations to reduce automobile trips for retail, recreation, childcare, or other activities.

Policy CD-A.8.1. The Town shall implement a multimodal transportation system that connects residents to activity centers throughout and near the town, such as commercial centers and corridors, employment centers, transit stops/stations, the airport, schools, parks, recreation areas, and other attractions.

Policy CD-A.8.2. The Town shall encourage an interconnected network of streets within neighborhoods and districts, with frequent connector streets and an emphasis on direct connections to parks, schools, and neighborhood centers.

Policy CD-A.8.3. The Town shall strive to create a more comprehensive network of streets by eliminating "gaps" in roadways, bikeways, and pedestrian networks, increasing transit access, and removing natural and manmade barriers to accessibility and connectivity.

Policy CD-A.8.7. Whenever the opportunity arises, the Town should encourage the retrofitting of existing streets to be more consistent with the Town's desires for an interconnected street network of complete streets that are pedestrian-oriented. Examples include reducing the extent of pavement on residential streets by adding contiguous planting strip and extending creek pathways through walled subdivisions.

Policy CD-A.8.8. The Town shall require all new development that proposes or is required to construct or extend streets to develop a transportation network that complements and contributes to the town's multimodal system, maximizes connections, and minimizes barriers to connectivity.

Policy CD-A.8.9. The Town shall ensure that new commercial and residential development projects provide convenient and direct connections to the nearest bikeways, pedestrian ways, and transit facilities.

Policy CD-A.9.1. The Town should design streets to enhance Windsor's identity, to provide opportunities for community life to be safe, and to be comfortable and convenient for all travel modes including cars, pedestrians and bicyclists.

Policy CD-A.9.2. Within neighborhoods, narrower widths (consistent with emergency vehicle access), street trees, buildings fronting onto the streets, and various techniques to slow through traffic should be encouraged to promote desirable residential environments.

Policy CD-B.8.8. The Town shall work with the Metropolitan Transportation Commission, Caltrans, Sonoma County Transit, SMART, and adjacent communities to improve Town roadways, pedestrian ways, bicycle facilities, and transit corridors to connect with neighboring and regional transportation networks and contribute to a regional multimodal transportation system.

Policy CD-D.1.2. The Town shall promote development of an integrated, multi-modal street network that offers desirable choices among modes including pedestrian ways, public transportation, roadways, bikeways, rail, and aviation.
**Policy CD-D.1.3.** The Town shall consider flexible LOS standards or alternative traffic Impact measurements, as part of a multimodal system approach, for projects that increase transit-ridership, biking, and walking in order to reduce air pollution, energy consumption, and greenhouse gas emissions.

**Policy CD-D.1.4.** The Town shall encourage the development of facilities and services (e.g., secure long-term bicycle parking, street lights, street furniture and trees, transit stop benches and shelters, and street sweeping of bike lanes) that enable bicycling, walking, and transit to become more widely used modes of transportation and recreation.

**Policy CD-D.2.1.** The Town shall encourage a network of interconnected connector and local streets to avoid excessive congestion on any one street and allow the safe use by motorists, pedestrians, and bicyclists.

**Policy CD-D.3.1.** The Town shall provide safe, comfortable, and convenient travel along and across streets to serve all users, including pedestrians, the disabled, bicyclists, and motorists, movers of commercial goods, and users and operators of public transportation.

**Policy CD-D.3.2.** The Town shall consider the needs of transit riders, pedestrians, people in wheelchairs, cyclists, and others in long-range planning and street design.

**Policy CD-D.3.3.** The Town shall balance the needs of all travel modes when planning transportation improvements and managing transportation use in the public right-of-way.

**Policy CD-D.3.5.** The Town shall incorporate appropriate complete streets infrastructure into transportation planning, funding, design, approval, and implementation processes and projects.

**Policy CD-D.4.2.** The Town shall develop safe and convenient bikeways and pedestrian crossings that reduce conflicts between pedestrians, bicyclists, and motor vehicles on streets, multi-use trails, and sidewalks.

**Policy CD-D.4.3.** The Town shall strive to address traffic operations, including traffic congestion, intersection delays, and travel speeds, while balancing neighborhood livability and safety concerns.

**Policy CD-D.4.4.** The Town shall “calm”, or slow, traffic in residential neighborhoods through a variety of techniques that have the effect of slowing through traffic, without compromising safety, emergency access, and reasonable flows. Guidelines for consideration and implementation of neighborhood traffic calming, including selection of appropriate devices and techniques, are provided in the Town’s Neighborhood Traffic Management and Calming Program.

**Policy ER-G.2.4.** The Town should prepare a comprehensive bicycle plan that provides linkages between residences, shopping areas, places of employment, and social and cultural events and affords the opportunity to not use a motorized vehicle.

**Policy ER-G.2.5.** The Town should support and participate in regional efforts to promote and offer carpooling, vanpooling, and other forms of high occupancy vehicles.

**Sonoma County**

The following goals, objectives, and policies from the Sonoma County General Plan 2020 (Sonoma County 2008) are applicable to the implementation of the CAP.
Policy LU-4q. Require pedestrian access infrastructure and streetlights in new development proposed within the Urban Service Area of a Community Opportunity Area where compatible with community character.

Policy LU-11a. Encourage reduction in greenhouse gas emissions, including alternatives to use of gas-powered vehicles. Such alternatives include public transit, alternatively fueled vehicles, bicycle and pedestrian routes, and bicycle and pedestrian friendly development design.

Policy OSRC-14c. Continue to purchase and utilize hybrid, electric, or other alternative fuel vehicles for the County vehicle fleet; and encourage County residents and businesses to do the same.

Policy OSRC-14g. Develop a Greenhouse Gas Emissions Reduction Program, as a high priority, to include the following:

10. A methodology to measure baseline and future VMT and greenhouse gas emissions
11. Targets for various sectors including existing development and potential future development of commercial, industrial, residential, transportation, and utility sources
12. Collaboration with local, regional, and State agencies and other community groups to identify effective greenhouse gas reduction policies and programs in compliance with new State and Federal standards
13. Adoption of development policies or standards that substantially reduce emissions for new development
14. Creation of a task force of key department and agency staff to develop action plans,
15. Monitoring and annual reporting of progress in meeting emission reduction targets.

Objective OSRC-16.2. Encourage reduced motor vehicle use as a means of reducing resultant air pollution.

Policy OSRC-16b. 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.

Objective OSRC-18.1. Design, construct and maintain a comprehensive Bikeways Network that links the County's cities, unincorporated communities, and other major activity centers including schools, recreational areas and employment centers.

Objective CT-1.4. Reduce the need for future automobile use by a combination of improvements and land development policies that give equal favor to alternate modes as to automobile use.

Objective CT-1.5. Reduce greenhouse gas emissions by minimizing future increase in VMT, with an emphasis on shifting short trips by automobile to walking and bicycling trips.

Objective CT-1.6. Require that circulation and transit system improvements be done in a manner that, to the extent practical, is consistent with community and rural character, minimizes disturbance of the natural environment, minimizes air and noise pollution, and helps reduce greenhouse gas emissions.

Policy CT-1e. Support development, implementation, and operation of a passenger rail system and contiguous north south pedestrian and bicycle path along the SMART passenger rail corridor including the funding necessary to support a multi-modal feeder system.
**Policy CT-1k.** Encourage development that reduces VMT, decreases distances between jobs and housing, reduces traffic impacts, and improves housing affordability.

**Policy CT-1m.** Require development projects contribute a fair share for development of alternative transportation mode facilities, including pedestrian and bicycle facilities along project frontages and links from these to nearby alternative mode facilities. Development near urban boundaries should provide safe access to the urban area.

**Objective CT-2.6.** In areas designated for through traffic, use existing circulation and transit facilities more efficiently, especially highways, to reduce the amount of investment required in new or expanded facilities, reduce greenhouse gas emissions, and increase the energy efficiency of the transportation system.

**Objective CT-2.8.** Provide bicycle and pedestrian links from bus stops and other transit facilities to residential areas, employment centers, schools, institutions, parks, and the greater roadway system in general, especially focusing on short trips that could result in a mode shift away from automobile travel.

**Objective CT-2.10.** Utilize shoulders, paths, and bike lanes for other alternative transportation modes along existing streets, roads, and bicycle routes where consistent with public safety and the Vehicle Code.

**Objective CT-2.12.** Increase the safety, convenience, and comfort of transit riders, to eliminate the potential obstacles to this mode choice that is associated with the lack of these facilities.

**Policy CT-2d.** Require major traffic generating projects on existing or planned transit routes to provide fixed transit facilities, such as bus turnouts, passenger shelters, bike lockers, and seating needed to serve anticipated or potential transit demand from the project.

**Policy CT-2f.** Require discretionary development projects to provide bicycle and pedestrian improvements and gap closures necessary for safe and convenient bicycle and pedestrian travel between the project and the public transit system.

**Goal CT-3.** Establish a viable transportation alternative to the automobile for residents of Sonoma County through a safe and convenient bicycle and pedestrian transportation network, well integrated with transit, that will reduce greenhouse gas emissions, increase outdoor recreational opportunities, and improve public health.

**Objective CT-3.2.** Reduce Sonoma County's greenhouse gas emissions by achieving a non-motorized trips mode share of 5% for all trips and 10% for trips under five miles long by 2020.

**Objective CT-3.3.** Encourage pedestrian, bicycle, and transit oriented development.

**Policy CT-3g.** Revise County Traffic Guidelines to require that traffic studies identify impacts to existing and planned bicycle and pedestrian facilities. Consider development of bicycle and pedestrian facilities as mitigation measures for congestion and greenhouse gas emission impacts.

**Policy CT-3t.** Require that bikeway improvements be included as part of all road improvement projects along road segments with existing or proposed bikeways.

**Policy CT-3w.** Where discretionary projects in Urban Service Areas and unincorporated communities are found to create additional demand for bicycle travel, require the project to directly provide or participate in the funding of bikeway improvements such as gap closures, shoulder
widening, safety improvements and signage that will improve bicycle access to destinations located within 3 miles of the project site.

**Policy CT-3x.** Require mitigation either through in-lieu fees, or development of alternative facilities that have been recommended by the BPAC, when development projects or road improvements are anticipated to result in a loss of existing bicycle and pedestrian facilities or jeopardize development of future facilities identified in the Bikeways Plan.

**Policy CT-3z.** Require road construction projects to minimize their impacts on bicyclists and pedestrians through the proper placement of construction signs and equipment and by providing adequate, safe, well-marked detours. Where it is safe to do so, allow bicyclists and pedestrians to pass through construction areas in order to avoid detours. Where two-way bicycle and pedestrian travel can be safely accommodated in a one-way traffic control zone, adequate signage shall be placed to alert motorists of bicycles and pedestrians in the lane.

**Policy CT-3oo.** Require new development in Urban Service Areas and unincorporated communities to provide safe, continuous and convenient pedestrian access to jobs, shopping and other local services and destinations. Maintain consistency with City standards for pedestrian facilities in Urban Service Areas that are within a city's Sphere of Influence or Urban Growth Boundary.

**Policy CT-3pp.** Require pedestrian-oriented street design in Urban Service Areas and unincorporated communities.

**Policy CT-3ss.** Where discretionary projects in Urban Service Areas and unincorporated communities are found to create additional demand for pedestrian travel, require the project to directly provide or participate in the funding of pedestrian improvements such as sidewalks, gap closures, steps, safety improvements, and/or trails that will improve pedestrian access to destinations located within 2 mile of the project site.

**Policy CT-3ww.** Require development projects in Urban Service Areas and unincorporated communities that conflict or interfere with development of future planned pedestrian facilities to provide development of equivalent facilities within the same area.

**Policy CT-4a.** Use the levels of service established in Objectives CT-4.1 and 4.3 to determine whether or not roadway segment congestion would exceed the desired LOS on the countywide road system. In cases where a roadway segment is designated as LOS F on Figure CT-3, a PM peak volume to capacity ratio of 1.2 is the acceptable LOS, with the exception of road segments shown below, for which the acceptable LOS is determined by the volume to capacity ratio or LOS as indicated.

**Policy CT-4f.** Implement safety improvements when and where problems arise. Where safety problems may result from a proposed project, require the safety improvements as a condition of approval.

### C.14 References


Consultation Code: 08EACT00-2016-SLI-0127
Event Code: 08EACT00-2016-E-00093
Project Name: Sonoma CAP EIR

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having...
similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2) (c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 et seq.), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment
Official Species List

Provided by:
Arcata Fish and Wildlife Office
1655 HEINDON ROAD
ARCATA, CA 95521
(707) 822-7201

Expect additional Species list documents from the following office(s):
San Francisco Bay-Delta Fish and Wildlife
650 CAPITOL MALL
SUITE 8-300
SACRAMENTO, CA 95814
(916) 930-5603
http://kim_squires@fws.gov
Sacramento Fish and Wildlife Office
FEDERAL BUILDING
2800 COTTAGE WAY, ROOM W-2605
SACRAMENTO, CA 95825
(916) 414-6600

Consultation Code: 08EACT00-2016-SLI-0127
Event Code: 08EACT00-2016-E-00093

Project Type: ** OTHER **

Project Name: Sonoma CAP EIR

Please Note: The FWS office may have modified the Project Name and/or Project Description, so it may be different from what was submitted in your previous request. If the Consultation Code matches, the FWS considers this to be the same project. Contact the office in the 'Provided by' section of your previous Official Species list if you have any questions or concerns.
**Project Location Map:**

![Map of Sonoma CAP EIR](image)

**Project Coordinates:** The coordinates are too numerous to display here.

**Project Counties:** Sonoma, CA
Endangered Species Act Species List

There are a total of 13 threatened or endangered species on your species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Critical habitats listed under the Has Critical Habitat column may or may not lie within your project area. See the Critical habitats within your project area section further below for critical habitat that lies within your project. Please contact the designated FWS office if you have questions.

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<td>western snowy plover (Charadrius nivosus ssp. nivosus)</td>
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Project name: Sonoma CAP EIR
### Fishes

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### Flowering Plants

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<td>Endangered</td>
<td></td>
</tr>
<tr>
<td>Contra Costa goldfields (<em>Lasthenia conjugens</em>)</td>
<td>Endangered</td>
<td>Final designated</td>
</tr>
<tr>
<td>Showy Indian clover (<em>Trifolium amoenum</em>)</td>
<td>Endangered</td>
<td></td>
</tr>
</tbody>
</table>

### Insects

<table>
<thead>
<tr>
<th>Species</th>
<th>Status</th>
<th>Protection Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Behren's Silverspot butterfly (<em>Speyeria zerene behrensii</em>)</td>
<td>Endangered</td>
<td></td>
</tr>
<tr>
<td>Population: Entire</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Mammals

<table>
<thead>
<tr>
<th>Species</th>
<th>Status</th>
<th>Protection Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Point Arena mountain beaver (<em>Aplodontia rafa nigra</em>)</td>
<td>Endangered</td>
<td></td>
</tr>
<tr>
<td>Population: Entire</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Reptiles

<table>
<thead>
<tr>
<th>Species</th>
<th>Status</th>
<th>Protection Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leatherback sea turtle (<em>Dermochelys coriacea</em>)</td>
<td>Endangered</td>
<td>Final designated</td>
</tr>
<tr>
<td>Population: Entire</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Critical habitats that lie within your project area

The following critical habitats lie fully or partially within your project area.

<table>
<thead>
<tr>
<th>Amphibians</th>
<th>Critical Habitat Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>California red-legged frog <em>(Rana draytonii)</em></td>
<td>Final designated</td>
</tr>
<tr>
<td>Population: Entire</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Birds</th>
<th>Critical Habitat Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marbled murrelet <em>(Brachyramphus marmoratus)</em></td>
<td>Final designated</td>
</tr>
<tr>
<td>Population: CA, OR, WA</td>
<td></td>
</tr>
</tbody>
</table>

| Northern Spotted owl *(Strix occidentalis caurina)* | Final designated           |
| Population: Entire               |                             |

<table>
<thead>
<tr>
<th>Fishes</th>
<th>Critical Habitat Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tidewater goby <em>(Eucyclogobius newberryi)</em></td>
<td>Final designated</td>
</tr>
<tr>
<td>Population: Entire</td>
<td></td>
</tr>
</tbody>
</table>
Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, under the jurisdiction of the U.S. Fish and Wildlife Service (Service) that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the Service under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.).

Please follow the link below to see if your proposed project has the potential to affect other species or their habitats under the jurisdiction of the National Marine Fisheries Service:

http://www.nwr.noaa.gov/protected_species/species_list/species_lists.html

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2)
of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2) (c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

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Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 et seq.), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

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We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment
Official Species List

Provided by:
Sacramento Fish and Wildlife Office
FEDERAL BUILDING
2800 COTTAGE WAY, ROOM W-2605
SACRAMENTO, CA 95825
(916) 414-6600

Expect additional Species list documents from the following office(s):
San Francisco Bay-Delta Fish and Wildlife
650 CAPITOL MALL
SUITE 8-300
SACRAMENTO, CA 95814
(916) 930-5603
http://kim_squires@fws.gov
Arcata Fish and Wildlife Office
1655 HEINDON ROAD
ARCATA, CA 95521
(707) 822-7201

Consultation Code: 08ESMF00-2016-SLI-0940
Event Code: 08ESMF00-2016-E-02039

Project Type: ** OTHER **

Project Name: Sonoma CAP EIR

Please Note: The FWS office may have modified the Project Name and/or Project Description, so it may be different from what was submitted in your previous request. If the Consultation Code matches, the FWS considers this to be the same project. Contact the office in the 'Provided by' section of your previous Official Species list if you have any questions or concerns.
United States Department of Interior
Fish and Wildlife Service
Project name: Sonoma CAP EIR

Project Location Map:

Project Coordinates: The coordinates are too numerous to display here.

Project Counties: Sonoma, CA
Endangered Species Act Species List

There are a total of 46 threatened or endangered species on your species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Critical habitats listed under the Has Critical Habitat column may or may not lie within your project area. See the Critical habitats within your project area section further below for critical habitat that lies within your project. Please contact the designated FWS office if you have questions.

<table>
<thead>
<tr>
<th>Amphibians</th>
<th>Status</th>
<th>Has Critical Habitat</th>
<th>Condition(s)</th>
</tr>
</thead>
</table>
| California red-legged frog (*Rana draytonii*)  
  Population: Entire | Threatened | Final designated |               |
| California tiger Salamander (*Ambystoma californiense*)  
  Population: U.S.A. (CA - Sonoma County) | Endangered | Final designated |               |

<table>
<thead>
<tr>
<th>Birds</th>
<th>Status</th>
<th></th>
<th></th>
</tr>
</thead>
</table>
| California Clapper rail (*Rallus longirostris obsoletus*)  
  Population: Entire | Endangered |                     |              |
| California Least tern (*Sterna antillarum browni*)  
  Population: Entire | Endangered |                     |              |
| Marbled murrelet (*Brachyramphus marmoratus*)  
  Population: CA, OR, WA | Threatened | Final designated |              |
| Northern Spotted owl (*Strix occidentalis caurina*)  
  Population: Entire | Threatened | Final designated |              |
<table>
<thead>
<tr>
<th>Species</th>
<th>Status</th>
<th>Designation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Short-Tailed albatross (<em>Phoebastria</em> (=<em>diomedea</em>) <em>albatrus</em>)</td>
<td>Endangered</td>
<td></td>
</tr>
<tr>
<td>western snowy plover (<em>Charadrius nivosus ssp. nivosus</em>)</td>
<td>Threatened</td>
<td>Final designated</td>
</tr>
<tr>
<td>Yellow-Billed Cuckoo (<em>Coccyzus americanus</em>)</td>
<td>Threatened</td>
<td>Proposed</td>
</tr>
</tbody>
</table>

### Crustaceans

<table>
<thead>
<tr>
<th>Species</th>
<th>Status</th>
<th>Designation</th>
</tr>
</thead>
<tbody>
<tr>
<td>California Freshwater shrimp (<em>Syncaris pacifica</em>)</td>
<td>Endangered</td>
<td></td>
</tr>
<tr>
<td>Conservancy fairy shrimp (<em>Branchinecta conservatio</em>)</td>
<td>Endangered</td>
<td>Final designated</td>
</tr>
<tr>
<td>Vernal Pool fairy shrimp (<em>Branchinecta lynchi</em>)</td>
<td>Threatened</td>
<td>Final designated</td>
</tr>
</tbody>
</table>

### Fishes

<table>
<thead>
<tr>
<th>Species</th>
<th>Status</th>
<th>Designation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Delta smelt (<em>Hypomesus transpacificus</em>)</td>
<td>Threatened</td>
<td>Final designated</td>
</tr>
<tr>
<td>steelhead (<em>Oncorhynchus (=<em>salmo</em>) mykiss</em>)</td>
<td>Threatened</td>
<td>Final designated</td>
</tr>
<tr>
<td>Tidewater goby (<em>Eucyclogobius newberryi</em>)</td>
<td>Endangered</td>
<td>Final designated</td>
</tr>
<tr>
<td>Flowering Plants</td>
<td>Status</td>
<td>Status Notes</td>
</tr>
<tr>
<td>------------------------------------------------------</td>
<td>------------</td>
<td>------------------------------</td>
</tr>
<tr>
<td>Baker's larkspur <em>(Delphinium bakeri)</em></td>
<td>Endangered</td>
<td>Final designated</td>
</tr>
<tr>
<td>Burke's goldfields <em>(Lasthenia burkei)</em></td>
<td>Endangered</td>
<td></td>
</tr>
<tr>
<td>Calistoga allocarya <em>(Plagiobothrys strictus)</em></td>
<td>Endangered</td>
<td></td>
</tr>
<tr>
<td>Clara Hunt's milk-vetch <em>(Astragalus clarianus)</em></td>
<td>Endangered</td>
<td></td>
</tr>
<tr>
<td>Clover lupine <em>(Lupinus tidestromii)</em></td>
<td>Endangered</td>
<td></td>
</tr>
<tr>
<td>Contra Costa goldfields <em>(Lasthenia conjugens)</em></td>
<td>Endangered</td>
<td>Final designated</td>
</tr>
<tr>
<td>Few-Flowered navarretia <em>(Navarretia leucocephala ssp. pauciflora (= n. pauciflora))</em></td>
<td>Endangered</td>
<td></td>
</tr>
<tr>
<td>Kenwood Marsh checker-mallow <em>(Sidalcea oregana ssp. valida)</em></td>
<td>Endangered</td>
<td></td>
</tr>
<tr>
<td>Lake County stonecrop <em>(Parvisedum leiocarpum)</em></td>
<td>Endangered</td>
<td></td>
</tr>
<tr>
<td>Loch Lomond Coyote thistle <em>(Eryngium constancei)</em></td>
<td>Endangered</td>
<td></td>
</tr>
<tr>
<td>Many-Flowered navarretia <em>(Navarretia leucocephala ssp. plieantha)</em></td>
<td>Endangered</td>
<td></td>
</tr>
<tr>
<td>Marin dwarf-flax <em>(Hesperolinon congestum)</em></td>
<td>Threatened</td>
<td></td>
</tr>
<tr>
<td>Napa bluegrass <em>(Poa napensis)</em></td>
<td>Endangered</td>
<td></td>
</tr>
<tr>
<td>Pennell's bird's-beak <em>(Cordylanthus tenuis ssp. capillaris)</em></td>
<td>Endangered</td>
<td></td>
</tr>
<tr>
<td>Plant Name</td>
<td>Status</td>
<td>Notes</td>
</tr>
<tr>
<td>------------</td>
<td>--------</td>
<td>-------</td>
</tr>
<tr>
<td>Pitkin Marsh lily (<em>Lilium pardalinum</em> ssp. <em>pitkinense</em>)</td>
<td>Endangered</td>
<td></td>
</tr>
<tr>
<td>Sebastopol meadowfoam (<em>Limnanthes vinculans</em>)</td>
<td>Endangered</td>
<td></td>
</tr>
<tr>
<td>Showy Indian clover (<em>Trifolium amoenum</em>)</td>
<td>Endangered</td>
<td></td>
</tr>
<tr>
<td>Slender Orcutt grass (<em>Orcuttia tenuis</em>)</td>
<td>Threatened</td>
<td>Final designated</td>
</tr>
<tr>
<td>Soft bird's-beak (<em>Cordylanthus mollis</em> ssp. <em>mollis</em>)</td>
<td>Endangered</td>
<td>Final designated</td>
</tr>
<tr>
<td>Sonoma alopecurus (<em>Alopecurus aequalis var. sonomensis</em>)</td>
<td>Endangered</td>
<td></td>
</tr>
<tr>
<td>Sonoma spineflower (<em>Chorizanthe valida</em>)</td>
<td>Endangered</td>
<td></td>
</tr>
<tr>
<td>Sonoma sunshine (<em>Blennosperma bakeri</em>)</td>
<td>Endangered</td>
<td></td>
</tr>
<tr>
<td>Vine Hill clarkia (<em>Clarkia imbricata</em>)</td>
<td>Endangered</td>
<td></td>
</tr>
<tr>
<td>White sedge (<em>Carex albida</em>)</td>
<td>Endangered</td>
<td></td>
</tr>
<tr>
<td>Yellow larkspur (<em>Delphinium luteum</em>)</td>
<td>Endangered</td>
<td>Final designated</td>
</tr>
</tbody>
</table>

**Insects**

<table>
<thead>
<tr>
<th>Insect Name</th>
<th>Status</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Behren's Silverspot butterfly (<em>Speyeria zerene behrensii</em>)</td>
<td>Endangered</td>
<td>Population: Entire</td>
</tr>
<tr>
<td>Callippe Silverspot butterfly (<em>Speyeria callippe callippe</em>)</td>
<td>Endangered</td>
<td>Population: Entire</td>
</tr>
<tr>
<td>Myrtle's Silverspot butterfly (<em>Speyeria zerene myrtleae</em>)</td>
<td>Endangered</td>
<td></td>
</tr>
<tr>
<td>Population: Entire</td>
<td></td>
<td></td>
</tr>
<tr>
<td>------------------</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>San Bruno Elfin butterfly (<em>Callophrys mossii bayensis</em>)</td>
<td>Endangered</td>
<td></td>
</tr>
<tr>
<td>Population: Entire</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mammals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population: Entire</td>
</tr>
<tr>
<td>Point Arena mountain beaver (<em>Aplodontia rufa nigra</em>)</td>
</tr>
<tr>
<td>Population: Entire</td>
</tr>
<tr>
<td>Salt Marsh Harvest mouse (<em>Reithrodontomys raviventris</em>)</td>
</tr>
<tr>
<td>Population: wherever found</td>
</tr>
</tbody>
</table>
## Critical habitats that lie within your project area

The following critical habitats lie fully or partially within your project area.

<table>
<thead>
<tr>
<th>Amphibians</th>
<th>Critical Habitat Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>California red-legged frog (<em>Rana draytonii</em>)</td>
<td>Final designated</td>
</tr>
<tr>
<td>Population: Entire</td>
<td></td>
</tr>
<tr>
<td>California tiger Salamander (<em>Ambystoma californiense</em>)</td>
<td>Final designated</td>
</tr>
<tr>
<td>Population: U.S.A. (CA - Sonoma County)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Birds</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Marbled murrelet (<em>Brachyramphus marmoratus</em>)</td>
<td>Final designated</td>
</tr>
<tr>
<td>Population: CA, OR, WA</td>
<td></td>
</tr>
<tr>
<td>Northern Spotted owl (<em>Strix occidentalis caurina</em>)</td>
<td>Final designated</td>
</tr>
<tr>
<td>Population: Entire</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fishes</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>steelhead (<em>Oncorhynchus (=salmo) mykiss</em>)</td>
<td>Final designated</td>
</tr>
<tr>
<td>Population: Northern California DPS</td>
<td></td>
</tr>
<tr>
<td>Tidewater goby (<em>Eucyclogobius newberryi</em>)</td>
<td>Final designated</td>
</tr>
<tr>
<td>Population: Entire</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Flowering Plants</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Baker's larkspur (<em>Delphinium bakeri</em>)</td>
<td>Final designated</td>
</tr>
<tr>
<td>Yellow larkspur (<em>Delphinium luteum</em>)</td>
<td>Final designated</td>
</tr>
</tbody>
</table>
Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project.

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.).

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The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.
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http://www.towerkill.com; and

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment
Official Species List

Provided by:
San Francisco Bay-Delta Fish and Wildlife
650 CAPITOL MALL
SUITE 8-300
SACRAMENTO, CA 95814
(916) 930-5603
http://kim_squires@fws.gov

Expect additional Species list documents from the following office(s):
Arcata Fish and Wildlife Office
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ARCATA, CA 95521
(707) 822-7201
Sacramento Fish and Wildlife Office
FEDERAL BUILDING
2800 COTTAGE WAY, ROOM W-2605
SACRAMENTO, CA 95825
(916) 414-6600

Consultation Code: 08FBDT00-2016-SLI-0084
Event Code: 08FBDT00-2016-E-00038

Project Type: ** OTHER **

Project Name: Sonoma CAP EIR

Please Note: The FWS office may have modified the Project Name and/or Project Description, so it may be different from what was submitted in your previous request. If the Consultation Code matches, the FWS considers this to be the same project. Contact the office in the 'Provided by' section of your previous Official Species list if you have any questions or concerns.
Project Location Map:

Project Coordinates: The coordinates are too numerous to display here.

Project Counties: Sonoma, CA
Endangered Species Act Species List

There are a total of 19 threatened or endangered species on your species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Critical habitats listed under the **Has Critical Habitat** column may or may not lie within your project area. See the **Critical habitats within your project area** section further below for critical habitat that lies within your project. Please contact the designated FWS office if you have questions.

<table>
<thead>
<tr>
<th>Amphibians</th>
<th>Status</th>
<th>Has Critical Habitat</th>
<th>Condition(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>California red-legged frog (<em>Rana draytonii</em>)</td>
<td>Threatened</td>
<td>Final designated</td>
<td></td>
</tr>
<tr>
<td>Population: Entire</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Birds                                           |               |                      |              |
| California Clapper rail (*Rallus longirostris obsoletus*) | Endangered |                      |              |
| Population: Entire                              |               |                      |              |
| California Least tern (*Sterna antillarum browni*) | Endangered   |                      |              |
| Northern Spotted owl (*Strix occidentalis caurina*) | Threatened   | Final designated     |              |
| Population: Entire                              |               |                      |              |
| western snowy plover (*Charadrius nivosus ssp. nivosus*) | Threatened   | Final designated     |              |

<p>| Crustaceans                                     |               |                      |              |
| California Freshwater shrimp (<em>Syncaris pacifica</em>) | Endangered    |                      |              |</p>
<table>
<thead>
<tr>
<th>Population</th>
<th>Species Name and Scientific Name</th>
<th>Status</th>
<th>Designation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entire</td>
<td>Conservancy fairy shrimp ((\text{Branchinecta conservatio}))</td>
<td>Endangered</td>
<td>Final designated</td>
</tr>
<tr>
<td>Entire</td>
<td>Vernal Pool fairy shrimp ((\text{Branchinecta lynchi}))</td>
<td>Threatened</td>
<td>Final designated</td>
</tr>
<tr>
<td>Entire</td>
<td>Delta smelt ((Hypomesus transpacificus))</td>
<td>Threatened</td>
<td>Final designated</td>
</tr>
<tr>
<td>Entire</td>
<td>steelhead ((Oncorhynchus (=\text{salmo}) mykiss))</td>
<td>Threatened</td>
<td>Final designated</td>
</tr>
<tr>
<td>Entire</td>
<td>Contra Costa goldfields ((Lasthenia conjugens))</td>
<td>Endangered</td>
<td>Final designated</td>
</tr>
<tr>
<td>Entire</td>
<td>Sebastopol meadowfoam ((\text{Limnanthes vinculans}))</td>
<td>Endangered</td>
<td></td>
</tr>
<tr>
<td>Entire</td>
<td>Soft bird's-beak ((\text{Cordylanthis mollis ssp. mollis}))</td>
<td>Endangered</td>
<td>Final designated</td>
</tr>
<tr>
<td>Entire</td>
<td>Yellow larkspur ((\text{Delphinium luteum}))</td>
<td>Endangered</td>
<td>Final designated</td>
</tr>
<tr>
<td>Entire</td>
<td>Callippe Silverspot butterfly ((\text{Speyeria callippe callippe}))</td>
<td>Endangered</td>
<td></td>
</tr>
<tr>
<td>Entire</td>
<td>Myrtle's Silverspot butterfly ((\text{Speyeria}))</td>
<td>Endangered</td>
<td></td>
</tr>
<tr>
<td>Species / Population</td>
<td>Status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>----------------------</td>
<td>-----------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>zerene myrtleae</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Population: Entire</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>San Bruno Elfin butterfly (<em>Callophrys mossii bayensis</em>)</td>
<td>Endangered</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Population: Entire</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Mammals**

<table>
<thead>
<tr>
<th>Species / Population</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salt Marsh Harvest mouse (<em>Reithrodontomys raviventris</em>)</td>
<td>Endangered</td>
</tr>
<tr>
<td>Population: wherever found</td>
<td></td>
</tr>
</tbody>
</table>

**Reptiles**

<table>
<thead>
<tr>
<th>Species / Population</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alameda whipsnake (<em>Masticophis lateralis euryxanthus</em>)</td>
<td>Threatened</td>
</tr>
<tr>
<td>Population: Entire</td>
<td>Final designated</td>
</tr>
</tbody>
</table>
Critical habitats that lie within your project area

The following critical habitats lie fully or partially within your project area.

<table>
<thead>
<tr>
<th>Amphibians</th>
<th>Critical Habitat Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>California red-legged frog <em>(Rana draytonii)</em></td>
<td>Final designated</td>
</tr>
<tr>
<td>Population: Entire</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Birds</th>
<th>Critical Habitat Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northern Spotted owl <em>(Strix occidentalis caurina)</em></td>
<td>Final designated</td>
</tr>
<tr>
<td>Population: Entire</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fishes</th>
<th>Critical Habitat Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Steelhead <em>(Oncorhynchus (=salmo) mykiss)</em></td>
<td>Final designated</td>
</tr>
<tr>
<td>Population: Northern California DPS</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Flowering Plants</th>
<th>Critical Habitat Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yellow larkspur <em>(Delphinium luteum)</em></td>
<td>Final designated</td>
</tr>
</tbody>
</table>
## Appendix E

### Local Land Use and Noise Compatibility Standards and Noise Ordinances

### E.1 City of Cloverdale

**Table 1. City of Cloverdale Exterior Land Use and Noise Compatibility Standards**

<table>
<thead>
<tr>
<th>Land Use Category</th>
<th>Normally Acceptable</th>
<th>Conditionally Acceptable</th>
<th>Normally Unacceptable</th>
<th>Clearly Unacceptable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential</td>
<td>&lt; 60</td>
<td>60 – 70</td>
<td>70 – 75</td>
<td>&gt; 75</td>
</tr>
<tr>
<td>Transient Lodging</td>
<td>&lt; 60</td>
<td>60 – 75</td>
<td>75 – 80</td>
<td>&gt; 80</td>
</tr>
<tr>
<td>Schools, Libraries, Churches, Hospitals, Nursing Homes, etc.</td>
<td>&lt; 60</td>
<td>60 – 70</td>
<td>70 – 80</td>
<td>&gt; 80</td>
</tr>
<tr>
<td>Theaters &amp; Auditoriums</td>
<td>&lt; 55</td>
<td>55 – 70</td>
<td>70 – 75</td>
<td>&gt; 75</td>
</tr>
<tr>
<td>Outdoor Spectator Venues</td>
<td>&lt; 60</td>
<td>60 – 75</td>
<td>--</td>
<td>&gt; 75</td>
</tr>
<tr>
<td>Playgrounds &amp; Neighborhood Parks</td>
<td>&lt; 70</td>
<td>--</td>
<td>70 – 75</td>
<td>&gt; 75</td>
</tr>
<tr>
<td>Golf Courses, Riding Stables, Water Recreation, Cemeteries, Etc.</td>
<td>&lt; 70</td>
<td>--</td>
<td>70 – 80</td>
<td>&gt; 80</td>
</tr>
<tr>
<td>Commercial &amp; Professional Development</td>
<td>&lt; 65</td>
<td>65 – 80</td>
<td>&gt; 80</td>
<td>--</td>
</tr>
<tr>
<td>Industrial &amp; Agricultural Development</td>
<td>&lt; 70</td>
<td>70 – 80</td>
<td>&gt; 80</td>
<td>--</td>
</tr>
</tbody>
</table>

**Notes:**

- Normally Acceptable – specified land use is satisfactory based upon the assumption that any buildings involved are of normal conventional construction without any special noise 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 included in the design.
- 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 should not be undertaken.

Source: City of Cloverdale 2009
E.2 City of Cotati

Table 2. City of Cotati Land Use Compatibility for Community Noise Environment

<table>
<thead>
<tr>
<th>Land Use Category</th>
<th>Normally Acceptable</th>
<th>Conditionally Acceptable</th>
<th>Unacceptable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single-Family Residential</td>
<td>&lt; 60</td>
<td>60 – 75</td>
<td>&gt; 75</td>
</tr>
<tr>
<td>Multi-Family Residential, Hotels, and Motels</td>
<td>&lt; 65</td>
<td>65 – 75</td>
<td>&gt; 75</td>
</tr>
<tr>
<td>Outdoor Sports and Recreation, Neighborhood Parks and Playgrounds</td>
<td>&lt; 65</td>
<td>65 – 80</td>
<td>&gt; 80</td>
</tr>
<tr>
<td>Schools, Libraries, Museums, Hospitals, Personal Care, Meeting Halls, Churches</td>
<td>&lt; 60</td>
<td>60 – 75</td>
<td>&gt; 75</td>
</tr>
<tr>
<td>Office Buildings, Business Commercial, and Professional</td>
<td>&lt; 67.5</td>
<td>67.5 – 80</td>
<td>&gt; 80</td>
</tr>
<tr>
<td>Auditoriums, Concert Halls, Amphitheaters</td>
<td>--</td>
<td>&lt;70</td>
<td>&gt; 70</td>
</tr>
<tr>
<td>Industrial</td>
<td>&lt; 70</td>
<td>70 – 80</td>
<td>&gt; 80</td>
</tr>
</tbody>
</table>

Notes:

- Normally Acceptable – specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special insulation requirements.
- Conditionally Acceptable – Specified land use may be permitted only after detailed analysis of the noise reduction requirements and needed noise insulation features included in the design.
- Unacceptable – New construction or development should generally not be undertaken because mitigation is usually not feasible to comply with noise element policies.

Source: City of Cotati 2015

City of Cotati Municipal Code

Section 17.30.050 of the City of Cotati Municipal Code addresses noise standards for all development and land uses. This section implements the noise related policies of the General Plan and provides standards for noise mitigation that are intended to protect the community by limiting exposure to the unhealthy effects of noise. It includes maximum allowable noise level standards (see Table 3 and Table 4).

This section of the Municipal Code also establishes requirements for the preparation of acoustical analyses for certain types of projects, and sets a limitation on hours of construction. Unless otherwise established as conditions of approval, the allowable hours of construction in Cotati are:

- Monday through Friday: 7:00 a.m. to 7:00 p.m.
- Saturdays, Sundays, Holidays: 9:00 a.m. to 5:00 p.m. (only as condition of approval).
### Table 3. City of Cotati Maximum Allowable Noise Level by Receiving Land Use

<table>
<thead>
<tr>
<th>Noise Sensitive Land Use</th>
<th>Outdoor Activity Areas</th>
<th>Interior Spaces</th>
<th>Interior Spaces</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>dBA L&lt;sub&gt;dn&lt;/sub&gt;</td>
<td>dBA L&lt;sub&gt;dn&lt;/sub&gt;</td>
<td>dBA L&lt;sub&gt;eq&lt;/sub&gt;</td>
</tr>
<tr>
<td>Residential</td>
<td>65</td>
<td>45</td>
<td>NA</td>
</tr>
<tr>
<td>Transient lodging</td>
<td>65</td>
<td>45</td>
<td>NA</td>
</tr>
<tr>
<td>Hospital, extended care</td>
<td>65</td>
<td>45</td>
<td>NA</td>
</tr>
<tr>
<td>Theater, auditorium</td>
<td>--&lt;sup&gt;3&lt;/sup&gt;</td>
<td>45</td>
<td>35</td>
</tr>
<tr>
<td>Meeting facility, public or private</td>
<td>65</td>
<td>45</td>
<td>40</td>
</tr>
<tr>
<td>Offices</td>
<td>75</td>
<td>45</td>
<td>45</td>
</tr>
<tr>
<td>School, library, Museum</td>
<td>65</td>
<td>45</td>
<td>45</td>
</tr>
<tr>
<td>Playground park</td>
<td>70</td>
<td>NA</td>
<td>NA</td>
</tr>
</tbody>
</table>

Notes:
1. Where the location of outdoor activity is unknown, the exterior noise level standard shall be applied to the property line of the receiving land use.
2. Where it is not possible to reduce noise in outdoor activity areas to 65 dBA L<sub>dn</sub>/CNEL or less using a practical application of the best-available noise reduction measures, an exterior noise level of up to 70 dBA L<sub>dn</sub>/CNEL may be allowed provided that available exterior noise level reduction measures have been implemented and interior noise levels are in compliance with this table.
3. Subject to an acoustical analysis in compliance with subsection (C)(2) of Municipal Code Section 17.30.042.
Source: City of Cotati Municipal Code, Section 17.30.050.

### Table 4. City of Cotati Noise Standards for Short-Term Events Near Residential Areas

<table>
<thead>
<tr>
<th>Sound Level</th>
<th>Maximum Allowable Sound Level&lt;sup&gt;1&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Day/Evening dB (7 a.m. to 10 p.m.)</td>
</tr>
<tr>
<td>Hourly Leq dB</td>
<td>50</td>
</tr>
<tr>
<td>Maximum level; dB</td>
<td>70</td>
</tr>
<tr>
<td>Maximum level; dB for impulsive noise</td>
<td>65</td>
</tr>
</tbody>
</table>

Notes:
1. If the offensive noise contains a steady, audible tone (e.g., a screech or hum), is a repetitive noise (e.g., hammering), or contains speech or music, the maximum allowable sound level shall be reduced by 5 dB.
Source: City of Cotati Municipal Code, Section 17.30.050.
E.3 City of Healdsburg

Table 5. City of Healdsburg Land Use Compatibility for Community Noise Environments

<table>
<thead>
<tr>
<th>Land Use Category</th>
<th>Community Noise Exposure (dBA Ldn)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Normally Acceptable1</td>
</tr>
<tr>
<td>Residential – Single-family, duplex, mobile home</td>
<td>≤ 605</td>
</tr>
<tr>
<td>Residential – Multi-family</td>
<td>≤ 656</td>
</tr>
<tr>
<td>Residential – Interior</td>
<td>≤ 45</td>
</tr>
<tr>
<td>Transient lodging – Motel, hotel</td>
<td>&lt; 65</td>
</tr>
<tr>
<td>School, library, church, hospital, nursing home</td>
<td>&lt; 70</td>
</tr>
<tr>
<td>Auditorium</td>
<td>--</td>
</tr>
<tr>
<td>Sports arena, outdoor spectator sports</td>
<td>--</td>
</tr>
<tr>
<td>Playground, neighborhood park</td>
<td>&lt; 70</td>
</tr>
<tr>
<td>Golf course, cemetery</td>
<td>&lt; 75</td>
</tr>
<tr>
<td>Commercial – Retail, office, service</td>
<td>&lt; 70</td>
</tr>
<tr>
<td>Industrial, utility, agriculture</td>
<td>&lt; 75</td>
</tr>
</tbody>
</table>

Notes:
- dBA = A-weighted decibels; Ldn = day-night average noise level
- Specified land use is satisfactory based on the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.
- New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and after 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.
- New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design. Outdoor areas must be shielded.
- New construction or development should generally not be undertaken.
- Outdoor private use areas
- Outdoor active use areas, excluding balconies

Source: City of Healdsburg 2009

City of Healdsburg Municipal Code

Section 9.32.070 and 9.32.080 of the City of Healdsburg Municipal Code addresses noise standards for construction and temporary activities as well as standards for maximum sound levels for receiving land uses. This section implements the noise related policies of the General Plan. It includes maximum allowable noise level standards (see Table 6).

Noise sources associated with or vibration created by construction, repair, remodeling, or grading of any real property or during authorized seismic surveys are permitted, provided such activities do not take place between the nighttime hours of 6:00 p.m. and 7:30 a.m. daily, or at any time on Sunday or a legal holiday, and provided the noise level created by such activities and any vibration created does not endanger the public health, welfare, and safety.
### Table 6. City of Healdsburg Standards for Maximum Sound Levels

<table>
<thead>
<tr>
<th>Receptor Land Use</th>
<th>Daytime Exterior Sound Level dBA L₁₀</th>
<th>Nighttime Exterior Sound Level dBA L₁₀</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential-zoned properties not located adjacent to industrial-zoned properties</td>
<td>60</td>
<td>55</td>
</tr>
<tr>
<td>Residential-zoned properties located adjacent to industrial-zoned properties</td>
<td>65</td>
<td>55</td>
</tr>
<tr>
<td>Commercial-zoned properties</td>
<td>65</td>
<td>60</td>
</tr>
<tr>
<td>Industrial-zoned properties</td>
<td>75</td>
<td>70</td>
</tr>
</tbody>
</table>

**Notes:**
Daytime shall be considered 7:00 a.m. to 8:00 p.m., and nighttime shall be considered to be 8:00 p.m. to 7:00 a.m. Where a land use activity is carried out over two of the above receptor land uses, the least restrictive sound level standard shall apply.

Source: City of Healdsburg Municipal Code, Section 9.32.080.
E.4 City of Petaluma

Table 7. City of Petaluma Land Use Compatibility Standards

<table>
<thead>
<tr>
<th>Land Use Category</th>
<th>Normally Acceptable</th>
<th>Conditionally Acceptable</th>
<th>Normally Unacceptable</th>
<th>Clearly Unacceptable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential – Low Density Single Family, Duplex, Mobile Homes</td>
<td>&lt; 60</td>
<td>55 – 70</td>
<td>70 – 75</td>
<td>&gt; 75</td>
</tr>
<tr>
<td>Residential – Multifamily</td>
<td>&lt; 65</td>
<td>60 – 70</td>
<td>70 – 75</td>
<td>&gt; 75</td>
</tr>
<tr>
<td>Transient Lodging – Motel, Hotel</td>
<td>&lt; 65</td>
<td>60 – 70</td>
<td>70 – 80</td>
<td>&gt; 80</td>
</tr>
<tr>
<td>Schools, Libraries, Churches, Hospitals, Nursing Homes</td>
<td>&lt; 70</td>
<td>60 – 70</td>
<td>70 – 80</td>
<td>&gt; 80</td>
</tr>
<tr>
<td>Auditorium, Concert Halls, Amphitheaters</td>
<td>--</td>
<td>&lt; 70</td>
<td>--</td>
<td>&gt; 65</td>
</tr>
<tr>
<td>Sports Arena, Outdoor Spectator Sports</td>
<td>--</td>
<td>&lt; 75</td>
<td>--</td>
<td>&gt; 70</td>
</tr>
<tr>
<td>Playgrounds, Neighborhood Parks</td>
<td>&lt; 70</td>
<td>67.5 – 75</td>
<td>--</td>
<td>&gt; 72.5</td>
</tr>
<tr>
<td>Golf Courses, Riding Stables, Water Recreation, Cemeteries</td>
<td>&lt; 75</td>
<td>70 – 80</td>
<td>&gt; 80</td>
<td>--</td>
</tr>
<tr>
<td>Office Buildings, Business Commercial and Professional</td>
<td>&lt; 70</td>
<td>67.5 – 77.5</td>
<td>&gt; 75</td>
<td>--</td>
</tr>
<tr>
<td>Industrial, Manufacturing Utilities, Agriculture</td>
<td>&lt; 75</td>
<td>70 – 80</td>
<td>&gt; 75</td>
<td>--</td>
</tr>
</tbody>
</table>

Notes:
- Normally Acceptable – specified land use is satisfactory, based upon the assumption that any building involved are of normal conventional construction, without any special noise 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 included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.
- Normally Unacceptable – New construction or development should generally be discouraged. If new construction 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 should generally not be undertaken.

Source: City of Petaluma 2008a

City of Petaluma Municipal Code

Per Section 21.040 of the City's Zoning Ordinance, noise generating construction activities are limited to the hours of 7:00 a.m. to 10:00 p.m. on weekdays and 9:00 a.m. to 10:00 p.m. on weekends and holidays. For daily operational noise, the noise ordinance generally establishes an hourly average level of 60 dBA Leq as the maximum that may be generated on one land use that would be affecting another land use, and the allowable levels are adjusted to account for the ambient noise level.

This ordinance also defines the exterior noise level criteria for the City of Petaluma (see Table 8).
Table 8. City of Petaluma Exterior Noise Level Criteria

<table>
<thead>
<tr>
<th>Time:</th>
<th>Maximum Noise Exposure (Leq, dBA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 p.m. to 7 a.m., Mon.-Fri. and</td>
<td></td>
</tr>
<tr>
<td>10 p.m. to 8 a.m. Sat., Sun., Holidays</td>
<td></td>
</tr>
<tr>
<td>General Plan Ambient</td>
<td>60</td>
</tr>
<tr>
<td>Cumulative period of 15 minutes or more in 1 hour</td>
<td>65</td>
</tr>
<tr>
<td>Cumulative period of 5 minutes or more in 1 hour</td>
<td>70</td>
</tr>
<tr>
<td>Cumulative period of 1 minute or more in 1 hour</td>
<td>75</td>
</tr>
</tbody>
</table>

Source: City of Petaluma 2008b

E.5 City of Rohnert Park

Table 9. City of Rohnert Park Land Use Compatibility for Community Noise Environments

<table>
<thead>
<tr>
<th>Land Use Category</th>
<th>Exterior Day/Night Noise Levels (DNL or L_{dn}, dB)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Normally Acceptable</td>
</tr>
<tr>
<td>Residential – Single Family</td>
<td>&lt; 60</td>
</tr>
<tr>
<td>Residential – Multiple Family</td>
<td>&lt; 65</td>
</tr>
<tr>
<td>Transient Lodging – Motels, Hotels</td>
<td>&lt; 65</td>
</tr>
<tr>
<td>Schools, Libraries, Churches, Hospitals*, Nursing Homes</td>
<td>&lt; 70</td>
</tr>
<tr>
<td>Auditorium, Concert Halls, Amphitheaters</td>
<td>--</td>
</tr>
<tr>
<td>Sports Arena, Outdoor Spectator Sports</td>
<td>--</td>
</tr>
<tr>
<td>Playgrounds, Parks</td>
<td>&lt; 70</td>
</tr>
<tr>
<td>Golf Courses, Riding Stables, Water Recreation, Cemeteries</td>
<td>&lt; 75</td>
</tr>
<tr>
<td>Office Buildings, Business Commercial and Professional</td>
<td>&lt; 70</td>
</tr>
<tr>
<td>Industrial, Manufacturing Utilities, Agriculture</td>
<td>&lt; 75</td>
</tr>
</tbody>
</table>

Notes:
* Because hospitals are often designed and constructed with high noise insulation properties, it is possible for them to be satisfactorily located in noisier areas.
Normal Acceptable – specified land use is satisfactory, based upon the assumption that any building involved are of normal conventional construction, without any special noise 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 included in the design.
Normally Unacceptable – New construction or development should generally 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 should not be undertaken.
Source: City of Rohnert Park 2000
City of Rohnert Park Municipal Code

The City of Rohnert Park has also adopted a Noise Ordinance (Chapter 9.44 of the Rohnert Park Municipal Code), which identifies ambient base noise levels, noise standards for various sources, specific noise restrictions, exemptions, and variances for sources of noise within the city. The Noise Ordinance applies to all noise sources with the exception of any vehicle that is operated upon any public highway, street or right-of-way, or to the operation of any off-highway vehicle, to the extent that it is regulated in the State Vehicle Code, and all other sources of noise that are specifically exempted. The ambient base noise levels of zoning categories is provided in Table 10.

Table 10. City of Rohnert Park Ambient Base Noise Levels

<table>
<thead>
<tr>
<th>Zone</th>
<th>Time</th>
<th>Sound Level A, decibels community environment classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>R1 and R2</td>
<td>10 p.m. to 7 a.m.</td>
<td>45</td>
</tr>
<tr>
<td>R1 and R2</td>
<td>7 p.m. to 10 p.m.</td>
<td>40</td>
</tr>
<tr>
<td>R1 and R2</td>
<td>7 a.m. to 7 p.m.</td>
<td>55</td>
</tr>
<tr>
<td>R3 and R4</td>
<td>10 p.m. to 7 a.m.</td>
<td>50</td>
</tr>
<tr>
<td>R3 and R4</td>
<td>7 a.m. to 10 p.m.</td>
<td>55</td>
</tr>
<tr>
<td>Commercial</td>
<td>10 p.m. to 7 a.m.</td>
<td>60</td>
</tr>
<tr>
<td>Commercial</td>
<td>7 a.m. to 10 p.m.</td>
<td>70</td>
</tr>
<tr>
<td>Limited industrial</td>
<td>Anytime</td>
<td>75</td>
</tr>
<tr>
<td>General industrial</td>
<td>Anytime</td>
<td></td>
</tr>
</tbody>
</table>

Source: City of Rohnert Park Municipal Code, Section 9.44.040

The Noise Ordinance also limits construction activity within a residential zone or a radius of 500 feet there from to the hours of 8:00 A.M. through 6:00 P.M. when the potential noise levels would cause discomfort or annoyance to a reasonable person of normal sensitiveness residing in the area.
E.6 City of Sebastopol

Table 11. City of Sebastopol Noise and Land Use Compatibility Standards

<table>
<thead>
<tr>
<th>Land Use Category</th>
<th>Normally Acceptable</th>
<th>Conditionally Acceptable</th>
<th>Normally Unacceptable</th>
<th>Clearly Unacceptable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential</td>
<td>&lt; 60</td>
<td>60 – 70</td>
<td>70 – 75</td>
<td>&gt; 75</td>
</tr>
<tr>
<td>Transient Lodging; Motel, Hotel</td>
<td>&lt; 60</td>
<td>60 – 75</td>
<td>70 – 80</td>
<td>&gt; 80</td>
</tr>
<tr>
<td>School, Library, Church, Hospital, Nursing Home</td>
<td>&lt; 60</td>
<td>60 – 70</td>
<td>70 – 80</td>
<td>&gt; 80</td>
</tr>
<tr>
<td>Auditorium, Concert Hall, Amphitheater, Sports Arena</td>
<td>--</td>
<td>&lt; 70</td>
<td>--</td>
<td>&gt; 70</td>
</tr>
<tr>
<td>Playground, Recreational Open Space, Park</td>
<td>&lt; 70</td>
<td>60 – 70</td>
<td>70 – 75</td>
<td>&gt; 72.5</td>
</tr>
<tr>
<td>Golf Course, Stables, Water Recreation, Cemetery</td>
<td>&lt; 70</td>
<td>60 – 70</td>
<td>70 – 80</td>
<td>&gt; 80</td>
</tr>
<tr>
<td>Office Buildings, Business Commercial</td>
<td>&lt; 65</td>
<td>65 – 77.5</td>
<td>&lt; 75</td>
<td>--</td>
</tr>
<tr>
<td>Industrial, Utilities, Manufacturing, Agriculture</td>
<td>&lt; 70</td>
<td>70 – 80</td>
<td>&lt; 75</td>
<td>--</td>
</tr>
</tbody>
</table>

Notes:

- Normally Acceptable – specified land use is satisfactory, based upon the assumption that any building involved are of normal conventional construction, without any special noise 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 included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.
- Normally Unacceptable – New construction or development should generally be discouraged. If new construction 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 should generally not be undertaken.

Source: City of Sebastopol 1994

City of Sebastopol Municipal Code

Section 8.25.060 of the City of Sebastopol Municipal Code addresses noise standards for all development and land uses. Noise levels in excess of the regulations established below are considered unlawful:

- No person in a residential zone shall emit noise beyond the boundaries of his/her premises exceeding the levels stated herein and applicable to adjacent residential, commercial and industrial zones.
  - Noise Levels shall not exceed:
    - Daytime Hours — 55 dba
    - Nighttime Hours — 45 dba
- No person in a commercial zone shall emit noise beyond the boundary of his/her premises exceeding the levels state herein and applicable to adjacent residential, commercial or industrial zones:
• Noise Levels shall not exceed:
  - Daytime Hours — 55 dba
  - Nighttime Hours — 45 dba
• No person in an industrial zone shall emit noise beyond the boundary of his/her premises exceeding the levels stated herein and applicable to adjacent residential commercial or industrial zones:
  - Noise Levels shall not exceed:
    - Daytime Hours — 65 dba
    - Nighttime Hours — 55 dba
• High background noise levels and impulse noise. In those individual cases where the background noise levels caused by sources not subject to these regulations exceed the standards contained herein, a source shall be considered to cause excessive noise if the noise emitted by such source exceeds the background noise levels by five (5) dBA, provided that no source subject to the provisions of this chapter shall emit noise in excess of eighty (80) dBA at any time and provided that this section does not decrease the permissible levels of other sections of this chapter.
  - No person shall cause or allow the emission of impulse noise in excess of eighty (80) dB peak sound pressure level during the nighttime to any residential noise zone.
  - No person shall cause or allow the emission of impulse noise in excess of one hundred (100) dB peak sound pressure level at any time to any zone.

In addition, Section 8.23.030 of the City of Sebastopol Municipal Code addresses regulates noise generated by construction:
• It shall be unlawful for any person, within a residential zone or within 300 feet thereof, during the days and hours designated below, to perform any construction or repair work on buildings, structures or projects, or to operate any construction type equipment or device, in such a manner so as to generate noise causing a reasonable person of normal sensitiveness residing in the area discomfort of annoyance (except in the case of emergencies or upon advance written approval of the City Engineer when necessary for the convenience of the public).
• The following days and hours are those in which the above activities shall be limited:
  - Sunday 5:00 p.m. to Monday 7:00 a.m.
  - Monday 8:00 p.m. to Tuesday 7:00 a.m.
  - Tuesday 8:00 p.m. to Wednesday 7:00 a.m.
  - Wednesday 8:00 p.m. to Thursday 7:00 a.m.
  - Thursday 8:00 p.m. to Friday 7:00 a.m.
  - Friday 8:00 p.m. to Saturday 8:00 a.m.
  - Saturday 5:00 p.m. to Sunday 8:00 a.m.
• Upon any of the following designated holidays, the above activities shall be limited for the complete 24-hour period:
- January 1st
- The last Monday in May
- July 4th
- The first Monday in September
- November 11th, Veterans Day
- December 25th
- The Thursday in November appointed as Thanksgiving Day.
### E.7 City of Sonoma

#### Table 12. City of Sonoma Acceptable Outdoor Noise Levels

<table>
<thead>
<tr>
<th>Land Use Category</th>
<th>Clearly Acceptable</th>
<th>Normally Acceptable</th>
<th>Conditionally Acceptable</th>
<th>Normally Unacceptable</th>
<th>Clearly Unacceptable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential</td>
<td>&lt; 55</td>
<td>55 – 60</td>
<td>60 – 65</td>
<td>65 – 70</td>
<td>&gt; 70</td>
</tr>
<tr>
<td>Single-family dwellings, duplexes, condominiums, apartments, hotels</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Outdoor Public Facilities</td>
<td>&lt; 55</td>
<td>55 – 60</td>
<td>60 – 65</td>
<td>65 – 70</td>
<td>&gt; 70</td>
</tr>
<tr>
<td>Neighborhood parks, amphitheaters, cemeteries</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public Buildings</td>
<td>&lt; 60</td>
<td>60 – 65</td>
<td>65 – 70</td>
<td>70 – 75</td>
<td>&gt; 75</td>
</tr>
<tr>
<td>Schools, libraries, churches, nursing homes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commercial</td>
<td>&lt; 60</td>
<td>60 – 65</td>
<td>65 – 70</td>
<td>70 – 75</td>
<td>&gt; 75</td>
</tr>
<tr>
<td>Offices, retail businesses, and professional facilities</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Industrial</td>
<td>&lt; 65</td>
<td>65 – 70</td>
<td>70 – 75</td>
<td>--</td>
<td>&gt; 75</td>
</tr>
<tr>
<td>Manufacturing, utilities, and agricultural facilities</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Notes:**
- Clearly Acceptable – The activities associated with the specified use can be carried out with virtually no interference from noise.
- Normally Acceptable – Occasional slight interference with outdoor activities may occur. Conventional structures will ensure that interior noise levels are compatible with indoor activities and with indoor activities if windows are open. New construction should only be undertaken following a noise study and subject to the implementation of noise reduction measures to upgrade conditions to normally acceptable levels.
- Conditionally Acceptable – The indicated noise levels will cause moderate interference with outdoor activities and with indoor activities if windows are open. New construction should be undertaken following a noise study and subject to the implementation of noise reduction measures to upgrade conditions to normally acceptable levels.
- Normally Unacceptable – Noise will create substantial interference with indoor and outdoor activities. New construction should be discouraged. If new construction does occur, noise mitigation should be required to bring exterior levels up to normal acceptable level and interior levels in compliance with state law.
- Clearly Unacceptable – Unacceptable noise intrusion upon land use activities will occur. Adequate structural insulation will be impractical under most circumstances. New construction is generally not recommended.
- Source: City of Sonoma 2006

#### City of Sonoma Municipal Code

Section 9.56.040 and 9.56.050 of the City of Sonoma Municipal Code addresses general noise limits for all land uses and construction noise limits. Table 13 provides the general noise limits for land uses in the City of Sonoma.
Table 13. City of Sonoma General Noise Limits

<table>
<thead>
<tr>
<th>Property Type or Zone</th>
<th>Daytime Limits</th>
<th>Nighttime Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential</td>
<td>60 dBA intermittent</td>
<td>50 dBA constant</td>
</tr>
<tr>
<td></td>
<td>50 dBA intermittent</td>
<td>40 dBA constant</td>
</tr>
<tr>
<td>Commercial/Mixed Use</td>
<td>65 dBA intermittent</td>
<td>60 dBA intermittent</td>
</tr>
<tr>
<td></td>
<td>55 dBA constant</td>
<td>55 dBA constant</td>
</tr>
<tr>
<td>Public Property</td>
<td>Most restrictive noise limit applicable to adjoining private property</td>
<td></td>
</tr>
</tbody>
</table>

Source: City of Sonoma Municipal Code, Section 9.56.040

Any construction project on property within the city, involving construction, alteration, demolition, maintenance of construction equipment, deliveries of materials or equipment, or repair activities otherwise allowed under applicable law shall be allowed as follows:

- between 8:00 a.m. and 6:00 p.m., Monday through Friday,
- between 9:00 a.m. and 6:00 p.m. on Saturday, and
- between 10:00 a.m. and 6:00 p.m. on Sundays and holidays; however,
- the noise level at any point outside of the property plane of the project shall not exceed 90 dBA.
## E.8 Town of Windsor

### Table 14. Town of Windsor Land Use Compatibility for Community Noise Environments

<table>
<thead>
<tr>
<th>Land Use Category</th>
<th>Community Noise Exposure ($L_{dn}$ or CNEL, dB)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Normally Acceptable</td>
</tr>
<tr>
<td>Residential – Low Density Single Family, Duplex, Mobiles Homes</td>
<td>&lt; 60</td>
</tr>
<tr>
<td>Residential – Multi Family</td>
<td>&lt; 65</td>
</tr>
<tr>
<td>Transient Lodging – Motels, Hotels</td>
<td>&lt; 65</td>
</tr>
<tr>
<td>Schools, Libraries, Churches, Hospitals, Nursing Homes</td>
<td>&lt; 70</td>
</tr>
<tr>
<td>Auditorium, Concert Halls, Amphitheaters</td>
<td>--</td>
</tr>
<tr>
<td>Sports Arena, Outdoor Spectator Sports</td>
<td>--</td>
</tr>
<tr>
<td>Playgrounds, Neighborhood Parks</td>
<td>&lt; 70</td>
</tr>
<tr>
<td>Golf Courses, Riding Stables, Water Recreation, Cemeteries</td>
<td>&lt; 75</td>
</tr>
<tr>
<td>Office Buildings, Business Commercial and Professional</td>
<td>&lt; 70</td>
</tr>
<tr>
<td>Industrial, Manufacturing Utilities, Agriculture</td>
<td>&lt; 75</td>
</tr>
</tbody>
</table>

**Notes:**

- Normally Acceptable – specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise 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 included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.
- Normally Unacceptable – New construction or development should generally be discouraged. If new construction 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 should generally not be undertaken.

**Source:** Town of Windsor 1996
### E.9 Sonoma County

**Table 9. Sonoma County Maximum Allowable Exterior Noise Exposures for Non-transportation Noise Sources**

<table>
<thead>
<tr>
<th>Hourly Noise Metric$^1$, dBA</th>
<th>Daytime (7 a.m. to 10 p.m.)</th>
<th>Nighttime (10 p.m. to 7 a.m.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>L50 (30 minutes in any hour)</td>
<td>50</td>
<td>45</td>
</tr>
<tr>
<td>L25 (15 minutes in any hour)</td>
<td>55</td>
<td>50</td>
</tr>
<tr>
<td>L08 (4 minutes 48 seconds in any hour)</td>
<td>60</td>
<td>55</td>
</tr>
<tr>
<td>L02 (72 seconds in any hour)</td>
<td>65</td>
<td>60</td>
</tr>
</tbody>
</table>

$^1$ The sound level exceeded n% of the time in any hour. For example, the L50 is the value exceeded 50% of the time or 30 minutes.

Source: Sonoma County 2008
E.10 References


City of Healdsburg, n/d. Healdsburg Municipal Code. Available:


City of Petaluma. 2008b. Petaluma Implementing Zoning Ordinance. Available:


City of Rohnert Park. n/d. Rohnert Park Municipal Code. Available:


City of Sebastopol. n/d. Sebastopol Municipal Code. Available:


City of Sonoma. n/d. Sonoma Municipal Code. Available:
