DRAFT ENVIRONMENTAL IMPACT REPORT

Climate Action Plan

Prepared for

County of Napa
Planning, Building, and Environmental Services Department
1195 Third Street, Suite 210
Napa, CA 94559

May 2019

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Prepared for:

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LIST OF ABBREVIATIONS

°C	degrees Celsius
°F	degrees Fahrenheit
µg/m^3	micrograms per cubic meter
2008 GP	2008 Napa County General Plan Update
2008 PEIR	Final Program Environmental Impact Report
2017 Scoping Plan	*California's 2017 Climate Change Scoping Plan*
AASHTO	American Association of State Highway and Transportation Officials
AB	Assembly Bill
ABAG	Association of Bay Area Governments
ACRD	American Canyon Recycling and Disposal
ADA	Americans with Disabilities Act
af	acre-feet
AFV	alternative fuel vehicles
ALUCP	Airport Land Use Compatibility Plan
AP	Agricultural Preserve
asl	above sea level
AW	Agricultural Watershed
BAAQMD	Bay Area Air Quality Management District
BAU	business as usual
BGS	Berryessa Garbage Service
BMP	best management practice
CAA	Clean Air Act
CAAA	Clean Air Act Amendments of 1990
CAAQS	California Ambient Air Quality Standards
CAFE	Corporate Average Fuel Economy
CAL FIRE	California Department of Forestry and Fire Protection
Cal/EPA	California Environmental Protection Agency
CalRecycle	California Department of Resources Recycling and Recovery
Caltrans	California Department of Transportation
CAP	Climate Action Plan
CARB	California Air Resources Board
CBC	California Building Code
CCA	community choice aggregation program
CCAA	California Clean Air Act
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CDPH	California Department of Public Health
CEC	California Energy Commission
CEQA	California Environmental Quality Act

CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980
CESA	California Endangered Species Act
CFC	California Fire Code
CFNR	California Northern Railroad
CFR	Code of Federal Regulations
CH_4	methane
Checklist	CAP Consistency Checklist
CMA	Congestion Management Agency
CMP	Congestion Management Program
CNDDB	California Natural Diversity Database
CNG	compressed natural gas
CNRA	California Natural Resources Agency's
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
COCWD	Circle Oaks County Water District
Compatibility Plan	Napa County Airport Land Use Compatibility Plan
County	Napa County
CPUC	California Public Utilities Commission
CRHR	California Register of Historical Resources
CRPR	California Rare Plant Rank
CTC	California Transportation Commission
CUPA	Certified Unified Program Agency
CWA	Clean Water Act
dB	decibels
dBA	A-weighted decibel
diesel PM	particulate matter from diesel-fueled engines
DOC	California Department of Conservation
DOT	U.S. Department of Transportation
Draft EIR	Draft Environmental Impact Report
DTSC	California Department of Toxic Substances Control
DWQ	Division of Water Quality
DWR	California Department of Water Resources
EAP	State of California 2008 Update Energy Action Plan
ECA	Essential Connectivity Area
EHA	erosion hazard area
EIR	Environmental Impact Report
EO	Executive Order
EPA	U.S. Environmental Protection Agency
EPAct	Energy Policy Act of 1992
ESA	federal Endangered Species Act
EVCS	electric vehicle–charging stations

FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Agency
F-gases	fluorinated gases
FHSZ	Fire Hazard Severity Zones
FIRM	flood insurance rate map
FMMP	Farmland Mapping and Monitoring Program
FR	Federal Register
FRA	Federal Responsibility Areas
FTA	Federal Transit Administration
GHG	greenhouse gas
GPA	General Plan Amendment
GSP	groundwater sustainability plans
GWP	global warming potential
HFC	hydrofluorocarbon
HRA	health risk assessment
I-80	Interstate freeway
IEPR	Integrated Energy Policy Report
in/sec	inches per second
lb/day	pounds per day
LBRID	Lake Berryessa Resort Improvement District
LCFS	Low Carbon Fuel Standard
L_{dn}	day-night noise level
LID	low impact development
L_{max}	maximum noise level
LRA	Local Responsibility Areas
LUST	leaking underground storage tank
MCE	Marin Clean Energy
MCL	maximum contaminant level
MLD	most likely descendant
MMT	million metric tons
$MMTCO_2e$	metric tons of carbon dioxide equivalent
mph	miles per hour
MPO	metropolitan planning organization
MS4	municipal separate storm sewer system
MST	Milliken-Sarco-Tulucay
MTBE	methyl tertiary butyl ether
MTC	Metropolitan Transportation Commission
$MTCO_2e$	metric tons of carbon dioxide equivalent
MTS	Metropolitan Transportation System
N_2O	nitrous oxide
NAAQS	national ambient air quality standards

NAHC	Native American Heritage Commission
NBRID	Napa Berryessa Resort Improvement District
NCDEH	Napa County Department of Environmental Health
NCFCWCD	Napa County Flood Control and Water Conservation District's
NCRWS	Napa County Recycling and Waste Services
NCSPPP	Napa Countywide Stormwater Pollution Prevention Program
NCTPA	Napa County Transportation and Planning Agency
NFD	not formally defined
NFIP	National Flood Insurance Program
NHPA	National Historic Preservation Act of 1966
NMFS	National Oceanic and Atmospheric Administration National Marine Fisheries Service
NO_2	nitrogen dioxide
NOA	Naturally occurring asbestos
NOP	Notice of Preparation
NO_x	oxides of nitrogen
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
NRRD	Napa River Reclamation District #2109
NRWS	Napa Recycling and Waste Services
NSD	Napa Sanitation District
NVWMA	Napa Vallejo Waste Management Authority
NWCG	National Wildlife Coordinating Group's
OAHMP	*Napa Operational Area Hazard Mitigation Plan*
OEHHA	Office of Environmental Health Hazard Assessment
OES	California Office of Emergency Services
OIMP	odor impact minimization plan
OPR	Governor's Office of Planning and Research
OSHA	Occupational Safety and Health Administration
PCB	polychlorinated biphenyls
PFC	perfluorocarbon
PG&E	Pacific Gas and Electric Company
PM_{10}	Respirable particulate matter
$PM_{2.5}$	Fine particulate matter
Porter-Cologne Act	Porter-Cologne Water Quality Control Act of 1969
ppm	parts per million
PPV	peak particle velocity
PRC	Public Resources Code
project	Napa County Climate Action Plan Project
PV	photovoltaic
RCP	Representative Concentration Pathway
RCRA	Resource Conservation and Recovery Act of 1976
RMS	root-mean-square
ROG	reactive organic gases

RPS	renewable portfolio standard
RTP	Regional Transportation Plan
RTP/SCS	Regional Transportation Plan and the Sustainable Communities Strategy
RWQCB	regional water quality control board
SAF Plan	State Alternative Fuels Plan
SARA	Superfund Amendments and Reauthorization Act of 1986
SB	Senate Bill
SCS	sustainable communities strategy
SF_6	sulfur hexafluoride
SFBAAB	San Francisco Bay Area Air Basin
SFWD	Spanish Flat Water District
SGMA	Sustainable Groundwater Management Act
SIP	State implementation plan
SLCP	short-lived climate pollutant
SMP	smoke management plan
SO_2	sulfur dioxide
SR	State Route
SRA	State Responsibility Areas
STIP	State Transportation Improvement Program
SWMP	stormwater management plan
SWPPP	storm water pollution prevention plan
SWRCB	State Water Resources Control Board
SWRQCB	State Water Resources Control Board
TAC	toxic air contaminant
TCR	Tribal cultural resources
TRB	Transportation Research Board
USACE	U.S. Army Corps of Engineers
USDOT	U.S. Department of Transportation
USFWS	U.S. Fish and Wildlife Service
UST	underground storage tank
UVDS	Upper Valley Disposal Service
UVWMA	Upper Valley Waste Management Agency
VdB	vibration decibels
VMT	vehicle miles traveled
VOC	Volatile organic compounds
WAA	Napa County Water Availability Analysis
Water Pollution Act	Federal Water Pollution Prevention and Control Act
ZEV	zero-emission vehicle

EXECUTIVE SUMMARY

ES.1 INTRODUCTION

This summary is provided in accordance with the California Environmental Quality Act (CEQA) Guidelines Section 15123. As stated in the State CEQA Guidelines Section 15123(a), "an environmental impact report (EIR) shall contain a summary of the proposed actions and its consequences. The language of the summary should be as clear and simple as reasonably practical." As required by the Guidelines, this section includes: (1) a summary description of the proposed project; (2) a synopsis of environmental impacts and recommended mitigation measures; (3) identification of the alternatives evaluated and of the environmentally superior alternative; and (4) a discussion of the areas of controversy associated with the project.

ES.1.1 Project Objectives

The fundamental purpose of the CAP is to provide a comprehensive roadmap to address the challenges of climate change in unincorporated Napa County. Acting on climate change means both reducing GHG emissions from local sources in the unincorporated County and helping the community to adapt to climate change and improve its resilience over the long term.

The County has developed the following objectives for the project:

- implement the County's 2008 GP Action item CON CPSP-2 and satisfy the requirements of 2008 GP PEIR Mitigation Measure 4.8.7a;
- prepare a baseline GHG emissions inventory which updates the previous baseline inventory year of 2005 including community-wide sources of emissions in the unincorporated area of the county, and analyzes the potential growth of these emissions over time;
- identify GHG reduction strategies and measures that reduce GHG emissions from activities in the unincorporated county, along with climate adaptation measures that address the challenges of a changing climate and improve resilience in the county over the long term;
- reduce community-wide GHG emissions to meet the County's GHG reduction targets for 2020 and 2030, and provide a mechanism to make progress towards meeting the County's long-term 2050 goal; and
- provide a CAP Consistency Checklist that provides guidance to the community on how to achieve consistency with the CAP and use CEQA streamlining tools for analysis of GHG emissions pursuant to the requirements of CEQA Guidelines Section 15183.5(b)(2).

ES.1.2 Project Location

Napa County is in the northern San Francisco Bay area, and approximately 50 miles due west of Sacramento, California. The County is bordered by Lake County to the north, Yolo and Solano County to the east, Sonoma County to the west, and San Pablo Bay to the south (Exhibit 2-1).

The planning area for the CAP is the same planning area that was considered by the 2008 GP, which encompasses all unincorporated land in the Napa County (Exhibit 2-2). The unincorporated County includes approximately 789 square miles.

ES.2 SUMMARY DESCRIPTION OF THE PROPOSED PROJECT

Napa County is proposing to adopt a Climate Action Plan (CAP), consistent with the County's 2008 GP and 2008 PEIR. Beginning in 2007, the County began implementing actions to address climate change and reduce the production of GHG emissions, both in the County's operations as well as the broader community which aligns with the State's broader efforts to reduce GHG emissions.

The following sections describe the project, including the contents of the CAP, the General Plan Amendment, and the CAP Consistency Checklist.

ES.3 CLIMATE ACTION PLAN

The County's CAP is being developed to implement 2008 GP Action Item CON SPSP-2. satisfy the requirements of 2008 PEIR Mitigation Measure 4.8.7a, and to be consistent with State legislation and policies that are aimed at reducing statewide GHG emissions. This includes:

- AB 32, which established a target of reducing statewide GHG levels to 1990 levels by 2020;
- SB 32, which established a mid-term target of reducing statewide GHG levels to 40 percent below 1990 levels by 2030; and
- Executive Order (EO) S-3-05, which recommends a 2050 statewide longer-term GHG reduction goal of reducing GHG emissions 80 percent below 1990 levels.

The GHG reduction targets and goals for the County in the CAP are established consistent with guidance provided in the 2017 Scoping Plan for plan-level, communitywide GHG reduction analysis and target-setting that aligns with methods used to develop the State's goals. Consistent with the Scoping Plan targets and the State's 2014 GHG emissions inventory, the CAP aims to achieve the following community-wide GHG reduction targets:

- 2 percent below 2014 levels by 2020,
- 40 percent below 2014 levels by 2030, and
- 77 percent below 2014 levels by 2050.

To achieve these GHG reduction targets, the CAP accounts for actions taken by State and Federal agencies that will reduce emissions in the County (also known as "legislative reductions") and identifies several sector-based strategies and GHG reduction measures that can be adopted and implemented locally by the County or others. The CAP also includes implementation and monitoring procedures so that the strategies and measures will be continually assessed and monitored. Reporting on the status of implementation of strategies, periodic updates to the GHG emissions inventory, and other monitoring activities will help ensure that the CAP is making progress towards achieving the objectives and specific GHG reduction measures.

The CAP will also be used for future project-specific environmental documents by being prepared consistent with the tiering and streamlining provisions of Section 15183.5(b)(2) of the State CEQA Guidelines. The EIR will provide the appropriate level of environmental review to allow future projects to tier from and streamline their analysis of GHG emissions pursuant to CEQA Guidelines Section 15183.5(b)(2). This is described in detail in Chapter 1, Introduction, of this EIR.

ES.3.1 CAP Contents

The CAP contains six chapters which are briefly summarized below:

- **Executive Summary:** Summarizes the key information contained in the CAP.
- **Chapter 1 - Introduction:** This chapter introduces the document, describes the purpose and context of the plan, and identifies the regulatory framework related to global GHG emissions.
- **Chapter 2 - Greenhouse Gas Emissions Inventory, Forecasts, and Reduction Targets:** This chapter provides detailed accounting of GHG emissions from community-wide activities within the unincorporated area. It updates the 2005 baseline inventory with 2014 GHG emissions from all sectors, and includes new emissions sources and new data sources, updates calculation methodologies, and updates global warming potential (GWP) factors. Projections of GHG emissions and reduction targets are described and the resultant emissions gap between projected emissions and reduction targets is calculated.
- **Chapter 3 - Greenhouse Gas Reduction Strategies and Measures:** This chapter outlines GHG reduction strategies and GHG reduction measures to be implemented by the County to achieve its GHG reduction targets. The strategies and measures focus on locally-based actions to reduce GHG emissions in various categories as a complement to legislative actions taken by the State or federal government.
- **Chapter 4 - Climate Change Vulnerability and Adaptation:** This chapter summarizes the expected effects of climate change on the community and describes the results of a climate change vulnerability assessment, summarizes the county's current capacity to adapt to climate-related impacts and considers how likely and how quickly impacts would occur, and identifies resiliency and adaptation strategies to reduce these impacts.
- **Chapter 5 - Implementation and Monitoring:** This chapter describes the set of actions that comprise the implementation strategy, possible funding mechanisms, the monitoring and compliance program, and an overview of the CEQA tiering/streamlining options for future projects.

GHG Emissions Inventory

The inventory was prepared for the year 2014 and serves as the baseline year from which the County determines GHG reduction targets. The 2014 baseline year was chosen as it was the most recent calendar year for which complete source and activity data was available when the planning process began in mid-2015. The 2014 inventory is organized into GHG Emissions Sectors, which represent a distinct subset of a market, society, industry, or economy whose components share similar characteristics. The nine major GHG Emissions Sectors are shown in order of contribution, which include the following:

1. Building Energy Use (31 percent),
2. On-Road Vehicles (26 percent),
3. Solid Waste (17 percent),
4. Agriculture (11 percent),
5. Off-Road Vehicles (9 percent),
6. High GWP Gases (3 percent),
7. Wastewater (2 percent),
8. Land Use Change (1 percent), and
9. Imported Water Conveyance (<1 percent).

As illustrated in Table ES-1 below, in 2014, community activities accounted for approximately 484,283 $MTCO_2e$.

Table ES-1 2014 Unincorporated Napa County Greenhouse Gas Emissions Inventory

Sectors	2014[1] ($MTCO_2e$/yr)
Building Energy Use	148,338
On-Road Vehicles	125,711
Solid Waste	83,086
Agriculture	52,198
Off-Road Vehicles	42,508
High GWP Gases	13,481
Wastewater	11,189
Land Use Change	7,684
Imported Water Conveyance	88
Total	**484,283**

Notes: Columns may not add to totals due to rounding.

$MTCO_2e$ = metric tons of carbon dioxide equivalent; GWP = Global Warming Potential; IPCC = Intergovernmental Panel on Climate Change

[1] Uses GWP factors from IPCC's Fourth Assessment Report.

Source: Ascent Environmental 2018

GHG Emissions Forecasts

GHG emissions forecasts for a community are used to estimate future emissions levels in the absence of climate action measures. Emissions forecasts were prepared for both "business-as-usual" (BAU) and legislative-adjusted BAU scenarios for 2020, 2030, and 2050. The BAU emissions scenario is based on projected population, housing, and employment growth anticipated in the unincorporated County as provided by the Metropolitan Transportation Commission (MTC), assuming no actions would be taken to reduce emissions by Federal, State or local agencies pursuant to AB 32 or other legislation. The BAU scenario represents theoretical "worst-case" future conditions, while the legislative-adjusted BAU scenario accounts for future emissions reductions pursuant to AB 32 and other legislation in California from a variety of regulations and programs, including the Renewable Portfolio Standard (RPS), improving vehicle fuel economy standards because of Advanced Clean Cars, and other State and Federal policies.

The legislative-adjusted BAU forecast scenario is summarized below in Table ES-2. Under the legislative-adjusted BAU scenario, community-wide GHG emissions are forecasted to decrease by approximately 4 percent by 2020, 28 percent by 2030, and 24 percent by 2050 for the unincorporated Napa County compared to 2014 emissions.

Table ES-2 Unincorporated Napa County Emissions Inventory and Legislative-Adjusted BAU Forecasts ($MTCO_2e$/yr)

Sector and Subsector	2014	2020	2030	2050
Energy	148,338	131,643	59,150	66,184
Transportation	125,711	112,854	84,845	85,735
Waste	83,086	62,345	56,711	48,854
Agriculture	52,198	52,521	53,589	57,446
Off-Road Vehicles and Equipment	42,508	45,164	49,592	58,474
High-GWP Gases	13,481	11,828	13,169	15,867
Water and Wastewater	11,277	11,858	12,959	14,335
Land Use Change	7,684	35,608[1]	18,239	21,669
Total	**484,283**	**463,821**	**348,253**	**369,563**
Percent change from 2014 (%)	**NA**	**-4**	**-28**	**-24**

Notes: Columns may not add to totals due to rounding.

BAU = Business as usual; NA = Not Applicable; GWP = Global Warming Potential; $MTCO_2e$ = metric tons of carbon dioxide equivalent

[1] The large increase in land use change "emissions" is due to sequestration and carbon storage losses associated with land use forecasts from the County that show a high rate of land use change between 2015 and 2020 compared to other years.

Source: Ascent Environmental 2018

GHG Emissions Reduction Targets

The CAP provides a course of action for the County to reduce GHG emissions consistent with Assembly Bill (AB) 32, Senate Bill (SB) 32, and Executive Orders B-30-15 and S-3-05. The state aims to reduce annual statewide GHG emissions to:

- 1990 levels by 2020,
- 40 percent below 1990 levels by 2030, and
- 80 percent below 1990 levels by 2050.

To determine an equivalent reduction target at the local level, California's 2017 Climate Change Scoping Plan released by the California Air Resources Board (CARB) recommends community-wide GHG reduction goals for local climate action plans that are aligned with and contribute to helping the State achieve its 2030 and 2050 goals (CARB 2017). The State's goals are expressed as reducing emissions to 6 $MTCO_2e$ per capita and 2 $MTCO_2e$ per capita by 2030 and 2050, respectively. Considering the overall statewide emissions in 1990 and 2014 and the forecasted statewide population in 2030 and 2050, these per-capita goals would be equivalent to reducing 2014 emissions by 40 percent by 2030 and 77 percent by 2050 (CARB 2016b, DOF 2014). Although CARB did not recommend a similar community-level target for 2020, an equivalent target can be calculated by comparing the State's GHG inventories for 1990 and 2014. According to CARB's estimate of California's GHG inventory, the State emitted approximately 431 million $MTCO_2e$ ($MMTCO_2e$) in 1990 and 442 $MMTCO_2e$ in 2014, a 2 percent increase. Thus, the following 2020 and 2030 targets and long-term goal for 2050 would reduce annual community-wide GHG emissions in unincorporated Napa County consistent with CARB's recommended goals:

- 2 percent below 2014 levels by 2020
- 40 percent below 2014 levels by 2030, and
- 77 percent below 2014 levels by 2050.

The recommended targets, along with estimated reductions required to achieve the targets, are summarized below in Table ES-3.

Table ES-3 Recommended Greenhouse Gas Emissions Reduction Targets: 2020, 2030, and 2050

Scenario or Target	2014	2020	2030	2050
Baseline and Projections				
2014 Baseline GHG Inventory ($MTCO_2e$)	484,283	NA	NA	NA
Legislative-Adjusted BAU Forecast ($MTCO_2e$)	NA	463,821	348,253	287,535
Legislative-Adjusted BAU Forecast: Percent below Baseline (%)	NA	4	28	24
Targets				
Target Percent Reduction below Baseline (%)	NA	2	40	77
Target Annual Emissions ($MTCO_2e$)	NA	474,598	290,570	111,385
Gap Analysis				
Reduction from Baseline needed to meet Target ($MTCO_2e$)	NA	-9,686	-193,713	372,898
Reduction from Legislative-Adjusted BAU needed to meet Target ($MTCO_2e$)	NA	0	57,683	258,178

Notes: BAU = Business as usual, $MTCO_2e$ = metric tons of carbon dioxide equivalent, GHG = greenhouse gas, NA = Not Applicable

Source: Ascent Environmental 2018

Therefore, the County's 2020 and 2030 GHG emissions reduction targets, along with the longer-term 2050 GHG emissions reduction goal, are identified in the following emissions limits, which are expressed as total annual mass emissions levels:

- 474,598 $MTCO_2e$ by 2020,
- 290,570$MTCO_2e$ by 2030, and
- 111,385 $MTCO_2e$ by 2050.

GHG Emissions Reductions Strategies and Measures

Based on the County's 2014 inventory shown in Table ES-3, the targets and long-term goal above aim to reduce annual County emissions to 474,598, 290,570, and 111,385 $MTCO_2e$ by 2020, 2030, and 2050, respectively. The County is already meeting the 2020 target because of existing legislative actions but would require significant additional GHG reductions to meet the 2030 target and longer-term 2050 goal. The County would need to reduce annual legislative-adjusted BAU 2030 emissions by 57,683 $MTCO_2e$ (40 percent). To meet the long-term 2050 goal, an additional reduction in annual emissions 258,178 $MTCO_2e$, or 77 percent, beyond the effect of current legislative reductions would be required.

The CAP includes 25 Primary GHG Reduction Measures and 26 Supporting GHG Reduction Measures that the County would implement to reduce GHG emissions. 40 Adaptation Measures would also be implemented as part of the project to improve the County's resiliency to the effects of climate change. Refer to Table ES-6, "GHG Reduction Measures and Adaptation Measures," at the end of this chapter for the complete list of measures. Measures that could result in physical environmental impacts are evaluated within applicable chapters of this Draft EIR. Those measures that were determined not to result in physical environmental impacts as indicated in Table ES-6, are not discussed further within this Draft EIR.

The total estimated GHG emissions reductions from all measures quantified is approximately 1,089 $MTCO_2e$ in 2020, 60,645 $MTCO_2e$ in 2030, and 82,048 $MTCO_2e$ in 2050. The total estimated reductions in 2020 would be more than sufficient to meet the recommended 2020 target, with a 11,866 $MTCO_2e$ annual surplus of GHG reductions beyond legislative-adjusted forecasts. Implementation of the revised draft GHG reduction measures identified in Table ES-6 would also meet the recommended 2030 target, with a surplus of 2,962 $MTCO_2e$ in reductions. However, the projected GHG reductions from all measures in 2050 would

fall considerably short of the long-term goal for 2050, requiring an additional 176,150 $MTCO_2e$ to be reduced per year by 2050.

Climate Change Vulnerability and Adaptation

The CAP contains five broad adaptation strategies and 40 adaptation measures. A list of these strategies and measures is provided in Table ES-6, "GHG Reduction Measures and Adaptation Measures." GHG reductions are not associated with the strategies and measures within the CAP, however, the strategies and measures are an important component of the project because they provide a framework through which to plan for increased resiliency related to climate change impacts within the unincorporated county.

Implementation and Monitoring Approach

Some of the proposed GHG reduction strategies and measures would be implemented through code updates adopted by the County based on the County's ability to protect the public health, safety, and welfare of its citizens. Discretionary review processes also provide a mechanism through which to implement strategies and measures. Implementation of some strategies and measures would rely on financial incentives, research and development of new programs, partnerships with other agencies, and education and outreach.

As part of the evaluation of CAP implementation, each strategy and measure must be continually assessed and monitored. Beginning in 2020, County staff would evaluate measures every two years and would summarize progress toward meeting the GHG reduction target at that time in a report to the Board of Supervisors. County staff, beginning in 2022 and every 5 years after, would update the inventory and prepare a more detailed report on the CAP to the Board that describes:

- results of the latest 5-year update to the inventory,
- estimated annual GHG reductions associated with measure implementation or legislative reductions,
- participation rates (where applicable),
- implementation costs and funding needs,
- community benefits realized,
- remaining barriers to implementation, and
- recommendations for changes to the CAP.

Additionally, the County would prepare a Target Year Report in 2027 for the Board of Supervisors. This report would present the most current inventory, status of measures, and would summarize achievements to date and demonstrate progress towards achieving the 2030 and 2050 targets. The report would also provide recommendations for any changes needed to the CAP to ensure that targets are met in 2030. The implementation and monitoring actions detailed in Chapter 5 of the CAP are the mechanism to monitor that progress (i.e., updated GHG inventories and annual monitoring reports).

Consistent with the requirements of CEQA Guidelines Section 15183.5 (b)(1)(E), an agency is required to monitor the CAP's progress and amend it if it is determined that the plan is not achieving its specified targets. If amendments to the CAP are required they would be reviewed considering CEQA's requirements for subsequent environmental review as outlined in Section 15162 to 15164.

Public Outreach

Public outreach would not result in any direct or indirect physical changes in and of itself that would require evaluation in the Draft EIR (CEQA Guidelines 15061(b)(3)). The County has engaged the community extensively throughout the Draft CAP and CAP process including several outreach meetings and public hearings at key milestones in the process to engage the community and interested stakeholders. Public outreach for the CAP included involvement and engagement of key internal and external stakeholder groups from various public, private, and nonprofit sectors; as well as individual citizens and residents of the County.

ES.4 GENERAL PLAN AMENDMENT

General Plan Policy CON-65 e) in the Conservation Element would be amended to require that all discretionary projects comply with the adopted CAP. This would be accomplished via implementation of the CAP Consistency Checklist discussed below. With adoption of the CAP, the General Plan Policy CON-65 e) is revised to the following:

> Policy CON-65 e) Consider GHG emissions in the review of discretionary projects and require that discretionary projects comply with the County's adopted Climate Action Plan as substantiated through compliance with the CAP Consistency Checklist. Consideration may include an inventory of GHG emissions produced by the traffic expected to be generated by the project, any changes in carbon sequestration capacities caused by the project, and anticipated fuel needs generated by building heating, cooling, lighting systems, manufacturing, or commercial activities on the premises. Projects shall consider methods to reduce GHG emissions and incorporate permanent and verifiable emission offsets.

ES.5 CAP CONSISTENCY CHECKLIST

The CAP Consistency Checklist (Checklist) is included as Appendix D to the CAP. The Checklist provides a mechanism by which discretionary projects may be determined consistent with the CAP and, therefore, eligible for CEQA streamlining privileges under CEQA Guidelines Section 15183.5. All discretionary projects that are not otherwise exempt from CEQA and require environmental review pursuant to CEQA, no matter the size of the project, would be evaluated for consistency with the CAP.

ES.6 PERMITS AND APPROVALS NEEDED

The Napa County Board of Supervisors (Table ES-4) will be the CEQA lead agency responsible for considering adoption and implementation of the CAP. As the lead agency under CEQA, Napa County is responsible for considering the adequacy of the EIR and determining if the overall project should be approved.

Table ES-4 Required Project Approvals

Project Approval	Approving Authority
Approval of Climate Action Plan	County Board of Supervisors
Approval of General Plan Amendment	County Board of Supervisors
Certification of the EIR	County Board of Supervisors

Note: The EIR is intended to apply to all listed project approvals as well as to any other approvals necessary or desirable to implement the project.

ES.7 ENVIRONMENTAL IMPACTS AND RECOMMENDED MITIGATION MEASURES

Table ES-5, at the end of this chapter, provides a summary of the environmental impacts of the project, the level of significance of the impact before mitigation, recommended mitigation measures, and the level of significance of the impact after the implementation of the mitigation measures.

ES.8 SUMMARY OF ALTERNATIVES

The following alternatives are evaluated in this Draft EIR.

ES.8.1 No Project Alternative

Section 15126.6(e) of the CEQA Guidelines requires that an EIR evaluate and analyze the environmental impacts of the No Project Alternative, to examine and compare the potential environmental consequences associated with not approving the CAP.

This alternative assumes that development would occur under the existing 2008 Napa County General Plan Updated (2008 GP) as adopted, but without a qualified CAP as a mechanism to mitigate the GHG emissions that are resultant from the build-out of the 2008 General Plan.

ES.8.2 Roof-Top Solar for Commercial Properties Alternative

While no significant environmental impacts would occur with implementation of the CAP, many of the GHG reduction measures would result in construction- and operational-related environmental impacts as described throughout this DEIR. To reduce or eliminate the impacts associated with larger construction projects, this alternative would modify GHG Reduction Measure BE-11 to require that solar systems be installed on all new or modified commercial rooftops throughout the County as part of the discretionary approval process. Commercial solar systems are small-scale power generation and storage systems that are located close to the source and are typically 1kW to 10,000 kW in size. Often these systems are located on rooftops and or consist of small ground-mounted systems.

This alternative would instead require the construction of solar systems on new commercial construction or modifications to commercial properties throughout the County. This alternative would increase GHG reductions through increased installations of distributed generation systems that are not currently assumed in the CAP and would offset the need to construct other GHG reduction measures that would have larger-scale construction impacts. Distributed generation systems are typically small in scale and located in urban areas. As such, construction-related environmental impacts would be minimal. In addition, because of their small size, no routine management or maintenance of the systems are required and, therefore, would not have any associated operational impacts. As a result, incentivizing and relying on distributed generation systems for additional GHG emissions reductions could reduce construction and operational impacts compared to the current suite of GHG reduction measures in the CAP.

Upon approval, new development in the County would be reviewed for consistency with the CAP and may be eligible for a streamlined environmental review under CEQA Guidelines Section 15183.5. All energy efficiency or renewable energy measures would be implemented as described under the CAP, which would result in a reduction of energy consumption and the production of associated GHG emissions. Under this alternative, the County would reduce community-wide and County operations GHG emissions in compliance with State-legislative targets, would meet the 2020 and 2030 reduction targets of the CAP, and would achieve the same level of GHG reductions compared to the project. Therefore, the Roof-Top Solar for Commercial Properties Alternative would achieve all project objectives and would reduce GHG emissions in the County consistent with State legislative requirements.

ES.8.3 “No Streamlining” CAP Alternative

Under this alternative, the County would develop and implement a CAP; however, the County would specifically prohibit the associated environmental document (this EIR) from being used as a CEQA

streamlining mechanism for future projects as it relates to evaluation of individual project-specific GHG impacts. Instead, individual projects would be required to prepare their own project-specific GHG analysis and recommend mitigation that would reduce GHG impacts. The County would review and evaluate GHG impacts and mitigation measures on a project-by-project basis.

Under this alternative, a CAP would be prepared and would be consistent with 2008 GP Policy CON-65, Action Item CON CPSP-2, and GP PEIR Mitigation Measure 4.8.7a. The CAP would require a general plan amendment and would include a CAP consistency checklist, similar to the project. With the CAP consistency checklist, the County would have a mechanism by which to ensure that a consistent program of GHG reduction measures would be implemented in a coordinated fashion for all discretionary actions. All other elements of the CAP would be similar to the project including implementing a suite of GHG reduction measures that would achieve 2020 and 2030 GHG emissions reduction targets.

ES.8.4 Net Zero by 2030 Alternative

The County's CAP is designed to reduce local GHG emissions in the unincorporated County by setting local GHG reduction targets and implementing local GHG reduction measures that are aligned with and complement State targets and actions, as established by AB 32 and SB 32 and the 2017 Scoping Plan. As described in Chapter 2, Project Description, Executive Order S-3-05 recommends a longer-term 2050 statewide goal of reducing GHG emissions to 80 percent below 1990 levels, and the County's long-term 2050 goal is also consistent with the State's goal. While the project would meet 2020 and 2030 emissions targets consistent with the State's targets, and some of the GHG reductions required to achieve the 2050 goal could be realized beyond 2030, additional reductions would be required to achieve 2050 GHG reduction goals, the feasibility of which at this time is unknown.

This alternative has been designed to accelerate achievement of additional GHG reductions that are likely to be required to meet the State's 2050 reduction goal, while also accelerating the timeframe for achieving such reductions in combination with a framework for offsetting emissions by 2030.

The CAP includes provisions to regularly monitor and adjust the CAP to ensure that the 2030 target would be met, but also to ensure the County makes substantial and ongoing progress towards achieving the 2050 goal over time. The State has also established its intent to continue to make progress towards reducing statewide GHG reductions beyond 2030, and that future legislative actions will be required to do so; however, the 2017 Scoping Plan does not currently identify a feasible pathway to achieve any post-2030 statewide target.

With the exception of the State's action to mandate zero-net carbon electricity generation by 2045 per SB 100 (2018), no other legislative actions are currently known that can be credited in a local CAP that would result in "net zero" emission levels in all sectors by 2030; thus, a CAP that achieves a" net zero" GHG emissions target by 2030 without known legislative actions would have to rely exclusively on known legislative actions in place, combined with aggressive local actions within a 10-year period, some of which may not be within the realm of technological feasibility or local jurisdictional authority.

Nevertheless, the County contemplated additional actions that would be needed on a local level to achieve net zero emissions by 2030. The Net Zero by 2030 Alternative contemplates the acceleration of actions and activities the County could implement, either alone or in partnership with others, to achieve sufficient reductions needed to either (a) eliminate all GHG emissions by 2030 or (b) result in a combination of locally-based GHG reductions and GHG offsets sufficient to achieve a "net zero" GHG emission level by 2030.

While the CAP already includes a substantial menu of reduction measures in a variety of sectors designed to achieve a 2030 target and longer-term 2050 goal that are aligned with SB 32 and the 2017 Scoping Plan, in general this alternative would require the County to expand many of the current GHG reduction measures or

include additional measures that would achieve further reductions such that "net zero" would be achieved. Specifically, the following measures could be included as part of such an alternative.

ON-ROAD TRANSPORTATION AND OFF-ROAD EQUIPMENT SECTORS

- Expand measures that support, encourage, incentivize, or require alternative modes of transportation, primarily in the form of transit or other similar shared-mobility options in the unincorporated/rural context, to further reduce trips and VMT beyond what is already assumed in the existing transportation GHG measures. The County does not operate transit systems, but the County could develop partnerships or operating agreements with local, regional, or State agencies such as the Napa Valley Transportation Authority (NVTA), the Metropolitan Transportation Commission (MTC), Caltrans, or other local or regional transportation authorities that maintain jurisdictional control over local or regional roadways or railways. The County would need to work with one or more of these agencies to secure funding and implement expanded transit or other types of systems that exceed the planned investments in the Plan Bay Area RTP/SCS. The CAP already includes a measure to explore operating transit services on existing railroad rights-of-way, for example. Under a Net Zero by 2030 Alternative, however, major transit service expansions or new transit services would need to be identified, funded, constructed (if applicable), and be operating at planned capacity by 2030.

- The County could explore the feasibility of increasing VMT reductions associated with development projects subject to CEQA review beyond the 15 percent VMT reduction identified in the recently-updated General Plan Circulation Element under Policy CIR-7 and as stated under GHG Measure TR-15 in the CAP. It is currently unknown how an overall 15 percent VMT reduction would be achieved on a project-by-project basis during CEQA review within the unincorporated County because the County has not yet implemented Circulation Element Policy CIR-9, which requires the County to update its Transportation Impact Study (TIS) guidelines; and, the County has yet to develop project-level VMT screening criteria identified in Circulation Element Action Item CIR-7.1.

- The County does not have jurisdictional control over on-road vehicle emissions standards; only the State and federal governments have the authority to regulate vehicle emissions standards. Thus, any local acceleration of a transition to zero- or low-emission vehicles by the year 2030 must be incentive-based. The County could include new measures that further incentivize the conversion to cleaner vehicles, such as a local incentive program, or a regional incentive program coordinated with the local air district, that would encourage citizens to upgrade or exchange fossil fuel powered vehicles with zero-emission vehicles such as battery electric or fuel cell vehicles.

  The State already provides similar incentives through programs such as the Clean Vehicle Rebate Program (CVRP), and a locally-or regionally-based incentive could be paired with CVRP incentives and federal tax credits to leverage increased participation beyond what would only be achieved through State rebates and federal tax credits or assumed fleet turnover under existing regulations. Any specific subsidy or incentive program would need to be developed through more detailed study and coordination with local and regional agencies and privately-owned automobile dealers.

  While such a local or regional incentive program could result in some additional GHG reductions, it's unlikely that the scale of reductions achieved in the transportation sector by 2030 would be sufficient to achieve net zero emissions by 2030, without future legislative actions by the State to mandate more stringent emissions standards in new vehicles manufactured after 2025.

- Similar to on-road vehicles, the County does not have jurisdictional control over emissions standards for off-road vehicles and equipment. The County could develop incentive-based measures to encourage the conversion of off-road vehicles from fossil-fuel to battery electric or fuel-cell vehicles, beyond what is already included in the CAP for agricultural equipment and construction and mining equipment. Any specific subsidy or incentive program would need to be developed through more detailed study and coordination with local and regional agencies and privately-owned off-road vehicle or equipment dealers.

ENERGY SECTOR

- The CAP already includes a measure that requires electric water heaters in new residential construction or in replacement of existing natural gas units, as an initial step towards "decarbonizing" the building stock. An additional measure could be added to the CAP to incentivize all-electric homes or buildings in all new development. The County does not have jurisdictional authority to mandate all-electric new construction or mandate the conversion of existing homes or buildings to all electric appliances or space heating because of federal and State preemption regarding energy sources in buildings. Local incentive-based programs could still be applied, however, and by doing so, the County would be able to achieve further GHG reductions tied to natural gas usage reductions in new and existing buildings, beyond what is achieved in the CAP.

  While some measurable GHG reductions could be attributed to an incentive-based program, the County's limited jurisdictional authority to reduce or eliminate natural gas in new and existing buildings would still present a formidable barrier to achieving the scale of energy-sector GHG reductions required to achieve net zero GHG by 2030.

SOLID WASTE SECTOR

- Increase countywide waste diversion goals to 100 percent by 2030 for all waste types. Organic waste will soon be the subject of regulations that would require diversion pursuant to SB 1383; however, SB 1383 does not require 100 percent organic waste diversion by 2030. Because the County's waste stream is not directly within the County's jurisdictional control, it would be speculative to assume that an aggressive 2030 goal that exceeds SB 1383 targets would be feasible, without further study and coordination with existing waste management agencies.

WATER AND WASTEWATER SECTOR

- Include measures that would phase out "hold and haul" wastewater treatment operations, in which wastewater from wineries or other commercial or industrial systems are hauled to offsite treatment plants. The County would take action to require that such wastewater sources install onsite package treatment facilities or connect to nearby local or regional wastewater treatment systems.

- Include measures that incentivize the conversion of traditional septic systems to low-GHG "blackwater" onsite recycling and treatment systems, or "composting toilets." Such systems often pose considerable challenges in permitting and construction in many situations because of health and safety concerns. The County would need to conduct a more detailed study to determine whether the measure is feasible and whether realistic reductions by the year 2030 could be achieved.

LAND USE

- Include measures that require all feasible onsite preservation of trees; and, develop and require more stringent tree mitigation ratios that exceed current minimum mitigation requirements, in cases where onsite preservation of trees is not feasible. The CAP currently contains similar measures under LU-1 and LU-2, so modification of these measures would be required.

- Develop and implement measures that would require all development projects that disturb undeveloped/natural and working lands to result in zero-net landscape carbon losses and, if feasible, demonstrate a net increase (benefit) in carbon sequestration or storage over the long-term.

MULTI-SECTOR

- The County could further develop and implement a GHG offset program, as described under Measures BE-10 and MS-4 such that (a) any remaining unmitigated GHG emissions in all new development

projects through 2030 would be required to be offset down to a "net zero" level through the purchase of locally-based credits by new development projects, and (b) offset credits generated in the program could be sourced through local projects designed to reduce emissions in existing buildings or other existing sources in the county, consistent with an appropriate GHG offset protocol. For such an offset program to achieve an overall net zero emissions level by 2030 for the entire unincorporated area of the county, further study and effort would be required to determine the level of reductions from the expanded list of GHG measures designed to reduce emissions, and whether the remaining GHG emissions required to be offset could feasibly be reduced in a 10-year period or less (measured from the date of program implementation).

The Net-Zero by 2030 Alternative would include implementation of all GHG reduction measures included in the CAP plus the additional new or modified measures identified above.

ES.8.5 Environmentally Superior Alternative

CEQA Guidelines Section 15126.6(e)(2) requires that if an EIR determines that the No Project Alternative is environmentally superior to the project, the EIR must identify an environmentally superior alternative among the other alternatives considered. Table 6-1 provides a summary comparison of the impacts of the project and alternatives. As described above, the No Project Alternative would not be environmentally superior to the project because it would not meet SB 32 reduction targets and would not reduce any of the project's impacts. Therefore, this alternative would result in a new significant GHG impact that was not previously identified for the project.

Based on review of the other alternatives considered, the County has determined that the Roof-Top Solar for Commercial Properties Alternative would be environmentally superior to the project because it would reduce impacts related to construction and operation of larger-scale GHG reduction measures while still achieving both the primary objective of GHG emissions reductions consistent with SB 32 and all other supporting project objectives.

ES.9 AREAS OF CONTROVERSY

In accordance with Public Resources Code (PRC) Section 21092 and CCR Section 15082, the County issued a notice of preparation (NOP) on July 24, 2018, to inform agencies and the general public that an EIR was being prepared and to invite comments on the scope and content of the document (Appendix A). County staff accepted comments on the scope of the EIR between July 24, 2018 and August 22, 2018. A noticed scoping meeting for the EIR occurred on August 15, 2018.

Based on the comments received during the NOP comment period, the major areas of controversy associated with the project are:

- AB 52 requirements,
- Greenhouse gas emissions (GHG) associated with wine production and tourist travel,
- Biological and land use impacts related to oak woodland conversion, and
- Compliance with federal and state regulatory requirements related to GHG emissions.

All the substantive environmental issues raised in the NOP comment letters and at the scoping meeting have been addressed or otherwise considered during preparation of this Draft EIR.

Table ES-5 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measure	Significance after Mitigation
NI = No impact LTS = Less than significant PS = Potentially significant S = Significant SU = Significant and unavoidable			
3.2 Aesthetics			
Impact 3.2-1: Affect Scenic Vistas or Substantially Damage Scenic Resources GHG reduction and adaptation measures that would result in new or updated utility service infrastructure, active transportation projects, and small-scale renewable energy systems could result in impacts to scenic vistas and scenic resources resulting from construction and operation activities. However, compliance with existing state, and local regulations that protect scenic resources, especially County Zoning Code Section 18.106, and completion of subsequent project-level planning and environmental review would reduce potential impacts to these resources. Therefore, this impact would be less than significant.	LTS	No mitigation is required.	LTS
Impact 3.2-2: Substantially Degrade the Existing Visual Character or Quality of the Site and Its Surroundings. GHG reduction and adaptation measures that result in new or updated utility service infrastructure, active transportation infrastructure, and small-scale renewable energy systems could result in construction and operational impacts to the local visual character. Compliance with existing state, and local regulations that protect scenic resources, especially County Zoning Code Section 18.106, and completion of subsequent project-level planning and environmental review would reduce potential impacts to these resources consistent with state and local polices. Therefore, this impact would be less than significant.	LTS	No mitigation is required.	LTS
Impact 3.2-3: Create a New Source of Substantial Light or Glare Which Would Adversely Affect Day or Nighttime Views in the Area Construction of new infrastructure or modification of existing structures associated with implementation of some GHG reduction and adaptation measures could result in new sources of substantial light and/or glare that would adversely affect a site and its surroundings. However, compliance with existing state lighting standards that address outdoor lighting, compliance with the County's Design Guidelines, including Zoning Code Section 18.106.040 which regulates lighting standards, and completion of subsequent project-level planning and environmental review would reduce potential impacts to these resources. Therefore, this impact would be less than significant.	LTS	No mitigation is required.	LTS
3.3 Air Quality			
Impact 3.3-1: Conflict with or Obstruct Implementation of the Applicable Air Quality Plan The proposed GHG reduction and adaptation measures are not growth-inducing, nor are they substantial employment generators such that an increase in VMT would be induced. While some measures may result in a temporary increase in the number of construction workers, workers would likely be from Napa or the surrounding counties and permanent relocation would not be required. A co-benefit of many of the GHG reduction and adaptation measures is improved air quality through reduction of criteria air pollutant emissions through long-term reduction in fuel use and VMT. Given that the CAP would not induce substantial population growth or increase in VMT, and would result in beneficial impacts, the project would not conflict with or obstruct implementation of any applicable air quality plans. Impacts would be less than significant.	LTS	No mitigation is required.	LTS

Table ES-5 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measure	Significance after Mitigation
NI = No impact LTS = Less than significant PS = Potentially significant S = Significant SU = Significant and unavoidable			
Impact 3.3-2: Violate Any Air Quality Standard or Contribute Substantially to an Existing or Projected Air Quality Violation Implementation of GHG reduction and adaptation measures would result in minor temporary air pollutant emissions during construction activities. However, GHG reduction measures would generally reduce criteria air pollutants emissions during operational activities. Also, project-specific evaluation of environmental impacts and implementation of feasible mitigation would reduce potential impacts. Thus, implementation of these types of small-scale facilities would not result in an exceedance of BAAQMD's thresholds. This impact would be less-than significant.	LTS	No mitigation is required.	LTS
Impact 3.3-3: Result in a Cumulatively Considerable Net Increase of Any Criteria Pollutant for Which the Project Region Is In Non-Attainment Under an Applicable Federal or State Ambient Air Quality Standard GHG reduction and adaptation measures that may result in new or updated utility service infrastructure, active transportation projects, and small-scale renewable energy systems could result in minor air pollutant emissions during construction activities which would likely be mitigated at the time of permitting. However, implementation would not involve large amounts of labor, construction equipment, or long-term maintenance activities and would not result in a cumulatively considerable contribution to criteria pollutants. Also, a co-benefit of many of the GHG reduction and adaptation measures is improved air quality through reduction of criteria air pollutant emissions through long-term reduction in fuel use and VMT. Therefore, this impact would be less-than-significant.	LTS	No mitigation is required.	LTS
Impact 3.3-4: Expose Sensitive Receptors to Substantial Pollutant Concentrations Although there would be a temporary increase in vehicle trips related to construction worker commute and equipment delivery, the CAP would not result in substantial long- or short-term vehicle trip generation at levels that could cause unhealthy concentrations of CO on nearby roadways Therefore, the project would not result in substantial local CO concentrations that could exceed ambient air quality standards GHG reduction and adaptation measures could result in minor increases in TAC emissions associated with the use of construction equipment for new infrastructure, new waste and composting facilities, renewable energy facilities, and vegetation clearing. However, construction activity would be minor and, in some cases, would not include heavy-duty diesel equipment, would be short-term, and would occur at various locations throughout the county, therefore, not exposing any single receptor to substantial TAC emissions. This would be a less-than-significant impact.	LTS	No mitigation is required.	SU
Impact 3.3-5: Create Objectionable Odors Affecting a Substantial Number of People Construction activities associated with implementation of GHG reduction and adaptation measures could result in temporary generation of odorous emissions. Given the temporary and intermittent nature of the impacts, and dissipation of odors with increasing distance from the source, construction odor impacts would be less than significant. GHG reduction measures contained within the CAP would support the expansion of existing composting programs and new or expanded waste processing and diversion facilities, which could generate objectionable odors during operation. Impacts would be minimized through implementation of an OIMP, as required by CalRecycle, as well as all applicable project-specific mitigation measures. Therefore, impacts would be less than significant.	LTS	No mitigation is required.	LTS

Table ES-5 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measure	Significance after Mitigation
NI = No impact LTS = Less than significant PS = Potentially significant S = Significant SU = Significant and unavoidable			
3.4 Biological Resources			
Impact 3.4-1: Effects on Special-Status Species or Their Habitat Implementation of GHG reduction and adaptation measures could result in new or updated utility service infrastructure, active transportation projects, and small-scale renewable energy systems that could have direct and indirect effects on special-status species and their habitat. Construction of new or expanded facilities as a result of measure implementation could result in short-term and long-term impacts to special-status species and their habitat if they are present in areas affected by the new or expanded facilities. Compliance with existing federal, State, and local regulations that protect sensitive resources, and completion of subsequent project-level planning and environmental review would reduce potential impacts to special-status species and their habitat. Therefore, this impact would be less-than-significant.	LTS	No mitigation is required.	LTS
Impact 3.4-2: Effects on Sensitive Natural Communities, Riparian Habitat, and Federally Protected Waters of the United States, Including Wetlands Implementation of GHG reduction and adaptation measures implemented with CAP adoption could result in new or updated utility service infrastructure, active transportation projects, and small-scale renewable energy systems and could have the potential to directly or indirectly affect sensitive habitats (e.g., sensitive natural communities, riparian habitat, and waters of the United States, including wetlands) as a result of construction of new facilities or expansion of existing facilities. Future projects would be required to evaluate project-specific impacts under CEQA at the time of application and project-specific mitigation would be required to minimize or eliminate impacts to sensitive habitats. In addition, compliance with local general plan policies and existing regulations, would protect sensitive habitats from direct and indirect impacts. Therefore, this impact would be less-than significant.	LTS	No mitigation is required.	LTS
Impact 3.4-3: Interfere with the Movement of Native Resident or Migratory Wildlife or Impede the Use of Native Wildlife Nursery Sites Several major regional wildlife movement corridors have been identified within the county. In addition, sensitive habitats throughout the county provide wildlife nursery sites and/or nesting, denning, or roosting habitat. Implementation of GHG reduction and adaptation measures have the potential to affect wildlife movement and nursery sites. Compliance with existing federal, State, and local regulations would reduce potential impacts to nursery sites and movement corridors. Therefore, this impact would be less-than-significant.	LTS	No mitigation is required.	LTS
Impact 3.4-4: Conflict with Any Local Policies or Ordinances Protecting Biological Resources All GHG reduction and adaptation measures that would require construction or expansion of new facilities or infrastructure could potentially conflict with local policies and ordinances established to protect biological resources. Future development projects would be required to follow County development requirements, including compliance with local policies, ordinances, and applicable permitting procedures related to protection of biological resources. This impact would be less than significant.	LTS	No mitigation is required.	LTS

Table ES-5 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measure	Significance after Mitigation
NI = No impact LTS = Less than significant PS = Potentially significant S = Significant SU = Significant and unavoidable			
3.5 Cultural and Tribal Cultural Resources			
Impact 3.5-1: Change in the Significance of a Historical Resource GHG reduction and adaptation measures that would require construction of new or modifications to existing facilities could result in impacts to historical resources, if they are associated with improvements to a historical building or if the introduction of new infrastructure could disrupt the historical context of the resource or other resources in the vicinity. However, projects would be required to comply with existing federal, State, and local regulations that protect historical resources, and undergo the County's discretionary review process including completion of subsequent project-level planning and environmental review that would ensure that identified resources are appropriately protected. Therefore, this impact would be less than significant.	LTS	No mitigation is required.	LTS
Impact 3.5-2: Potential Disturbance of Known or Undiscovered Cultural Resources or Paleontological Resources Ground-disturbing activities associated with implementation of some GHG reduction and adaptation measures could result in damage to unknown cultural resources, including human remains or paleontological resources as defined in State CEQA Guidelines Section 15064.5. However, compliance with existing federal, State, and local regulations and completion of subsequent project-level planning and environmental review would reduce potential impacts to these resources. Impacts would be less than significant	LTS	No mitigation is required.	LTS
Impact 3.5-3: Impacts to tribal cultural resources. Ground-disturbing activities associated with implementation of some GHG reduction and adaptation measures could result in disturbance to tribal cultural places and sacred lands (tribal cultural resources). However, compliance with existing federal, State, and local regulations and completion of subsequent project-level planning and environmental review would reduce potential impacts to these resources. Impacts to TCRs would be **less than significant.**	LTS	No mitigation is required.	
3.6 Energy			
Impact 3.6-1: Result in Potentially Significant Environmental Impact Due to Wasteful, Inefficient, or Unnecessary Consumption Of Energy Resources, During Project Construction or Operation GHG reduction and adaptation measures have the potential to result in the consumption of energy resources during construction and operation of new or expanded facilities and infrastructure that would increase the County's ability to reduce GHG emissions. Standard best management practices would discourage unnecessary idling and the operation of poorly maintained equipment during construction. New facilities would be required to meet current building code requirements including requirements for achieving appropriate energy efficiency standards (e.g., Title 24 standards or better), and would be required to comply with the adopted 2008 General Plan policies related to energy resources. Moreover, while GHG reduction and adaptation measures were formulated to reduce GHGs, many would improve energy efficiency and decrease reliance on fossil fuels. Thus, implementation of the GHG reduction and adaptation measures would not result in wasteful, inefficient, or unnecessary consumption of energy, during project construction or operation. Therefore, this impact would be less than significant.	LTS	No mitigation is required.	LTS

Table ES-5 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measure	Significance after Mitigation
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Impact 3.6-2: Conflict with or Obstruct a State or Local Plan for Renewable Energy or Energy Efficiency Relevant plans that pertain to the efficient use of energy include the State's 2008 Update Energy Action Plan (EAP). The EAP focuses on energy efficiency; demand response; renewable energy; the supply and reliability of electricity, natural gas, and transportation fuels; and achieving GHG reduction targets (CEC and CPUC 2008). Overall, the CAP is intended to reduce GHG emissions generated within the County. GHG reduction and adaptation measures aimed at improving energy efficiency, conversion from gasoline or diesel to electricity or alternative fuels, and renewable energy would directly support EAP goals and strategies. Therefore, the CAP would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. No impact would occur.	NI	No mitigation required.	NI
3.7 Greenhouse Gas Emissions			
Impact 3.7-1: Generate GHG Emissions, Either Directly or Indirectly, that may have a Significant Impact on the Environment The GHG reduction and adaptation measures would directly or indirectly emit GHG emissions during construction and operation. GHG emissions would result from the operation of construction equipment, construction worker vehicle trips, and truck hauling trips. During the operational phase, some CAP measures may require additional staffing, resulting in increased vehicle trips and associated GHG emissions. Overall, the CAP is intended to reduce GHG emissions generated within the County by using alternatively fueled vehicles, reducing VMT, using renewable energy, reducing waste generation, and increasing water conservation. Thus, the effects associated with the reduction of GHG emissions in the County would be beneficial. Implementation of the GHG reduction and adaptation measures would not generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment. Impacts would be less than significant.	LTS	No mitigation is required.	LTS
Impact 3.7-2: Conflict with an Applicable Plan, Policy, or Regulation Adopted for the Purpose of Reducing the Emissions of GHGs Applicable plans, policies, or regulations include statewide GHG emission targets for 2020 and 2030 established by AB 32and SB 32 a longer-term 2050 goal established by EO S-3-05; the 2017 Scoping Plan; which identifies a statewide strategy to achieve the SB 32 target for 2030, Plan Bay Area 2040; regulations regarding increased use renewables for electricity production (SB X1-2 and SB 100); California Energy Code; and the Napa County General Plan (2013). Implementation of the GHG reduction and adaption measures would be consistent with the County's overall goal to reduce GHG emissions consistent with statewide targets and would support a variety of other state and local plans, policies, and regulations. The proposed CAP would reduce emissions by 2020 and 2030, consistent with legislatively-adopted State targets, through both local actions and legislative actions by state and federal agencies. The proposed CAP would also achieve substantial post-2030 emission reductions, in furtherance of the State's longer-term 2050 goals; and, the County would continuously monitor the CAP and update the targets, goals, and GHG reduction measures over time to reflect future state actions to update the Scoping Plan in view of the long-term 2050 goal, along with new or modified local measures to complement state actions needed to achieve the state's 2050 goal. Therefore, because the CAP would not conflict with applicable plans, policies, or regulations, this impact would be **less than significant.**	LTS	No mitigation is required.	SU

Table ES-5 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measure	Significance after Mitigation
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3.8 Hazards and Hazardous Materials			
Impact 3.8-1: Expose People or the Environment to Hazardous Materials or Emit Hazardous Emissions; or Handle Materials Within 0.25-Mile of an Existing or Proposed School The routine storage, transport, and handling of hazardous materials, and accidental release of hazardous materials during construction, maintenance, or operation of new facilities as a result of implementation of the CAP could expose people, the environment, or schools within 0.25-mile to hazardous materials. However, compliance with existing federal, State, and local regulations that protect people and the environment from exposure to hazardous materials would be required with the discretionary review of future projects. Completion of subsequent project-specific evaluation and environmental review would reduce potential impacts. Therefore, this impact would be less than significant.	LTS	No mitigation is required.	LTS
Impact 3.8-2: Result in a Safety Hazard for People Working or Residing In the Area Because of Proximity to Airports or Private Airstrips There are two public use airports and four private airstrips and/or heliports located in Napa County. Safety hazards associated with airports are generally related to tall structures and creation of wildlife attractants that could interfere with airplane flight paths. Small-scale wind turbines that could result in airport safety hazards would be required to comply with existing federal, State, and local regulations that minimize airport safety hazards, including 2008 General Plan policies and airport land use plans. Therefore, this impact would be less than significant.	LTS	No mitigation is required.	LTS
Impact 3.8-3: Impair Implementation of or Physically Interfere with an Adopted Emergency Response Plan or Emergency Evacuation Plan Utility upgrades and linear improvements such as bike and pedestrian infrastructure have the potential to interfere with emergency response plans and evacuation routes. However, all projects would be evaluated for project-specific conflicts with applicable local, State, and federal regulations intended to ensure safety, including the County's OAHMP. Therefore, this impact would be less than significant.	LTS	No mitigation is required.	LTS
Impact 3.8-4: Expose People or Structures to a Significant Risk of Loss, Injury, or Death Involving Wildfires Most of the county has been classified as having moderate to very high wildfire risk. Implementation of the GHG reduction measures could result in construction-related increases in potential wildfire risk if caution is not exerted at the time of development. However, compliance with existing federal, State, and local regulations that minimize the potential for wildfire and completion of subsequent project-level planning and environmental review would reduce potential impacts as part of the discretionary review process. Therefore, this impact would be less-than-significant.	LTS	No mitigation is required.	LTS

Table ES-5 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measure	Significance after Mitigation
NI = No impact LTS = Less than significant PS = Potentially significant S = Significant SU = Significant and unavoidable			
3.9 Hydrology and Water Quality			
Impact 3.9-1: Violate Water Quality Standards, Exceed Stormwater Capacity, or Degrade Water Quality or Alter Drainage Patterns of a Site Resulting in Erosion or Siltation, or Flooding Implementation of GHG reduction and adaptation measures that would be implemented with CAP adoption have the potential to violate a water quality standard, degrade water quality, or exceed stormwater capacity as a result of construction, operation, or maintenance of new facilities. Future projects would be required to evaluate project-specific impacts under CEQA at the time of application and project-specific mitigation would be required to minimize or eliminate impacts to water quality and stormwater runoff. In addition, compliance with local general plan policies and existing regulations, would protect water quality and stormwater systems. Therefore, this impact would be less than significant.	LTS	No mitigation is required.	LTS
Impact 3.9-2: Groundwater Recharge and Water Supplies There are four major groundwater basins within the County. If implementation of GHG reduction and adaptation measures would result in a substantial increase in impervious surfaces or compaction of soils such that it would interfere with groundwater recharge, those measures could adversely affect groundwater. However, compliance with existing federal, state, and local regulations that minimize impacts on groundwater recharge and completion of subsequent project-level planning and environmental review would reduce potential impacts from large-scale projects. Small-scale projects would not be of a large enough scale to interfere substantially with groundwater recharge. Therefore, this impact would be less than significant.	LTS	No mitigation is required.	LTS
Impact 3.9-3: Place Housing or Structures in Flood Hazard Area, Dam Inundation Zone, or other Flood Hazard Implementation of GHG reduction and adaptation measures that would be implemented with CAP adoption have the potential to be located within a floodplain or dam inundation area. Future projects would be required to evaluate project-specific impacts under CEQA at the time of application and project-specific mitigation would be required to minimize or eliminate flooding hazards. In addition, compliance with local general plan policies and existing regulations, would minimize flooding hazards. Therefore, this impact would be less than significant.	LTS	No mitigation is required.	LTS
3.10 Land Use			
Impact 3.10-1: Conflict with Applicable Land Use Plan, Policy or Regulation Adopted for the Purpose of Avoiding or Mitigating an Environmental Effect Implementation of GHG reduction and adaptation measures could result in the development of new small-scale renewable energy systems. Construction or installation of small-scale projects would be required to comply with existing state and local land-use policies and regulations. Any such projects that could result in conflicts with applicable land use plans, policies or regulations that have been adopted for the purpose of avoiding or mitigating environmental impacts would be required to obtain a Use Permit, complete project-level planning, conduct environmental review of potential impacts, and comply with all applicable federal, state and local regulations. Projects would be required to mitigate environmental impacts through the discretionary review process. Therefore, impacts related to policy conflicts would be less than significant.	LTS	No mitigation is required.	LTS

Table ES-5 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measure	Significance after Mitigation
NI = No impact LTS = Less than significant PS = Potentially significant S = Significant SU = Significant and unavoidable			
3.11 Noise			
Impact 3.11-1: Short-Term Construction Noise Impacts Implementation of the CAP would not generally result in substantial short-term noise impacts due to the scale and nature of future improvements which may occur, and which are generally small, localized, and would require little use of heavy-duty construction equipment. However, GHG reduction and adaptation measures that would result in vegetation management could expose rural residential receptors to temporary and intermittent noise from mechanical equipment and haul trucks. Projects would be required to be evaluated for project-specific impacts under CEQA at the time of application and project-specific mitigation would be required to minimize or avoid noise impacts to the extent feasible in compliance with CEQA Guidelines Section 15126.4. Implementation of General Plan policies that reduce noise impacts consistent with federal and State requirements, as well as all other County noise regulations would minimize impacts. Therefore, this impact would be less-than-significant.	LTS	No mitigation is required.	LTS
Impact 3.11-2: Long-Term Operational Noise Impacts GHG reduction and adaptation measures would not result in substantial operational noise due to required setback distances for siting of facilities, the minor nature of maintenance activities, and few new operational vehicle trips. This impact would be less-than-significant.	LTS	No mitigation is required.	LTS
Impact 3.11-3: Excessive Groundborne Vibration Implementation of GHG reduction and adaptation measures that involve the operation of heavy-duty construction equipment could generate localized groundborne vibration in the vicinity of the construction activity. Given the required setback distances for siting of certain facilities, as well as the low likelihood that construction activities or haul truck trips would occur within 43 feet of receptors, it is unlikely that construction or operational vibration impacts would occur. Where there is the potential for these impacts, they are routinely addressed through project-level environmental review and permitting. Future discretionary projects would be required to evaluate project-specific impacts under CEQA at the time of application and project-specific mitigation would be required to minimize or avoid vibration impacts to the extent feasible in compliance with CEQA Guidelines Section 15126.4. Thus, impacts related to excessive groundborne vibration would be less than significant.	LTS	No mitigation is required.	LTS

Table ES-5 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measure	Significance after Mitigation
NI = No impact LTS = Less than significant PS = Potentially significant S = Significant SU = Significant and unavoidable			
3.12 Traffic and Transportation			
Impact 3.12-1: Conflict with an Applicable Plan, Ordinance or Policy Establishing Measures of Effectiveness for the Performance of the Circulation System, Taking into Account All Modes of Transportation Including Mass Transit and Non-Motorized Travel and Relevant Components of the Circulation System, Including but Not Limited to Intersections, Streets, Highways and Freeways, Pedestrian and Bicycle Paths, and Mass Transit GHG reduction and adaption measures promote a reduction in VMT and are generally consistent with general plan circulation element policies that encourage construction of infrastructure that promotes the use of transportation modes other than the private automobile (public transit, bicycling, walking). While these projects may result in a temporary increase in construction traffic, the projects would remain consistent with the goals, policies, and ordinances relevant to transportation and circulation systems. This impact would be less than significant.	LTS	No mitigation is required.	LTS
Impact 3.12-2: Conflict with an Applicable Congestion Management Program, Including, But Not Limited to, LOS Standards and Travel Demand Measures, or Other Standards Established By the County Congestion Management Agency for Designated Roads or Highways GHG supporting measures (TR-10, TR-14, TR-15) that address transportation would support congestion management efforts by requiring an increase in the number of park and ride facilities and increasing active transportation facilities (bike lanes, sidewalks). Although construction of the improvements may temporarily increase congestion on area roadways by increasing the amount of heavy-duty construction vehicles sharing the roadways with normal vehicle traffic or by reducing travel lanes temporarily, all future development projects would be required to follow County regulations, including preparation of and implementation of construction period traffic planning. Ultimately, these facilities would improve overall congestion with the County and would result in beneficial impacts. Significant construction-related transportation impacts would be avoided with implementation of standard traffic control measures. Therefore, this impact would be less than significant.	LTS	No mitigation is required.	LTS

Table ES-5 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measure	Significance after Mitigation
NI = No impact LTS = Less than significant PS = Potentially significant S = Significant SU = Significant and unavoidable			
Impact 3.12-3: Substantially Increase Hazards Due to a Design Feature (e.g., Sharp Curves or Dangerous Intersections) or Incompatible Uses (e.g., Farm Equipment) Future projects that would occur as a result of CAP implementation would largely be constructed in developed areas, within or on existing buildings (e.g., rooftops, wastewater treatment plants), or along existing roadways and would not change the existing configuration of the roadways. Other measures that encourage a shift in transportation modes and reduction in travel demand would result in minor changes to the existing streetscape. 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. This impact would be less than significant.	LTS	No mitigation is required.	LTS
Impact 3.12-4: Result In Inadequate Emergency Access Implementation of some of the GHG reduction and adaptation measures may temporarily disrupt traffic flows on area roadways increasing the amount of heavy-duty construction vehicles sharing the roadways with normal vehicle traffic, All future development projects would be required to follow County development and construction standards, including preparation of and implementation of construction period traffic control plan that would include provisions for emergency vehicle access. Therefore, this impact would be less-than-significant.	LTS	No mitigation is required.	LTS
Impact 3.12-5: Conflict With Adopted Policies, Plans, or Programs Regarding Public Transit, Bicycle, or Pedestrian Facilities, or Otherwise Decrease the Performance or Safety of Such Facilities Implementation of GHG reduction and adaptation measures may temporarily disrupt traffic flows on area roadways by increasing the amount of heavy-duty construction vehicles sharing the roadways with normal vehicle traffic, All future development projects would be required to follow County development and construction standards, including preparation of and implementation of construction period traffic control plan that would reduce significant construction-related transportation impacts. Therefore, this impact would be less than significant.	LTS	No mitigation is required.	LTS
3.13 Utilities			
Impact 3.13-1: Result In the Expansion of Stormwater or Wastewater Infrastructure, the Construction of Which Could Result In Environmental Impacts Implementation of adaptation measures Flood-6 and Flood-7 that would be implemented with the CAP have the potential to result in new or expanded stormwater or wastewater infrastructure to improve the County's ability to respond to effects related to climate change (i.e., storm surge, flooding, and inundation) which could result in environmental impacts from construction. However, future projects would be required to evaluate project-specific impacts under CEQA at the time of application and project-specific mitigation would be required to minimize or eliminate impacts resulting from construction activities (i.e., biological resources, cultural resources, noise, air quality, etc.). In addition, compliance with local general plan policies and existing regulations, would ensure that impacts would be mitigated. Therefore, this impact would be less than significant.	LTS	No mitigation is required.	LTS

Table ES-5 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measure	Significance after Mitigation
NI = No impact LTS = Less than significant PS = Potentially significant S = Significant SU = Significant and unavoidable			
Impact 3.13-2: Result in Expansion of Solid Waste Facilities, the Construction of Which Could Result in Environmental Impacts Implementation of GHG reduction measures BE-7, SW-1, and SW-2 that would be implemented with CAP adoption have the potential to result in new or expanded solid waste and composting facilities to increase the County's ability to process increased compost, divert additional waste, and capture methane gas for fuel conversion. The new or expanded facilities have the potential to result in environmental impacts from construction, operation, and maintenance. However, future projects would be required to evaluate project-specific impacts under CEQA at the time of application and project-specific mitigation would be required to minimize or eliminate impacts resulting from construction activities (i.e., biological resources, cultural resources, noise, air quality, etc.). In addition, compliance with local general plan policies and existing regulations, would ensure that impacts would be mitigated. Therefore, this impact would be less than significant.	LTS	No mitigation is required.	LTS

1 INTRODUCTION

This Draft Environmental Impact Report (Draft EIR) evaluates the potential environmental impacts of the proposed Napa County Climate Action Plan Project (project). Napa County (County) proposes to adopt a comprehensive greenhouse gas (GHG) reduction plan including strategies and measures that would apply to all property located within unincorporated Napa County. The project also includes a CAP Checklist to establish consistency for future development projects.

This Draft EIR evaluates the environmental impacts of the adoption and implementation of the project. The Draft EIR also evaluates alternatives to the project and includes mitigation to reduce, minimize, or avoid any significant adverse impacts.

This Draft EIR has been prepared under the County's direction in accordance with the requirements of the California Environmental Quality Act (CEQA) (Public Resources Code [PRC] Section 21000 et seq.), the State CEQA Guidelines, and Napa County's local CEQA Guidelines.

1.1 PURPOSE AND INTENDED USES OF THIS DRAFT EIR

According to the State CEQA Guidelines (14 California Code of Regulations [CCR] Section 15064[f][1]), preparation of an EIR is required whenever a project may result in a significant environmental impact. An EIR is an informational document used to inform public agency decision makers and the general public of the significant environmental effects of a project, identify possible ways to mitigate or avoid the significant effects, and describe a range of reasonable alternatives to the project that could feasibly attain most of the basic objectives of the project while substantially lessening or avoiding any of the significant environmental impacts. Public agencies are required to consider the information presented in the EIR when determining whether to approve a project.

CEQA requires that state and local government agencies consider the environmental effects of projects over which they have discretionary authority before taking action on those projects (PRC Section 21000 et seq.). CEQA also requires that each public agency avoid or mitigate to less-than-significant levels, wherever feasible, the significant environmental effects of projects it approves or implements. If a project would result in significant and unavoidable environmental impacts that cannot be feasibly mitigated to less-than-significant levels, the project can still be approved, but the lead agency's decision makers must prepare findings and issue a "statement of overriding considerations" explaining in writing the specific economic, social, or other considerations that they believe, based on substantial evidence, make those significant effects acceptable (PRC Section 21002; CCR Section 15093). Because they have the principal authority over approval of the project, Napa County is the lead agency, as defined by CEQA, for this EIR. Other public agencies with jurisdiction over the project are listed below in Section 1.3, "Agency Roles and Responsibilities."

This document also functions as a Program EIR in accordance with CEQA Guidelines Section 15168(c) for streamlining future projects. The CAP is intended to be used for future project-specific GHG emissions analyses by being prepared consistent with the tiering and streamlining provisions of Section 15183.5 of the CEQA Guidelines. The Draft EIR provides the appropriate level of environmental review to allow future projects to tier from and streamline their analysis of GHG emissions pursuant to CEQA Guidelines Section 15183.5(a) and (b)(2), unless otherwise determined to be cumulatively considerable.

1.2 SCOPE OF ENVIRONMENTAL ANALYSIS

Pursuant to CEQA and the CEQA Guidelines, a lead agency shall focus an EIR's discussion on significant environmental effects and may limit discussion on other effects to brief explanations about why they are not significant (PRC Section 21002.1, CCR Section 15128). A determination of which impacts would be potentially significant was made for this project based on review of the information presented and comments received as part of the public scoping process (Appendix A), as well as additional research and analysis of relevant project data during preparation of this Draft EIR.

The County has determined that the project has the potential to result in significant environmental impacts on the following resources, which are addressed in detail in this Draft EIR:

- Aesthetics,
- Air Quality,
- Biological Resources,
- Cultural and Tribal Cultural Resources,
- Energy,
- Greenhouse Gas Emissions,
- Hazards and Safety,
- Hydrology and Water Quality,
- Land Use,
- Noise,
- Traffic, and
- Utilities.

1.2.1 Effects Found Not to be Significant

CEQA allows a lead agency to limit the detail of discussion of the environmental effects that are not considered potentially significant (PRC Section 21100, CCR Sections 15126.2[a] and 15128). The County determined through a review of NOP comments, analysis of project materials, and research that the following issue areas would not result in significant environmental impacts. As such the following topics are not discussed in detail in this Draft EIR and the reasons for determining this area described below.

- Agriculture and Forestry Resources
- Geology/Soils,
- Mineral Resources,
- Population/Housing,
- Public Services, and
- Recreation.

AGRICULTURAL AND FORESTRY RESOURCES

Implementation of the CAP is intended to reduce GHG emissions through the proposed GHG reduction and adaptation measures that would result in equipment fuel conversion, building energy efficiency improvements, small-scale renewable energy installation, vegetation management and restoration, bicycle and pedestrian infrastructure improvements, expansion of alternative transportation, and utility resiliency improvements. The measures contained in the CAP do not support or require development of large-scale energy, solid waste disposal or wastewater treatment facilities that would require conversion agricultural land or forested areas. Implementation of subsequent projects, such as traffic-calming measures, small-scale renewable energy projects, or bike and pedestrian improvements would be associated with existing development or be located within urbanized areas. These types of projects would not result in conversion of existing agriculture and forestry resources, nor would they be incompatible with existing agricultural uses or forestry operations.

GEOLOGY/SOILS

Implementation of the CAP would not expose people or structures to adverse effects resulting from geologic hazards because the CAP's GHG reduction and adaptation measures would not amend, revise, or be inconsistent with any existing regulations related to geology and soils for development projects. All future infrastructure projects resulting from implementation of the CAP would be required to undergo a

discretionary review process. As a matter of standard process, conditions of approval would require projects to comply with all relevant federal, state, and local regulations and building standards, including the California Building Code (CBC) and County-required geotechnical reconnaissance reports and investigations which would minimize the risk of seismic, soil instability, and expansive soils hazards. Compliance with National Pollution Discharge Elimination System, CBC, and the County Grading Ordinance, would prevent potential impacts to soil erosion. Development would be required to comply with all applicable federal, state and local regulations related to septic tanks and wastewater disposal, including County Environmental Health Division standards to prevent water quality issues because of ineffective septic and wastewater systems. Development would also be required to follow all applicable regulatory processes, including compliance with the CEQA Guidelines, which could require the completion of a geological reconnaissance report to evaluate the significance of unique geologic features on a given project site which would preserve unique geologic features.

Any development or expansion of facilities associated with subsequent projects implemented as a result of the CAP would be required to comply with existing regulations intended to protect people and structures from seismic hazards, soil instability and expansive soils, and would not expose people or structures to potential substantial adverse effects involving risks related to these hazards. The project also would not amend or revise any regulations in place to prevent soil erosion, water quality impacts from septic tanks and wastewater disposal, or impacts to unique geologic features or expose more people and structures to these hazards. Therefore, potential impacts related to geology and soils would be less than significant, no mitigation measures were required, and this issue is not discussed further in this EIR.

MINERAL RESOURCES

Implementation of the CAP would not preclude future access to mineral resources throughout the County because the CAP does not revise any policies or regulations regarding mineral access. The CAP also does not include any specific development projects. In general, GHG reduction and adaptation measures proposed by the CAP would result in small and unrelated infrastructure improvements that would not affect mineral resources access. Proposed measures include equipment fuel conversion, building energy efficiency improvements, small-scale renewable energy installation, vegetation management and restoration, bicycle and pedestrian infrastructure improvements, expansion of alternative transportation, and utility resiliency improvements. Potential impacts to mineral resources generally occur when a development project permanently precludes the potential to mine the resource located within a site. The measures that have the most potential to impact future access to mineral resources include those related to large-scale renewable energy infrastructure. However, all future large-scale renewable energy projects would require a use permit and would be required to go through the County's discretionary review process during which minerals access would be reviewed as part of CEQA and measures to minimize impacts to mineral resources would be implemented as necessary. Additionally, if a future large-scale renewable energy project is located near or within an area that contains mineral resources, a mineral resources technical report may be required at the discretion of the County. The technical report would assess the site-specific conditions and include mitigation measures, as necessary. Furthermore, large-scale renewable energy projects would not permanently preclude the loss of mining potential resources, as they could eventually be decommissioned. Therefore, potential impacts related to minerals resources would be less than significant, no mitigation measures are required, and this issue is not discussed further in this EIR.

POPULATION AND HOUSING

Implementation of the CAP would not induce population growth directly or indirectly, remove existing housing or displace existing populations because it does not propose changes to policies related to land use or residential zoning. The CAP includes GHG reduction and adaptation measures that would result in equipment fuel conversion, building energy efficiency improvements, small-scale renewable energy installation, vegetation management and restoration, bicycle and pedestrian infrastructure improvements, expansion of alternative transportation, and utility resiliency improvements. Large-scale renewable energy

infrastructure development requires hundreds to thousands of acres in scale, which could result in a nominal loss of potential dwelling units on land converted to this use.

Typically, large-scale renewable energy development occurs outside of areas designated or zoned as residential and would not employ substantial numbers of people. However, it is not likely that land which is developed with existing housing, or designated for higher densities would be converted because the land value for property that is designated for residential is higher than property designated for agricultural. Therefore, the potential loss of existing/future residential units would be nominal. Potential impacts related to population and housing would be less than significant, no mitigation measures were required, and this issue is not discussed further in this EIR.

PUBLIC SERVICES

Implementation of the CAP is intended to reduce GHG emissions through the proposed GHG reduction and adaptation measures that would result in equipment fuel conversion, building energy efficiency improvements, small-scale renewable energy installation, vegetation management and restoration, bicycle and pedestrian infrastructure improvements, expansion of alternative transportation, and utility resiliency improvements. Implementation of subsequent projects, such as traffic-calming measures, small-scale renewable energy projects, or bike and pedestrian improvements would not directly affect the provision of public services, nor contribute to population growth that could result in an increase for demand for public services. These types of projects would not have a population-generating component and, therefore, no increase in demand on public services is expected. Potential impacts related to public services would be less than significant, no mitigation measures were required, and this issue is not discussed further in this EIR.

RECREATION

Implementation of the CAP is intended to reduce GHG emissions through the proposed GHG reduction and adaptation measures that would result in equipment fuel conversion, building energy efficiency improvements, small-scale renewable energy installation, vegetation management and restoration, bicycle and pedestrian infrastructure improvements, expansion of alternative transportation, and utility resiliency improvements. Implementation of subsequent projects, such as traffic-calming measures, small-scale renewable energy projects, or bike and pedestrian improvements would not directly affect the provision of recreational facilities, nor contribute to population growth that could result in a deterioration of existing recreational facilities. These types of projects would not have a population-generating component and, therefore, no increase in demand for recreational facilities is expected. Potential impacts related to recreation would be less than significant, no mitigation measures were required, and this issue is not discussed further in this EIR.

1.3 REVIEW AND CONSULTATION REQUIREMENTS

This Draft EIR will be used by the County and CEQA responsible and trustee agencies to ensure that they have met their requirements under CEQA before deciding whether to approve or permit project elements over which they have jurisdiction. It may also be used by other state and local agencies, which may have an interest in resources that could be affected by the project, or that have jurisdiction over portions of the project. The project is also subject to consultation requirements in addition to the discretionary approvals identified in Table 2-4, Required Project Approvals. To date, the County has engaged in consultation with the following entities regarding the project:

- **Tribal Governments.** As required by SB 18 and AB 52, the County has consulted with all Native American tribes with an affiliation to Napa County to aid in the protection of traditional tribal cultural places and sacred lands as part of the Draft EIR process. AB 52 letters were sent to the Middletown Rancheria, Mishewal Wappo Tribe of Alexander Valley, and Yocha Dehe Wintun Nation on July 24, 2018 for a 30-day response period (ending on August 24, 2018). The County received responses from the Middletown

Rancheria and Yocha Dehe Wintun Nation. SB18 letters were sent to the Middletown Rancheria, Mishewal Wappo Tribe of Alexander Valley, Yocha Dehe Wintun Nation, Cortina Indian Rancheria of Wintun Indians, and Federated Indians of Graton Rancheria on September 11, 2018.

- Native American Heritage Commission (NAHC). Although the County consulted with all tribes with an affiliation to Napa County, a letter (Sacred Lands check) was sent to the NAHC on August 30, 2018 to ensure all appropriate Native American tribes are consulted for their knowledge of potential known resources and history of the areas affected by the project. The NAHC responded identifying that both cultural resources and tribal cultural resources are present within the project site and provided the County with a list of Native American Tribes that should be consulted for the project. All Tribes on the list had already been consulted by the County during the SB 18 and AB 52 consultation.

1.3.1 Lead Agency

For this EIR, Napa County is the lead agency under CEQA, as defined in Section 15367 of the State CEQA Guidelines.

1.3.2 Responsible and Trustee Agencies

Under CEQA, a responsible agency is a public agency, other than the lead agency, that has responsibility to carry out or approve a project (PRC Section 21069). A trustee agency is a state agency that has jurisdiction by law over natural resources that are held in trust for the people of the State of California (PRC Section 21070). Responsible and trustee agencies are consulted by the lead agency to ensure the opportunity for input during the environmental review process. There are no responsible or trustee agencies with permitting authority over this project.

1.4 CEQA PUBLIC REVIEW PROCESS

1.4.1 Notice of Preparation

In accordance with PRC Section 21092 and CCR Section 15082, the County issued a notice of preparation (NOP) on July 24, 2018 to inform agencies and the general public that an EIR was being prepared and to invite comments on the scope and content of the document (Appendix A). The NOP was submitted to the State Clearinghouse (SCH #2018072058; posted on the County's website https://www.countyofnapa.org/592/Climate-Action-Plan, advertised in the Napa Valley Register; available at the Napa County Planning, Building, and Environmental Services Department as well as the Napa Main Library; and distributed directly to public agencies (including potential responsible and trustee agencies), interested parties, and organizations. The NOP was circulated for 30 days, through August 22, 2018.

In accordance with PRC Section 21083.9 and CCR Section 15082(c), a noticed scoping meeting for the EIR occurred on Wednesday August 15, 2018 at 9:00 a.m. at the Napa County Administration Building, Third Floor Board Chambers, 1195 Third Street, Napa. Appendix A contains the comment letters submitted during the public comment period as well as the Scoping Meeting Summary, which summarizes the comments received during the scoping meeting.

1.4.2 Public Review of Draft EIR

This Draft EIR is being circulated for public review and comment for a period of 45 days, from **May 10, 2019 to June 24, 2019**.

In addition, written comments from the public as well as organizations and agencies will be accepted throughout the public comment period. Because of time limits mandated by State law, comments should be provided no later than 5:00 p.m. on **June 24, 2019**. Please send all comments to:

Napa County Planning, Building, and Environmental Services Department
1195 Third Street, Suite 210
Napa, CA 94559
Attention: Jason Hade, Planner III
Telephone: (707) 259-8757
Email: Jason.Hade@countyofnapa.org

Comments provided by email should include the name and physical address of the commenter. Copies of this Draft EIR are available for public review at the following locations:

- Napa County Planning, Building, and Environmental Services Department at 1195 Third Street, Suite 210, Napa; and
- Napa Main Library at 580 Coombs Street, Napa.

The Draft EIR is also available for public review online at: https://www.countyofnapa.org/591/Current-Projects.

1.4.3 Final EIR

Following public review of the Draft EIR, a Final EIR will be prepared that will include both written and oral comments on the Draft EIR received during the public review period, responses to those comments, and any revisions to the Draft EIR. The Draft EIR and the Final EIR will comprise the EIR for the CAP. Before approving the CAP, the lead agency is required to certify that the EIR has been completed in compliance with CEQA, that the decision-making body reviewed and considered the information in the EIR, and that the EIR reflects the independent judgment of the lead agency.

1.5 ORGANIZATION OF THIS DRAFT EIR

This Draft EIR is organized as follows:

Executive Summary: This chapter introduces the proposed CAP; provides a summary of the environmental review process, effects found not to be significant, and key environmental issues; and lists significant environmental impacts and mitigation measures to reduce significant impacts to a less-than-significant level.

Chapter 1, Introduction: This chapter provides a description of the lead and responsible agencies, the legal authority and purpose of the EIR, the scope of the environmental analysis, agency roles and responsibilities, the CEQA public review process, and organization of the EIR.

Chapter 2, Project Description: This chapter describes the project background, objectives, and location, and provides a detailed description of the characteristics associated with the proposed CAP.

Chapter 3, Approach to the Environmental Analysis: The resource sections within this chapter evaluate the expected environmental impacts generated by the project. Within each subsection of Chapter 3, the regulatory background, existing environmental setting, the significance criteria, and the analysis methodology and assumptions are described. The anticipated changes to the existing environmental conditions after development of the project are then evaluated for each resource. For any significant or potentially significant impact that would result from project implementation, mitigation measures are

presented along with the remaining level of significance. Environmental impacts are numbered sequentially throughout the sections of Chapter 3 (e.g., Impact 3.2-1, Impact 3.2-2, etc.). Any required mitigation measures are numbered to correspond to the impact numbering; therefore, the mitigation measure for Impact 3.2-1 would be Mitigation Measure 3.2-1.

Chapter 4, Cumulative Impacts: This chapter provides information regarding the potential cumulative impacts that would result from implementation of the project together with other past, present, and probable future projects.

Chapter 5, Other CEQA Sections: This chapter provides a discussion of potential significant and unavoidable impacts, significant and irreversible commitment of resources, energy conservation, and growth-inducing impacts.

Chapter 6, Alternatives: This chapter provides a discussion of alternatives to the project, including the No Project Alternative; alternatives considered but removed from further consideration; and the environmentally superior alternative.

Chapter 7, List of Preparers: This chapter identifies the lead agency contacts as well as the preparers of this Draft EIR.

Chapter 8, References: This chapter identifies the organizations and persons consulted during preparation of this Draft EIR and the documents used as sources for the analysis.

Chapter 9, Acronyms and Abbreviations: This chapter defines the acronyms and abbreviations used throughout this Draft EIR.

1.6 STANDARD TERMINOLOGY

This Draft EIR uses the following standard terminology:

No Impact means no change from existing conditions (no mitigation is required).

Less-than-Significant Impact means no substantial adverse change in the physical environment (no mitigation is required).

Potentially Significant Impact or **Significant Impact** means an impact that might or would cause a substantial adverse change in the physical environment (mitigation is recommended where feasible).

Significant and Unavoidable Impact means an impact that would cause a substantial adverse change in the physical environment and that cannot be avoided, even with the implementation of all feasible mitigation.

Project means the proposed Climate Action Plan (CAP) and CAP Checklist.

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2 PROJECT DESCRIPTION

This chapter presents a detailed description of the Napa County Climate Action Plan (CAP) Project (project). Napa County, as the Lead Agency for the project, has determined that the project requires the preparation of an environmental impact report (EIR) pursuant to the requirements of the California Environmental Quality Act (CEQA) (Public Resources Code [PRC] Section 21000 et seq.) and the State CEQA Guidelines.

2.1 PROJECT BACKGROUND

In June 2008, Napa County prepared and adopted the 2008 Napa County General Plan Update (2008 GP) and certified the Final Program Environmental Impact Report (2008 PEIR) (SCH# 2005102088), which assessed the potential environmental impacts of implementing the 2008 GP. Within the 2008 GP, Napa County adopted goals, policies, and action items aimed at reducing greenhouse gas (GHG) emissions. Further, the County adopted Action Item CON CPSP-2 which specifically called on the County to develop a GHG emissions inventory in a manner consistent with Assembly Bill (AB) 32 and then to develop an emissions reduction plan that included consideration of a "green building" ordinance and other mechanisms "shown to be effective at reducing emissions." Mitigation Measure 4.8.7a, which was included in the 2008 PEIR, implements 2008 GP Action item CON CPSP-2.

Subsequently, the County prepared a Draft CAP and presented it to the Board of Supervisors in 2012. However, the plan was not adopted.

In 2017, a new Draft CAP was prepared and released for public review in January 2017. The County received public comment on the Draft CAP and presented a Final Draft CAP to the County's Planning Commission in July 2017. Staff also prepared an initial study and findings that the CAP was within the scope of the 2008 General Plan Program EIR. Following the hearing, the County determined that additional revisions to the CAP, as well as the preparation of an EIR, would be required.

The County prepared additional revisions to the CAP and released a Revised Draft CAP for public review in July 2018 that included numerous changes to the previous 2017 versions of the CAP. A Second Revised Draft CAP, which responded to comments received on the Revised Draft CAP, was prepared in April 2019 and is the subject of this Draft EIR.

2.2 PROJECT OBJECTIVES

Section 15124 of the CEQA Guidelines requires an EIR to include a statement of objectives sought by the project. The objectives assist the County, as lead agency, in developing a reasonable range of alternatives to be evaluated in the EIR. The project objectives also aide decision makers in preparing findings or, if necessary, a statement of overriding considerations. The statement of objectives also includes the underlying purpose of the project.

The fundamental purpose of the CAP is to provide a comprehensive roadmap to address the challenges of climate change in unincorporated Napa County. Acting on climate change means both reducing GHG emissions from local sources in the unincorporated County and helping the community to adapt to climate change and improve its resilience over the long term.

The County has developed the following objectives for the project:

- implement the County's 2008 GP Action item CON CPSP-2 and satisfy the requirements of 2008 GP PEIR Mitigation Measure 4.8.7a;

- prepare a baseline GHG emissions inventory which updates the previous baseline inventory year of 2005 including community-wide sources of emissions in the unincorporated area of the county, and analyzes the potential growth of these emissions over time;
- identify GHG reduction strategies and measures that reduce GHG emissions from activities in the unincorporated county, along with climate adaptation measures that address the challenges of a changing climate and improve resilience in the county over the long term;
- reduce community-wide GHG emissions to meet the County's GHG reduction targets for 2020 and 2030, and provide a mechanism to make progress towards meeting the County's long-term 2050 goal; and
- provide a CAP Consistency Checklist that provides guidance for development to achieve consistency with the CAP and use CEQA streamlining tools for analysis of GHG emissions pursuant to the requirements of CEQA Guidelines Section 15183.5(b)(2).

2.3 PROJECT LOCATION

Napa County is in the northern San Francisco Bay area, and approximately 50 miles due west of Sacramento, California. The County is bordered by Lake County to the north, Yolo and Solano County to the east, Sonoma County to the west, and San Pablo Bay to the south (Figure 2-1).

The planning area for the CAP is the same planning area that was considered by the 2008 GP, which encompasses all unincorporated land in the Napa County (Figure 2-2). The unincorporated County includes approximately 789 square miles.

2.4 DESCRIPTION OF THE PROPOSED PROJECT

In 2006, the California Global Warmings Solutions Act (AB 32) established the State's first target to reduce GHG emissions to 1990 levels by 2020. As California continued to make progress toward the 2020 goal, Governor Brown strengthened efforts by signing Senate Bill (SB) 32 into law in 2016, which established a new mid-term target of 40 percent below 1990 levels by 2030. This target aligns with those of leading international governments such as the 29-nation European Union which adopted the same target in October 2014. The new 2030 target places California on a trajectory towards meeting its longer-term goal, which is to bring emissions down to 80 percent below 1990 levels by 2050.

Beginning in 2007, the County began implementing actions to address climate change and reduce GHG emissions, both in the County's operations as well as the broader community. Subsequently, the County's 2008 GP and 2008 PEIR called for the development and adoption of a CAP, which aligns with the State's broader efforts to reduce GHG emissions.

The following sections describe the project, including the contents of the CAP

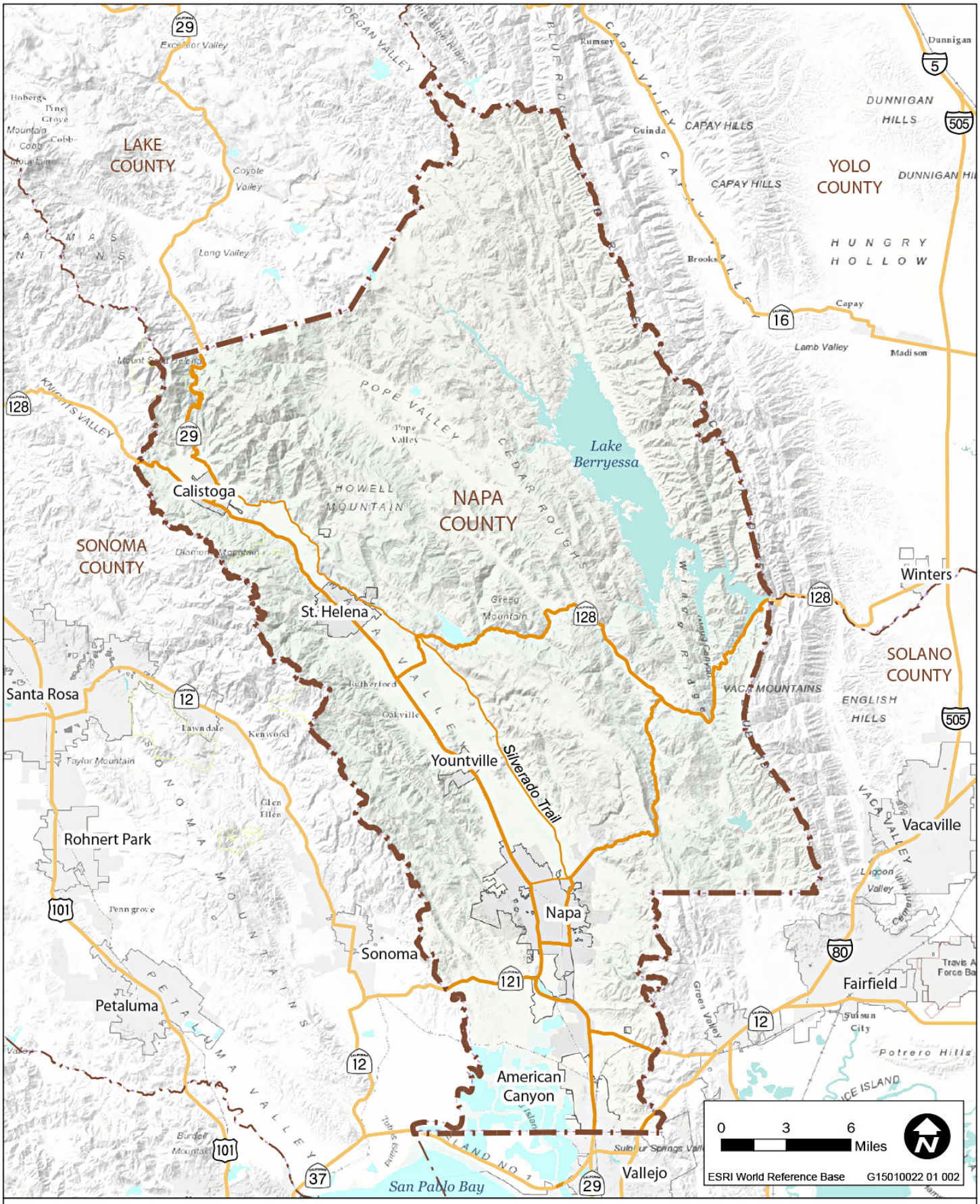


Figure 2-1 **Project Location**

Figure 2-2 **Regional Location**

2.4.1 Climate Action Plan

The County's CAP is being developed to implement 2008 GP Action Item CON SPSP-2, satisfy the requirements of 2008 PEIR Mitigation Measure 4.8.7a, and to be consistent with State legislation and policies that are aimed at reducing statewide GHG emissions. This includes:

- AB 32, which established a target of reducing statewide GHG levels to 1990 levels by 2020;
- SB 32, which established a mid-term target of reducing statewide GHG levels to 40 percent below 1990 levels by 2030; and
- Executive Order S-3-05, which recommends a 2050 statewide longer-term GHG reduction goal of reducing GHG emissions 80 percent below 1990 levels.

The GHG reduction targets and goals for the County in the CAP are established consistent with guidance provided in the 2017 Scoping Plan for plan-level, communitywide GHG reduction analysis and target-setting that aligns with methods used to develop the State's targets and goals. Consistent with the Scoping Plan and the State's 2014 GHG emissions inventory, the CAP aims to achieve the following community-wide GHG reduction targets for 2020 and 2030 and a longer-term 2050 goal:

- 2 percent below 2014 levels by 2020,
- 40 percent below 2014 levels by 2030, and
- 77 percent below 2014 levels by 2050.

To achieve these GHG reduction targets and demonstrate progress towards the longer-term goal, the CAP accounts for actions taken by State and Federal agencies that will reduce emissions in the County (also known as "legislative reductions") and identifies several sector-based strategies and GHG reduction measures that can be adopted and implemented locally by the County or others. The CAP also includes implementation and monitoring procedures that require the strategies and measures to be continually assessed and monitored. Reporting on the status of implementation and the performance of strategies and measures, periodic updates to the GHG emissions inventory, and other monitoring and reporting activities will help ensure that the CAP is making progress towards achieving the objectives and specific GHG reduction targets and longer-term goal, in alignment with current and future State actions.

The CAP will also be used for future project-specific environmental documents by being prepared consistent with the tiering and streamlining provisions of Section 15183.5(b)(2) of the State CEQA Guidelines. The EIR will provide the appropriate level of environmental review to allow future projects to tier from and streamline their analysis of GHG emissions pursuant to CEQA Guidelines Section 15183.5(b)(2). This is described in detail in Chapter 1, Introduction of this EIR.

CAP CONTENTS

The CAP contains six chapters which are briefly summarized below:

- Executive Summary: Summarizes the key information contained in the CAP.
- Chapter 1 - Introduction: This chapter introduces the document, describes the purpose and context of the plan, and identifies the regulatory framework related to global GHG emissions.
- Chapter 2 - Greenhouse Gas Emissions Inventory, Forecasts, and Reduction Targets: This chapter provides detailed accounting of GHG emissions from community-wide activities within the unincorporated area. It updates the 2005 baseline inventory with 2014 GHG emissions from all sectors, and includes new emissions sources and new data sources, updates calculation methodologies, and updates global

warming potential (GWP) factors. Projections of GHG emissions and reduction targets are described and the resultant emissions gap between projected emissions and reduction targets is calculated.

- Chapter 3 - Greenhouse Gas Reduction Strategies and Measures: This chapter outlines GHG reduction strategies and GHG reduction measures to be implemented by the County to achieve its GHG reduction targets. The strategies and measures focus on locally-based actions to reduce GHG emissions in various categories as a complement to legislative actions taken by the State or federal government.

- Chapter 4 - Climate Change Vulnerability and Adaptation: This chapter summarizes the expected effects of climate change on the community and describes the results of a climate change vulnerability assessment, summarizes the county's current capacity to adapt to climate-related impacts and considers how likely and how quickly impacts would occur, and identifies resiliency and adaptation strategies to reduce these impacts.

- Chapter 5 - Implementation and Monitoring: This chapter describes the set of actions that comprise the implementation strategy, possible funding mechanisms, the monitoring and compliance program, and an overview of the CEQA tiering/streamlining options for future projects.

The key components included in the CAP chapters listed above are described in more detail below. The CAP Consistency Checklist, which would be the mechanism for new development project to demonstrate project consistency with the CAP, is in Appendix D of the CAP.

GHG Emissions Inventory

A community GHG emissions inventory is an estimate of a defined set of gases emitted to the atmosphere from local or regional sources that contribute to climate change. The CAP is based on the inventory of these GHG emissions, which identifies and quantifies the sources and amounts of GHG emissions that are generated from activities within the unincorporated County in one calendar year (i.e., annual emissions). Conducting an inventory of emissions provides a baseline of GHG emissions to be established, from which future changes in emissions can be forecasted, along with calculation of GHG reduction targets, and from which GHG reduction measures can then be quantified.

The inventory was prepared for the year 2014 and serves as the baseline year from which the County determines GHG reduction targets. The 2014 baseline year was chosen as it was the most recent calendar year for which complete source and activity data was available when the planning process began in mid-2015. The 2014 inventory is organized into GHG Emissions Sectors, which represent a distinct subset of a market, society, industry, or economy whose components share similar characteristics. The nine major GHG Emissions Sectors are shown in order of contribution, which include the following (refer to CAP Appendix A for a more detailed discussion of the 2014 emissions inventory methods, data sources, and assumptions):

1. *Building Energy Use*: Building Energy sector emissions include carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O) emissions generated from electricity and natural gas consumption in residential, commercial, and industrial buildings and stationary equipment, including water pumps for private wells.

2. *On-Road Vehicles*: On-road transportation emissions include CO_2, CH_4, and N_2O emissions associated with gasoline, diesel, and other fossil fuel consumption from motor vehicles on local and regional roadways.

3. *Solid Waste*: Solid Waste sector emissions include waste-in-place CH_4 emissions generated from the decomposition of previously-landfilled waste in existing landfills operating in the County, as well as CH_4 emissions from the decomposition of waste generated by residences and businesses in the County at landfills in various locations.

4. *Agriculture*: Agriculture sector emissions include CO_2, CH_4, and N_2O emissions generated during fuel combustion in farm equipment operations; CH_4 and N_2O emissions from livestock; and, N_2O from fertilizer use.

5. *Off-Road Vehicles*: Off-road vehicles and equipment generate CO_2, CH_4, and N_2O emissions associated with combustion of gasoline, diesel and other fossil fuels.

6. *High global warming potential (GWP) gases:* High GWP gas emissions are generated as the result of the use or leakage of refrigerants, electrical insulators in transmission lines, fumigants, and other materials. Emissions in this sector include fluorinated gases (F-gases) such as hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6).

7. *Wastewater*: Wastewater treatment results in CO_2 emissions associated with the electricity consumed during treatment, as well as fugitive CH_4 emissions resulting from the treatment process for domestic sewage and industrial wastewater. Fugitive CH_4 accounts for most of the emissions in this sector.

8. *Land Use Change:* Lost carbon sequestration and storage potential from conversion of natural lands such as oak woodlands, forests, and shrublands to developed uses, such as agriculture or urban development.

9. *Imported Water Conveyance*: Water-related emissions include CO_2 emissions associated with energy and fuel used to convey imported water into the unincorporated County for domestic, irrigation, and industrial purposes.

Carbon Dioxide (CO_2) is the largest contributor to global warming and the most recognized GHG; however, there are five other primary GHGs that must be addressed to meet State-mandated reduction targets, including: CH_4; N_2O; and, three types of F-gases, which include HFCs, PFCs, and SF_6. To simplify discussion of these emissions collectively, climate action plans use a measurement known as carbon dioxide equivalent (CO_2e). The CO_2e measurement translates each GHG to CO_2 by weighting it by its relative GWP. For example, according to the Intergovernmental Panel on Climate Change, CH_4 and N_2O are 25 and 298 times more potent, respectively, than CO_2 in their ability to trap heat in the atmosphere (IPCC 2007). Converting these gases into CO_2e allows consideration of all the gases in comparable terms and makes it easier to communicate how various sources and types of GHG emissions contribute to global warming. A metric ton of carbon dioxide equivalent ($MTCO_2e$) is the standard measurement of the amount of GHG emissions produced and released into the atmosphere.

Some GHG emissions can also be referred to as "short-lived climate pollutants" (SLCPs) because they remain in the atmosphere for a much shorter period than long-lived climate pollutants and have much higher GWP values than longer-lived climate pollutants. SLCPs include CH_4, F-gases, and black carbon. The GHG emissions inventory prepared for this CAP includes the most common and prevalent SLCPs (i.e., CH4 and F-gases); however, black carbon emissions are not quantified in the inventory.

Table 2-1 summarizes the GHG emissions inventory results by sector.

Table 2-1 2014 Unincorporated Napa County Greenhouse Gas Emissions Inventory

Sectors	2014[1] ($MTCO_2e$/yr)
Building Energy Use	148,338
On-Road Vehicles	125,711
Solid Waste	83,086
Agriculture	52,198
Off-Road Vehicles	42,508
High GWP Gases	13,481
Wastewater	11,189
Land Use Change	7,684
Imported Water Conveyance	88
Total	**484,283**

Notes: Columns may not add to totals due to rounding.

$MTCO_2e$ = metric tons of carbon dioxide equivalent; GWP = Global Warming Potential; IPCC = Intergovernmental Panel on Climate Change

[1] **Uses GWP factors from IPCC's Fourth Assessment Report.**

Source: data compiled by Ascent Environmental in 2018

As illustrated in Table 2-1 above, in 2014, community activities accounted for approximately 484,283 $MTCO_2e$. Most of the emissions were due to building energy use and on-road vehicle activity. Thirty-one percent of these emissions were due to energy used in buildings for heating, cooling, and powering devices, equipment, and other energy loads. Emissions from gasoline and diesel consumption related to vehicles and trucks on local and regional roads accounted for another 26 percent of the County's emissions in 2014. The contributions from the nine major GHG Emissions Sectors by percentage are listed below.

1. Building Energy Use (31 percent),
2. On-Road Vehicles (26 percent),
3. Solid Waste (17 percent),
4. Agriculture (11 percent),
5. Off-Road Vehicles (9 percent),
6. High GWP Gases (3 percent),
7. Wastewater (2 percent),
8. Land Use Change (1 percent), and
9. Imported Water Conveyance (<1 percent).

GHG Emissions Forecasts

GHG emissions forecasts for a community are used to estimate future emissions levels in the absence of climate action measures. Emissions forecasts were prepared for both "business-as-usual" (BAU) and legislative-adjusted BAU scenarios for 2020, 2030, and 2050. The BAU emissions scenario is based on projected population, housing, and employment growth anticipated in the unincorporated County as provided by the Metropolitan Transportation Commission, assuming no actions would be taken to reduce emissions by Federal, State or local agencies pursuant to SB 32 or other legislation. The BAU scenario represents theoretical "worst-case" future conditions, while the legislative-adjusted BAU scenario accounts for future emissions reductions pursuant to SB 32 and other legislation in California from a variety of regulations and programs, including the Renewable Portfolio Standard, improving vehicle fuel economy standards because of Advanced Clean Cars, and other State and Federal policies.

The legislative-adjusted BAU forecast scenario is summarized below in Table 2-2. Under the legislative-adjusted BAU scenario, community-wide GHG emissions are forecasted to decrease by approximately 4 percent by 2020, 28 percent by 2030, and 24 percent by 2050 for the unincorporated Napa County compared to 2014 emissions.

Table 2-2 Unincorporated Napa County Emissions Inventory and Legislative-Adjusted BAU Forecasts ($MTCO_2e$/yr)

Sector and Subsector	2014	2020	2030	2050
Energy	148,338	131,643	59,150	66,184
Transportation	125,711	112,854	84,845	85,735
Waste	83,086	62,345	56,711	48,854
Agriculture	52,198	52,521	53,589	57,446
Off-Road Vehicles and Equipment	42,508	45,164	49,592	58,474
High-GWP Gases	13,481	11,828	13,169	15,867
Water and Wastewater	11,277	11,858	12,959	14,335
Land Use Change	7,684	35,608[1]	18,239	21,669
Total	**484,283**	**463,821**	**348,253**	**369,563**
Percent change from 2014 (%)	**NA**	**-4**	**-28**	**-24**

Notes: Columns may not add to totals due to rounding.

BAU = Business as usual; NA = Not Applicable; GWP = Global Warming Potential; $MTCO_2e$ = metric tons of carbon dioxide equivalent

[1] The large increase in land use change "emissions" is due to sequestration and carbon storage losses associated with land use forecasts from the County that show a high rate of land use change between 2015 and 2020 compared to other years.

Source: data compiled by Ascent Environmental in 2018

GHG Emissions Reduction Targets

The CAP provides a course of action for the County to reduce GHG emissions consistent with targets in AB 32 and SB 32, and longer-term goals established in Executive Orders B-30-15 and S-3-05. The state aims to reduce annual statewide GHG emissions to:

- 1990 levels by 2020,
- 40% below 1990 levels by 2030, and
- 80% below 1990 levels by 2050.

To determine an equivalent reduction target at the local level, California's 2017 Climate Change Scoping Plan released by the California Air Resources Board (CARB) recommends community-wide GHG reduction goals for local climate action plans that are aligned with and contribute to helping the State achieve its 2030 target and long-term 2050 goal (CARB 2017). The 2017 Scoping Plan identifies a quantified statewide strategy to achieve the 2030 target, but it does not identify a specific and quantifiable strategy for achieving the longer-term 2050 goal. The State's 2030 target and 2050 goal are expressed as reducing emissions to 6 $MTCO_2e$ per capita and 2 $MTCO_2e$ per capita by 2030 and 2050, respectively. Considering the overall statewide emissions in 1990 and 2014 and the forecasted statewide population in 2030 and 2050, these per-capita goals would be equivalent to reducing 2014 emissions by 40 percent by 2030 and 77 percent by 2050 (CARB 2016, DOF 2014). Although CARB did not recommend a similar community-level target for 2020, an equivalent target can be calculated by comparing the State's GHG inventories for 1990 and 2014. According to CARB's estimate of California's GHG inventory, the State emitted approximately 431 million $MTCO_2e$ ($MMTCO_2e$) in 1990 and 442 $MMTCO_2e$ in 2014, a 2 percent increase. Thus, the following 2020 and 2030 targets and long-term goal for 2050 would reduce annual community-wide GHG emissions in unincorporated Napa County consistent with CARB's recommended targets and longer-term goal:

- 2 percent below 2014 levels by 2020,
- 40 percent below 2014 levels by 2030, and
- 77 percent below 2014 levels by 2050.

The recommended 2020 and 2030 targets and long-term 2050 goal, along with estimated reductions required to achieve the targets and long-term goal, are summarized below in Table 2-3.

Table 2-3 Recommended Greenhouse Gas Emissions Reduction Targets: 2020, 2030, and 2050

Scenario or Target	2014	2020	2030	2050
Baseline and Projections				
2014 Baseline GHG Inventory ($MTCO_2e$)	484,283	NA	NA	NA
Legislative-Adjusted BAU Forecast ($MTCO_2e$)	NA	463,821	348,253	287,535
Legislative-Adjusted BAU Forecast: Percent below Baseline (%)	NA	4	28	24
Targets				
Target Percent Reduction below Baseline (%)	NA	2	40	77
Target Annual Emissions ($MTCO_2e$)	NA	474,598	290,570	111,385
Gap Analysis				
Reduction from Baseline needed to meet Target ($MTCO_2e$)	NA	-9,686	-193,713	372,898
Reduction from Legislative-Adjusted BAU needed to meet Target ($MTCO_2e$)	NA	0	57,683	258,178

Notes: BAU = Business as usual, $MTCO_2e$ = metric tons of carbon dioxide equivalent, GHG = greenhouse gas, NA = Not Applicable

Source: data compiled by Ascent Environmental in 2018

Therefore, the County's 2020 and 2030 GHG emissions reduction targets, along with the longer-term 2050 GHG emissions reduction goal, are identified in the following emissions limits, which are expressed as total annual mass emissions levels:

- 474,598 $MTCO_2e$ by 2020,
- 290,570 $MTCO_2e$ by 2030, and
- 111,385 $MTCO_2e$ by 2050.

GHG Emissions Reductions Strategies and Measures

Based on the County's 2014 inventory shown in Table 2-3, the targets and long-term goal above aim to reduce annual County emissions to 474,598, 290,570, and 111,385 $MTCO_2e$ by 2020, 2030, and 2050, respectively. The County is already meeting the 2020 target because of existing legislative actions but would require significant additional GHG reductions to meet the 2030 target and longer-term 2050 goal. The County would need to reduce annual legislative-adjusted BAU 2030 emissions by 57,683 $MTCO_2e$ (40 percent). To meet the long-term 2050 goal, an additional reduction in annual emissions 258,178 $MTCO_2e$, or 77 percent, beyond the effect of current legislative reductions, would be required.

As a local government, the County can act to adopt or update land use plans, enforce or update County ordinances, adjust municipal operations, encourage or influence County residents and business by partnering with local organizations, and work with local and regional transportation planning or other agencies that provide services or maintain infrastructure that is not directly in the County's control. The County can effectively reduce emissions in some sectors where the County has jurisdictional control (e.g., municipal operations, land use change), but in some cases the County has limited ability to influence reductions because the County has limited jurisdictional control (e.g., on-road transportation).

Since the original Draft and Final CAP documents were circulated for public review in 2017 and subsequently revised in July 2018 and October 2018, the County has developed a revised draft list of recommended GHG reduction measures based on the County's jurisdictional influence, public input, and other measures based on best practices. These GHG reduction measures are organized according to "primary" and "supporting" measure categories in the CAP. Primary measures include those for which GHG reductions have been quantified and are the primary measures that the County would rely upon to meet the GHG reduction targets identified. Supporting measures are qualitative and are not identified as part of the primary set of quantifiable GHG reduction measures to meet the targets, either because reliable quantification methods are not available or to avoid double-counting with other similar measures within some sectors; however, supporting measures are still considered actionable measures that the County would implement as part of the CAP that would help to achieve GHG reductions.

The proposed measures were developed based on a combination of factors, including:

- the feasibility of the measure to be implemented by the County;
- the need for greater reductions in the sectors with the most emissions, especially in building energy and transportation (See CAP Figure 2-1 in Chapter 2);
- existing policies, actions, or programs that can be expanded or proposed policies yet to be adopted;
- feedback from community and other stakeholders; and
- technological innovations.

The CAP includes 25 Primary GHG Reduction Measures and 26 Supporting GHG Reduction Measures that the County would implement to reduce GHG emissions. 40 Adaptation Measures would also be implemented as part of the project to improve the County's resiliency to the effects of climate change. Refer to Table 2-4, GHG Reduction Measures and Adaptation Measures, at the end of this chapter for the complete list of

measures. Measures that could result in physical environmental impacts are evaluated within applicable chapters of this Draft EIR. Those measures that were determined not to result in physical environmental impacts as indicated in Table 2-4, are not discussed further within this Draft EIR.

The total estimated GHG emissions reductions from all measures quantified is approximately 37,583 $MTCO_2e$ in 2020, 66,334 $MTCO_2e$ in 2030, and 94,500 $MTCO_2e$ in 2050. The total estimated reductions in 2020 would be more than enough to meet the recommended 2020 target, with a 48,359 $MTCO_2e$ annual surplus of GHG reductions beyond legislative-adjusted forecasts. Implementation of the revised draft GHG reduction measures identified in Table 2-4 would also meet the recommended 2030 target, with a surplus of 8,651 $MTCO_2e$ in reductions. However, the projected GHG reductions from all measures in 2050 would fall considerably short of the long-term goal for 2050, requiring an additional 163,678 $MTCO_2e$ to be reduced per year by 2050.

Climate Change Vulnerability and Adaptation

Climate change is a global phenomenon that over the long term will have a wide variety of impacts on human health and safety, economic continuity, water supply, ecosystem function, and the provision of basic services (CNRA 2012a:3). Locally, climate change is already affecting and will continue to affect the physical environment throughout California, the Bay Area, and Napa County. Because impacts of climate change vary by location and other social and economic characteristics, it is important to identify the projected severity these impacts could have in Napa County. To determine the potential for impacts related to climate change, Cal-Adapt, a global climate simulation model was performed for the County using low and high GHG emissions scenarios. The direct, or primary, changes analyzed for the County include average temperature, annual precipitation, and sea-level rise. Secondary impacts, which can occur because of individual or a combination of these changes, are also assessed and include extreme heat and its frequency, wildfire risk, and changes in precipitation and hydrology (CNRA 2012a:16-17). These potential impacts and the County's strategies and measures to increase adaptation and resilience are discussed in Chapter 4 of the CAP.

The CAP contains five broad adaptation strategies and 40 adaptation measures. A list of these strategies and measures is provided in Table 2-4, GHG Reduction Measures and Adaptation Measures. GHG reductions are not associated with the strategies and measures within the CAP, however, the strategies and measures are an important component of the project because they provide a framework through which to plan for increased resiliency related to climate change impacts within the unincorporated county.

Implementation and Monitoring Approach

Some of the proposed GHG reduction strategies and measures would be implemented through code updates adopted by the County based on the County's ability to protect the public health, safety, and welfare of its citizens. Discretionary review processes also provide a mechanism through which to implement strategies and measures. Implementation of some strategies and measures would rely on financial incentives, research and development of new programs, partnerships with other agencies, and education and outreach.

Chapter 5, "Implementation and Monitoring," of the CAP includes the specific implementation, monitoring and reporting procedures to ensure that the CAP stays on track to meet its targets and long-term goals. The specific procedures for monitoring, reporting and updating the CAP include the following:

(1) Updates to the GHG Emission Inventory: The County will conduct periodic GHG emissions inventory updates at least every three years, beginning with the year 2020, to quantify whether overall progress is being made towards achieving emission reduction targets. The inventory updates will also serve as an opportunity to reevaluate the scope, methods, and assumptions in the inventory using the most recent GHG accounting and reporting protocols, which are constantly evolving along with global climate change science and policy.

(2) Monitor Implementation Status and Performance of Measures:

Implementation monitoring: County staff will monitor the implementation status of all GHG and adaptation measures in the plan on a quarterly basis.

Performance Monitoring: County staff will also monitor the overall performance of both primary and supporting GHG reduction measures and climate adaptation measures in meeting specified targets or goals by describing or quantifying GHG reductions achieved on an annual basis. County staff will evaluate and, where feasible, quantify the effectiveness of each primary measure in achieving the GHG reductions or other benefits described in the CAP. Performance of supporting measures will generally be described qualitatively, unless specific quantitative monitoring methods become available. Primary measure performance monitoring requires analyzing the level of community participation, costs, or barriers to implementation; and, quantifying actual reductions in fuel consumption, vehicle miles traveled, energy usage, water usage, landfilled waste, or other activities that result in GHG emissions reductions. By evaluating whether the implementation of a measure is on track to achieve its reduction potential, the County can identify successful measures and determine whether to modify or replace under-performing measures.

(3) Public Reporting on CAP Progress: The County will prepare annual CAP progress reports that summarize the status of implementation and monitoring efforts for the performance of individual GHG measures. The annual reports will also provide the opportunity to include new information about potential new measures or related activities in the region or State that may help the County meet its goals. County staff will make the annual reports available to the public (e.g., posted to the County website) and present a summary of the annual report to the Board of Supervisors.

"Additionally, beginning in 2021 and every three years after, County staff will prepare a more detailed CAP progress report to the Board of Supervisors that describes:

- results of the latest three-year update to the inventory;
- estimated annual GHG reductions associated with measure implementation or legislative reductions;
- estimated participation rates (where applicable);
- implementation costs and funding needs;
- community benefits realized;
- remaining barriers to implementation;
- projections of whether the CAP is on track to achieve the 2030 target, along with updates to post-2030 forecasts and estimated reductions considering the longer-term 2050 goal; and,
- recommendations for changes or updates to the CAP required to achieve the 2030 target, as well as making increasingly- effective progress towards achieving the 2050 goal (see also items 4, 5, and 6 below).

(4) CAP Updates: Based on the findings of items 1 through 3 above, the County will initiate updates or amendments to the CAP document as needed to ensure that (a) the CAP remains on track to meet the 2030 GHG reduction target; and, (b) the County is making substantial and increasingly-effective progress towards achieving its longer-term goal for 2050.

(5) Specified Regulatory Triggers for CAP Updates: The County is committed to keeping the CAP up to date with both evolving State and Federal statutes, policies, and plans that are designed to reduce GHG emissions beyond 2030 consistent with scientific findings. Thus, the County will take immediate action to initiate a CAP update if any of the following events occur:

(a) Adoption of an update to the Climate Change Scoping Plan by the California Air Resources Board (CARB), pursuant to executive orders or other legislative actions, that identifies specific regulations, programs, or other reasonably-foreseeable State actions that define a specific pathway to achieving the State's longer-term goals. These longer-term goals could include the 2050 GHG reduction goal established in EO S-3-05 and EO B-30-15; other new post-2030 interim targets related to achievement of the GHG reduction goal for 2050 (e.g., a new 2040 legislative target); or, any new or modified target related to the zero-net carbon goal for 2045 as stated in EO B-55-15.

(b) Enactment of new State or Federal legislation that codifies into statute post-2030 GHG emission reduction or zero-net carbon targets or goals; and, that would require CARB, EPA, or other entities to update existing plans (i.e., Scoping Plan) to identify specific regulations, programs, or other reasonably-foreseeable actions that define a specific pathway to achieving post-2030 targets or goals.

(6) Updates Consistent with State Guidance: The County's actions to update the CAP will be consistent with current guidance and best-available methods recommended by CARB, OPR, or other appropriate regulatory agencies that demonstrate how local government efforts to reduce GHG emissions should be aligned with and complement State efforts."

Consistent with the requirements of CEQA Guidelines Section 15183.5 (b)(1)(E), an agency is required to monitor the CAP's progress and amend it if it is determined that the plan is not achieving its specified targets. If amendments to the CAP are required, they would be reviewed considering CEQA's requirements for subsequent environmental review as outlined in Section 15162 to 15164.

Co-Benefits

While the measures included in the CAP are generally geared towards reducing GHG emissions, many will also result in environmental or economic "co-benefits." Environmental co-benefits include improved air quality, water supplies, biological resources, public health outcomes, and beneficial outcomes for other resources. For example, a significant co-benefit of implementing GHG measures related to reductions in motor vehicle use and associated fuel combustion will result in fewer toxic air contaminants, leading to better air quality and improved health for everyone. Other strategies focus on improving energy and water-use efficiency in new and existing buildings, which often contribute to lowering reducing overall housing and operational costs for residents and businesses. Another key GHG reduction measure focuses on improving the sustainability of wineries in the County, which is a large economic driver. By incentivizing wineries in the County to participate in the Napa Green Program, wineries could expand their facilities while also reducing the amount of GHGs their facilities emit.

Furthermore, several reduction measures encourage transit-oriented development and siting of affordable housing in the County, which allow residents to live closer to jobs, schools, and services, as well as help to reduce housing costs. The CAP also supports the development of increased interregional transit solutions, as well as the construction of more park and ride facilities. Other transportation measures including encouraging the use of active modes of transportation, which can have public health benefits and allow people to drive less, save money, and use their time more constructively.

Public Outreach

Public outreach would not result in any direct or indirect physical changes in and of itself that would require evaluation in the Draft EIR (CEQA Guidelines 15061(b)(3)). The County has engaged the community extensively throughout the Draft CAP and CAP process including several outreach meetings and public hearings at key milestones in the process to engage the community and interested stakeholders. Public outreach for the CAP included involvement and engagement of key internal and external stakeholder groups from various public, private, and nonprofit sectors; as well as individual citizens and residents of the County.

2.4.2 General Plan Amendment

General Plan Amendment to Policy CON-65 e): In the Conservation Element, Policy CON-65 e) would be amended to require that certain discretionary projects comply with the adopted CAP. This would be accomplished via implementation of the CAP Consistency Checklist discussed below. With adoption of the CAP, the General Plan Policy CON-65 e) is revised to the following:

- Policy CON-65 e): Consider GHG emissions in the review of discretionary projects and require that discretionary projects comply with the County's adopted Climate Action Plan as substantiated through compliance with the CAP Consistency Checklist. Consideration may include an inventory of GHG emissions produced by the traffic expected to be generated by the project, any changes in carbon sequestration capacities caused by the project, and anticipated fuel needs generated by building heating, cooling, lighting systems, manufacturing, or commercial activities on the premises. Projects shall consider methods to reduce GHG emissions and incorporate permanent and verifiable emission offsets.

2.4.3 CAP Consistency Checklist

The CAP Consistency Checklist (Checklist) is included as Appendix D to the CAP. The Checklist provides a mechanism by which discretionary projects may be determined consistent with the CAP and, therefore, eligible for CEQA streamlining privileges under CEQA Guidelines Section 15183.5. Discretionary projects that are not otherwise exempt from CEQA and require environmental review pursuant to CEQA, no matter the size of the project, would be evaluated for consistency with the CAP.

The Checklist identifies the GHG reduction measures in the CAP that would be required to be implemented on a project-by-project basis by discretionary projects subject to CEQA review that are not exempt from CEQA, to ensure that the specified emissions targets identified in the CAP are achieved. Implementation of these measures would ensure that new development requiring discretionary approvals is consistent with the CAP's assumptions regarding the implementation of relevant CAP strategies toward achieving the identified GHG reduction targets. Furthermore, a project's incremental contribution to cumulative GHG emissions may be determined to not be cumulatively considerable. Projects that are consistent with the CAP, as determined using the Checklist, may rely on the CAP for the cumulative impact analysis of GHG emissions under CEQA. Projects requiring discretionary review that cannot demonstrate consistency with the CAP using the Checklist would be required to prepare a separate, more detailed project-level GHG analysis as part of the CEQA document prepared for the project.

2.5 APPROVALS AND PERMITS REQUIRED

The Napa County Board of Supervisors will be the CEQA lead agency responsible for considering adoption and implementation of the CAP. As the lead agency under CEQA, Napa County is responsible for considering the adequacy of the EIR and determining if the overall project should be approved.

Table 2-5 Required Project Approvals

Project Approval	Approving Authority
Approval of Climate Action Plan	County Board of Supervisors
Approval of General Plan Amendment	County Board of Supervisors
Certification of the EIR	County Board of Supervisors

Note: The EIR is intended to apply to all listed project approvals as well as to any other approvals necessary or desirable to implement the project.

Table 2-4 GHG Reduction Measures

Measure Number	Sector Name	GHG Reduction Measure	Measure Description	Potential Physical Changes to the Environment	Environmental Issue Areas Potentially Affected
Agriculture					
Primary Measures					
AG-1	Agriculture	Support the conversion of stationary diesel or gas-powered irrigation pumps to solar, electric, or other alternative fueled pumps.	The County will work the California Air Resources Board, (CARB), BAAQMD, PG&E, MCE, and other public agencies to provide incentives and technical assistance to pump operators to convert stationary diesel or gas-powered irrigation pumps to either electric pumps that are connected to the grid or use off-grid alternative/renewable energy sources, such as solar, or, switch to alternative fuels such as renewable diesel in either existing or upgraded pumps. Electric pumps are up to 2.5 times more efficient than diesel pumps. This measure will apply to all crop types and assumes that electric, solar, and renewable diesel alternatives to traditional diesel and gasoline irrigation pumps are viable. This measure assumes that 50 percent of pumps in the County will be converted to electric or alternative fuels, instead of petroleum-based diesel and gasoline, by 2030. The measure effectively targets replacement of up to 14 irrigation pumps by 2030 and 24 pumps by 2050.	This measure would result in a new incentive program, or tie into existing incentive programs, that would aid in the both expanded use of renewable fuels or conversion from diesel or gas-powered irrigation pumps to electric- powered pumps. This measure would result in beneficial physical impacts including improved air quality, and a reduction in GHGs. Nominal physical impacts related to ground disturbance related to conversion activities. Fuel-switching activities would be the most likely compliance response to this measure, which would result in increased use of renewable diesel or other renewable fuels in lieu of regular fossil fuels. There could be a minor increase in electricity consumption and/or decreases in fossil fuel consumption as a result of replacement of standard fossil-fuel based pumps with on-site solar PV/battery power or grid-tied electrical power systems.	Air Quality Biological Resources Cultural Resources/TCR Energy GHG
AG-2	Agriculture	Support use of electric or alternatively-fueled agricultural equipment	Farm equipment other than irrigation pumps accounted for 60 percent of agricultural emissions in 2014 and is anticipated to increase through 2050. Under this measure, the County will support the use of electric or alternatively-fueled equipment in place of gasoline or diesel equipment. This measure targets a 50 percent alternatively-fueled agricultural equipment fleet in the county by 2030. Similar to AG-1, the County will provide technical assistance in identifying available alternative fuels and technology for agricultural equipment include CNG, biodiesel, and renewable diesel and electric equipment. The County will also work with BAAQMD or CARB to promote or provide financial or regulatory incentives to encourage the switch to electric or alternatively-fueled equipment. CARB funding sources include the FARMER program, the State's GHG Reduction Fund, and the Carl Moyer Program.	This measure would result in the development of an incentive program that would aid in the transition from gas and diesel-powered engines to electric or the use of alternative-fuels in agricultural equipment. This measure would result in beneficial physical impacts including improved air quality, and a reduction in GHGs. Fuel-switching activities would be the most likely compliance response to this measure, which would result in increased use of renewable diesel or other renewable fuels in lieu of regular fossil fuels. May result in a small increase in electricity consumption, accompanied by small decreases in fossil fuel usage because of decreases in internal combustion engines.	Air Quality Energy GHG
AG-3	Agriculture	Support the use of Tier 4 final diesel equipment for off-road agricultural equipment	The County will work with Napa Green and other entities to encourage vintners and other growers to use Tier 4 final diesel equipment. Equipment manufacturers claim that Tier 4 final equipment may increase fuel efficiency by up to 5 percent from Tier 4 interim and Tier 3 level equipment (Caterpillar 2016, Empire Renewable Energy 2011). Measure AG-6 below will also contribute to achieving these reductions. The County will work with Napa Green to encourage the use of Tier 4 Final equipment as a requirement for certification.	This measure would result in the promotion of the use of Tier 4 equipment for use in agricultural activities. This would result in a reduction of GHG emissions related to agriculture.	None. Not evaluated further in this Draft EIR because no direct or indirect physical changes (e.g., construction) to the environment would occur.
AG-4	Agriculture	Support reduced application of inorganic nitrogen fertilizer	The County will work with farmers to either reduce or replace the use of nitrogen-based fertilizers. Reductions can be achieved through better fertilizer management, and examples of recommended replacements include compost produced from local waste management or manure from local ranches and dairies. To track the progress of this measure, the County will work with the farming cooperatives or industry associations, such as the Napa Valley Grape growers or Napa Valley Vintners, to determine the amount of inorganic and organic nitrogen fertilizers applied per year and identify ways to further reduce nitrogen fertilizer use. The County will also review the annual fertilizer tonnage reports from CDFA to assess whether reductions in the county's nitrogen application rates are being achieved.	This measure would result in the voluntary implementation of agricultural practices that reduce or eliminate the need for fertilizer through the provision of incentives to use organic fertilizer. This would be facilitated through a public outreach program. This would result in beneficial physical impacts resulting in a reduction in GHGs.	None. Not evaluated further in this Draft EIR because no direct or indirect physical changes (e.g., construction) to the environment would occur.
Supporting Measures					
AG-5	Agriculture	Support BAAQMD in efforts to reduce open burning of removed agricultural biomass and flood debris	The County will support BAAQMD in encouraging farmers and County public services to find alternatives to open burning of agricultural, forest, and other removed biomass. The County does not have regulatory jurisdiction over open burning. Potential alternatives could include converting agricultural and forest waste to compost, mulch, smokeless burning, or pyrolysis into biochar for reapplication on cropland (see Measure AG-6 below); or, converting to biomass to energy at waste-to-energy facilities. The County may also be willing to contribute funds to support a wood waste to energy plant, should a viable project be proposed by another party. There may be instances where open burning is still the	This measure would result in the promotion of alternatives to burning biomass materials. This could result in chipping, mastication, use of materials onsite, and/or hauling materials to off-site locations. Burning could be considered as the last option to remove materials, but in some cases burning could still occur to prevent disease and control pests. While chipping, mastication, and hauling offsite could result in the	Air Quality GHG Energy Noise

Table 2-4 GHG Reduction Measures

Measure Number	Sector Name	GHG Reduction Measure	Measure Description	Potential Physical Changes to the Environment	Environmental Issue Areas Potentially Affected
			most effective tool to prevent the spread of pests and disease, and for this reason the County will support ongoing use of open burning where appropriate and in compliance with BAAQMD regulations.	production of some new emissions, it could ultimately result in fewer emissions than if the materials were burned.	
AG-6	Agriculture	Encourage and support the use of carbon farming and other sustainable agricultural practices in the County	The County will work with the Napa County Resource Conservation District (RCD), farmers, and other stakeholders to encourage and support the use of carbon farming and other sustainable agricultural practices in the County. Some examples of sustainable agricultural practices include cover-cropping, composting, limited or no-tilling, and livestock methane capture. The County can encourage and promote, through partnerships and education and outreach, the use of best management practices (BMPs) in farming operations to reduce emissions and sequester carbon. These BMPs include, but are not limited to, low carbon farming, low impact farming including minimizing tractor passes, low- or no-till farming, cover cropping strategies, low nitrogen usage, low water usage, composting, and use of fuel-efficient equipment.	This measure would result in the support and promotion of reduced carbon farming methods that would reduce GHG emissions related to agricultural activities.	None. Not evaluated further in this Draft EIR because no direct or indirect physical changes (e.g., construction) to the environment would occur.
Building Energy					
Primary Measures					
BE-1	Building Energy	Require compliance with CAL Green Tier 1 Green Building standards and Tier 1 Building Energy Efficiency Standards for eligible alterations or additions to existing buildings	The County will amend County Code to require compliance with CALGreen Tier 1 standards (Title 24, Part 11), as well as Tier 1 building energy efficiency standards (Title 24, Part 6), for alterations and additions over 1,000 square feet, in addition to requiring energy audits (see Measure BE-9). The County may also consider incentivizing compliance with CALGreen Tier 2 standards for eligible buildings, such as through expedited permitting or reduced permit fees (see Measures BE-5 and BE-8 below). CALGreen Tier 1 also requires all appliances to be EnergyStar rated.	This measure would result in revisions to the County Codes to require compliance with CalGreen Tier 1 Green Building standards for alterations and additions. This would result in GHG emissions reductions related to energy and water conservation.	None. Not evaluated further in this Draft EIR because no direct or indirect physical changes (e.g., construction) to the environment would occur.
BE-2	Building Energy	Require compliance with CAL Green Tier 1 Green Building standards and Tier 1 Building Energy Efficiency Standards for all new construction, and phase in ZNE standards for new construction, beginning with residential in 2020 and non-residential by 2030	The County will amend the County Code to require compliance with CALGreen Tier 1 green building standards (Title 24, Part 11), as well as Tier 1 building energy efficiency standards (Title 24, Part 6), for all new construction. These "reach code" standards include green building measures that can reduce GHG emissions beyond mandatory CALGreen requirements in several categories, including Energy Efficiency, Planning and Design, Water Efficiency and Conservation, Materials Conservation and Resource Efficiency, and Indoor Air Quality. Compliance with these green building measures can lead to increased use of green and recycled materials, turf area limits, reduction of construction waste through recycling, and other important features that achieve important sustainability and public health co-benefits.	This measure would result in revisions to the County Codes to require compliance with CalGreen Tier 1 Green Building standards for all new construction and compliance with ZNE requirements for residential new construction by 2020 and non-residential new construction by 2030. This would result in GHG emissions reductions related to energy and water conservation.	None. Not evaluated further in this Draft EIR because no direct or indirect physical changes (e.g., construction) to the environment would occur.
BE-3	Building Energy	Increase participation in MCE's Deep Green (100% Renewable Energy) option and encourage ongoing participation in MCE.	The County will develop and provide incentives for residents and businesses to adopt Marin Clean Energy's (MCE's) Deep Green Option, which provides 100 percent renewable electricity. The County will commit to subsidizing the extra cost of opting into Deep Green (e.g., $0.01 per kilowatt hour) for low-income households, and will develop incentives for wineries, hotels, and other businesses that opt into Deep Green. The County will also work with MCE to promote awareness of the Deep Green Option.	This measure would result in increased demand for energy supplied by 100% renewable sources. This measure would encourage Napa County residents to switch from the Light Green option which includes 60% renewable energy sources to the Deep Green option which includes 100% renewable energy sources. The increased demand for renewable energy resources is consistent with existing capacity and planned procurement targets established by MCE for 2019 (90% GHG-free portfolio) and 2022 (100% GHG-free portfolio) and would not induce demand for new, unplanned renewable energy. This EIR assumes that the mix of renewable energy resources would continue to include a mix of approximately 50% wind, 25% solar, and 25% biogas sourced from producers within California, Washington, and Oregon and consistent with MCE procurement targets.	None. Not evaluated further in this Draft EIR because no direct or indirect physical changes (e.g., construction) to the environment would occur.
BE-4	Building Energy	Require new or replacement residential and commercial water heating systems to be electrically powered or alternatively fueled (e.g., solar water heating).	The County will amend the County Code to require all new or replacement residential water heaters to be electrically-powered (e.g. heat pumps) or alternatively fueled systems, such as solar thermal or geothermal heat pump systems. Replacement of natural gas-fueled water heaters with electric or alternatively fueled heating allows for more opportunities to reduce emissions by displacing on-site fossil fuel combustion with electricity that is at least 50 percent renewable under MCE, on-site renewable energy, or a combination thereof. This measure will be enforced through the County's current permitting process for new or replacement water heaters in existing buildings and will initially apply to residential properties first. New residential development projects that are not exempt from CEQA will also be required to comply with this measure	This measure would result in a new ordinance or revisions to the County Code that would require replacement water heaters to be electric or alternatively fueled. This would reduce the number of gas water heaters in use. This would result in beneficial physical changes to related to air quality and GHG, and a nominal increase in electricity consumption.	Air Quality Energy GHG

Table 2-4 GHG Reduction Measures

Measure Number	Sector Name	GHG Reduction Measure	Measure Description	Potential Physical Changes to the Environment	Environmental Issue Areas Potentially Affected
			via compliance with the CAP Consistency Checklist (see Chapter 5 and Appendix D). New or replacement residential natural gas water heaters would typically no longer be permitted under this ordinance unless they are high-efficiency units that meet stringent uniform energy factor (UEF) ratings of 0.95 or higher.		
BE-5	Building Energy	Expand current renewable energy and green energy incentives and update local ordinances	The County will continue to provide expedited permitting incentives for installing solar panels, electric vehicle charging stations, and wind turbines. The County will also consider expanding permitting incentives and develop new incentives for other green technologies (e.g., solar water heating systems, geothermal ground-source heat pumps, micro-turbines, and battery storage). The County will also amend the County Code to ensure that all codes and ordinances are consistent with ongoing State legislation updates that encourage or require the use of renewable energy in existing or new development. This includes identifying any ordinances and policy language that may inhibit reasonable development or usage of renewable energy in the county. Notably, the statewide Title 24 Part 6 Energy Code update for 2019, which is scheduled to become effective on January 1, 2020, will require the installation of solar PV systems on all new single-family and low-rise residential buildings. The County will also update all other ordinances affecting renewable energy use by the end of 2020. This would include ensuring that ground-based solar systems would not count against residential acreage limits on agricultural land uses.	This measure would result in an expansion of incentives for renewable energy systems that would increase participation by individual property owners. This measure would result in the installation of new private renewable energy systems including new photovoltaic, small-scale wind turbines, solar water heating systems, geothermal ground source heat pump, and battery storage. This may result in construction, operation, and maintenance-related impacts.	Aesthetics Air Quality Biological Resources Cultural Resources/TCR Energy GHG Hydrology and Water Quality Noise
BE-6	Building Energy	Select MCE's Deep Green Option for all County Facilities	In 2017, the County selected MCE's Deep Green option for all County-owned facilities within the County's operational control, fulfilling the intent of this measure (MCE 2017b). The County will continue to opt into the Deep Green option into the future.	This measure would result in increased demand for energy supplied by 100% renewable energy sources. This measure would result in a switch to MCE's Deep Green option. The increased demand for renewable energy resources is consistent with existing capacity and planned procurement targets established by MCE for 2019 (90% GHG-free portfolio) and 2022 (100% GHG-free portfolio) and would not induce demand for new and unplanned renewable energy resources. This EIR assumes that the mix of renewable energy resources would continue to include a mix of approximately 50% wind, 25% solar, and 25% biogas sourced from producers within California, Washington, and Oregon and consistent with MCE procurement targets.	None. Not evaluated further in this Draft EIR because no direct or indirect physical changes (e.g., construction) to the environment would occur.
BE-7	Building Energy	Support waste-to-energy programs at unincorporated landfills	The County will encourage landfills located in the county to pursue waste-to-energy programs that convert waste-based fuel to usable energy that can offset a facility's non-renewable energy usage.	This measure will result in gas that is captured through existing landfill gas capture systems being reused for energy, rather than being flared. This measure could result in new infrastructure on-site or off-site to process landfill gas so that it can be used for energy generation or other end-uses such as CNG for fuel in vehicles. This may result in physical changes resulting from construction, operation, and maintenance of infrastructure.	Air Quality Biological Resources Cultural Resources/TCR Energy GHG Hazards and Hazardous Materials Hydrology and Water Quality Noise Utilities and Service Systems
Supporting Measures					
BE-8	Building Energy	Work with PG&E, BayREN, MCE, PACE financing programs, and other regional partners to incentivize energy efficiency improvements in existing buildings	The County will provide information on County-, State-, utility-based, and other local or regional energy efficiency programs and funding opportunities (e.g., Pacific Gas and Electric's [PG&E's] Energy Watch Program, Bay Area Renewable Energy Network [BayREN], MCE, Sustainable Napa County, and various property assessed clean energy [PACE] financing programs. This will be achieved by providing informational brochures at County offices, updating the County website, and other methods that the County will determine based on collaborative efforts with the above-referenced organizations and agencies. This measure is meant to support the efforts pursued under Measures BE-1, BE-2, and BE-4.	This measure would result in coordination among the County and partner organizations in order to incentivize energy efficiency improvements in existing buildings. Improved energy efficiency would reduce the consumption of carbon-based energy sources and reduce GHG emissions. This measure would result in physical changes to existing buildings, some of which may be historic structures.	Air Quality Cultural Resources/TCR Greenhouse Gas Emissions Energy
BE-9	Building Energy	Require energy audits for major additions to or alterations of existing buildings	The County will amend the County Code to require energy audits when a building permit application is submitted for a substantial addition to or alteration to an existing building. Audits could be triggered by an alteration or addition greater than or equal to 50 percent of a lot's total building square footage.	This measure would result in an amendment to the County Code to require energy audits in order to increase energy efficiency. This would result in a reduction of GHG emissions but could result in nominal construction activities.	Air Quality Cultural Resources/TCR Energy GHG

Table 2-4 GHG Reduction Measures

Measure Number	Sector Name	GHG Reduction Measure	Measure Description	Potential Physical Changes to the Environment	Environmental Issue Areas Potentially Affected
			Permit applicants would be required to incorporate all cost-effective improvements into the project to increase energy efficiency per the recommendations of the audit. The County will work with Napa Green's existing energy audit program under Napa Green's Integrated Resource Assessment program to avoid duplicating efforts and implementing this measure efficiently. This measure could be combined with BE-8 to inform permit applicants of available incentives and financing available to cover efficiency upgrades pursuant to audit recommendations.		
BE-10	Building Energy	Develop a program to allow new development to offset project GHG emissions by retrofitting existing income-qualified homes and buildings	The County will establish a program that allows new development to offset construction or operational GHG emissions by setting up a funding mechanism into which developments pay and, indirectly, finance residential energy efficiency retrofits in local existing income-qualified homes or buildings. The County will need to determine how the offset funds will be used to fund retrofits. Emissions benefits may be quantifiable once program details are established. The County could consider pairing funds from the retrofit program with other funding sources or financing mechanisms to allow for even greater energy efficiency improvements in existing buildings (see Measure BE-8).	This would result in the development of a program that would allow new development to contribute energy efficiency retrofits to existing income qualified homes and buildings. This would result in reduced GHG emissions but could result in nominal construction activities. This measure would result in physical changes to existing buildings, some of which may be historic structures.	Air Quality Cultural Resources/TCR Energy GHG
BE-11	Building Energy	Encourage solar panel installations on commercial roof spaces.	The County will work with MCE and commercial and industrial building owners to encourage solar panel installations on roof spaces, including warehouses. The County would develop a program to incentivize these installations by expediting permitting or reducing permit fees associated with installations on existing facilities (see Measure BE-5). The County could also work with interested stakeholders in developing a program to encourage solar panel installations for Feed-in-Tariff arrangements.	This measure would result in an expansion of incentives for renewable energy systems that would increase participation by individual property owners. This measure would result in the installation of new private renewable energy systems on roofs. This may result in construction, operation, and maintenance-related impacts.	Aesthetics Air Quality Cultural Resources/TCR Energy GHG Hazards and Hazardous Materials Noise
Land Use Change					
Primary Measures					
LU-1	Land Use	Establish targets and enhanced programs for oak woodland and coniferous forest preservation and mandatory replanting	The County will establish a mitigation program that prioritizes preservation of existing on-site trees for land use development projects, including vineyard conversions. Trees that cannot be preserved will be required to be replaced at a 2:1 ratio, consistent with General Plan Policy CON-24. This program will primarily focus on, but will not be limited to, oak and coniferous trees. The program will target a minimum preservation rate of 30 percent of existing on-site trees, weighted by tree size in diameter at breast height. For any tree replacements, the County will encourage project applicants to prioritize replanting on the project site followed by offering off-site planting opportunities. Considering County resources, staffing, and physical space limitations on available lands, it is assumed that an average of 2,500 replacement trees will be planted per year beginning in 2020 after the adoption of the CAP in spring 2019. This target could be achieved by a combination of existing or enhanced volunteer replanting efforts (e.g., 5,000 Oaks Initiative) and compliance with the County's 2:1 tree replacement policy (Napa County Resource Conservation District 2015).	This effort would result in preservation activities aimed at reducing the net loss of oak woodlands and coniferous forests. The program would include replanting activities that could result in nominal impacts related to distribution, installation, and early maintenance of trees during the establishment period.	Air Quality Energy GHG
LU-2	Land Use	Refine protection guidelines for existing riparian lands	The County will continue to enforce the County's Conservation Regulations (County Code, section 18.108.010 B.4) that protect riparian lands and prevents conversion of riparian lands to urban development, agricultural land use, or other land use types. If appropriate, the County will develop guidelines or refine existing regulations to ensure that no net losses of riparian lands will occur. The County will work with arborists and local organizations to implement policies or programs that enhance existing riparian lands, especially those deemed unhealthy or at risk. The County already restricts development activity in riparian zones through several ordinances. Section 16.04.750 limits number of the types and sizes of trees and vegetation that can be removed from riparian areas, including limitations on removal of native trees. The County will ensure that any revisions to riparian policies do not prevent removal of non-native disease hosts. Also, any development activities in riparian zones are required to be permitted. Such limits are also in place to prevent erosion under Section 18.108.100. Also, the 2:1 tree replanting policy described in LU-1 would also apply to trees removed from riparian lands. The County will also collaborate with arborist and stakeholder organizations, (e.g., Napa River Rutherford Reach Restoration Project, U.S. Army Corp of Engineers, California Department of Fish and Wildlife, and State Water Resources Control Board) to develop and implement coordinated policies or programs that enhance existing riparian lands, especially those deemed unhealthy or at risk.	This effort would result in the continued enforcement of existing regulations that protect riparian areas. This would result in an increase in the total amount of protected conservation areas.	None. Not evaluated further in this Draft EIR because no direct or indirect physical changes (e.g., construction) to the environment would occur.

Table 2-4 GHG Reduction Measures

Measure Number	Sector Name	GHG Reduction Measure	Measure Description	Potential Physical Changes to the Environment	Environmental Issue Areas Potentially Affected
LU-3	Land Use	Repurpose or otherwise prevent burning of removed trees and other woody material from land use conversions of oak woodlands and coniferous forests	The County will develop a program to require repurposing of usable timber from trees removed due to land use conversion and burying or chipping of non-usable timber. Repurposed wood may be used in construction or sold to local woodworking businesses or collectives with proceeds funding the administration of this measure and, if additional funds are available, LU-1. A minimum of 80 percent of the total removed weight of trees shall be repurposed, buried, chipped, or otherwise prevented from burning. This measure excludes timber in commercial forests. The County will consider collaborating with one or more program partners to implement the program in order to avoid duplicative efforts.	This effort would result in repurposing timber and woody materials that are collected during oak woodlands and forest conversion. This could result in chipping, mastication, and transportation of materials to off-site locations; however, these activities could result in fewer emissions than if the materials were burned.	Air Quality GHG Energy Noise Transportation and Traffic
Off-Road Transportation					
Primary Measures					
OR-1	Off-Road Transportation	Require Tier 4 equipment and alternative fuel use for all construction activity and mining operations as a condition for approval by 2030	The County will amend the County Code to require the use of Tier 4 final equipment as a condition of approval for all construction projects occurring in the county by 2030. Equipment manufacturers claim that Tier 4 final equipment may increase fuel efficiency by up to 5 percent from Tier 4 interim equipment. Because higher Tier equipment have more stringent standards, efficiency gains compared to lower Tier equipment may be greater.	This effort would result in revisions to existing building ordinances in order to require the use of Tier 4 equipment for all construction activities and mining operations. This would reduce emissions related to construction and mining activities.	None. Not evaluated further in this Draft EIR because no direct or indirect physical changes (e.g., construction) to the environment would occur.
OR-2	Off-Road Transportation	Require use of renewable diesel or other alternative fuel for all construction activity as a condition of approval by 2030.	The County will amend the County Code to require the use of renewable diesel or other alternative fuels, such as CNG, electricity, or biodiesel, as a condition of approval for all construction projects occurring in the county by 2030.	This effort would result in the promotion of alternative fuel use in construction equipment. This would result in a decrease in emissions related to construction activities.	None. Not evaluated further in this Draft EIR because no direct or indirect physical changes (e.g., construction) to the environment would occur.
On-Road Transportation					
Primary Measures					
TR-1	On-Road Transportation	Update Transportation System Management Ordinance (for employers)	The County will revise, adopt, and enforce the existing Transportation System Management ordinance (Chapter 10.28 of the County Code), consistent with General Plan Policy CIR-23, Policy CIR-24, and Actions Items CIR-24.1 and 24.2 in the updated Circulation Element. The updated ordinance will include measures to reduce commute trips to workplaces within the county as well as a program to oversee implementation of these measures at businesses. The County will develop a point-based system that allows employers with more than 20 employees to choose the best trip reduction measures that work for them. The County will develop a list of trip reduction or transportation demand management (TDM) measures, such as preferential parking for carpools/vanpools or providing shuttle service. The ordinance will also establish a measurable target (e.g., percent increase in vanpool participation and number of transit pass sales) as a guide for eligible workplaces. The ordinance will also require projects to demonstrate that at least one or more of a list of best management practices (e.g., telework programs, parking management plans, secure bike parking) will be implemented as part of the project. See example trip reduction ordinances from the U.S. Environmental Protection Agency and Code 17.94.060 (Transportation Control Measure) for the City of Rocklin (U.S. Environmental Protection Agency 2011). The ordinance will be integrated with current Bay Area Air Quality Management District (BAAQMD) and Metropolitan Transportation Commission (MTC) programs and regulations. For new development projects subject to environmental review, applicants would also be required, through the CAP Consistency Checklist, to demonstrate compliance with the TSM ordinance.	This effort would result in the revision of the Transportation System Management ordinance to include measures that would reduce commute trips. This would result in reduced emissions related to transportation.	None. Not evaluated further in this Draft EIR because no direct or indirect physical changes (e.g., construction) to the environment would occur.
TR-2	On-Road Transportation	Adopt parking reduction ordinance revisions	The County will develop, adopt, and enforce reductions in visitor and employee parking requirements, that are consistent with General Plan Policy CIR-8 in the updated Circulation Element, and require minimum carpool/vanpool/tour bus or shuttle parking spaces, consistent with CALGreen Tier 1 measures (see CALGreen Tier 1 requirements for applicable projects in Measures BE-1 and BE-2 above). The County will also consider allowing dedicated electric vehicle (EV)-only and other low or zero-emission vehicle-only parking in lieu of parking reductions. Reductions in standard parking requirements will be made to the standards in Napa County Code 18.66.280.	This would result in the development of new parking regulations that would reduce the amount of required parking in new development. This would result in reduced GHG emissions related to reduced vehicle trips because of limited parking, and mode shifts.	None. Not evaluated further in this Draft EIR because no direct or indirect physical changes (e.g., construction) to the environment would occur.
TR-3	On-Road Transportation	Increase affordable housing, especially workforce housing, in Napa County	The County will increase affordable multi-unit housing (including workforce housing) through implementation of policies and programs in the County's Housing Element and General Plan Policy CIR-8 in the updated Circulation Element Update, and by promoting and encouraging the development of affordable housing and transit-oriented development (TOD) in priority development areas in the County as allowable under the County's jurisdiction. Also, the County will encourage the development of housing closer to jobs and services. The Napa Valley Transportation Authority's (NVTA) Countywide Transportation Plan (Vision 2040) predicts growth in low-wage employment throughout the County.	This effort would result in promoting affordable housing in priority locations that are close to existing jobs. This would result in reduced vehicle miles traveled and a reduction in emissions.	None. Not evaluated further in this Draft EIR because no direct or indirect physical changes (e.g., construction) to the environment would occur.

Table 2-4 GHG Reduction Measures

Measure Number	Sector Name	GHG Reduction Measure	Measure Description	Potential Physical Changes to the Environment	Environmental Issue Areas Potentially Affected
			Given the many low-wage jobs already located in the county, VMT from commuting will increase without sufficient affordable housing in the County.		
TR-4	On-Road Transportation	Support efforts to allow commuter service to operate on railroad rights-of-way	The County will support efforts to allow commuter rail service to operate on railroad rights-of-way in the County, so long as it does not worsen traffic congestion and associated vehicular emissions. The NVTA has already explored the possibility of having such a service, but no action has yet been taken to implement such a service. Enhancing connection services, such as shuttles, between stations and nearby employment destinations, in both incorporated and unincorporated areas, will improve the effectiveness of this measure. The County will further support these efforts by establishing a public-private task force to advocate for commuter rail service in Napa County. This task force would examine and recommend revision of any County ordinances that may hinder the success of commuter rail service in the county.	This would result in collocation of passenger commuter rail services along existing railroad rights-of-way to support alternative modes of transportation and reduce VMT. This would result in emissions reductions related to transportation.	None. Not evaluated further in this Draft EIR because no direct or indirect physical changes (e.g., construction) to the environment would occur.
TR-5	On-Road Transportation	Support efforts of solid waste collection services to convert diesel solid waste collection vehicles to use CNG	The County will support and encourage solid waste services to convert diesel and gasoline solid waste collection vehicles to compressed natural gas (CNG) or other alternative fuels, thereby reducing fleet-wide emissions. Other alternative fuels may include renewable CNG from biogas generated by solid waste facilities and electric hybrid technology in solid waste collection vehicles UVDS and Clover Flat Landfill already have plans to convert their fleet from diesel to CNG according to their Climate Action Management Plan (Upper Valley Disposal and Recycling 2016). Although the County does not have direct control over privately-owned waste management businesses serving the county, the County supports UVDS's fleet organics conversion efforts.	This effort would result in encouragement by the County to convert the fleet of waste collection vehicles to CNG. This would result in GHG emissions reductions related to waste collection services.	None. Not evaluated further in this Draft EIR because no direct or indirect physical changes (e.g., construction) to the environment would occur.
Supporting Measures					
TR-6	On-Road Transportation	Support efforts of transit agencies to increase availability and accessibility of transit information	The County will support efforts to improve overall availability and accessibility of transit information. NVTA is currently working with Google to provide up-to-date transit information online.	This effort would result in improved availability of transit information. This would result in GHG emissions reductions related to transportation.	None. Not evaluated further in this Draft EIR because no direct or indirect physical changes (e.g., construction) to the environment would occur.
TR-7	On-Road Transportation	Support alternatives to private vehicle travel for visitors	The County will work with NVTA to improve access to available travel alternatives for visitors. The ways the County will support travel alternatives include: ◢ subsidizing shuttles for visitors; ◢ offering winery travel trip route plans that reduce trips and VMT; ◢ providing information of public and private multi-modal options, including active transportation (e.g., bicycle routes/tours, van tours, motorcycle tours); ◢ participating in an industry-wide transportation demand management program (such as a "hop-on hop-off" shuttle programs); ◢ exploring driverless technology solutions, as they become available; ◢ requiring dedicated parking space for eligible car-sharing vehicles at major destinations; ◢ providing cost comparisons to tourists to show monetary and safety benefits of driving vs. using a shuttle service; and ◢ offering additional subsidies for commercial fleets that are more than 50 percent alternatively fueled.	This effort would result in the implementation of shuttle programs, promotion of alternative transportation options, and incentivization of alternatively fueled vehicles. This would result in GHG emissions reductions related to transportation.	None. Not evaluated further in this Draft EIR because no direct or indirect physical changes (e.g., construction) to the environment would occur.
TR-8	On-Road Transportation	Support Napa County's incorporated cities in developing transit-oriented development unique to the needs of the Napa Region	The County will work with the City of Napa and other incorporated cities in exploring the possibility of making the recently-built Soscol Gateway Transit Center, other planned transit hubs, and surrounding areas more visitor-friendly and not just to serve commuters. Transit facilities can be marketed as attractions in and of themselves. The County will also support and encourage development of restaurants, hotels, and other attractions within walking distance of the transit center throughout the County, as its jurisdiction allows. One example of such a development is a "grand station" district concept with easy and walkable access to major downtown destinations (e.g., downtown Napa, Riverfront green). This will encourage transit and other non-automobile ridership for visitors traveling to and from the county. This measure should be enacted in tandem with vanpool, shuttle, and increasing transit service in the county (e.g., stops along Vine's Route 10). In addition to funding, the County could install wayfinding signage to promote uses of these developments.	This would result in collaboration among the County and incorporated cities in order to create a more robust visitor-friendly environment around the Soscol Gateway Transit Center (and future transit centers) in order to encourage additional users. This would result in GHG emissions reductions with an increase in ridership.	Speculative. The specific protocols or programs that would be included in this program are not known and evaluation of such actions would be speculative. However, this Draft SEIR conservatively assumes that some construction-related activities may occur at the project-level. Typical Construction Impacts Aesthetics Air Quality Biological Resources Cultural Resources/TCR Energy GHG Hazards and Hazardous Materials Hydrology and Water Quality Noise

Table 2-4 GHG Reduction Measures

Measure Number	Sector Name	GHG Reduction Measure	Measure Description	Potential Physical Changes to the Environment	Environmental Issue Areas Potentially Affected
TR-9	On-Road Transportation	Support interregional transit solutions	The County will support and work with NVTA, Association of Bay Area Governments (ABAG), MTC, and Bay Area tourism bureaus to develop transit solutions for interregional passenger travel between San Francisco/East Bay and Napa County, including the unincorporated areas. In addition to expanding connections with ferries, Bay Area Rapid Transit, and Amtrak, the County will consider supporting improvements to existing transit/rail connections to Sonoma County via the Sonoma-Marin Area Rail Transit (SMART) system, and with Solano County, to increase ridership. This could help offset employee commuter trips to and from the county. The County will also work with NVTA to implement or support applicable measures for interregional travel already included in NVTA's Short Range Transit Plan and Vision 2040.	This would result in collaboration among the County and regional transportation agencies in order to identify alternative transportation solutions to reduce vehicle miles traveled. This would result in a reduction of GHG emissions.	None. Not evaluated further in this Draft EIR because no direct or indirect physical changes (e.g., construction) to the environment would occur.
TR-10	On-Road Transportation	Work with Napa County's incorporated cities, NVTA, and neighboring regions to increase presence of park-and-ride facilities near residential centers	The County will work with the incorporated cities, neighboring jurisdictions, and NVTA to install additional park-and-ride facilities near major unincorporated residential centers, where feasible. The County will work with stakeholders to identify appropriate locations of the proposed park-and-ride facilities, such that the facilities are located and designed in such a way to maximize facility usage and vehicle occupancy rates, and to identify opportunities to connect these facilities to bicycle and pedestrian infrastructure. Currently, there are only a handful of park-and-ride facilities in the County, all of which are located in three incorporated cities: Yountville, the City of Napa, and American Canyon. The additional park-and-ride facilities will help consolidate and reduce vehicle trips through carpooling, vanpooling, and transit.	This effort would result in new park and ride facilities which would reduce GHG emissions by decreasing the number of vehicles on the road. This would result in construction impacts.	Aesthetics Air Quality Biological Resources Cultural Resources/TCR Energy GHG Hazards and Hazardous Materials Hydrology and Water Quality Noise Transportation and Traffic
TR-11	On-Road Transportation	Promote existing ride-matching services for people living and working in the unincorporated county	The County will support NVTA and the Solano Transportation Authority to promote awareness of the ride-matching services provided through the Solano Napa Commuter Information website and other organizations. The County will work with local businesses, especially winery, vineyards, and hospitality, to provide information to employers and their employees on ridesharing or shuttle options to transport seasonal workers to and from home. The County will consider offering monetary and non-monetary incentives.	This would result in ridematching services that would encourage trips that are not single occupant vehicles. This would reduce GHG emissions related to transportation.	None. Not evaluated further in this Draft EIR because no direct or indirect physical changes (e.g., construction) to the environment would occur.
TR-12	On-Road Transportation	Increase the supply of electric vehicle charging stations	The County will increase the supply of electric vehicle (EV) charging stations by (1) adopting new minimum standards for the installation of EV charging stations in new residential and non-residential development and (2) promoting or incentivizing installation of EV charging stations at existing facilities such as wineries, industrial centers, hotels, major visitor attractions, and multifamily complexes.	This measure would result in the installation of new EV charging stations in priority areas including existing commercial areas, major visitor attractions, and multifamily complexes. This would reduce GHG emissions associated with the regional vehicle fleet through greater fuel efficiency and improved air quality. Could result in minor construction activities and nominal electricity consumption.	Aesthetics Air Quality Biological Resources Cultural Resources/TCR Energy GHG Hazards and Hazardous Materials Noise
TR-13	On-Road Transportation	Promote telecommuting at office-based businesses	To reduce commute vehicle miles traveled, the County will work with local office-based businesses to encourage telecommuting. Telecommuting should not impede on normal business practices and, thus, may not be suitable for businesses that require physical employee attendance, such as at retail storefronts and warehouses.	This effort would result in a reduction of VMT with the promotion of telecommuting practices. This would result in GHG emissions reductions.	None. Not evaluated further in this Draft EIR because no direct or indirect physical changes (e.g., construction) to the environment would occur.
TR-14	On-Road Transportation	Develop and implement active transportation projects	The County will develop and implement active transportation projects in the unincorporated County, such as roadway modifications to install bike lanes, sidewalks (in small lot residential areas), or other infrastructure that encourages and facilitates walking and bicycling. The County will work with NVTA to implement the current countywide Pedestrian and Bicycle Master Plans and will prioritize improvements in areas where residential uses are within reasonable walking or biking distance to retail, parks, employment, or other key destinations. The County will also support existing efforts to develop multi-use trail systems (e.g., the Napa Valley Vine Trail). This measure is also further supported by various policies and programs in the County's updated General Plan Circualtion Element, adopted in 2019, that call for complete streets, multi-model access, and increasing pedestrian and bicycle facilities.	This measure would result in the development and construction of new pedestrian, trail, and bicycle improvements. This could result in construction impacts and is evaluated for consistency with policies related to circulation.	Aesthetics Air Quality Biological Resources Cultural Resources/TCR Energy GHG Hazards and Hazardous Materials Hydrology and Water Quality Noise Transportation and Traffic
TR-15	On-Road Transportation	Require new development projects to evaluate and reduce VMT	Policy CIR-7 in the County's updated Circulation Element (adopted in 2019) requires all new development projects to evaluate and reduce unmitigated VMT associated with the project by at least 15 percent. Accompanying this policy is Action Item CIR-7.1, in which staff will update the County's Local Procedures for Implementation of CEQA to develop screening criteria for projects that would not be considered to have significant impacts to VMT.	This measure would implement roadway improvements to reduce VMT by calming traffic and improving the bicyclist and pedestrian infrastructure and would occur as part of resurfacing projects within existing paved areas. This could	Aesthetics Air Quality Biological Resources Cultural Resources/TCR Energy

Table 2-4 GHG Reduction Measures

Measure Number	Sector Name	GHG Reduction Measure	Measure Description	Potential Physical Changes to the Environment	Environmental Issue Areas Potentially Affected
			Policy CIR-9 also requires the County to update its Transportation Impact Study (TIS) Guidelines to specify a methodology for evaluating a project's VMT and a list of potential mitigation measures for achieving VMT reductions from a project. This policy also requires the County to periodically monitor vehicle trips at built projects to assess the effectiveness of specified VMT reduction measures and shall periodically modify the list in the TIS Guidelines to reflect ongoing best practices in VMT reduction.	result in construction impacts and is evaluated for consistency with policies related to circulation.	GHG Hazards and Hazardous Materials Hydrology and Water Quality Noise Transportation and Traffic
TR-16	On-Road Transportation	Convert at least 50% of County fleet vehicles to alternative fuels by 2030	The County will convert at least 50 percent of the County fleet be powered by alternative fuels or zero-emission technology, such as electricity, hyrdogen, CNG, and bioethanol, by 2030. These may also include electric hybrid vehicles. In 2014, 50 of 225 vehicles, or 22 percent, of the County's fleet consisted of hybrid or flex fuel vehicles that used 85 percent bioethanol (E85). The final selection of vehicles and fuel types will depend on vehicle availability and County fiscal constraints.	This measure would result in the conversion of the County's fleet to alternative fuels. This may result in a nominal increase in consumption of electricity but would decrease fuel use overall and resulting GHG emissions.	Air Quality Energy GHG
Solid Waste					
Primary Measures					
SW-1	Solid Waste	Encourage expansion of composting program for both residential and commercial land uses	The County will encourage expansion of current composting programs that serve the county to exceed requirements under AB 1826. Under AB 1826, no more than 50 percent of the amount of commercial organic waste landfilled in 2014 can be landfilled starting in 2020. Under this measure, the County will target a composting rate of 85 percent of all food waste and 100 percent of yard waste generated by the County by 2030. Expansion of local composting programs described under this measure could complement or be included in potential compliance mechanisms for future SB 1383 regulations, which are scheduled for adoption in 2019.	This measure would result in the expansion of composting programs which would reduce GHG emissions by decreasing methane in landfills. This could result in a minor increase in vehicle trips and emissions related to new or expanded collections services that would be offset by the emissions reductions.	Air Quality Biological Resources Cultural Resources/TCR Energy GHG Hydrology and Water Quality Noise Utilities and Service Systems
SW-2	Solid Waste	Meet an 80 percent Waste Diversion Goal by 2020 and a 90 percent Waste Diversion Goal by 2030	The County will establish a target to meet an 80 percent waste diversion goal by 2020 and a 90 percent waste diversion goal by 2030. This will exceed the State's 2020 75 percent waste diversion target by 5 percent. Key steps include: ◢ completing an annual or biannual waste characterization study to analyze the distribution of waste types in the County's generated waste and identify major waste reduction opportunities (The last waste characterization profile available for the county was available for 1999 from CalRecycle), ◢ supporting and expanding existing composting and recycling programs and incentives for residences and businesses, and ◢ supporting and incentivizing private waste collection providers and landfills in reducing landfilled waste; and ◢ working with private waste collection providers and landfills to leverage CalRecycle's GHG Reduction Grant and Loan Program, which provides grants and loans for capital investments in infrastructure for aerobic composting, anaerobic digestion, and recycling facilities.	This measure could result in new/expanded waste processing and diversion facilities throughout the unincorporated County. This could result in a variety of physical impacts related to the construction and operation of such facilities dependent upon the scale of facilities.	Air Quality Biological Resources Cultural Resources/TCR Energy GHG Hazards and Hazardous Materials Hydrology and Water Quality Noise Utilities and Service Systems
Water and Wastewater					
Supporting Measures					
WA-1	Water and Wastewater	Amend or revise water conservation regulations for landscape design	The County will consider expanding its existing water conservation ordinance (Chapter 18.118) to include homeowner-provided landscaping projects. Section 18.118.020 exempts home-owner provided landscaping on a residential property. This measure will limit documentation requirements for homeowners. Other potential amendments can include minimum drought tolerant plant species and cash-for-grass turf rebates.	This effort would result in a revision to the existing water conservation regulations for landscape. This would result in water conservation and reduce GHG emissions related to the conveyance of water.	None. Not evaluated further in this Draft EIR because no direct or indirect physical changes (e.g., construction) to the environment would occur.
WA-2	Water and Wastewater	Adopt a new water conservation ordinance for commercial and residential land uses limiting outdoor watering	The County will adopt a new water conservation ordinance for commercial and residential land uses that focuses on limiting on-site outdoor and indoor water use. Requirements include: ◢ limiting outdoor watering to 2 days per week and having written violations for the first offense and increasing fines for each offence, thereafter, waiving a second offense fee after an offender attends a 2-hour water conservation seminar; ◢ staggering allowable watering days on an address-number basis (e.g., even address numbers can only water on Tuesday and Saturday); ◢ banning most lawn and landscape watering on consecutive days and irrigation within 48 hours of measurable rainfall, similar to the City of Napa's water conservation ordinance;	This effort would result in the development and adoption of a water conservation ordinance which would reduce water consumption within the county. This would result in water conservation and reduce GHG emissions related to the conveyance of water.	None. Not evaluated further in this Draft EIR because no direct or indirect physical changes (e.g., construction) to the environment would occur.

Table 2-4 GHG Reduction Measures

Measure Number	Sector Name	GHG Reduction Measure	Measure Description	Potential Physical Changes to the Environment	Environmental Issue Areas Potentially Affected
			◢ banning outdoor car washing on certain days of the week; and ◢ providing educational material for residents and businesses on water conservation tips.		
WA-3	Water and Wastewater	Expedite and/or reduce permit fees associated with water conservation installations in existing facilities	The County will expedite, reduce, or exempt permits and permit fees associated with water conservation installations in existing facilities. These installations can include graywater plumbing and large rainwater catchment systems.	This effort would result in a streamlined permit process associated with water conservation retrofits in existing facilities. This would result in water conservation and reduce GHG emissions related to the conveyance of water.	None. Not evaluated further in this Draft EIR because no direct or indirect physical changes (e.g., construction) to the environment would occur.
WA-4	Water and Wastewater	Require water audits for large new commercial or industrial projects and significant expansions of existing facilities	The County will require water audits for large new commercial or industrial projects and significant expansions of existing facilities to identify opportunities for water conservation Water audits are already required as part of the Napa Green certification program and Napa Green's Integrated Resource Assessments program. The County will establish a program to follow up with the water audits for eligible facilities and explore water conservation that are appropriate to each facility. Funding for water audits are currently available from Napa Valley Vintners with work being done by Sustainable Napa County. The County will designate staff to work with Napa Green, Napa Valley Vintners, and Sustainable Napa County to streamline implementation of this measure and reduce duplicative efforts.	This effort would result in the development of a program to conduct water audits of large new commercial and industrial projects, and significant expansions of existing facilities. This would result in the identification of opportunities to conserve water and reduce GHG emissions related to the conveyance of water.	None. Not evaluated further in this Draft EIR because no direct or indirect physical changes (e.g., construction) to the environment would occur.
High-GWP Gases					
Supporting Measures					
HG-1	High-GWP Gases	Encourage registration of facilities in CARB's RMP and support local compliance efforts with State regulations. After the passing of SB 1383 in 2016, CARB approved the 2017 Short-Lived Climate Pollutant (SLCP) strategy that includes a range of measures to reduce SLCPs, including HFCs, in California. These measures include proposed regulations that would ban HFCs with a GWP factor of 750 or more in new stationary source air conditioning systems by 2023, limiting the use of high GWP refrigerants in stationary systems, increase recovery of HFCs from spent containers, and developing a certification system for small containers of automotive refrigerants. Local air districts, such as BAAQMD, would be responsible for developing regulations to require low GWP replacements for HFCs. In September 2018, Governor Brown signed SB 1013, the California Cooling Act, strengthening the intent of SB 1383 with respect to refrigerant chemicals, specifically	CARB's Refrigerant Management Program (RMP) requires facilities with refrigeration systems using over 50 pounds of high GWP refrigerant to register with the program. To reduce emissions of these refrigerants, facilities registered in the program are required to enact several BMPs including conducting periodic leak checks and detecting leaks in a timely manner. The County will encourage registration into the program and explore ways to financially incentivize the future installation of low-GWP refrigerant systems. The County will assist in the statewide and regional efforts to reduce HFC emissions by first evaluating and changing the use of refrigerants in County facilities and fleet to decrease the amount of refrigerant used or switch to refrigerants with lower GWP factors, as recommended by CARB and BAAQMD. The County will also take an active role in working with BAAQMD to implement locally-specific programs, such as the replacement of refrigerants in refrigerated warehouses and grocery stores	This effort would result in the registration of new facilities into CARB's RMP and a reduction in use of high global warming potential refrigerants.	None. Not evaluated further in this Draft EIR because no direct or indirect physical changes (e.g., construction) to the environment would occur.
HG-2	High-GWP Gases	Incentivize the use of low-GWP refrigerants	The County will consider incentivizing the use of low-GWP refrigerants in refrigeration systems or heating, ventilation, and air conditioning (HVAC) systems by expediting the permitting process or reducing permitting for new or replacement projects. The County could also pair funds with other funding sources and financing mechanisms to increase installation rates	This effort would result in the incentivization of low global warming potential refrigerants.	None. Not evaluated further in this Draft EIR because no direct or indirect physical changes (e.g., construction) to the environment would occur.
Multiple Sectors					
Primary Measures					
MS-1	Multiple Sectors	Support efforts to increase Napa Green Certified wineries and land in the County, with a goal of achieving a 100-percent certification rate for all eligible wineries and properties by 2030.	Napa Green offers two environmental certification programs, Napa Green Winery and Napa Green Land, for winery and land owners, respectively. Although Napa Green Land typically applies to vineyards, it also applies to land management of whole parcels, including any combination of farmland, natural land, and road and water ways. Green land management practices include using electrified or alternatively-fueled agricultural equipment, converting diesel-powered irrigation pumps to electric,	This effort would result in the development of a green certification program that would encourage wineries and vineyards to incorporate more sustainable agricultural practices into their business operations. This would result in GHG emissions reductions related to the wine industry.	None. Not evaluated further in this Draft EIR because no direct or indirect physical changes (e.g., construction) to the environment would occur.

Table 2-4 GHG Reduction Measures

Measure Number	Sector Name	GHG Reduction Measure	Measure Description	Potential Physical Changes to the Environment	Environmental Issue Areas Potentially Affected
			night-shift harvesting, and using biochar as soil amendments. Together, the Napa Green Winery and Land certification programs aim to reduce solid waste generation, water use, and wastewater generation, promoting sustainable agricultural practices.		
Supporting Measures					
MS-2	Multiple Sectors	Work with other local jurisdictions within the County to develop a unified Climate Action Plan	Reducing GHG emissions in the entire County will require the efforts of all local jurisdictions in the County. The measures in the CAP are primarily focused on the unincorporated county. Under this measure, the County will coordinate with the incorporated cities in the County to pursue development of a unified, countywide climate action policy framework. This could result in a countywide CAP that applies to both the County and incorporated cities, or similar efforts to encourage incorporated communities to adopt their own CAPs consistent with the County's CAP.	This effort would result in increased coordination between the County and incorporated cities within Napa County to pursue development of a unified climate action policy framework. This would result in a reduction of GHG emissions countywide.	None. Not evaluated further in this Draft EIR because no direct or indirect physical changes (e.g., construction) to the environment would occur.
MS-3	Multiple Sectors	Promote the sale and consumption of locally grown foods and/or products	Developing and supporting a market for locally-grown foods or other consumer products helps to decrease transportation emissions from delivery, promotes local sustainable growing practices, and contributes to a stronger local economy. Under this measure, the County will promote the sale and use of locally grown food and/or products in the County. The County will work with local grocery stores, farmer's markets, and restaurants to identify opportunities to reduce the supply of imported foods and to encourage local farmers to grow foods that are typically imported. Imported crops are typically off-season crops or tropical fruits for which there is little or no domestic production. The County will encourage farmers to use greenhouses or other methods to supply off-season crops during the winter.	This effort would result in the promotion of the sale and use of locally grown food and other products within the County. This would result in a reduction of GHG emissions related to transportation.	None. Not evaluated further in this Draft EIR because no direct or indirect physical changes (e.g., construction) to the environment would occur.
MS-4	Multiple Sectors	Establish a local carbon offset program in partnership with Sustainable Napa County	In coordination with Sustainable Napa County, the County will establish a local carbon offset program that allows events, persons, businesses, or institutions in Napa County to purchase credits to offset GHG emissions they generate. The funds from the sale of carbon offsets will be used to construct, develop, or operate projects that provide short or long term GHG reductions, depending on the emissions being offset. This program could be used to help implement other measures in this CAP, such as auditing and retrofitting existing buildings under applicable Building Energy sector measures; or, converting agricultural equipment to alternative fuels under measures AG-2 or AG-3.	This effort would result in the development of a local carbon offset program that would provide carbon offset credits for purchase, with funds generated used for short or long term GHG reductions. This would result in a reduction of GHG emissions within the county.	Speculative. The specific protocols or programs that would be included in this program are not known and evaluation of such actions would be speculative. This Draft EIR does not further evaluate impacts because direct or indirect physical changes (e.g., construction) to the environment cannot be characterized.
Adaptation Measures					
Strategy-1: Prepare for Increased in Average Temperatures and Extreme Heat Events					
Temp-1	Temperature	Map Critical Infrastructure Locations Vulnerable to Extreme Heat Events	Map locations of communication, energy, service, and transportation infrastructure that are vulnerable to extreme heat events.	This measure would result in mapping efforts that would create more resilient infrastructure.	None. Not evaluated further in this Draft EIR because no direct or indirect physical changes (e.g., construction) to the environment would occur.
Temp-2	Temperature	Develop Outreach Programs for Outdoor Workers	Work with labor organizations, the agriculture and wine community, and County and State health and safety agencies to publicize programs and standards for preventing heat-related illness in employees who work outdoors.	This measure would result in increased coordination between the County and stakeholders to increase awareness about heat-related illness in outdoor workers.	None. Not evaluated further in this Draft EIR because no direct or indirect physical changes (e.g., construction) to the environment would occur.
Temp-3	Temperature	Educate Residents on Heat-Related Illness Prevention	Develop education outreach materials to publicize methods for preventing heat-related illness during heat waves.	This measure would result in increased outreach related to heat-related illness.	None. Not evaluated further in this Draft EIR because no direct or indirect physical changes (e.g., construction) to the environment would occur.
Temp-4	Temperature	Encourage the installation of Cool Roof Technologies and Rooftop Gardens	Encourage and explore ways to incentivize the installation of cool roof technologies and, where appropriate, rooftop gardens in residences and commercial buildings.	This measure would result in increased incentivization of cool roofs and rooftop gardens which would help reduce GHG emissions.	None. Not evaluated further in this Draft EIR because no direct or indirect physical changes (e.g., construction) to the environment would occur.
Temp-5	Temperature	Incorporate Cool Pavement Technology	Explore options to incorporate cool pavement technology into both the regular maintenance of existing and construction of new roads, sidewalks, parking areas, and bike lanes.	This measure would result in increased use of cool pavement technology when replacing during regular maintenance activities.	None. Not evaluated further in this Draft EIR because no direct or indirect physical changes (e.g., construction) to the environment would occur.
Temp-6	Temperature	Improve Parking Lot Shading and Landscaping	Explore options to improve parking lot shading requirements in new construction and to promote planting of additional trees and landscaping in existing parking lots.	This measure would result in increased parking lot shading and trees and landscaping to help reduce heat island effect and resulting GHG emissions related to cooling. This would result in nominal emissions related to increased tree planting/landscaping efforts and increased water use.	Air Quality Energy GHG
Temp-7	Temperature	Update the County's Excessive Heat Emergency Response Plan	Coordinate with the Napa County Health and Human Services Agency, Public Health Division, to maintain and update the County's Excessive Heat Emergency Response Plan to better prepare for increased extreme heat days and more frequent and intense heat waves.	This measure would result in increased planning efforts related to excessive heat.	None. Not evaluated further in this Draft EIR because no direct or indirect physical changes (e.g., construction) to the environment would occur.
Temp-8	Temperature	Support Research on the Effects of a Warmer Climate on the Agriculture and Wine Industries	Support and monitor ongoing research on the potential effects of a warmer climate on the agriculture and wine industry by existing organizations and groups, including but not limited to, Napa Valley Vintners and the California Climate and Agriculture Network.	This measure would result in increased monitoring by the County regarding ongoing research related to climate change.	None. Not evaluated further in this Draft EIR because no direct or indirect physical changes (e.g., construction) to the environment would occur.

Table 2-4 GHG Reduction Measures

Measure Number	Sector Name	GHG Reduction Measure	Measure Description	Potential Physical Changes to the Environment	Environmental Issue Areas Potentially Affected
Temp-9	Temperature	Understand the Tolerance of Current Wine Grape Varieties to Withstand Increased Temperatures	Work with grape growers and grape grower associations (e.g., Napa Valley Vintners) to understand the tolerance of current wine grape crop mixes to withstand increased temperatures and explore options to shift the types of grape varietals to suit changing environments.	This measure would result in increased information related to the effects of climate change on grape varietals.	None. Not evaluated further in this Draft EIR because no direct or indirect physical changes (e.g., construction) to the environment would occur.
Temp-10	Temperature	Develop Outreach Programs for Winemakers	Develop outreach programs to inform and assist winemakers in changing practices to adapt to the effects of climate change (e.g., increasing average temperatures, variation in water supplies). Techniques could include, but are not limited to, providing artificial shade and limiting light exposure on grapevines during extreme heat events.	This measure would result in the dissemination and education of winemakers to climate change adaptation strategies.	None. Not evaluated further in this Draft EIR because no direct or indirect physical changes (e.g., construction) to the environment would occur.
Temp-11	Temperature	Develop and Implement Strategies to Increase Energy Resiliency	Work with MCE and PG&E to develop and implement strategies to increase energy resiliency in the face of extreme events (e.g., extreme heat events, damages due to wildfire, flooding, and sea-level rise). Strategies could include, but are not limited to, battery storage and back-up systems, creating grid flexibility through increased renewable energy development, and identifying design weaknesses in energy infrastructure.	This measure would result in increased coordination with local utilities to create resiliency within the local grid by increasing battery storage and improving resilience of renewable energy systems. This could result in construction and operation impacts related to improving the resiliency of renewable energy systems.	Speculative. The specific actions that would be undertaken are not known and evaluation of such actions would be speculative. However, this Draft EIR conservatively assumes that some construction-related activities may occur at the project-level. Typical Construction Impacts Aesthetics Air Quality Agriculture and Forestry Resources Biological Resources Cultural Resources/TCR Energy GHG Hazards and Hazardous Materials Hydrology and Water Quality Land Use (evaluated for policy conflicts) Noise
Strategy-2: Prepare for Increased Risk of Wildfire					
Fire-1	Wildfire Risk	Map and Identify Locations That Are Newly at Risk, or at Higher Risk for Fire Hazards	Work with CAL FIRE and the Napa County Fire Department to map and identify locations in the County that are newly at risk, or at higher risk, for fire hazards because of climate change and its impacts.	This measure would result in increased coordination between the County and fire agencies in mapping efforts to identify newly at-risk or high-risk fire locations.	None. Not evaluated further in this Draft EIR because no direct or indirect physical changes (e.g., construction) to the environment would occur.
Fire-2	Wildfire Risk	Map Critical Infrastructure Locations Vulnerable to Wildfires	Map locations of communication, energy, service, and transportation infrastructure that are vulnerable to wildfires.	This measure would result in increased mapping efforts to identify vulnerable infrastructure.	None. Not evaluated further in this Draft EIR because no direct or indirect physical changes (e.g., construction) to the environment would occur.
Fire-3	Wildfire Risk	Collaborate with the Napa County Firefighters Association in the Dissemination of Information	Collaborate with the Napa County Firefighters Association to disseminate information regarding the nexus between climate change and increased wildfire risk to identify opportunities for County-wide coordination efforts.	This measure would result in increased collaboration with the Napa County Firefighters Association to identify opportunities for related to increased wildfire risk.	None. Not evaluated further in this Draft EIR because no direct or indirect physical changes (e.g., construction) to the environment would occur.
Fire-4	Wildfire Risk	Coordinate Emergency Preparedness Systems	Coordinate with the Napa County Firefighters Association and the Office of Emergency Services to identify strategies to ensure capacity and resilience of escape routes compromised by wildfire, including emergency evacuation and supply transportation routes.	This measure would result in increased coordination to identify additional evacuation and supply transportation routes.	None. Not evaluated further in this Draft EIR because no direct or indirect physical changes (e.g., construction) to the environment would occur.
Fire-5	Wildfire Risk	Collaborate on Programs to Reduce Fire Hazards	Collaborate with the Napa County Fire Department to continue to reduce fire hazards, including but not limited to, enforcing defensible space guidelines, restoring fire-resilient conditions by thinning, removing live or dead vegetation, and retaining healthy native trees.	This measure would result in increased collaboration to improve resiliency related to wildfire hazards. This could include thinning, removing, or chipping vegetation which would result in ground disturbing activities and may include prescribed burning.	Speculative. The specific actions that would be undertaken are not known and evaluation of such actions would be speculative. However, this Draft EIR conservatively assumes that some construction-related activities may occur at the project-level. Typical Construction Impacts Air Quality Biological Resources Cultural Resources/TCR Energy GHG Hazards and Hazardous Materials Hydrology and Water Quality Noise
Strategy-3: Prepare for Variable Water Supplies and Preserve Water Quality					
Water-1	Water Supply and Quality	Evaluate Vulnerabilities of Water Supply Systems and Networks	Evaluate the vulnerability of the water supply systems and networks to climate change related impacts and develop strategies to increase the resilience of these systems.	This measure would result in the development of strategies to increase the resiliency of water supply systems.	None. Not evaluated further in this Draft EIR because no direct or indirect physical changes (e.g., construction) to the environment would occur.

Table 2-4 GHG Reduction Measures

Measure Number	Sector Name	GHG Reduction Measure	Measure Description	Potential Physical Changes to the Environment	Environmental Issue Areas Potentially Affected
Water-2	Water Supply and Quality	Consider Innovative Options to Meet Future Demand	Consider innovative options to meet future water demand (e.g., on-site graywater systems; institute water conservation strategies; and use of recycled water).	This measure would result in the development and implementation of water supply resiliency strategies such as graywater systems, recycled water, and other water conservation strategies. This would result in construction activities related to the development of alternative water supplies.	Speculative. The specific actions that would be undertaken are not known and evaluation of such actions would be speculative. However, this Draft EIR conservatively assumes that some construction-related activities may occur at the project-level. Typical Construction Impacts Aesthetics Air Quality Biological Resources Cultural Resources/TCR Energy GHG Hazards and Hazardous Materials Hydrology and Water Quality Noise
Water-3	Water Supply and Quality	Promote Use of Rainwater Catchment Systems	Promote the use of catchment systems, such as rain barrels, rain gardens, cisterns, and other mechanisms to capture and store rainwater.	This measure would result in the promotion of private catchment systems such as rain barrels to decrease the individual consumption of potable water.	None. Not evaluated further in this Draft EIR because no direct or indirect physical changes (e.g., construction) to the environment would occur.
Water-4	Water Supply and Quality	Support Napa Green Land Certification Efforts	Support efforts of the Napa Green Land certification program for agriculture and farm land to prevent soil erosion, reduce harmful inputs and runoff, restore wildlife habitats, and support healthy rivers, streams, and riparian vegetation to maintain water quality and conserve water resources. See also GHG reduction measure MS-1 in Chapter 3, which establishes a goal for 100 percent certification for all eligible properties in the Napa Green certification programs.	This measure would result in increased support for the use of agricultural certification programs, which prioritize sustainable agricultural practices.	None. Not evaluated further in this Draft EIR because no direct or indirect physical changes (e.g., construction) to the environment would occur.
Water-5	Water Supply and Quality	Collaborate with Agencies to Identify Future Water Supplies and Explore Alternative Supply Sources	Collaborate with the Napa County Flood Control and Water Conservation District and Public Works, to identify water supply options for the future. Explore opportunities to expand the use of on-site graywater systems, recycled water systems, or other alternative supply sources to meet non-potable water demands, and where possible, to offset groundwater and/or potable use.	This measure would result in increased collaboration to identify future water supply options, including expanded use of on-site graywater, recycled water, or other water conservation options. This would result in construction activities related to the development of alternative water supplies.	Speculative. The specific actions that would be undertaken are not known and evaluation of such actions would be speculative. However, this Draft EIR conservatively assumes that some construction-related activities may occur at the project-level. Typical Construction Impacts Aesthetics Air Quality Biological Resources Cultural Resources/TCR Energy GHG Hazards and Hazardous Materials Hydrology and Water Quality Noise
Water-6	Water Supply and Quality	Pursue Grant Funding Opportunities for Water Resource Planning Projects	Pursue grant funding opportunities related to on-site graywater reuse systems, water recycling projects, and/or other water resource planning projects.	This measure would result in the pursuit of grant funding opportunities for additional water supply infrastructure.	None. Not evaluated further in this Draft EIR because no direct or indirect physical changes (e.g., construction) to the environment would occur.
Strategy-4: Prepare for Increased Likelihood of Flooding					
Flood-1	Flood Risk	Update the County's Operational Area Hazard Mitigation Plan to Address Flooding and Climate Change	Ensure that future updates to the County's Operational Area Hazard Mitigation Plan incorporate strategies to address the increased likelihood of flooding because of climate change.	This measure would result in the inclusion of flood-related strategies into the County's Operational Area Hazard Mitigation Plan.	None. Not evaluated further in this Draft EIR because no direct or indirect physical changes (e.g., construction) to the environment would occur.
Flood-2	Flood Risk	Partner with Incorporated Towns and Cities and Local Organizations to Address Flooding	Partner with incorporated cities in the County and local organizations, such as the North Bay Climate Adaptation Initiative, to ensure coordinated efforts are taken to reduce threats to structures, populations, and functions because of flooding, particularly along the Napa River.	This measure would result in increased coordination between the County and other local stakeholders to identify and plan for increased flooding potential along the Napa River.	None. Not evaluated further in this Draft EIR because no direct or indirect physical changes (e.g., construction) to the environment would occur.
Flood-3	Flood Risk	Identify Potential Streamside Restoration Areas	Identify potential streamside areas in the County that could be restored by stabilizing stream banks and planting appropriate vegetation to buffer buildings, roads, and crops from floods.	This measure would result in the identification and restoration of stream banks within the unincorporated county to buffer buildings, roads, and crops from increased flooding potential.	Speculative. The specific actions that would be undertaken are not known and evaluation of such actions would be speculative. However, this Draft EIR conservatively assumes that some construction-related activities may occur at the project-level. Typical Construction Impacts Air Quality

Table 2-4 GHG Reduction Measures

Measure Number	Sector Name	GHG Reduction Measure	Measure Description	Potential Physical Changes to the Environment	Environmental Issue Areas Potentially Affected
					Biological Resources Cultural Resources/TCR Energy GHG Hazards and Hazardous Materials Hydrology and Water Quality Noise
Flood-4	Flood Risk	Encourage Replanting Bare or Disturbed Areas	Encourage the replanting of bare or disturbed areas to reduce runoff, improve water uptake, and reduce erosion and sedimentation in streams.	This measure would result in the identification and restoration of areas that are subject to erosion within the unincorporated county to improve water quality and reduce stream sedimentation.	Speculative. The specific actions that would be undertaken are not known and evaluation of such actions would be speculative. However, this Draft EIR conservatively assumes that some construction-related activities may occur at the project-level. <u>Typical Construction Impacts</u> Air Quality Biological Resources Cultural Resources/TCR Energy GHG Hazards and Hazardous Materials Hydrology and Water Quality Noise
Flood-5	Flood Risk	Coordinate Emergency Evacuation and Supply Transportation Routes	Coordinate emergency evacuation and supply transportation routes with the County's Office of Emergency Services to ensure capacity and resilience of escape routes compromised by flooding.	This measure would improve the capacity and resilience of evacuation and supply transportation routes that could be compromised by future flooding events.	None. Not evaluated further in this Draft EIR because no direct or indirect physical changes (e.g., construction) to the environment would occur.
Flood-6	Flood Risk	Improve Sewage and Solid-Waste Management Infrastructure	Improve sewage and solid-waste management infrastructure, to the extent such infrastructure is within the jurisdiction of the County, to reduce vulnerabilities to climate change (i.e., storm surge, flooding, and inundation).	This measure would result in improved sewage and solid-waste management infrastructure to reduce climate change vulnerabilities related to flooding, storm surge, and inundation.	Speculative. The specific actions that would be undertaken are not known and evaluation of such actions would be speculative. However, this Draft EIR conservatively assumes that some construction-related activities may occur at the project-level. <u>Typical Construction Impacts</u> Aesthetics Agricultural and Forest Resources Air Quality Biological Resources Cultural Resources/TCR Energy GHG Hazards and Hazardous Materials Hydrology and Water Quality Noise Utilities & Service Systems
Flood-7	Flood Risk	Improve Capacity of Storm Water Infrastructure	Evaluate and improve capacity of storm water infrastructure for high intensity rainfall events.	This measure would result in improved storm water infrastructure and improved resilience for high intensity rain events.	Speculative. The specific actions that would be undertaken are not known and evaluation of such actions would be speculative. However, this Draft EIR conservatively assumes that some construction-related activities may occur at the project-level. <u>Typical Construction Impacts</u> Aesthetics Air Quality Biological Resources Cultural Resources/TCR Energy GHG Hazards and Hazardous Materials Hydrology and Water Quality

Table 2-4 GHG Reduction Measures

Measure Number	Sector Name	GHG Reduction Measure	Measure Description	Potential Physical Changes to the Environment	Environmental Issue Areas Potentially Affected
					Noise Utilities & Service Systems
Flood-8	Flood Risk	Increase Use of Pervious Surfaces and Landscaping in Developed Areas	Increase the use of pervious pavements and landscaped areas to allow for better infiltration and reduced stormwater overflow in developed areas.	This measure would result in increased use of pervious pavement and landscaped areas which would improve water quality in the surrounding area and help build resiliency during high rainfall events.	None. Not evaluated further in this Draft EIR because no direct or indirect physical changes (e.g., construction) to the environment would occur.
Flood-9	Flood Risk	Map Critical Infrastructure Locations Vulnerable to Flooding	Map locations of communication, energy, service, and transportation infrastructure that are vulnerable to floods and storm surges.	This measure would result in increased mapping efforts and improved identification of flood and storm vulnerable infrastructure.	None. Not evaluated further in this Draft EIR because no direct or indirect physical changes (e.g., construction) to the environment would occur.
Flood-10	Flood Risk	Understand the Tolerance of Current Wine Grape Varieties to Withstand Increased Flooding	Work with the agriculture sector to understand the tolerance of current wine grape varieties to withstand increased flooding and explore options to shift the types of grape varietals to suit changing conditions.	This measure would result in increased information related to the effects of flooding on grape varietals.	None. Not evaluated further in this Draft EIR because no direct or indirect physical changes (e.g., construction) to the environment would occur.
Flood-11	Flood Risk	Design Programs to Address Vector- and Waterborne Diseases	Design programs to monitor and prepare for the appearance of vector- and waterborne diseases following floods and storms.	This measure would result in new programs to monitor and prepare for the possible appearance of vector and waterborne diseases because of flooding.	None. Not evaluated further in this Draft EIR because no direct or indirect physical changes (e.g., construction) to the environment would occur.
Strategy-5: Prepare for Sea-Level Rise					
SLR-1	Sea-Level Rise	Identify Areas Affected by Sea-Level Rise	Conduct a detailed sea-level rise assessment to identify and inventory areas that will be affected by sea-level rise and establish measures to protect functions, structures, and populations.	This measure would result in sea-level rise assessments to identify susceptible areas and establish protective measures.	None. Not evaluated further in this Draft EIR because no direct or indirect physical changes (e.g., construction) to the environment would occur.
SLR-2	Sea-Level Rise	Update Napa County's Operational Area Hazard Mitigation Plan to Incorporate Sea-Level Rise	Ensure that future updates to the County's Operational Area Hazard Mitigation Plan incorporate sea-level rise assessment and risk management processes.	This measure would result in updates to the County's Hazard Mitigation Plan related to sea-level rise risk management activities.	None. Not evaluated further in this Draft EIR because no direct or indirect physical changes (e.g., construction) to the environment would occur.
SLR-3	Sea-Level Rise	Floodplain Mapping Coordination	Coordinate with FEMA and DWR to ensure that floodplain mapping for potentially affected areas are regularly updated to reflect changes in Base Flood Elevations that account for sea-level rise.	This measure would result in increased coordination between the County, FEMA and DWR to maintain updated floodplain mapping to account for sea-level rise.	None. Not evaluated further in this Draft EIR because no direct or indirect physical changes (e.g., construction) to the environment would occur.
SLR-4	Sea-Level Rise	Support and Monitor Ongoing Analysis of Sea-Level Rise Data	Support and monitor ongoing collection and analysis of sea-level rise, storm surge, and tidal data by existing institutions, including, but not limited to FEMA, the Bay Conservation Development Commission, the Bay Area Regional Collaborative, and the National Oceanic and Atmospheric Administration.	This measure would result in increased monitoring of sea-level rise, storm surge, and tidal data that is being collected by relevant agencies.	None. Not evaluated further in this Draft EIR because no direct or indirect physical changes (e.g., construction) to the environment would occur.
SLR-5	Sea-Level Rise	Create a Comprehensive Outreach Strategy	Create a comprehensive outreach strategy that informs residents in potentially affected areas of County efforts to protect and increase community resiliency to sea-level rise.	This measure would result in the development of a plan to provide outreach to residents regarding possible sea-level rise impacts.	None. Not evaluated further in this Draft EIR because no direct or indirect physical changes (e.g., construction) to the environment would occur.
SLR-6	Sea-Level Rise	Incorporate Sea-Level Rise Effects into Capital Improvement Plans	Update capital improvement plans for critical infrastructure to address the effects of future sea-level rise and associated hazards in potentially affected areas.	This measure would result in updates to capital improvement plans in order to address sea-level rise impacts and associated hazards.	None. Not evaluated further in this Draft EIR because no direct or indirect physical changes (e.g., construction) to the environment would occur.
SLR-7	Sea-Level Rise	Assess Sea-Level Rise Impacts on Agriculture	Conduct a more detailed assessment of the impacts sea-level rise, severe storms, and increased risk of coastal flooding on the County's agriculture sector.		None. Not evaluated further in this Draft EIR because no direct or indirect physical changes (e.g., construction) to the environment would occur.

3 ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

3.1 APPROACH TO THE ENVIRONMENTAL ANALYSIS

In accordance with Section 15126.2 of the State CEQA Guidelines, this Draft EIR identifies and focuses on the significant direct and indirect environmental effects of the project, giving due consideration to both its short-term and its long-term effects. Short-term effects are generally those associated with construction, and long-term effects are generally those associated with operations.

The resource chapters of the Draft EIR address the following resource topics:

- Section 3.2, Aesthetics;
- Section 3.3, Air Quality;
- Section 3.4, Biological Resources;
- Section 3.5, Cultural Resources/Tribal Cultural Resources;
- Section 3.6, Energy;
- Section 3.7, Greenhouse Gas Emissions;
- Section 3.8, Hazards and Hazardous Materials;
- Section 3.9, Hydrology;
- Section 3.10, Land Use;
- Section 3.11, Noise;
- Section 3.12, Traffic; and
- Section 3.13, Utilities.

Sections 3.2 through 3.13 follow the same general format:

Environmental Setting presents the existing environmental conditions within the County, in accordance with the State CEQA Guidelines (California Code of Regulations [CCR] Section 15125). This setting generally serves as the baseline against which environmental impacts are evaluated. The extent of the environmental setting area evaluated (the project study area) differs among resources, depending on the locations where impacts would be expected. For example, air quality impacts are assessed for the air basin (macroscale) as well as the site vicinity (microscale), whereas noise impacts are assessed for the areas surrounding a project site vicinity only.

Regulatory Setting presents the laws, regulations, plans, and policies that are relevant to each issue area. Regulations originating from the federal, state, and local levels are each discussed as appropriate.

Environmental Impacts and Mitigation Measures identifies the thresholds of significance used to determine the level of significance of the environmental impacts for each resource topic, in accordance with the State CEQA Guidelines (CCR Sections 15126, 15126.2, and 15143). The thresholds of significance used in this Draft EIR are based on the checklist presented in Appendix G of the State CEQA Guidelines; best available data; and regulatory standards of federal, state, and local agencies. The level of each impact is determined by comparing the effects of the project to the environmental setting. Key methods and assumptions used to frame and conduct the impact analysis as well as issues or potential impacts not discussed further (such issues for which the project would have no impact) are also described.

Project impacts are organized numerically in each subsection (e.g., Impact 3.2-1, Impact 3.2-2, Impact 3.2-3, etc.). A bold-font impact statement, a summary of each impact, and its level of significance precedes the discussion of each impact. The discussion that follows the impact summary includes the substantial evidence supporting the impact significance conclusion.

The Draft EIR must describe any feasible measures that could avoid, minimize, rectify, reduce, or compensate for significant adverse impacts, and the measures are to be fully enforceable through incorporation into the project (Public Resources Code Section 21081.6[b]). Mitigation measures are not required for effects that are found to be less than significant. Where feasible mitigation for a significant impact is available, it is described following the impact along with its effectiveness at addressing the impact. Each identified mitigation measure is labeled numerically to correspond with the number of the impact that would be mitigated by the measure. Where sufficient feasible mitigation is not available to reduce impacts to a less-than-significant level, or where the County lacks the authority to ensure that the mitigation is implemented when needed, the impacts are identified as remaining "significant and unavoidable."

3.2 AESTHETICS

This chapter evaluates existing conditions for aesthetic and visual resources within the County, and the potential effects that implementation of the project may have on these resources.

The County did not receive comments regarding aesthetics and visual resources during the Notice of Preparation (NOP) scoping process. A copy of the NOP and comment letters received in response to the NOP are included in Appendix A of this Draft EIR.

3.2.1 Environmental Setting

The source for background and setting in this section includes the Napa County General Plan EIR (2007; Chapter 4.14).

REGION

Napa County is situated within the California Coastal Range, north of the San Francisco Bay Area and is bounded on the south by San Pablo Bay, an extension of the San Francisco Bay/Sacramento-San Joaquin Delta Estuary. The Coastal Range mountains run through the County trending southeast to northwest with intervening interior valleys. Mountainous and sometimes rugged ridgelines frame the eastern and western boundaries of the County, and provide visually distinct valley regions within the area; some are densely forested with evergreen trees, while others are dominated by mature oak trees set amid shrub and grasslands. Water is often a prominent feature in the landscape. The marsh lands in the southern part of the County are fed by the Napa River and tidal fluctuations of San Pablo Bay, which in turn drains a number of other rivers, streams and creeks originating in the area's high lands. Residences are scattered about the County, but urbanized areas tend to be concentrated in the cities of the County and in relatively few locations, surrounded by agricultural uses, which consist primarily of vineyards.

The Napa Valley is the largest valley in the County and is situated between mountainous ridges on the westerly side of County. It is relatively narrow, extending from San Pablo Bay on the south to the County's northwestern border with Sonoma County. The County retains a rural, agricultural character. Vineyards are prevalent on the valley floor and appear as a patchwork within grasslands and forested lands on the surrounding hillsides. Vineyards and other agricultural uses occupy more than half of the land on the valley floor. Combined with the naturally-occurring vegetation, this gives the entire valley a natural, yet managed, appearance (Napa County 2005:12-12). The Napa River flows through Napa Valley and drains to San Pablo Bay, Other smaller streams drain the mountainous areas and flow into the Napa River.

Urban development is concentrated in the cities of Napa, American Canyon, St. Helena, Calistoga, and the Town of Yountville. The edges of these communities are softened by the rural residences, which exist all around the area, resulting in very few abrupt delineations between city and farmland. Structures associated with agriculture, including wineries and wine tasting rooms, are also scattered among the vineyards.

Many of the scenic views from the floor of the Napa Valley include distinctive buildings, some prominently feature stone masonry and historical design styles while others are intentionally created to reinforce the character of Napa's rural, agricultural landscape. As a consequence, the built landscape is an important component of the valley floor, yielding only to vineyards and other large agricultural lands, and woven into the visual fabric elsewhere. Stands of mature valley oak, and streams and their riparian surroundings – serve as natural landscape buffers between residences and agricultural uses in many locations (Napa County 2005:12-12).

Scenic Corridors

In Napa County, many highways traverse areas of natural scenic beauty and recreational interest. These State highway routes and County roads pass through the vineyards in the Napa Valley, wind through several steep and forested hills and provide access to numerous wineries, historical landmarks, state parks and Lake Berryessa. There are currently approximately 280 miles of County designated scenic roadways within Napa County, including State Route 29. The majority of these scenic corridors are located in the Napa Valley, with the next largest group located on the western side of the County (Figure 3.2-1).

Viewsheds

Viewsheds of the highest visibility are generally concentrated in the mountains and foothills to the east and west of the Napa Valley. Bald Mountain, Mount St. Helena (identified in the County Viewshed Ordinance as a "unique geologic feature"), the foothills of Sugarloaf Ridge, and areas surrounding Bear Canyon and Sulphur Canyon on the western side of the valley are among the high visibility viewsheds (Figure 3.2-2).

Ridgelines

Major ridgelines are prominent on a countywide level, generally above 2000 feet in elevation and form the entirety of Napa County's eastern boundary (Figure 3.2-3). Blue Ridge and Rocky Ridge are the major ridgelines shaping the eastern edge of the county. The majority of the western boundary is also a major ridgeline, from the northern tip of the Napa Valley floor to near SR 12/121 in Carneros. It includes Diamond Mountain, Bald Mountain and Mount Veeder.

Major ridgelines comprise a substantial portion of the eastern mountains. In the southern extent, the ridgeline extends north from the area surrounding Mount George, to a fork that includes both Atlas Peak and Red Mountain. In the northern extent the ridgeline extends from Howell Mountain, near Angwin, to the slopes of Mount St. Helena located within Napa County. Cedar Roughs also comprise a major ridgeline west of Lake Berryessa, providing form to the entire Lake Berryessa evaluation area, as well as Pope Valley and Central Interior Valleys to the west. The remaining major ridgelines identified within Napa County exist in the Livermore Ranch Area (including The Calistoga Palisades, Sugarloaf Mountain and Table Mountain) and Knoxville Area (including most of Adams Ridge) (Napa County 2007:4.14-2).

Additionally, the County has designated Mt. St. Helena, Stag's Leap, Calistoga Palisades, Round Hill, Mt. George, and Mt. St. John as unique geological features, under the Viewshed Protection Program Ordinance, Zoning Code Section 18.106.040.

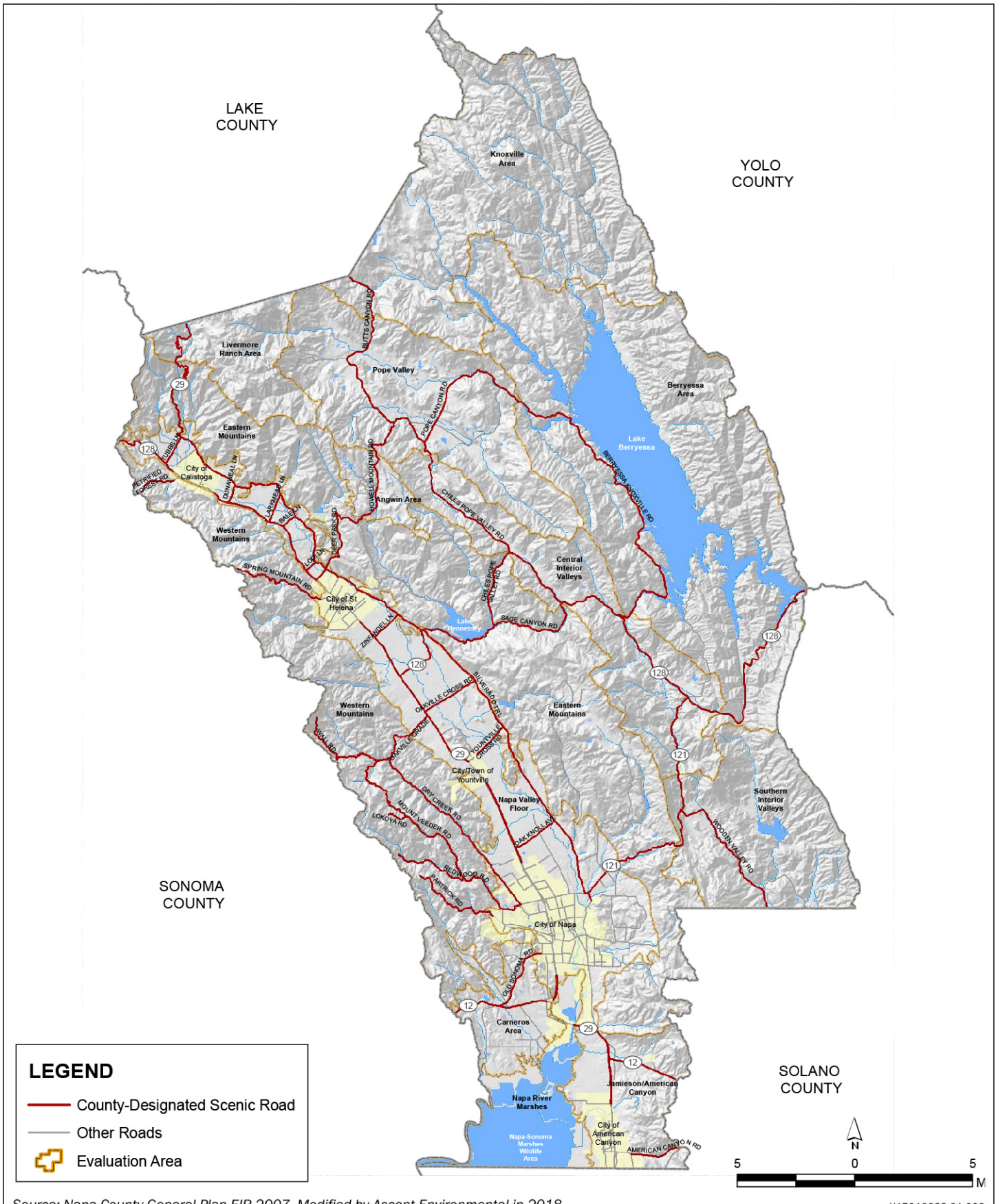
Light and Glare

The main sources of daytime glare in the County are from sunlight reflecting from structures with reflective surfaces such as windows, and from vehicles on major roadways. After dark, Napa County, with its thousands of acres of open space and concentrated urban development pattern, has a relatively low-light, dark-sky environment (Napa County 2008).

3.2.2 Regulatory Setting

FEDERAL

No federal plans, policies, regulations, or laws related to aesthetics apply to the project.

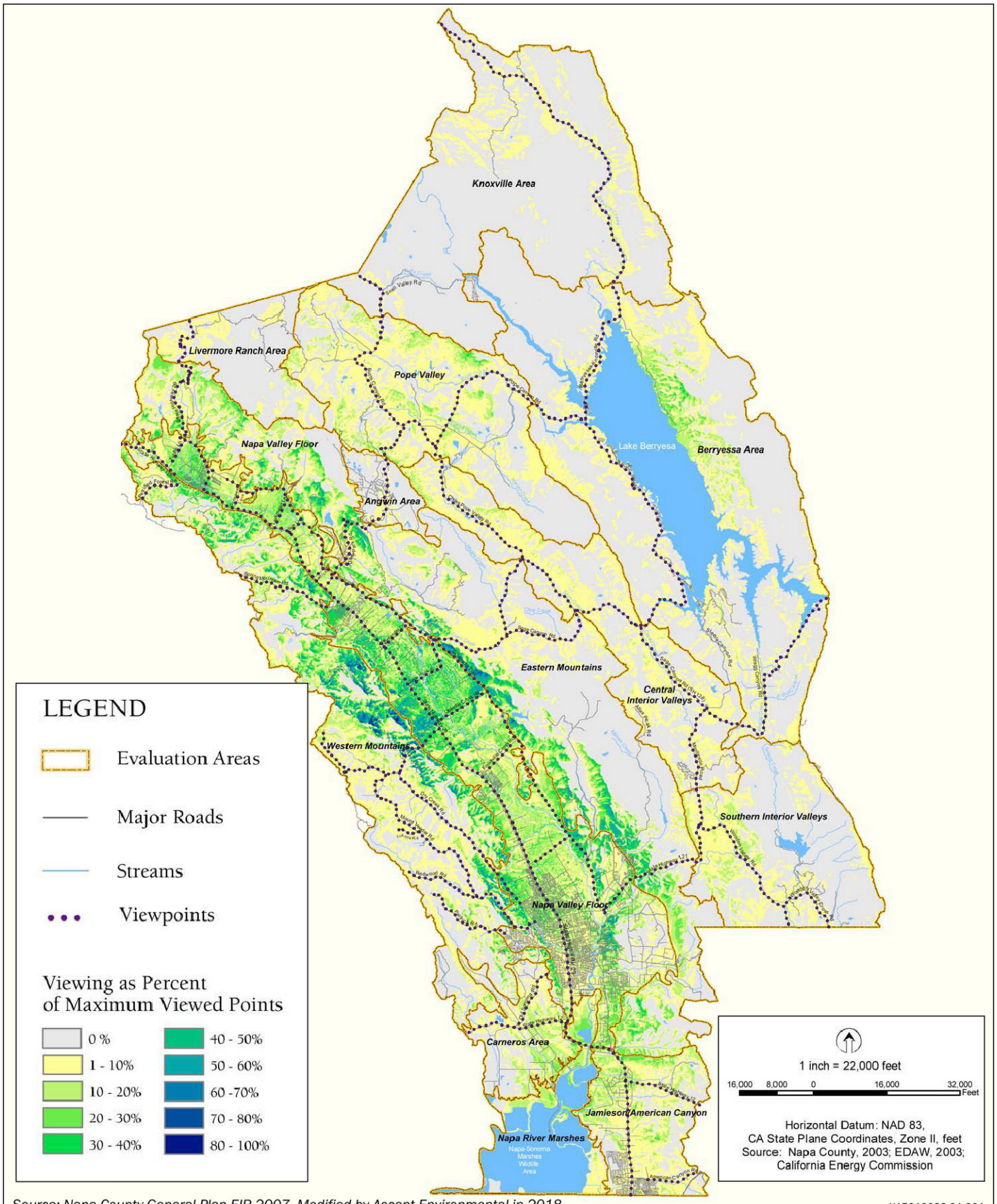


Source: Napa County General Plan EIR 2007. Modified by Ascent Environmental in 2018.

X15010022 01 002

Source: GP EIR 2007

Figure 3.2-1 **Scenic Corridor**



Source: Napa County General Plan EIR 2007. Modified by Ascent Environmental in 2018.

X15010022 01 001

Source: GP EIR 2007

Figure 3.2-2 **Viewshed**

Source: Napa County General Plan EIR 2007. Modified by Ascent Environmental in 2018.

X15010022 01 003

Source: GP EIR 2007

Figure 3.2-3 **Ridgelines**

STATE

California Scenic Highway Program

California's Scenic Highway Program was created by the California Legislature in 1963 and is managed by the California Department of Transportation. The goal of this program is to preserve and protect scenic highway corridors from changes that would affect the aesthetic value of the land adjacent to highways. A highway may be designated "scenic" depending on how much of the natural landscape travelers can see, the scenic quality of the landscape, and the extent to which development intrudes on travelers' enjoyment of the view. While State Route 29 is listed as an Eligible State Scenic Highway, it is not officially designated by the California Department of Transportation (2011).

Title 24 Outdoor Lighting Standards

The California Legislature passed a bill in 2001 requiring the California Energy Commission to adopt energy efficiency standards for outdoor lighting for both the public and private sector. In November 2003, the California Energy Commission adopted changes to the Title 24, parts 1 and 6, Building Energy Efficiency Standards. These standards became effective on October 1, 2005 and included changes to the requirements for outdoor lighting for residential and nonresidential development. The new standards will likely improve the quality of outdoor lighting and help to reduce the impacts of light pollution, light trespass, and glare. The standards regulate lighting characteristics such as, maximum power and brightness, shielding, and sensor controls to turn lighting on and off. Different lighting standards are set by classifying areas by lighting zone. The classification is based on population figures of the 2000 Census. Areas can be designated as LZ1 (dark), LZ2 (rural), or LZ3 (urban). Lighting requirements for dark and rural areas are stricter to protect the areas from new sources of light pollution and light trespass. The majority of Napa County, including the project site, is designated as LZ2 (Napa County 2007).

LOCAL

Napa County General Plan

The following policies of the *Napa County General Plan* (Napa County 2008) are applicable to the project.

- **Policy CC-1:** The County will retain the character and natural beauty of Napa County through the preservation of open space.
- **Policy CC-2**: New wineries and other uses requiring the issuance of a Use Permit should be designed to convey their permanence and attractiveness.
- **Policy CC-5**: Recognizing that vineyards are an accepted and attractive visual feature of Napa County, but that visual changes can cause public concern, the County shall require the retention of trees in strategic locations when approving conversion of existing forested land to vineyards in order to retain landscape characteristics of the site when viewed from public roadways and shall require the retention of trees to screen non-agricultural activities and other proposed developments.
- **Policy CC-6**: The grading of building sites, vineyards, and other uses shall incorporate techniques to retain as much as possible a natural landform appearance. Examples include:
  - The overall shape, height, and grade of any cut or fill slope shall be designed to simulate the existing natural contours and scale of the natural terrain of the site.
  - The angle of the graded slope shall be gradually adjusted to the angle of the natural terrain.
  - Sharp, angular forms shall be rounded and smoothed to blend with the natural terrain.

- **Policy CC-8**: Scenic roadways which shall be subject to the Viewshed Protection Program are those shown in Figure CC-3, or designated by the Board of Supervisors in the future.

- **Policy CC-10**: Consistent with the County's Viewshed Protection Program (Zoning Code Section 18.106.), new developments in hillside areas should be designed to minimize their visibility from the County's scenic roadways and discourage new encroachments on natural ridgelines. The County shall continue implementation of the Viewshed Protection Program and shall apply the protective provisions of the program to all public projects.

- **Policy CC-13**: The County's roadway construction and maintenance standards and other practices shall be designed to enhance the attractiveness of all roadways and in particular scenic roadways. New roadway construction or expansion shall retain the current landscape characteristics of County-designated scenic roadways, including retention of existing trees to the extent feasible and required re-vegetation and re-contouring of disturbed areas. In addition:

  a) The development of hiking trails and bicycle lanes should be coordinated, when possible, with scenic roadway corridors and should provide access for the elderly and disabled in accordance with the Americans with Disabilities Act.

  b) A program to replant trees and shrubbery should be implemented in cases where they are removed during new roadway alignment.

  c) Opportunities should be explored for joint public/private participation in developing locations for roadside rests, picnic areas and vista points.

  d) Installation of landscaping shall be required in conjunction with major roadway improvements where necessary to screen existing residences from glare generated by vehicle headlights.

- **Policy CC-14**: To the extent allowed by law, telecommunications facilities and transmission lines shall not be located within view of any scenic roadway unless they are sited and designed so as to be virtually invisible to the naked eye from the roadway, are designed to appear as a natural feature of the environment and do not block views or disrupt scenic vistas, or are so well architecturally-integrated into an existing building as to effectively be unnoticeable.

- **Policy CC-33**: The design of buildings visible from the County's designated scenic roadways shall avoid the use of reflective surfaces which could cause glare.

- **Policy CC-34**: Consistent with Building Code requirements for new construction in rural areas, nighttime lighting associated with new development shall be designed to limit upward and sideways spillover of light. Standards shall be as specified in the most recent update of the "Nonresidential Compliance Manual for California's 2005 Energy Efficiency Standards" or the "Residential Compliance Manual for California's 2005 Energy Efficiency Standards" published by the State of California. Light timers and motion sensors shall be used wherever feasible.

Napa County Code

Napa County Viewshed Protection Combination District (County Code 18.101)

The Viewshed Protection Combination District classification is intended to identify those properties along major County roads and highways that are visually prominent, are located in identified scenic corridors, or are located in areas of existing significant geologic, topographic and other natural features. Future development activities within the district should be designed and sited so as to preserve and, where possible, enhance existing short, medium and long-range views of existing significant geologic, topographic and other natural features. The purpose of establishing this district is to ensure that future construction minimizes impacts on area roadways

and adheres to recognized principles of design, site planning and is of a high quality design that will enhance the market attractiveness of the entire airport industrial specific plan area.

Napa County Viewshed Protection Program (County Code 18.106)

The Viewshed Protection Ordinance was passed by the Board of Supervisors in December 2001 and amended in 2003 and 2006. Its intent is to preserve the unique scenic quality of Napa County. More specifically, the regulations were adopted to "protect the public health, safety, and community welfare and to otherwise protect the scenic quality of the County both for visitors to the County as well as for its residents by ensuring that future improvements are compatible with existing land forms, particularly County ridgelines and that views of the County's many unique geologic features and the existing landscape fabric of the County's hillside areas are protected and preserved."

3.2.3 Environmental Impacts and Mitigation Measures

ANALYSIS METHODOLOGY

The project impact analysis area includes the unincorporated County and the analysis of aesthetic and visual resources presented in this section is based on an evaluation of the proposed GHG reduction and adaptation measures as described in Table 2.4 of Chapter 2, Project Description.

PROPOSED CAP GHG REDUCTION MEASURES

Table 2.4 of the Draft EIR, provides a list of proposed GHG reduction measures and adaptation measures that would be implemented by the CAP. However, only those measures that are relevant to aesthetics and visual resources and could potentially result in a significant impact within the County are described and evaluated below. None of the proposed measures indicate where specific improvements would be constructed, their size, or specific characteristics. As a program EIR, the Draft EIR does not, and cannot, speculate on the individual environmental impacts of specific future projects/improvements. However, implementation of all GHG reduction and adaptation measures were considered during preparation of the Draft EIR to the degree specific information about implementation is known. Consistent with the requirements of CEQA Guidelines Section 15168, this Draft EIR provides a program-level discussion of the potential general impacts of implementing these measures, rather than project-level or site-specific physical impacts of such actions. Only those measures that have the potential to affect aesthetics are listed below. All other measures in Table 2.4 would have no effect on aesthetics and are not discussed further.

- **Primary Measure BE-5: Expand current renewable energy and green energy incentives and update local ordinances**. This measure would result in an expansion of incentives for renewable energy systems that would increase participation by individual property owners. This measure would result in the installation of new private renewable energy systems including photovoltaic, small-scale wind turbines, solar water heating systems, geothermal ground source heat pump, and battery storage. This may result in physical changes that would alter the aesthetic qualities of the particular site and result in a deterioration of values for scenic vistas and scenic resources resulting from construction of infrastructure.

- **Supporting Measure BE-11: Encourage Solar Panel Installations on Warehouse Roof Space.** This measure would result in an expansion of incentives for renewable energy systems that would increase participation by individual property owners. This measure would result in the installation of new private renewable energy systems on roofs. This may result in construction, operation, and maintenance-related impacts and would result in physical changes within a viewshed or scenic vista that would alter the aesthetic qualities of the particular site and result in a deterioration of values for scenic vistas and scenic resources from construction of new infrastructure.

- **Supporting Measure TR-8: Support Napa County's incorporated cities in developing transit-oriented development unique to the needs of the Napa Region.** This would result in collaboration among the County and incorporated cities in order to create a more robust visitor-friendly environment around the Soscol Gateway Transit Center (and future transit centers) in order to encourage additional users. This would result in GHG emissions reductions with an increase in ridership. Temporary aesthetic impacts could result from construction of infrastructure.

- **Supporting Measure TR-10: Work with Napa County's incorporated cities, NVTA, and neighboring regions to increase presence of park and ride facilities near residential centers**. This effort would result in new park and ride facilities which would reduce GHG emissions by decreasing the amount of vehicles on the road. This may result in physical changes within a viewshed or scenic vista that would alter the aesthetic qualities of the particular site and result in a deterioration of values for scenic vistas and scenic resources resulting from construction of infrastructure.

- **Supporting Measure TR-12: Increase the supply of electric vehicle charging stations**. This measure would result in the installation of new electric vehicle charging stations (EV charging stations) in priority areas including existing commercial areas, major visitor attractions, and multifamily complexes. This would reduce GHG emissions associated with the regional vehicle fleet through greater fuel efficiency and improved air quality. This measure could result in minor construction activities and nominal electricity consumption.

- **Supporting Measure TR-14: Develop and implement active transportation projects.** This measure would develop and implement active transportation projects in the County, such as roadway modifications to install bike lanes, sidewalks, or other infrastructure that encourages and facilitates walking and bicycling. The County will work with NVTA to implement the current countywide Pedestrian and Bicycle Master Plans. This may result in physical changes within a viewshed or scenic vista that would alter the aesthetic qualities of the particular site and result in a deterioration of values for scenic vistas and scenic resources resulting from construction of infrastructure.

- **Supporting Measure TR-15: On-Road Transportation**. This measure would develop and implement active transportation projects in the County, such as roadway modifications to install bike lanes, sidewalks, or other infrastructure that encourages and facilitates walking and bicycling.

- **Adaptation Measure Water-2: Consider innovative options to meet future demand.** This measure would result in the development and implementation of water supply resiliency strategies such as graywater systems, recycled water, and other water conservation strategies. The impacts related to this measure are speculative but could include physical impacts to aesthetics related to the construction of new or updated infrastructure.

- **Adaptation Measure Water-5: Collaborate with agencies to identify future water supplies and explore alternative supply sources**. This measure would result in increased collaboration to identify future water supply options, including expanded use of on-site graywater, recycled water, or other water conservation options. The impacts related to this measure are speculative, but could include physical impacts to aesthetics related to the construction of new or updated infrastructure.

- **Adaptation Measure Flood-7: Improve capacity of storm water infrastructure**. This measure would result in improved storm water infrastructure and improved resilience for high intensity rain events. The impacts related to this measure are speculative, but could include physical impacts to aesthetics related to the construction of new or updated infrastructure.

THRESHOLDS OF SIGNIFICANCE

Based on Appendix G of the State CEQA Guidelines, an aesthetics impact is considered significant if implementation of the project would do any of the following:

- 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; or
- create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

ISSUES NOT DISCUSSED FURTHER

As described in Chapter 2, Project Description, implementation of the CAP and the targets and strategies identified therein necessitate changes to Policy CON-65 e) of the County's General Plan (2008 GP). The proposed changes would require that all discretionary development projects demonstrate consistency with the CAP by substantiating compliance through the CAP Consistency Checklist. As described in Section 2.4.2, Project Description, proposed changes to the adopted policy of the General Plan requires the County to implement a General Plan Amendment (GPA) as part of the administrative approval process.

The CAP EIR evaluates the GPA as part of the series of actions associated with implementation of the CAP. The changes reflected in the GPA support and are consistent with implementation of the CAP, its GHG targets, and GHG reduction measures. No additional activities or measures, other than those described in the CAP, would occur as a result of implementation of the GPA. Therefore, the GPA is not evaluated separately from the actions proposed by the CAP, but rather its implementation is within the scope of the overall impact analysis of the CAP. As described in Section 2.4.3, Project Description, to provide a mechanism by which projects can demonstrate consistency with the CAP, a CAP Consistency Checklist is included as Appendix D of the CAP. The CAP Consistency Checklist is a tool by which the County will track and determine a project's consistency with the CAP and how it delivers its appropriate GHG reductions. No physical projects or improvements other than those described in the CAP are included or would be approved with approval of the checklist. As such, like the GPA, the CAP Consistency Checklist is not evaluated separately from the actions proposed by the CAP.

In summary, the physical changes and associated environmental impacts of all GHG reduction and adaptation measures have been evaluated throughout the CAP EIR. The GPA and CAP Consistency Checklist which are included as part of the project, are not addressed as a separate impact discussion below. These administrative mechanisms on their own would not result in any physical impacts that would require separate evaluation below and are not discussed further.

IMPACT ANALYSIS

Impact 3.2-1: Affect Scenic Vistas or Substantially Damage Scenic Resources

GHG reduction and adaptation measures that would result in new or updated utility service infrastructure, active transportation projects, and small-scale renewable energy systems could result in impacts to scenic vistas and scenic resources resulting from construction and operation activities. However, compliance with existing state, and local regulations that protect scenic resources, especially County Zoning Code Section 18.106, and completion of subsequent project-level planning and environmental review would reduce potential impacts to these resources. Therefore, this impact would be **less than significant**.

Although a comprehensive survey of scenic vistas and other scenic resources has not been conducted, there are many scenic vistas and scenic resources within the County. The CAP is a policy-level document that does not include any site-specific designs or proposals or grant any entitlements for development; however, implementation of GHG reduction and adaptation measures contained within the CAP has the potential to directly or indirectly affect scenic vistas or other scenic resources. Some of the co-benefits of the proposed GHG reduction measures (building efficiency, agricultural, off-road, land use, water, wastewater, solid waste, high GWP, and multi-sector measures) include the preservation and protection of natural ecosystems and habitat resulting in preservation of potential scenic resources. The detailed description of the referenced measures can be found in Table 2-4, Project Description. Other measures would result in changes to the scenic environment as a result of construction of new infrastructure or expansion of existing facilities as described below.

Transportation, Water, Sewer and Stormwater, and Grid Utility Infrastructure Measures

GHG reduction and adaptation measures that would result in the construction of new active transportation infrastructure such as visitor-friendly infrastructure, park and ride facilities, electric vehicle (EV) charging stations, pedestrian, trail, and bicycle improvements (TR-8, TR-10, TR-12, TR-14, TR-15) and water, and stormwater facilities and grid utility infrastructure (SW-2, Water-2, Water-5, Flood-7) could result in impacts to scenic vistas or scenic resources if they are present in areas affected by construction of new or expanded facilities. However, because of the nature of such improvements (i.e., limited size, along existing roadways, not accompanied by tall or expansive buildings) it is likely that most infrastructure improvements would occur within existing developed residential and commercial centers throughout the County or as part of new development as it is approved and would not result in substantial changes to the visual landscape. Specific projects related to infrastructure upgrades that would result in increased resiliency for utility systems are not evaluated as it is too speculative to determine what facilities would be required at this time. It is assumed that some level of construction activities would be included in potential projects. Typical construction activities would require the use of trucks, staging areas for supplies and equipment, parking for workers, and signage and grading. All construction activities would be temporary effects of the construction process and would not likely result in permanent significant impacts to scenic vistas and scenic resources.

Small-Scale Renewable Energy Infrastructure

GHG reduction and adaptation measures (BE-5 and BE-11) would result in the construction of new small-scale renewable energy infrastructure, including rooftop or ground-mounted photovoltaic solar arrays or small wind turbines, solar water heating systems, geothermal ground source heat pumps, and battery storage. Rooftop photovoltaic solar energy panels, solar water heating systems, heat pumps and battery storage generally do not involve construction that would substantially change roof lines or add substantial massing or height such that the altered buildings would result in the potential to substantially alter or obstruct views. Small wind turbines are regulated by the County's Zoning Code Section 18.117, which allows by right one small system on properties greater than two acres in certain rural zones. Turbines are prohibited on exposed ridgelines, or where skylining may occur or where they may be viewed from public trails, parks, etc. Construction activities related to these project types would be nominal.

Impact Summary

Future projects would be required to evaluate project-specific impacts under CEQA at the time of application and implement project-specific mitigation to minimize or avoid impacts to scenic resources to the extent feasible in compliance with CEQA Guidelines Section 15126.4. As described in Section 3.2.1, Regulatory Setting above, state, and local regulations and policies (e.g., State Lighting Standards, 2008 General Plan policies CC-2, CC-6, CC-10, CC-13 and CC-14, and County Viewshed Protection Program) are in place to protect scenic resources. Furthermore, all future development projects would be required to follow County development requirements, including compliance with local policies, and ordinances related to protection of scenic resources.

Rooftop solar systems are regulated by the County's Zoning Code Chapter 15.14, which allows for the placement of small-scale renewable energy systems that meet the criteria of the code through a ministerial building permit process. The code applies size and height limits for infrastructure, which would minimize

potential impacts related to aesthetics. If rooftop installations cannot meet the criteria, then a Use Permit must be obtained which is a discretionary process, and would allow project conditioning to reduce impacts. Ground-mounted solar installations are not specifically covered by Chapter 15.14 and would, therefore, be subject to conditions pertaining to a Use Permit. However, because of the low profile of solar arrays, small-scale, ground-mounted systems would not be anticipated to result in impacts to scenic vistas or scenic resources. In addition, the 2008 General Plan policies pertaining to visual resources (listed above) would further limit project impacts to scenic vistas and scenic resources. In both cases, environmental impacts would be reduced through the County's ministerial or discretionary review process.

Small-scale wind turbines are regulated by the Napa County Zoning Code Chapter 18.117 which allows the installation of one small wind system outside of urbanized areas on properties of at least two-acres, and providing that the locations of the systems do not interfere with special-status species or habitat, do not occur in floodplains, do not create new visual impacts, do not exceed noise standards, and do not create a silhouetting issue. In these cases, small wind systems can be installed after obtaining a ministerial building permit. In cases where systems cannot meet the criteria of Chapter 18.117, then a Use Permit must be obtained which is a discretionary process, and allows for the projects to be conditioned to minimize potential impacts. In addition, the 2008 General Plan policies pertaining to visual resources (listed above) would further limit project impacts to scenic vistas and scenic resources. In both cases, environmental impacts would be reduced through the County's ministerial or discretionary review process.

Projects that include active transportation projects and utility infrastructure improvement projects would also be subject to discretionary review by the County. Project-specific evaluation of environmental impacts and implementation of feasible mitigation, as well as compliance with existing state, and local regulations that protect scenic resources would reduce potential impacts to scenic resources. Therefore, this impact would be **less than significant**.

Mitigation Measures

No mitigation is required.

Impact 3.2-2: Substantially Degrade the Existing Visual Character or Quality of the Site and Its Surroundings

GHG reduction and adaptation measures that result in new or updated utility service infrastructure, active transportation infrastructure, and small-scale renewable energy systems could result in construction and operational impacts to the local visual character. Compliance with existing state, and local regulations that protect scenic resources, especially County Zoning Code Section 18.106, and completion of subsequent project-level planning and environmental review would reduce potential impacts to these resources consistent with state and local polices. Therefore, this impact would be **less than significant**.

Although a comprehensive survey of scenic resources has not been conducted throughout the County, the general quality of visual character is considered high; scenic resources associated with agricultural landscapes, distinctive structures associated with historic structures and winery tasting rooms, scenic features associated with Napa Valley, ridgelines and topographic features such as Mt. St. Helena all contribute to a unique visual character in many areas of the County. The CAP is a policy-level document that does not include any site-specific designs or proposals or grant any entitlements for development; however, implementation of measures contained within the CAP have the potential to directly or indirectly affect visual character as a result of construction of new facilities or expansion of existing facilities. Some of the co-benefits of the proposed GHG reduction measures (building efficiency, agricultural, off-road, land use, water, wastewater, solid waste, high GWP, and multi-sector measures) include the preservation and protection of natural ecosystems and habitat resulting in preservation of potential scenic resources. The detailed description of the referenced measures can be found in Table 2-4, Project Description. Other measures would result in changes to the scenic environment as a result of construction of new infrastructure or expansion of existing facilities as described below.

As described above in Impact 3.2-1, GHG reduction and adaptation measures would result in the construction of new active transportation infrastructure such as visitor-friendly infrastructure, park and ride facilities, EV charging stations, pedestrian, trail, and bicycle improvements (TR-8, TR-10, TR-12, TR-14, TR-15) and water, and stormwater facilities and grid utility infrastructure (SW-2, Water-2, Water-5Flood-7). GHG reduction and adaptation measures (BE-5 and BE-11) would result in the construction of new small-scale renewable energy infrastructure, including rooftop or ground-mounted photovoltaic solar arrays or small wind turbines, solar water heating systems, geothermal ground source heat pumps, and battery storage.

Impact Summary

Impacts to visual character or quality could occur with the introduction of project features or components that would detract from or contrast with the existing visual character and/or quality of a neighborhood, community, or localized area by conflicting with important visual elements or the quality of the area (such as theme, style, setbacks, density, size, massing, coverage, scale, color, architecture, building materials, etc.) or by being inconsistent with applicable design guidelines. Each of these project types could potentially result in degradation to the existing visual character because of the development of new or expanded infrastructure. Potential impacts to visual character could occur as a result of damage or removal of scenic resources such as removal of vegetation, grading that would alter unique geologic features, Installation of large solar arrays on hill sides or in valleys, or large wind turbines on ridgelines would intrude on or detract from visual character of the affected sites and their surroundings.

In rural areas of the County, there are land uses considered sensitive to visual changes in their settings which are protected by General Plan policies, and include residential areas; designated park areas, recreation (including off-highway vehicle staging and use), and natural areas; major transportation systems; and designated and eligible state historic routes and scenic highways.

In general, while the project types listed above may alter the visual quality or character of a community, these alterations would not generally result in a degradation of visual character or quality by introducing incompatible uses, bulk, scale, or materials to the area. Most facilities would be small in footprint (e.g., charging stations), would be designed to the local site conditions (e.g., park-n-ride lots, trails), or would be additive to existing established infrastructure. Small-scale wind turbines would be regulated by the County's Zoning Code Section 18.117 and would prohibit the placement of turbines on exposed ridgelines, or in areas where skylining could occur. Also, while it is possible that temporary impacts related to construction and the introduction of features that may detract from or contrast with the existing visual character and/or quality of a neighborhood, community, or localized area, it is not likely that the development of new or expanded facilities would cause permanent significant impacts related to visual character or quality and would not result in substantial changes to the visual landscape.

All projects would be required to undergo a discretionary process, and be evaluated for project-specific impacts under CEQA at the time of application. Project-specific mitigation would minimize or eliminate impacts related to visual character to the extent feasible in compliance with CEQA Guidelines Section 15126.4. In addition, implementation of the County's Viewshed Protection Ordinance (Section 18.106) requirements which would require that future improvements be designed to be compatible with existing land forms, particularly County ridgelines, views of unique geologic features, and maintain existing landscape fabric of the County's hillside areas would ensure that the visual landscape is protected and preserved at the time of project permitting.

Compliance with existing state, and local regulations that protect visual character and completion of subsequent project-level planning and environmental review would reduce potential impacts to visual character consistent with state and local policies. Therefore, this impact would be **less than significant**.

Mitigation Measures

No mitigation is required.

Impact 3.2-3: Create a New Source of Substantial Light or Glare Which Would Adversely Affect Day or Nighttime Views in the Area

Construction of new infrastructure or modification of existing structures associated with implementation of some GHG reduction and adaptation measures could result in new sources of substantial light and/or glare that would adversely affect a site and its surroundings. However, compliance with existing state lighting standards that address outdoor lighting, compliance with the County's Design Guidelines, including Zoning Code Section 18.106.040 which regulates lighting standards, and completion of subsequent project-level planning and environmental review would reduce potential impacts to these resources. Therefore, this impact would be **less than significant**.

Given the rural nature of most of the County, nighttime lighting is relatively low, and glare from structures is limited. The CAP is a policy-level document that does not include any site-specific designs or proposals or grant any entitlements for development; however, implementation of GHG reduction measures supported by the CAP has the potential to create new sources of light or glare as a result of construction of new infrastructure or expansion of existing facilities.

As described above, GHG reduction and adaptation measures would result in the construction of new active transportation infrastructure such as visitor-friendly infrastructure, park and ride facilities; EV charging stations; pedestrian, trail, and bicycle improvements (TR-8, TR-10, TR-12, TR-14, TR-15); water, and stormwater facilities; and grid utility infrastructure (SW-2, Water-2, Water-5, Flood-7). GHG reduction and supporting measures (BE-5 and BE-11) would result in the construction of new small-scale renewable energy infrastructure, including rooftop or ground-mounted photovoltaic solar arrays or small wind turbines, solar water heating systems, geothermal ground source heat pumps, and battery storage.

Generally, the infrastructure improvements that would result from implementation of the GHG reduction and adaptation measures listed above would not have the potential to result in new significant sources of light or glare. Most improvements would occur within the existing urbanized areas within the County and would not include sources of light and glare. In the case of grid utility infrastructure updates including water, stormwater, wastewater, project types would generally not include design elements prone to glare or lighting. However, while specific projects are not contemplated as part of this EIR, projects would be required to undergo the County's discretionary review at the time of application, including an evaluation of light and glare impacts consistent with CEQA, and implementation of all feasible mitigation.

Impact Summary

Future improvements that would result from implementation of the CAP would be required to evaluate project-specific impacts under CEQA at the time of application. All project types would be discretionary except small solar and wind systems permitted by right under certain criteria established in the County's Zoning Code, and project-specific mitigation would be required to minimize or avoid impacts as a result of nighttime lighting or glare to the extent feasible in compliance with CEQA Guidelines Section 15126.4. As described in Section 3.2.1 "Regulatory Setting," above, state, and local regulations and policies (e.g., State Lighting Standards, 2008 General Plan Policy CC-34, County Viewshed Protection Program, County Design Guidelines) are in place to protect the visual character of the County, and regulate lighting conditions.

All projects would be required to undergo the County's discretionary review process and evaluate the potential for light and glare impacts under CEQA. Compliance with existing state, and local regulations that address light and glare and completion of subsequent project-level planning and environmental review would reduce potential impacts from light and glare consistent with local policies. Therefore, this impact would be **less than significant**.

Mitigation Measures

No feasible mitigation is available.

3.3 AIR QUALITY

This section includes a discussion of existing air quality conditions, a summary of applicable regulations, and an analysis of potential short-term and long-term air quality impacts that could result from implementation of the project.

There were no comments received during the Notice of Preparation (NOP) scoping process that include specific concerns regarding air quality. A copy of the NOP and comment letters received in response to the NOP are included in Appendix A of this Draft EIR.

3.3.1 Environmental Setting

The project is located in Napa County, California, which is within the San Francisco Bay Area Air Basin (SFBAAB). The SFBAAB also includes all of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, and Santa Clara Counties; and the western portion of Solano County and the southern portion of Sonoma County. The ambient concentrations of air pollutants are determined by the amount of emissions released by the sources of air pollutants and the atmosphere's ability to transport and dilute such emissions. Natural factors that affect transport and dilution include terrain, wind, atmospheric stability, and sunlight. Therefore, existing air quality conditions in the area are determined by natural factors such as topography, meteorology, and climate, in addition to the amount of emissions released by existing air pollutant sources, as discussed separately below.

CLIMATE, METEOROLOGY, AND TOPOGRAPHY

The SFBAAB is characterized by moderately wet winters and dry summers. Winter rains account for approximately 75 percent of the average annual rainfall. In general, total annual rainfall can reach 40 inches in the mountains, but less than 16 inches in sheltered valleys (BAAQMD 2017a).

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. The climate of the SFBAAB is dominated by the semi-permanent, subtropical high-pressure cell that is often present over the Pacific Ocean. High-pressure systems are characterized by an upper layer of dry air that warms as it descends, restricting the mobility of cooler marine-influenced air near the ground surface, resulting in subsidence inversions. During summer and fall, locally generated emissions can, under the restraining influences of topography and subsidence inversions, cause conditions that are conducive to the formation of photochemical pollutants, such as ozone and secondary particulates (e.g., nitrates and sulfates). In the winter, the Pacific high-pressure system shifts southward, allowing storms to pass through the area (BAAQMD 2017a).

The Napa Valley is bordered by relatively high mountains. With an average ridgeline height of about 2,000 feet, and with some peaks approaching 3,000 to 4,000 feet, these mountains are effective barriers to the prevailing northwesterly winds. The Napa Valley is widest at its southern end and narrows in the north. During the day, the prevailing winds flow up-valley from the south about half of the time. A strong up-valley wind frequently develops during warm summer afternoons, drawing air in from the San Pablo Bay. Daytime winds sometimes flow down-valley from the north. During the evening, especially in the winter, down-valley drainage often occurs. Wind speeds are generally low, with almost 50 percent of the winds less than four miles per hour (mph). Only 5 percent of the winds are between 16 and 18 mph, representing strong summertime up-valley winds and winter storms (BAAQMD 2017a). The annual prevailing wind direction in Napa County is from the south-southwest (Western Regional Climate Center n.d.).

In Napa Valley, summer average maximum temperatures are in the low-80s at the southern end and in the low 90s at the northern end. Winter average maximum temperatures are in the high-50s and low-60s, and minimum temperatures are in the high to mid-30s with the slightly cooler temperatures in the northern end (BAAQMD 2017a).

The air pollution potential in the Napa Valley could be high if there were sufficient sources of air contaminants nearby. Summer and fall prevailing winds can transport ozone precursors northward from the Carquinez Strait Region to the Napa Valley, effectively trapping and concentrating the pollutants when stable conditions are present. The local upslope and downslope flows created by the surrounding mountains may also recirculate pollutants already present, contributing to buildup of air pollution. High ozone concentrations are a potential problem to human health, as well as to sensitive crops such as wine grapes. The high frequency of light winds and stable conditions during the late fall and winter contribute to the buildup of particulate matter from motor vehicles, agriculture and wood burning in fireplaces and stoves (BAAQMD 2017a).

CRITERIA AIR POLLUTANTS

Concentrations of ozone, carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), respirable and fine particulate matter (PM_{10} and $PM_{2.5}$), and lead, which are criteria air pollutants, are used to indicate the quality of ambient air. Criteria air pollutants are also the most prevalent indicators of how air pollution is detrimental to human health. The health effects of each criteria air pollutant, as well as source of emissions are summarized in Table 3.3-1.

Table 3.3-1 Sources and Health Effects of Criteria Air Pollutants

Pollutant	Sources	Acute[1] Health Effects	Chronic[2] Health Effects
Ozone	secondary pollutant resulting from reaction of ROG and NO_X in presence of sunlight; ROG results from incomplete combustion and evaporation of chemical solvents and fuels; NO_X results from the combustion of fuels	increased respiration and pulmonary resistance; cough, pain, shortness of breath, lung inflammation	permeability of respiratory epithelia, possibility of permanent lung impairment
Carbon monoxide (CO)	incomplete combustion of fuels; motor vehicle exhaust	headache, dizziness, fatigue, nausea, vomiting, death	permanent heart and brain damage
Nitrogen dioxide (NO_2)	combustion devices; e.g., boilers, gas turbines, and mobile and stationary reciprocating internal combustion engines	coughing, difficulty breathing, vomiting, headache, eye irritation, chemical pneumonitis or pulmonary edema; breathing abnormalities, cough, cyanosis, chest pain, rapid heartbeat, death	chronic bronchitis, decreased lung function
Sulfur dioxide (SO_2)	coal and oil combustion, steel mills, refineries, and pulp and paper mills	irritation of upper respiratory tract, increased asthma symptoms	insufficient evidence linking SO_2 exposure to chronic health impacts
Respirable particulate matter (PM_{10}), Fine particulate matter ($PM_{2.5}$)	fugitive dust, soot, smoke, mobile and stationary sources, construction, fires and natural windblown dust, and formation in the atmosphere by condensation and/or transformation of SO_2 and ROG	breathing and respiratory symptoms, aggravation of existing respiratory and cardiovascular diseases, premature death	alterations to the immune system, carcinogenesis
Lead	metal processing	reproductive/developmental effects (fetuses and children)	numerous effects including neurological, endocrine, and cardiovascular effects

Notes: NO_X = oxides of nitrogen; ROG = reactive organic gases

1. Acute refers to effects of short-term exposures to criteria air pollutants, usually at fairly high concentrations.

2. Chronic refers to effects of long-term exposures to criteria air pollutants, usually at lower, ambient concentrations.

Source: EPA 2015

EMISSIONS INVENTORY

The California Air Resources Board (CARB) provides estimates for the County's 2012 inventory – the most recent available inventory. According to this inventory, mobile sources are the largest contributor to the estimated annual average for air pollutant levels of ROG and NO_X accounting for approximately 55 percent and 91 percent respectively, of the total emissions. Areawide sources account for approximately 89 percent and 78 percent of the County's PM_{10} and $PM_{2.5}$ emissions, respectively (CARB 2016a).

Monitoring Station Data and Attainment Area Designations

The Bay Area Air Quality Management District (BAAQMD) and CARB operate a regional monitoring network that measures the ambient concentrations of the six criteria air pollutants within the Bay Area. Existing and probable future levels of air quality in Napa County can generally be inferred from ambient air quality measurements conducted by BAAQMD at its nearby monitoring stations.

Napa County currently has one monitoring station, the Napa-Jefferson Avenue monitoring station, which measures criteria pollutants, including ozone, $PM_{2.5}$, PM_{10}, and NO_2. Table 3.3-2 below shows a 3-year summary of monitoring data from the monitoring station for ozone, $PM_{2.5}$, and PM_{10}, the main pollutants of concern in Napa County.

Table 3.3-2 Summary of Annual Air Quality Data (2014–2016)

Ozone[1]	2014	2015	2016
Maximum concentration (1-hour/8-hour, ppm)	0.074/0.066	0.079/0.069	0.080/0.067
Number of days state standard exceeded (1-hour/8-hour)	0/0	0/0	0/0
Number of days national standard exceeded (1-hour/8-hour)	0/0	0/0	0/0
Respirable Particulate Matter (PM_{10})[1]	**2014**	**2015**	**2016**
Maximum Concentration ($\mu g/m^3$)	39.3	50.0	33.0
Number of days state standard exceeded (measured[2])	0	0	0
Number of days national standard exceeded (measured[2])	0	0	0
Fine Particulate Matter ($PM_{2.5}$)[1]	**2014**	**2015**	**2016**
Maximum Concentration ($\mu g/m^3$)	29.9	38.2	24.3
Annual Average ($\mu g/m^3$)	11.9	10.7	8.6
Number of days national standard exceeded (measured[2])	0	1	0

Notes: $\mu g/m^3$ = micrograms per cubic meter; ppm = parts per million

1 Data from the Napa-Jefferson Avenue station.

2 Measured days are those days that an actual measurement was greater than the level of the state daily standard or the national daily standard. The number of days above the standard is not necessarily the number of violations of the standard for the year.

Source: CARB 2018a

As described in Section 3.3.2, "Regulatory Setting," the Clean Air Act (CAA) required the U.S. Environmental Protection Agency (EPA) to establish National Ambient Air Quality Standards (NAAQS), which regulate criteria air pollutants. The California Clean Air Act (CCAA) required CARB to establish California Ambient Air Quality Standards (CAAQS). Both CARB and EPA use air quality monitoring data to designate areas according to their attainment status for criteria air pollutants. The purpose of these designations is to identify those areas with air quality problems and thereby initiate planning efforts for improvement. The three basic designation categories are "nonattainment," "attainment," and "unclassified." "Unclassified" is used in an area that cannot be classified on the basis of available information as meeting or not meeting the standards. The CAAQS and NAAQS as well as Napa County's attainment designations for the years 2014 through 2016 are shown in Table 3.3-3 for each criteria air pollutant.

Table 3.3-3 Ambient Air Quality Standards and Designations for Napa County

Pollutant	Averaging Time	California		National Standards [1]	
		Standards[2,3]	Attainment Status[4]	Primary[3]	Attainment Status[6]
Ozone	1-hour	0.09 ppm (180 µg/m^3)	N	–	–
	8-hour	0.070 ppm (137 µg/m^3)		0.075 ppm (147 µg/m^3)	N
Carbon Monoxide (CO)	1-hour	20 ppm (23 mg/m^3)	A	35 ppm (40 mg/m^3)	U/A
	8-hour	9 ppm (10 mg/m^3)		9 ppm (10 mg/m^3)	
Nitrogen Dioxide (NO_2)	Annual Arithmetic Mean	0.030 ppm (57 µg/m^3)	A	0.053 ppm (100 µg/m^3)	U/A
	1-hour	0.18 ppm (339 µg/m^3)		0.100 ppm	
Sulfur Dioxide (SO_2)	Annual Arithmetic Mean	–	A	0.030 ppm (80 µg/m^3)	U/A
	24-hour	0.04 ppm (105 µg/m^3)		0.14 ppm (365 µg/m^3)	
	3-hour	–		0.5 ppm (1300 µg/m^3)[5]	
	1-hour	0.25 ppm (655 µg/m^3)		0.075 ppm	
Respirable Particulate Matter (PM_{10})	Annual Arithmetic Mean	20 µg/m^3	N	–	U/A
	24-hour	50 µg/m^3		150 µg/m^3	
Fine Particulate Matter ($PM_{2.5}$)	Annual Arithmetic Mean	12 µg/m^3	N	12.0 µg/m^3	N
	24-hour	–		35 µg/m^3	
Lead [7]	30-day Average	1.5 µg/m^3	A	–	–
	Calendar Quarter	–		1.5 µg/m^3	U/A
	Rolling 3-Month Avg	–		0.15 µg/m^3	U/A
Sulfates	24-hour	25 µg/m^3	A	No National Standards	
Hydrogen Sulfide	1-hour	0.03 ppm (42 µg/m^3)	U		
Vinyl Chloride [7]	24-hour	0.01 ppm (26 µg/m^3)	Not Available		
Visibility-Reducing Particle Matter	8-hour	Extinction coefficient of 0.23 per kilometer —visibility of 10 mi or more	U		

Notes: µg/m^3 = micrograms per cubic meter; ppm = parts per million

[1] National standards (other than ozone, PM, and those based on annual averages or annual arithmetic means) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration in a year, averaged over 3 years, is equal to or less than the standard. The PM_{10} 24-hour standard is attained when 99 percent of the daily concentrations, averaged over 3 years, are equal to or less than the standard. The $PM_{2.5}$ 24-hour standard is attained when 98 percent of the daily concentrations, averaged over 3 years, are equal to or less than the standard. Contact EPA for further clarification and current federal policies.

[2] California standards for ozone, CO (except in the Lake Tahoe Basin), SO_2 (1- and 24-hour), NO_2, PM, and visibility-reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded. California Ambient Air Quality Standards (CAAQS) are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

[3] Concentration expressed first in units in which it was promulgated [i.e., parts per million (ppm) or micrograms per cubic meter (µg/m^3)]. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas. Secondary national standards are also available from EPA.

[4] Unclassified (U): a pollutant is designated unclassified if the data are incomplete and do not support a designation of attainment or nonattainment.

Attainment (A): a pollutant is designated attainment if the state standard for that pollutant was not violated at any site in the area during a 3-year period.

Nonattainment (N): a pollutant is designated nonattainment if there was a least one violation of a state standard for that pollutant in the area. Non-attainment designations for ozone are classified as marginal, serious, severe, or extreme depending on the magnitude of the highest 8-Hour ozone design value at a monitoring site in a non-attainment area.

[5] Secondary Standard

[6] Nonattainment (N): any area that does not meet (or that contributes to ambient air quality in a nearby area that does not meet) the national primary or secondary ambient air quality standard for the pollutant.

Attainment (A): any area that meets the national primary or secondary ambient air quality standard for the pollutant.

Unclassifiable (U): any area that cannot be classified on the basis of available information as meeting or not meeting the national primary or secondary ambient air quality standard for the pollutant.

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

Sources: BAAQMD 2014, CARB 2016b, data compiled by Ascent Environmental in 2016

TOXIC AIR CONTAMINANTS

Concentrations of toxic air contaminants (TACs) are also used to indicate the quality of ambient air. A TAC is defined as an air pollutant that may cause or contribute to an increase in mortality or in serious illness, or that may pose a hazard to human health. TACs are usually present in relatively minute quantities in the ambient air; however, their high toxicity and associated health effects may pose a threat to public health even at low concentrations.

Diesel Particulate Matter

According to the California Almanac of Emissions and Air Quality[1] (CARB 2009), the majority of the estimated health risks from TACs can be attributed to relatively few compounds, the most important being exhaust emissions of particulate matter from diesel-fueled engines (diesel PM). Diesel PM differs from other TACs in that it is not a single substance, but rather a complex mixture of hundreds of substances. Although diesel PM is emitted by diesel-fueled internal combustion engines, the composition of the emissions varies depending on engine type, operating conditions, fuel composition, lubricating oil, and whether an emissions control system is being used. Unlike the other TACs, no ambient monitoring data are available for diesel PM.

In addition to diesel PM, the TACs that pose the greatest level of risk in California include benzene, 1,3-butadiene, acetaldehyde, carbon tetrachloride, hexavalent chromium, para-dichlorobenzene, formaldehyde, methylene chloride, and perchloroethylene. Sources of these TACs vary considerably and include (but are not limited to) consumer products, gasoline dispensing stations, auto repair and auto body coating shops, dry cleaning establishments, chrome plating and anodizing shops, welding operations, and other stationary sources.

Diesel PM poses the greatest health risk among the 10 TACs mentioned. Based on receptor modeling techniques, CARB estimated its health risk to be 480 excess cancer cases per million people in the SFBAAB in the year 2000, which when coupled with the average health risk within the SFBAAB of 179 cancer cases per million people yields a total health risk of 659 cancer cases per million people. Since 1990, emissions of diesel PM have decreased in the SFBAAB even though population and vehicle miles traveled (VMT) are growing, because of adoption of more stringent emission standards. Overall, levels of most TACs, except para-dichlorobenzene, have decreased since 1990.

Naturally Occurring Asbestos

Naturally occurring asbestos (NOA) was identified as a TAC in 1986 by CARB. NOA is located in many parts of California, and is commonly associated with ultramafic rocks, according to a special publication published by the California Geological Survey (Churchill and Hill, 2000). Asbestos is the common name for a group of naturally occurring fibrous silicate minerals that can separate into thin but strong and durable fibers. Ultramafic rocks form in high-temperature environments well below the surface of the earth. By the time they are exposed at the surface by geologic uplift and erosion, ultramafic rocks may be partially to completely altered into a type of metamorphic rock called serpentinite. Sometimes the metamorphic conditions are right for the formation of chrysotile asbestos or tremolite-actinolite asbestos in the bodies of these rocks, along their boundaries, or in the soil.

Asbestos could be released from serpentinite or ultramafic rock if the rock is broken or crushed. Asbestos could also be released into the air due to vehicular traffic on unpaved roads on which asbestos-bearing rock has been used as gravel. At the point of release, asbestos fibers could become airborne, causing air quality and human health hazards. Natural weathering and erosion processes act on asbestos bearing rock and soil, increasing the likelihood for asbestos fibers to become airborne if disturbed (CGS 2002). Asbestos is known to occur naturally in serpentine mineral deposits within several areas of the County, including Oat Hill Quarry, American Canyon Quarry, and areas northeast of the City of Napa (Napa County 2007).

[1] Although a more recent version of the almanac was available in 2013, this 2009 version of the almanac is the latest version that contains TAC information.

ODORS

Odors are generally regarded as an annoyance rather than a health hazard. However, manifestations of a person's reaction to foul odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache). 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 may be perfectly acceptable to another (e.g., coffee roaster). It is important to also note that an unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. This is because of the phenomenon known as odor fatigue, in which a person can become desensitized to almost any odor and recognition only occurs with an alteration in the intensity.

SENSITIVE LAND USES

Sensitive receptors are generally considered to include those land uses where exposure to pollutants could result in health-related risks to sensitive individuals, such as children or the elderly. Residential dwellings, schools, hospitals, playgrounds, and similar facilities are of primary concern because of the presence of individuals particularly sensitive to pollutants and/or the potential for increased and prolonged exposure of individuals to pollutants.

3.3.1 Regulatory Setting

Air quality in the SFBAAB is regulated by EPA, CARB, and BAAQMD. Each of these agencies develops rules, regulations, policies, and/or goals to comply with applicable legislation. Although EPA regulations may not be superseded, state and local regulations may be more stringent.

FEDERAL

EPA has been charged with implementing national air quality programs. EPA's air quality mandates are drawn primarily from the federal CAA, which was enacted in 1970. The most recent major amendments made by Congress were in 1990.

Criteria Air Pollutants

The CAA required EPA to establish NAAQS. As shown in Table 3.3-3 above, EPA has established primary and secondary NAAQS for the following criteria air pollutants: ozone, CO, NO_2, SO_2, PM_{10}, $PM_{2.5}$, and lead. The primary standards protect public health and the secondary standards protect public welfare. The CAA also required each state to prepare a State implementation plan (SIP) for attaining and maintaining the NAAQS. The federal Clean Air Act Amendments of 1990 (CAAA) added requirements for states with nonattainment areas to revise their SIPs to incorporate additional control measures to reduce air pollution. The SIP is modified periodically to reflect the latest emissions inventories, planning documents, and rules and regulations of the air basins as reported by their jurisdictional agencies. EPA is responsible for reviewing all SIPs to determine whether they conform to the mandates of the CAA and its amendments, and whether implementation will achieve air quality goals. If EPA determines a SIP to be inadequate, a federal implementation plan that imposes additional control measures may be prepared for the nonattainment area. If an approvable SIP is not submitted or implemented within the mandated time frame, sanctions may be applied to transportation funding and stationary air pollution sources in the air basin.

Toxic Air Contaminants

TACs are a defined set of airborne pollutants that may pose a present or potential hazard to human health. A wide range of sources, from industrial plants to motor vehicles, emit TACs. The health effects associated with TACs are quite diverse and generally are assessed locally, rather than regionally. TACs can cause long-term health effects such as cancer, birth defects, neurological damage, asthma, bronchitis, or genetic damage; or short-term acute affects such as eye watering, respiratory irritation (a cough), running nose, throat pain, and headaches.

For evaluation purposes, TACs are separated into carcinogens and non-carcinogens based on the nature of the physiological effects associated with exposure to the pollutant. Carcinogens are assumed to have no safe threshold below which health impacts would not occur. This contrasts with criteria air pollutants for which acceptable levels of exposure can be determined and for which the ambient standards have been established (Table 3.3-3). Cancer risk from TACs is expressed as excess cancer cases per one million exposed individuals, typically over a lifetime of exposure. CARB regulates and TACs through statutes and regulations that generally require the use of the maximum available control technology or best available control technology for toxics to limit emissions.

STATE

CARB is the agency responsible for coordination and oversight of State and local air pollution control programs in California and for implementing the CCAA. The CCAA, which was adopted in 1988, required CARB to establish CAAQS (Table 3.3-3).

Criteria Air Pollutants

CARB has established CAAQS for sulfates, hydrogen sulfide, vinyl chloride, visibility-reducing particulate matter, and the above-mentioned criteria air pollutants. In most cases the CAAQS are more stringent than the NAAQS. Differences in the standards are generally explained by the health effects studies considered during the standard-setting process and the interpretation of the studies. In addition, the CAAQS incorporate a margin of safety to protect sensitive individuals.

The CCAA requires that all local air districts in the state endeavor to attain and maintain the CAAQS by the earliest date practical. The CCAA specifies that local air districts should focus particular attention on reducing the emissions from transportation and area-wide emission sources and provides air districts with the authority to regulate indirect sources.

Among CARB's other responsibilities are overseeing local air district compliance with federal and state laws, approving local air quality plans, submitting SIPs to EPA, monitoring air quality, determining and updating area designations and maps, and setting emissions standards for new mobile sources, consumer products, small utility engines, off-road vehicles, and fuels.

Toxic Air Contaminants

TACs in California are regulated primarily through the Tanner Air Toxics Act (Assembly Bill [AB] 1807, Chapter 1047, Statutes of 1983) and the Air Toxics Hot Spots Information and Assessment Act of 1987 (AB 2588, Chapter 1252, Statutes of 1987). AB 1807 sets forth a formal procedure for CARB to designate substances as TACs. Research, public participation, and scientific peer review are required before CARB can designate a substance as a TAC. To date, CARB has identified more than 21 TACs and adopted EPA's list of HAPs as TACs. Most recently, diesel PM was added to CARB's list of TACs.

After a TAC is identified, CARB then adopts a control measure for applicable sources. If a safe threshold exists for a substance at which there is no toxic effect, the control measure must reduce exposure below that threshold. If no safe threshold exists, the measure must incorporate best available control technology to minimize TAC emissions.

The Hot Spots Act requires that existing facilities that emit toxic substances above a specified level prepare an inventory of toxic emissions, prepare a risk assessment if emissions are significant, notify the public of significant risk levels, and prepare and implement risk reduction measures.

AB 617 of 2017 aims to help protect air quality and public health in communities around industries subject to the state's cap-and-trade program for greenhouse gas (GHG) emissions. AB 617 imposes a new state-mandated local program to address non-vehicular sources (e.g., refineries, manufacturing facilities) of criteria air pollutants and TACs. AB 617 requires CARB to identify high-pollution areas and directs air districts to focus air quality improvement efforts through adoption of community emission reduction programs within these identified areas. Currently, air districts review individual sources and impose emissions limits on emitters based on best available control technology, pollutant type, and proximity to nearby existing land uses. This bill addresses the cumulative and additive nature of air pollutant health effects by requiring community-wide air quality assessment and emission reduction planning.

CARB has adopted diesel exhaust control measures and more stringent emissions standards for various transportation-related mobile sources of emissions, including transit buses, and off-road diesel equipment (e.g., tractors, generators). Over time, the replacement of older vehicles will result in a vehicle fleet that produces substantially lower levels of TACs than under current conditions. Mobile-source emissions of TACs (e.g., benzene, 1-3-butadiene, diesel PM) have been reduced significantly over the last decade and will be reduced further in California through a progression of regulatory measures (e.g., Low Emission Vehicle/Clean Fuels and Phase II reformulated gasoline regulations) and control technologies. With implementation of CARB's Risk Reduction Plan, it is expected that diesel PM concentrations will be 85 percent less in 2020 in comparison to year 2000 (CARB 2000). Adopted regulations are also expected to continue to reduce formaldehyde emissions emitted by cars and light-duty trucks. As emissions are reduced, it is expected that risks associated with exposure to the emissions will also be reduced.

Odors

The California Department of Resources Recycling and Recovery (CalRecycle) regulates solid waste disposal and composting facilities. All compostable material handling facilities and operations are required to comply with the state minimum standards set forth in Title 14 of the California Code of Regulations (CCR), Division 7, Chapter 3.1, Articles 5, 6, 7, 8, and 9. An odor impact minimization plan (OIMP) is required for facilities and operations as specified in 14 CCR Section 17863.4. The CalRecycle minimum standard (14 CCR Section 17867(a)(2)) for odor requires that "All handling activities shall be conducted in a manner that minimizes vectors, odor impacts, litter, hazards, nuisances, and noise impacts; and minimizes human contact with, inhalation, ingestion, and transportation of dust, particulates, and pathogenic organisms."

LOCAL

Bay Area Air Quality Management District

BAAQMD attains and maintains air quality conditions in Napa County through a comprehensive program of planning, regulation, enforcement, technical innovation, and promotion of the understanding of air quality issues. The clean air strategy of BAAQMD includes the preparation of plans and programs for the attainment of NAAQS and CAAQS, adoption and enforcement of rules and regulations, and issuance of permits for stationary sources. BAAQMD also inspects stationary sources, responds to citizen complaints, monitors ambient air quality and meteorological conditions, and implements other programs and regulations required by the CAA and CCAA.

As mentioned above, BAAQMD adopts rules and regulations. All projects are subject to BAAQMD's rules and regulations in effect at the time of construction. Specific rules applicable to project construction may include, but are not limited to:

- **Regulation 2, Rule 1, General Permit Requirements.** Includes criteria for issuance or denial of permits, exemptions, appeals against decisions of the Air Pollution Control Officer and BAAQMD actions on applications.

- **Regulation 2, Rule 2, New Source Review.** Applies to new or modified sources and contains requirements for Best Available Control Technology and emission offsets. Rule 2 implements federal New Source Review and Prevention of Significant Deterioration requirements.

- **Regulation 5: Open Burning.** Generally, prohibits open burning, but also allows for exemptions such as agricultural burning, disposal of hazardous materials, fire training, and range, forest, and wildlife management.

- **Regulation 6, Rule 1, General Requirements.** Limits the quantity of particulate matter in the atmosphere by controlling emission rates, concentration, visible emissions and opacity.

- **Regulation 7, Odorous Substances.** Regulation 7 places general limitations on odorous substances and specific emission limitations on certain odorous compounds.

- **Regulation 8, Rule 3, Architectural Coatings.** Limits the quantity of volatile organic compounds in architectural coatings supplied, sold, offered for sale, applied, solicited for application, or manufactured for use within BAAQMD.

- **Regulation 8, Rule 34, Solid Waste Disposal Sites**. Limits the emission of non-methane organic compounds and methane from the waste decomposition process at solid waste disposal sites.

- **Regulation 11, Rule 2, Asbestos Demolition, Renovation, and Manufacturing.** Limits asbestos emissions during demolition or renovation of structures and the associated disturbance of asbestos-containing waste material generated or handled during these activities.

Under BAAQMD Regulation 2, Rule 1, General Permit Requirements and Regulation 2, Rule 2, New Source Review, all sources that possess the potential to emit TACs are required to obtain permits from the district. Permits may be granted to these operations if they are constructed and operated in accordance with applicable regulations, including new-source-review standards and air-toxics control measures.

BAAQMD also requires burn permits for open burning and preparation of a smoke management plan (SMP) for prescribed burning. These plans and permits would describe acres by burn type, predominant vegetation, duration of burn, emissions estimates, meteorological prescription, identification of smoke sensitive areas, and alternatives and contingencies. Emissions would be minimized through considerations such as weather conditions, wind direction, and burn pile size. The local air district is the ultimate arbiter in whether the activity can occur as proposed, in a limited capacity, or must be postponed based on the predicted transport and placement of pollutants from the activity relative to sensitive receptors that may be impacted by the activity. Prescribed fire treatments need not only an authorization from the local air district, but also must ensure that the conditions set forth in the approved SMP are met before ignition of a prescribed fire. That is, even with authorization from the local district to conduct the prescribed burn, if the conditions and requirements of the SMP are not met on site, ignition is prohibited (17 CCR Section 80160).

To implement the Hot Spots Information and Assessment Act in its jurisdiction, BAAQMD requires all stationary sources of TACs that are determined to generate an incremental increase in cancer risk that exceeds 10 in one million or a non-cancer chronic or acute risk level that exceeds a hazard index of 1.0 (using the conservative estimates of screening-level analysis) to perform a detailed, formal health risk assessment (HRA). A hazard index is the ratio of the average short term (generally 1 hour) ambient concentration of a toxic substance(s) divided by the reference exposure level set by the Office of Environmental Health Hazard Assessment (OEHHA). If the ratio is above one, then adverse health effects may occur (CAPCOA 2009).

To address community risk from air toxics, BAAQMD initiated the Community Air Risk Evaluation (CARE) program in 2004 to evaluate and reduce health risks associated with exposure to outdoor TACs. The program examines TAC emissions from point sources, area sources and on-road and off-road mobile sources co-located with sensitive populations to help focus mitigation strategies. The BAAQMD allocates funds for

diesel emission reduction projects in CARE communities. These projects include diesel emission retrofits for heavy-duty vehicle, equipment, locomotives, and vessels. BAAQMD designates areas in the Bay Area as CARE communities. These areas typically have elevated air pollutant concentrations or are near major air pollution sources, such as freeways and industrial facilities. These locations typically occur in areas where infill development is planned. Infill development typically includes high density, mixed-use, and transit-oriented development, which is essential in reducing air pollution and GHG emissions from on-road vehicles and is vital for the region overall to help meet its climate protection goals and attain health-based ambient air quality standards. Given these parameters, BAAQMD has not designated any locations within Napa County as CARE communities (BAAQMD 2018).

Air Quality Plans

The CCAA requires that all local air districts in the state endeavor to achieve and maintain the CAAQS by the earliest practical date. The act specifies that local air districts should focus attention on reducing the emissions from transportation and area-wide emission sources, and provides districts with the authority to regulate indirect sources. To achieve the CAAQS, BAAQMD prepares and updates air quality plans on a regular basis. The air quality plans published by local air districts are incorporated into the State's SIP Strategy and meet CAA requirements.

For State air quality planning purposes, the Bay Area is classified as a serious non-attainment area for the 1-hour ozone standard. The "serious" classification triggers various plan submittal requirements and transportation performance standards. One such requirement is that the Bay Area update the Clean Air Plan every 3 years to reflect progress in meeting the air quality standards and to incorporate new information regarding the feasibility of control measures and new emission inventory data. The Bay Area's record of progress in implementing previous measures must also be reviewed. Bay Area plans are prepared with the cooperation of the Metropolitan Transportation Commission and the Association of Bay Area Governments. On April 19, 2017 BAAQMD adopted the most recent revision to the Clean Air Plan - the *2017 Clean Air Plan: Spare the Air, Cool the Climate* (BAAQMD 2017b). The Clean Air Plan serves to:

- define a vision for transitioning the region to a post-carbon economy needed to achieve 2030 and 2050 GHG reduction targets;
- decrease emissions of air pollutants most harmful to Bay Area residents, such as particulate matter, ozone, and TACs;
- reduce emissions of methane and other potent climate pollutants; and
- decrease emissions of carbon dioxide by reducing fossil fuel combustion.

Napa County General Plan

The following policies of the *Napa County General Plan* (Napa County 2008) are applicable to the project.

- **Policy CON-69:** The County shall provide incentives and opportunities for the use of energy-efficient forms of transportation such as public transit, carpooling, walking, and bicycling. This shall include the provision and/or the extension of transit to urban areas where development densities (residential and nonresidential) would support transit use, as well as bus turnouts/access, bicycle storage, and carpool/vanpool parking where appropriate.
- **Policy CON-75**: The County shall work to implement all applicable local, state, and federal air pollution standards, including those related to reductions in GHG emissions.
- **Policy CON-76:** The County shall minimize air pollutant emissions from all County facilities and operations to the extent feasible, consistent with the County's desire to provide a high level of public service.

- **Policy CON-77:** All new discretionary projects shall be evaluated to determine potential significant project-specific air quality impacts and shall be required to incorporate appropriate design, construction, and operational features to reduce emissions of criteria pollutants regulated by the state and federal governments below the applicable significance standard(s) or implement alternate and equally effective mitigation strategies consistent with BAAQMD's air quality improvement programs to reduce emissions.

- **Policy CON-80:** The County shall seek to reduce particulate emissions and avoid exceedances of state particulate matter standards by requiring implementation of dust control measures during construction and grading activities and enforcing winter grading deadlines.

- **Policy CON-81.** The County shall require dust control measures to be applied to construction projects consistent with measures recommended for use by BAAQMD.

- **Policy CON-82:** The County shall require applicants seeking demolition permits to demonstrate compliance with any applicable BAAQMD requirements, particularly those related to asbestos-containing materials and exposure to lead paint.

- **Policy CON-84:** The County shall require the establishment and maintenance of adequate buffer distances or filters or other equipment modifications for new sources TACs and odors near proposed or existing sensitive receptors consistent with local and state regulatory requirements and guidelines (pursuant to Mitigation Measure 4.8.5 of the Napa County General Plan Environmental Impact Report [EIR]).

- **Policy CON-85:** The County shall utilize construction emission control measures required by CARB or BAAQMD that are appropriate for the specifics of the project (e.g., length of time of construction and distance from sensitive receptors). These measures shall be made conditions of approval and/or adopted as mitigation to ensure implementation.

- **Policy CC-53:** Odors associated with industrial and commercial uses—in particular, those generated by chemical or industrial processes—are considered generally unacceptable, and shall be required to mitigate their effects on nearby businesses and residences in accordance with standards of BAAQMD.

3.3.2 Environmental Impacts and Mitigation Measures

ANALYSIS METHODOLOGY

The scope of the project and cumulative impact analysis study area for air quality is the entire unincorporated County and the SFBAAB, respectively. The impact analysis below uses the local jurisdictions' policies and thresholds to determine whether implementation of the CAP would result in a significant environmental impact.

PROPOSED CAP GHG REDUCTION AND ADAPTATION MEASURES

Table 2.4 of the Draft EIR, provides a list of proposed GHG reduction and adaptation measures that would be implemented by the CAP. None of the proposed measures indicate where specific improvements would be constructed, their size, or specific characteristics. As a program EIR, the Draft EIR does not, and cannot, speculate on the individual environmental impacts of specific future projects/improvements. However, implementation of all GHG reduction and adaptation measures were considered during preparation of the Draft EIR to the degree specific information about implementation is known. Consistent with the requirements of the California Environmental Quality Act (CEQA) Guidelines Section 15168, this Draft EIR provides a program-level discussion of the potential general impacts of implementing these measures, rather than project-level or site-specific physical impacts of such actions. Only those measures that have the potential to affect air quality are listed below. Those measures not listed below but would have a beneficial

effect are briefly noted in the following impact discussions. All other measures in Table 2.4 would have no effect on air quality and are not discussed further.

- **Primary Measure AG-1: Convert all stationary diesel or gas-powered irrigation pumps to electric pumps.** This measure would result in an incentive program that would aid in the conversion from diesel or gas-powered irrigation pumps to solar, electric or other alternative fuel. This would have a long-term beneficial impact on air quality as fewer air pollutants would be emitted. Temporary air quality impacts would result from use of worker trips during pump replacement.

- **Primary Measure AG-2: Support use of electric or alternatively-fueled agricultural equipment.** This measure would result in the development of an incentive program that would aid in the transition from gas and diesel-powered engines to electric engines in agricultural equipment. This would have a long-term beneficial impact on air quality as fewer air pollutants would be emitted.

- **Primary Measure AG-5: Support BAAQMD in ending open burning of removed agricultural biomass and flood debris**. This measure would result in the promotion of alternatives to burning biomass materials, such as chipping, mastication, use of materials onsite, and/or hauling materials to off-site locations. Fewer air pollutants would be emitted from open burning and there would be a slight increase in emissions from heavy machinery used for chipping, mastication, and transportation of materials.

- **Primary Measure BE-4: Require new or replacement water heating systems to be electrically powered or alternatively fueled (e.g., solar water heating) for all residential land uses.** This measure would result in a new ordinance or revisions to the County Code that would require replacement water heaters to be electric or alternatively fueled. This would reduce the number of gas water heaters in use. This would result in beneficial physical changes to related to air quality and GHG, and a nominal increase in electricity consumption.

- **Primary Measure BE-5: Expand current renewable energy and green energy incentives and update local ordinances.** This measure would result in an expansion of incentives for renewable energy systems that would increase participation by individual property owners. This measure would result in the installation of new private renewable energy systems including new photovoltaic, small-scale wind turbines, solar water heating systems, geothermal ground source heat pump, and battery storage. Air pollutants would be emitted during project construction, operation, and maintenance of infrastructure.

- **Primary Measure BE-7: Support Waste-to-Energy Programs at Unincorporated Landfills.** This measure will result in gas that is captured through existing landfill gas capture systems being reused for energy, rather than being flared. This measure could result in new infrastructure on-site or off-site to process landfill gas so that it can be used for energy generation or other end-uses such as CNG for fuel in vehicles. Air pollutants would be emitted during project construction, operation, and maintenance of infrastructure.

- **Primary Measure BE-8: Work with PG&E, BayREN, MCE, PACE financing programs, and other regional partners to incentivize energy efficiency improvements in existing buildings.** This measure would result in coordination among the County and partner organizations in order to incentivize energy efficiency improvements in existing buildings. This could result in nominal construction activities.

- **Primary Measure BE-9: Require energy audits for major additions to or alterations of existing buildings.** This measure would result in an amendment to the County Code to require energy audits when a building permit application is submitted in order to increase energy efficiency. Permit applicants would be required to incorporate all cost-effective improvements into the project to increase energy efficiency per the recommendations of the audit. This could result in nominal construction activities.

- **Primary Measure BE-10: Develop a program to allow new development to offset project GHG emissions by retrofitting existing income-qualified homes and buildings.** This would result in the development of a program that would allow new development to contribute energy efficiency retrofits to existing income qualified homes and buildings. This would result in reduced GHG emissions but could result in nominal construction activities, which would emit short-term air pollutants.

- **Primary Measure BE-11: Encourage Solar Panel Installations on Commercial Roof Spaces.** This measure would result in an expansion of incentives for renewable energy systems that would increase participation by individual property owners. This measure would result in the installation of new private renewable energy systems. Air pollutants would be emitted during project construction, operation, and maintenance of infrastructure.

- **Primary Measure LU-1: Establish targets and enhanced programs for oak woodland and coniferous forest preservation and mandatory replanting.** This effort would result in preservation activities aimed at reducing the net loss of oak woodlands and coniferous forests. The program would include replanting activities that could result in minor air pollutant emissions impacts due to worker trips and use of heavy equipment.

- **Primary Measure LU-3: Repurpose or otherwise prevent burning of removed trees and other woody material from land use conversions of oak**. This effort would result in repurposing timber and woody materials that are collected during oak woodlands and forest conversion. Air pollutants would be emitted during chipping, mastication, and transportation of materials to off-site locations.

- **Supporting Measure TR-8: Support Napa County's incorporated cities in developing transit-oriented development unique to the needs of the Napa Region**. This would result in collaboration among the County and incorporated cities in order to create a more robust visitor-friendly environment around the Soscol Gateway Transit Center (and future transit centers) in order to encourage additional users. Short-term air pollutants would be emitted during the construction of visitor-serving infrastructure.

- **Supporting Measure TR-10: Work with Napa County's incorporated cities, NVTA, and neighboring regions to increase presence of park and ride facilities near residential centers.** This effort would result in new park and ride facilities which would reduce long-term air pollutant emissions by decreasing the amount of vehicles on the road. Short-term air pollutants would be emitted during the construction of park and ride facilities.

- **Supporting Measure TR-12: Increase the supply of electric vehicle charging stations.** This measure would result in the installation of new electric vehicle charging stations (EV charging stations) in priority areas including existing commercial areas, major visitor attractions, and multifamily complexes. Long term air quality would be improved due to decreased fuel consumption. Short-term air pollutants would be emitted during the installation of EV charging stations.

- **Supporting Measure TR-14: Develop and implement active transportation projects.** This measure would result in the development and construction of new pedestrian, trail, and bicycle improvements. Short-term air pollutants would be emitted during construction.

- **Supporting Measure TR-15: Require new development projects to evaluate and reduce VMT.** This measure would implement roadway improvements to reduce VMT by calming traffic and improving the bicyclist and pedestrian infrastructure and would occur as part of resurfacing projects within existing paved areas. Short-term air pollutants would be emitted during construction.

- **Supporting Measure TR-16: Convert 50% of County fleet vehicles to alternative fuels by 2030.** This measure would result in the conversion of the County's fleet to alternative fuels. This may result in a nominal increase in consumption of electricity but would decrease fuel use overall and resulting GHG emissions.

- **Primary Measure SW-1: Encourage expansion of composting programs for both residential and commercial land uses.** This measure would result in the expansion of composting programs which would reduce GHG emissions by decreasing methane in landfills. Although this would result in new vehicle trips related to new or expanded composting collection services, the associated air pollutant emissions would be offset by a reduction in vehicle trips to landfills.

- **Primary Measure SW-2: Meet an 80 percent Waste Diversion Goal by 2020 and a 90 percent Waste Diversion Goal by 2030.** This measure could result in new/expanded waste processing and diversion facilities throughout the unincorporated County. Air pollutants would be emitted during project construction, operation, and maintenance of new or expanded facilities.

- **Adaptation Measure Temp-6: Improve Parking Lot Shading and Landscaping**. This measure would result in increased parking lot shading and trees and landscaping to help reduce heat island effect. This would result in nominal air pollutant emissions related to increased tree planting/landscaping efforts and installation of solar PV canopies.

- **Adaptation Measure Fire-5: Collaborate on Programs to Reduce Fire Hazards**. This measure would result in increased collaboration to improve resiliency related to wildfire hazards. This could include thinning, removing, or chipping vegetation and prescribed burning, which would result in air pollutant emissions. However, these emissions would be lower than air pollutant emissions from a wildfire on untreated lands.

- **Adaptation Measure Water-2: Water Supply and Quality.** This measure would result in the development and implementation of water supply resiliency strategies such as graywater systems, recycled water, and other water conservation strategies. This could result in air pollutant emissions related to the construction of new or updated infrastructure.

- **Adaptation Measure Water-5: Collaborate with Agencies to Identify Future Water Supplies and Explore Alternative Supply Sources.** This measure would result in increased collaboration to identify future water supply options, including expanded use of on-site graywater, recycled water, or other water conservation options. This could result in air pollutant emissions related to the construction of new or updated infrastructure.

- **Adaptation Measure Flood-3: Identify Potential Streamside Restoration Areas**. This measure would result in the identification and restoration of stream banks within the unincorporated county to buffer buildings, roads, and crops from increased flooding potential. Air pollutants would be emitted during construction but would be minor and temporary in nature.

- **Adaptation Measure Flood-4: Encourage Replanting Bare or Disturbed Areas**. This measure would result in the identification and restoration of areas that are subject to erosion within the unincorporated county to improve water quality and reduce stream sedimentation. Air pollutants would be emitted during construction but would be minor and temporary in nature.

- **Adaptation Measure Flood-7: Improve Capacity of Storm Water Infrastructure**. This measure would result in improved storm water infrastructure and improved resilience for high intensity rain events. Air pollutants would be emitted during project construction and maintenance of new or updated infrastructure.

THRESHOLDS OF SIGNIFICANCE

Based on Appendix G of the State CEQA Guidelines the project would result in a potentially significant impact on air quality if it would:

- 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 in non-attainment under an applicable federal or state ambient air quality standard,
- expose sensitive receptors to substantial pollutant concentrations, or
- create objectionable odors affecting a substantial number of people.

ISSUES NOT DISCUSSED FURTHER

As described in Chapter 2, Project Description, implementation of the CAP and the targets and strategies identified therein necessitate changes to Policy CON-65 e) of the County's General Plan (2008 GP). The proposed changes would require that all discretionary development projects demonstrate consistency with the CAP by substantiating compliance through the CAP Consistency Checklist. As described in Section 2.4.2, Project Description, proposed changes to the adopted policy of the General Plan requires the County to implement a General Plan Amendment (GPA) as part of the administrative approval process.

The CAP EIR evaluates the GPA as part of the series of actions associated with implementation of the CAP. The changes reflected in the GPA support and are consistent with implementation of the CAP, its GHG targets, and GHG reduction measures. No additional activities or measures, other than those described in the CAP, would occur as a result of implementation of the GPA. Therefore, the GPA is not evaluated separately from the actions proposed by the CAP, but rather its implementation is within the scope of the overall impact analysis of the CAP. As described in Section 2.4.3, Project Description, to provide a mechanism by which projects can demonstrate consistency with the CAP, a CAP Consistency Checklist is included as Appendix D of the CAP. The CAP Consistency Checklist is a tool by which the County will track and determine a project's consistency with the CAP and how it delivers its appropriate GHG reductions. No physical projects or improvements other than those described in the CAP are included or would be approved with approval of the checklist. As such, like the GPA, the CAP Consistency Checklist is not evaluated separately from the actions proposed by the CAP.

In summary, the physical changes and associated environmental impacts of all GHG reduction and adaptation measures have been evaluated throughout the CAP EIR. The GPA and CAP Consistency Checklist which are included as part of the project, are not addressed as a separate impact discussion below. These administrative mechanisms on their own would not result in any physical impacts that would require separate evaluation below and are not discussed further.

IMPACT ANALYSIS

Impact 3.3-1: Conflict With or Obstruct Implementation of the Applicable Air Quality Plan

The proposed GHG reduction and adaptation measures are not growth-inducing, nor are they substantial employment generators such that an increase in VMT would be induced. A co-benefit of many of the GHG reduction and adaptation measures is improved air quality through reduction of criteria air pollutant emissions through long-term reduction in fuel use and VMT. While some measures may result in a temporary increase in the number of construction workers, workers would likely be from Napa or the surrounding counties and permanent relocation would not be required. Given that the CAP would not induce substantial population growth or increase in VMT, and would result in beneficial impacts, the project would not conflict with or obstruct implementation of any applicable air quality plans. Impacts would be **less than significant**.

The emission inventories used to develop a region's air quality attainment plans are based primarily on projected population growth and VMT for the region, which are based, in part, on the planned growth identified in regional and community plans. Therefore, projects that would result in increases in population or employment growth beyond that projected in regional or community plans could result in increases in VMT above that planned in the attainment plan, further resulting in mobile source emissions that could conflict

with a region's air quality planning efforts. Increases in VMT beyond that projected in area plans generally would be considered to have a significant adverse incremental effect on the region's ability to attain or maintain state and federal ambient air quality standards. The analysis below focuses on whether GHG reduction, supporting, and adaptation measures would increase population, employment, or VMT above planned levels.

Infrastructure Efficiency and Replacement Measures

GHG reduction measures that could result in new infrastructure on- or off-site to process landfill gas (BE-7) could require a temporary increase in the number of construction workers. However, workers would likely be from Napa or the surrounding counties and permanent relocation would not be required. Operation of landfill gas capture facilities could require a small increase in the number of full-time employees to operate and maintain the facilities; however, these types of projects are not substantial employment generators such that substantial population growth or increase in VMT would be induced.

GHG reduction measures that would encourage the conversion of diesel- or gas-powered equipment (i.e. water heaters, irrigation pumps, and agricultural equipment) to electrically powered or alternatively fueled equipment (BE-4, AG-1, AG-2, TR-16) are not substantial employment generators, such that substantial population growth and increase in VMT would be induced. Also, these GHG reduction measures would have the co-benefit of reducing air pollutants through the reduction in fossil fuel combustion.

Transportation, Water, Sewer and Stormwater, and Grid Utility Infrastructure Measures

GHG reduction measures that would result in the construction of new facilities and new active transportation infrastructure such as visitor-friendly infrastructure; park and ride facilities; electric vehicle (EV) charging stations; and pedestrian, trail, and bicycle improvements (TR-8, TR-10, TR-12, TR-14, TR-15) could require a temporary increase in the number of construction workers. However, workers would likely be from Napa or the surrounding counties and permanent relocation would not be required. Furthermore, these measures would reduce VMT by encouraging shifts to alternative modes of transportation. Also, these GHG reduction measures would have the co-benefit of reducing long-term air pollutant emissions through the reduction in fuel use and reduced VMT.

Adaptation measures that would result in the construction and operation of water, sewage, solid waste management, and stormwater facilities and grid utility infrastructure (Water-2, Water-5, Flood-7) could require a temporary increase in the number of construction workers. However, workers would likely be from Napa or the surrounding counties and permanent relocation would not be required. A small increase in the number of full-time employees may be required to operate and maintain the facilities; however, these types of projects are not substantial employment generators such that substantial population growth or increase in VMT would be induced. Specific projects related to infrastructure upgrades that would result in increased resiliency for utility systems are not evaluated as it is too speculative to determine what facilities would be required at this time. It is assumed that some level of construction activities would be included in potential projects. Typical construction activities would require the use of trucks, and grading. All construction activities would be temporary effects of the construction process.

Vegetation Management Measures

GHG reduction and adaptation measures that would result in intermittent activities such as chipping, mastication, and hauling of biomass; replanting and restoration activities; prescribed burns; and installation of parking lot shading and landscaping (AG-5, LU-1, LU-3, Temp-6, Fire-5, Flood-3, Flood-4) could require a temporary increase in the number of workers. However, workers would likely be from Napa or the surrounding counties and permanent relocation would not be required. Therefore, these measures would not result in substantial population growth or increase in VMT.

Renewable Energy and Efficiency Upgrades Measures

GHG reduction and adaptation measures that could result in the construction of, small-scale renewable energy infrastructure and retrofits to existing buildings including rooftop or ground-mounted photovoltaic solar arrays or small wind turbines, solar water heating systems, geothermal ground source heat pumps, and battery storage (BE-3, BE-5, BE-6, BE-8, BE-9, BE-10, BE-11) would require an increase in the number of workers.

However, workers would likely be from Napa or the surrounding counties and permanent relocation would not be required. Also, the measures that replace or retrofit natural gas heating systems would reduce air pollutants from natural gas combustion, such as CO, that would have otherwise occurred. Therefore, implementation of these measures would not result in substantial population growth or increase in VMT and would not conflict with or obstruct the implementation of any applicable air quality plans.

Waste Diversion and Compost Measures

GHG reduction measures that would result in the expansion of compost and waste diversion facilities (SW-1 and SW-2) could require an increase in the number of workers. However, workers would likely be from Napa or the surrounding counties and permanent relocation would not be required. This could result in a minor increase in VMT associated with new or expanded composting collections services that would be offset by a reduction in VMT associated with landfills. Therefore, implementation of these measures would not result in substantial population growth or increase in VMT and would not conflict with or obstruct the implementation of any applicable air quality plans.

Impact Summary

Overall, the CAP is intended to reduce GHG emissions generated within the County by 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 through the reduction in fuel combustion. 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 effects associated with the reduction of air pollutant emissions in the County would be beneficial. Given that GHG reduction and adaptation measures would not induce substantial population growth or increase in VMT, and given the beneficial air quality effects, the project would not conflict with or obstruct implementation of any applicable air quality plans. Impacts would be **less than significant**.

Mitigation Measures

No mitigation is required.

Impact 3.3-2: Violate Any Air Quality Standard or Contribute Substantially to an Existing or Projected Air Quality Violation

Implementation of GHG reduction and adaptation measures would result in minor temporary air pollutant emissions during construction activities. However, GHG reduction measures would generally reduce criteria air pollutants emissions during operational activities. Also, project-specific evaluation of environmental impacts and implementation of feasible mitigation would reduce potential impacts. Thus, implementation of these types of small-scale facilities would not result in an exceedance of BAAQMD's thresholds. This impact would be **less than significant**.

The CAP would result in a significant impact if it would cause construction-generated or operational criteria air pollutant or precursor emissions to exceed the BAAQMD-recommended average daily emissions thresholds of 54 pounds per day (lb/day) for ROG, 54 lb/day for NO_X, 82 lb/day for PM_{10} (exhaust), and 54 lb/day for $PM_{2.5}$ (exhaust) (BAAQMD 2017c). Furthermore, a project's impact to air quality would be considered significant if BAAQMD's best management practices for fugitive dust emissions were not incorporated.

The CAP is a policy-level document that does not include any site-specific designs or proposals or grant any entitlements for development; however, construction and operation of GHG reduction and adaptation measures that would be implemented with the CAP have the potential to directly or indirectly emit air pollutants. Emissions of ROG, NO_X, and small quantities of PM_{10} and $PM_{2.5}$ would result from the operation of

construction equipment, construction worker vehicle trips, and truck hauling trips. Emissions of fugitive dust are largely associated with ground-disturbing activities, such as site preparation. During the operational phase, some CAP measures may require additional staffing, resulting in increased vehicle trips and associated air pollutant emissions. Additionally, some CAP measures would result in a slight increase in electricity consumption, leading to increased indirect air pollutant emissions from electricity generation at offsite locations.

Infrastructure Efficiency and Replacement Measures

GHG reduction measures that could result in new infrastructure on- or off-site to process landfill gas for use as energy (BE-7) would result in air pollutant emissions from construction equipment and vehicle trips. Construction activities may involve site preparation, trenching for utilities and pipeline connections, and installation of new tanks and equipment. If additional staff are required to operate new infrastructure, long-term emissions may result from increased vehicle trips. However, the increase in alternative fuel use would result in a decrease in the burning of fossil fuels and an overall reduction in County-wide air pollutant emissions.

GHG reduction measures that would encourage the conversion of diesel or gas-powered agricultural equipment to electricity or alternative fuels and require new or replacement water heating systems to be electrically powered or alternatively fueled (AG-1, AG-2, BE-4, TR-16) would result in minor air pollutant emissions from equipment and vehicle trips during construction and installation. These types of small conversion and replacement activities would not require the use of heavy construction equipment and would rely on small hand-held equipment, if any at all. Any emissions associated with these improvements would be minimal and temporary and would not contribute to air quality violations. Furthermore, the conversion from gas or diesel to electric or alternative fuels could result in a long-term improvement in air quality due to the reduction fossil fuel combustion.

Transportation, Water, Sewer and Stormwater, and Grid Utility Infrastructure Measures

GHG reduction measures that would result in the construction of new facilities and infrastructure such as visitor-friendly infrastructure; park and ride facilities; EV charging stations; and pedestrian, trail, and bicycle improvements (TR-8, TR-10, TR-12, TR-14, TR-15) would result in air pollutant emissions from construction equipment and vehicle trips. Construction activities may include grading, clearing, and paving, but would not include construction of new buildings or structures. Operational emissions associated with these improvements would be minimal and generated by occasional use of maintenance equipment. Furthermore, these measures are intended to reduce vehicle use, reduce VMT, and increase alternative fuel use, resulting in an overall reduction in County-wide air pollutant emissions.

Adaptation measures that would result in the construction and operation of water, sewage, solid waste management, and stormwater facilities (Water-2, Water-5, Flood-7,) would result in air pollutant emissions from construction equipment and vehicle trips. Specific projects related to infrastructure upgrades that would result in increased resiliency for utility systems are not evaluated it is too speculative to determine what facilities would be required at this time. It is assumed that some level of construction activities would be included in potential projects. Typical construction activities would require the use of trucks, and grading. All construction activities would be temporary effects of the construction process.

Vegetation Management Measures

GHG reduction measures that would result in the chipping, mastication, and hauling of biomass as opposed to open burning (AG-5, LU-3) would result in a minor increase in air pollutant emissions from fuel combustion in mechanical equipment such as chippers, masticators, and loaders; as well as vehicle trips for worker commute and transport of materials. However, these air pollutant emissions would be offset by the air pollutant emissions avoided from the reduction of open burning of biomass.

GHG reduction and adaptation measures that would result in tree planting and restoration (LU-1, Temp-6, Flood-3, Flood-4) would result in minor air pollutant emissions from equipment and vehicle trips. These activities would not require heavy equipment but could result in a small amount of air emissions due to

distribution of trees and watering at the beginning of the establishment period. Any emissions associated with these improvements would be minimal and temporary and would not contribute to air quality violations.

Adaptation measures intended to improve resiliency to wildfire hazards (Fire-5) would include activities such as thinning, chipping, or prescribed burns would be implemented to avoid uncontrolled wildfires. Air pollutant emissions would result from mechanical equipment such as chippers, masticators, and loaders; as well as vehicle trips for worker commute and transport of materials. Air pollutants would also be emitted during prescribed burns. As discussed in Section 3.3.2, "Regulatory Setting," prescribed burns would be subject to BAAQMD's rules and regulations and would be required to prepare a SMP to reduce air quality impacts. Furthermore, these air pollutant emissions would be offset by avoiding air pollutant emissions from uncontrolled wildfire.

Renewable Energy and Efficiency Upgrades Measures

GHG reduction and adaptation measures that would result in retrofits to existing buildings and the construction of small-scale private renewable energy systems such as photovoltaic, wind turbines, solar water heating systems, geothermal ground source heat pump, and battery storage (BE-5, BE-8, BE-9, BE-10, BE-11,) would not involve large amounts of labor, construction equipment, or long-term maintenance activities. Also, the measures that replace or retrofit natural gas heating systems would reduce air pollutants from natural gas combustion, such as CO, that would have otherwise occurred. Thus, these measures would not be expected to result in air pollutant emissions in exceedance of BAAQMD's thresholds.

Waste Diversion and Compost Measures

GHG reduction measures that would result in the expansion of existing composting programs and new or expanded waste processing and diversion facilities (SW-1, SW-2) would result in air pollutant emissions from construction equipment, vehicle trips, anaerobic decomposition, and stationary sources. Construction activities would primarily consist of site preparation, grading, and the construction of small structures. Anaerobic decomposition of waste would result in operational emissions of ROG that would be analyzed during discretionary review of individual projects, and is regulated by BAAQMD Rule 34, Solid Waste Disposal Sites, which limits the emission of non-methane organic compounds and methane from the waste decomposition process at solid waste disposal sites. Generators used for aeration and powering water pumps would also generate air emissions, but these emissions are typically minimal. Operation of new or expanded composting programs and waste diversion facilities would result in increased haul truck trips to and from the facility; however, it is anticipated that these trips would displace the haul truck trips that would be diverted from the landfill. Therefore, a net increase in the number of haul truck trips and associated air pollutant emissions within the County is not anticipated.

Impact Summary

GHG reduction and adaptation measures that would result in the conversion of gas or diesel-powered equipment to electric or alternatively fueled equipment; reduction of VMT and fuel consumption; building retrofits; installation of a landfill gas capture system; transportation improvements; water, sewer, and stormwater infrastructure; vegetation management; small-scale renewables; and expansion of existing composting programs and new or expanded waste processing and diversion facilities would result in minor air pollutant emissions during construction. These projects would be required to undergo the County's discretionary review and project-specific CEQA evaluation, but it is unlikely that these types of activities would be of the size or intensity to exceed BAAQMD's thresholds. Also, these measures would generally have a co-benefit of reducing air pollutants through the reduction of fuel use and VMT.

GHG reduction and adaptation measures that would result in the expansion of existing composting programs and new or expanded waste processing and diversion facilities would generate operational emissions of air pollutants, but would comply with BAAQMD permit requirements, such as BAAQMD Rule 34, Solid Waste Disposal Sites, which limits the emission of non-methane organic compounds and methane from the waste decomposition process at solid waste disposal sites. The development standards in Napa County's Ordinance (§ 18.117.070 [L]), also require the implementation of fugitive dust management practices to control dust associated with installation and long-term operation activities. Therefore, these GHG reduction

and adaptation measures would not result in the violation of any air quality standard, contribute substantially to an existing or projected air quality violation, or result in a cumulative air quality impact. Therefore, this impact would be **less than significant**.

Mitigation Measures

No mitigation required.

Impact 3.3-3: Result in a Cumulatively Considerable Net Increase of Any Criteria Pollutant for Which the Project Region Is In Non- Attainment Under an Applicable Federal or State Ambient Air Quality Standard

GHG reduction and adaptation measures that may result in new or updated utility service infrastructure, active transportation projects, and small-scale renewable energy systems could result in minor air pollutant emissions during construction activities which would likely be mitigated at the time of permitting. However, implementation would not involve large amounts of labor, construction equipment, or long-term maintenance activities and would not result in a cumulatively considerable contribution to criteria pollutants. Also, a co-benefit of many of the GHG reduction and adaptation measures is improved air quality through reduction of criteria air pollutant emissions through long-term reduction in fuel use and VMT. Therefore, this impact would be **less than significant**.

Napa County is designated as a nonattainment for ozone and $PM_{2.5}$ with respect to the CAAQS and NAAQS and nonattainment for PM_{10} with respect to the CAAQS (See Table 3.3-3, above). Impacts would be cumulative in nature if the project, in combination with cumulative development, leads to violation of any air quality standard or contributes substantially to an existing or projected air quality violation. In developing thresholds of significance for air pollutants, BAAQMD considered the emission levels for which a project's individual emissions would be cumulatively considerable. Thus, the CAP would result in a significant cumulative impact if it would cause construction-generated or operational criteria air pollutant or precursor emissions to exceed the if BAAQMD's thresholds. These impacts are discussed in Impact 3.3-2, above and are summarized below.

Infrastructure Efficiency and Replacement Measures

As discussed in Impact 3.3-2, construction emissions associated with these measures would be temporary, minimal, and would not result in a cumulatively considerable impact. GHG reduction measures that could result in new infrastructure on- or off-site to process landfill gas for use as energy (BE-7) may require a small increase in staffing, resulting in some operational air pollutant emissions from vehicle trips. However, the increase in alternative fuel use would result in a decrease in the burning of fossil fuels and an overall reduction in County-wide air pollutant emissions.

Transportation, Water, Sewer and Stormwater Infrastructure Measures

As discussed in Impact 3.3-2, construction emissions associated with these measures would be temporary, minimal, and would not result in a cumulatively considerable impact. Furthermore, these measures are intended to reduce vehicle use, reduce VMT, and increase alternative fuel use, resulting in an overall reduction in County-wide air pollutant emissions. Adaptation measures that would result in the construction and operation of water, sewage, solid waste management, and stormwater facilities (Water-2, Water-5, Flood-7,) may require a small increase in staffing, resulting in some operational air pollutant emissions from vehicle trips. However, emissions would be minimal and would not result in a cumulatively considerable impact.

Vegetation Management Measures

As discussed in Impact 3.3-2, GHG reduction measures that would result in the chipping, mastication, and hauling of biomass as opposed to open burning (AG-5, LU-3) would result in minor increase in air pollutant emissions from fuel combustion in vehicle and equipment use. However, the emissions from the vehicles and equipment would be offset by the air pollutant emissions avoided from the reduction in open burning of

biomass; thus, impacts would not be cumulatively considerable. Emissions associated with GHG reduction and adaptation measures that would result in tree planting and restoration (LU-1, Temp-6, Flood-3, Flood-4) would be temporary, minimal, and would not result in a cumulatively considerable impact.

Adaptation measure Fire-5 would result in air pollutant emissions from mechanical equipment, worker trips, and prescribed burning. As discussed by the EPA in AP 42: Compilation of Air Emissions Factors, emissions from both wildfire and prescribed fire are driven by the kinds of vegetation consumed, the moisture content of the vegetation, meteorological conditions, and weight of consumable fuel per acre (EPA 1995). The primary difference between wildfire and prescribed fire is that prescribed fire is a planned event and wildfire is an unplanned event. Because a prescribed fire activity is a planned event, emissions can be reduced by burning only when specific fuel conditions and meteorological conditions are present, thereby controlling the quantity and location of smoke, and the time spent in each combustion phase. The National Wildlife Coordinating Group's (NWCG) 2001 Smoke Management Guide for Prescribed and Wildland Fire states that, "emission reduction techniques may reduce emissions from a given prescribed burn area by as much as about 60 percent to as little as virtually zero" (NWCG 2001). As discussed in Section 3.3.2, "Regulatory Setting," prescribed burns would be subject to BAAQMD's rules and regulations and would be required to prepare a SMP to reduce air quality impacts. Furthermore, these air pollutant emissions would be offset by the avoided air pollutant emissions from uncontrolled wildfire.

Renewable Energy and Efficiency Upgrades Measures

As discussed in Impact 3.3-2, construction emissions associated with GHG reduction and adaptation measures that would result in retrofits to existing buildings and the construction of small-scale private renewable energy systems (BE-5, BE-8, BE-9, BE-10, and BE-11) would be temporary, minimal, and would not result in a cumulatively considerable impact. Also, the measures that replace or retrofit natural gas heating systems would reduce air pollutants from natural gas combustion, such as CO, that would have otherwise occurred.

Waste Diversion and Compost Measures

As discussed in Impact 3.3-2, construction emissions associated with these measures would be temporary, minimal, and would not result in a cumulatively considerable impact. During operation, anaerobic decomposition of waste would result in emissions of ROG that would be analyzed during discretionary review of individual projects, and is regulated by BAAQMD Rule 34, Solid Waste Disposal Sites. Generators used for aeration and powering water pumps would also generate air emissions, but these emissions are typically minimal. A net increase in the number of haul truck trips and associated air pollutant emissions within the County is not anticipated.

Impact Summary

As discussed in Impact 3.3-2, implementation of most GHG reduction and adaptation measures would not result in the violation of any air quality standard and thus, would not result in a cumulative air quality impact. Therefore, this impact would be **less than significant**.

Mitigation Measures

No mitigation required.

Impact 3.3-4: Expose Sensitive Receptors to Substantial Pollutant Concentrations

Although there would be a temporary increase in vehicle trips related to construction worker commute and equipment delivery, the CAP would not result in substantial long- or short-term vehicle trip generation at levels that could cause unhealthy concentrations of CO on nearby roadways. Therefore, the project would not result in substantial local CO concentrations that could exceed ambient air quality standards.

GHG reduction and adaptation measures could result in minor increases in TAC emissions associated with the use of construction equipment for new infrastructure, new waste and composting facilities, renewable energy facilities, and vegetation clearing. However, construction activity would be minor and, in some cases, would not include heavy-duty diesel equipment, would be short-term, and would occur at various locations throughout the county, therefore, not exposing any single receptor to substantial TAC emissions.

Regarding operational activities, expansion of existing composting programs and new or expanded waste processing and diversion facilities could result in TAC emissions from new haul truck routes or additional haul truck traffic in some areas. However, increases in haul trips would not result in more than four trips on any one road per day, which would not be considered a substantial increase in TAC emissions. Thus, the project would not expose sensitive receptors to substantial increases in TAC emissions from construction or operation, and this impact would be **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; however, construction and operation of GHG reduction and adaptation measures that would be implemented with CAP adoption have the potential to directly or indirectly emit CO and TACs that could affect sensitive receptors.

The single largest source of CO is motor vehicle engines. CO concentration near roadways is a direct function of vehicle idling time and, thus, traffic flow conditions. The CAP does not include new or modified land use designations that would increase traffic or have the potential to result in substantial CO concentrations. Implementation of TR-4 could result in some increased delays in traffic due to increases of at-grade railway activity. However, according to guidance from BAAQMD, intersections with less than 44,000 vehicles per hour (vph) are considered to have a less-than-significant impact to localized CO concentrations. According to 2016 Caltrans traffic counts, major roadway intersections in Napa County, such as between State Routes 221 and 12, do not exceed 15,000 vph even during peak hours (Caltrans 2016). The goal of the CAP is to reduce GHG emissions in the County; and, in multiple cases, the CAP would also have the co-benefit of reducing emissions of air pollutants. Although there would be a temporary increase in vehicle trips related to construction worker commute and equipment delivery, the proposed CAP would reduce VMT associated with gasoline and diesel-powered vehicles. Thus, the CAP would not result in substantial increases in long-term vehicle trip generation at levels that could cause unhealthy concentrations of CO on local roadways; and the project would not result in substantial local CO concentrations.

The CAP could result in the construction and operation of stationary source and non-stationary source projects. For stationary source projects, TACs could result from process or off-gassing emissions that occur onsite and which vary depending on the type of activity occurring. For projects that do not propose stationary sources, diesel PM is the primary TAC of concern. CAP measures would result in short-term diesel exhaust emissions from construction equipment and heavy-duty trips during construction. DPM dissipates rapidly from the source, and exposure concentrations would decline with distance from construction activities (Zhu et al. 2002). The dose to which receptors are exposed is the primary factor used to determine health risk (i.e., potential exposure to TAC emission levels that exceed applicable standards). Dose is a function of the concentration of a substance or substances in the environment and the duration of exposure to the substance. Dose is positively correlated with time, meaning that a longer exposure period would result in a higher exposure level for the maximally exposed individual. According to OEHHA, health risk assessments, which determine the exposure of sensitive receptors to TAC emissions, should be based on a 70- or 30-year exposure period. However, such assessments should be limited to the period/duration of activities that generate TAC emissions (OEHHA 2015).

Infrastructure Efficiency and Replacement Measures

One GHG reduction measure, BE-7, could result in new infrastructure on- or off-site to process landfill gas for use as energy which would result in diesel PM emissions from construction equipment and heavy-duty truck trips. Per the County code of ordinances Section 8.58.150 – Disposal and composting sites – Setbacks, a setback distance of 1,000 feet is required between the operating perimeter of the landfill or composting facility and any legal dwelling unit. Furthermore, it is unlikely that construction would last for longer than a year, which is a short exposure period relative to the 30- or 70-year exposure timeframe recommended for

health risk assessments. Given the appropriate setback distances and relatively short exposure period, new landfill gas systems would not expose sensitive receptors to substantial pollutant concentrations.

GHG reduction measures that would encourage the conversion of diesel or gas-powered agricultural equipment to electricity or alternative fuels and require new or replacement water heating systems to be electrically powered or alternatively fueled (AG-1, AG-2, BE-4, TR-16) are unlikely to result in diesel PM emissions. These types of small conversion and replacement activities would not require the use of heavy construction equipment and would rely on small hand-held equipment, if any at all. Any diesel PM emissions associated with these improvements would be minimal and temporary and would not expose sensitive receptors to substantial pollutant concentrations. Also, these GHG reduction measures would have the co-benefit of reducing air pollutants through the reduction in fossil fuel combustion, including the combustion of diesel fuel that would lead to diesel PM.

Transportation, Water, Sewer and Stormwater Infrastructure Measures

GHG reduction and adaptation measures that would result in the construction of new facilities and infrastructure such as visitor-friendly infrastructure; park and ride facilities; EV charging stations; pedestrian, trail, and bicycle improvements; and water, sewage, solid waste management, and stormwater facilities (TR-8, TR-10, TR-12, TR-14, TR-15, Water-2, Water-5, Flood-7) would result in temporary diesel PM emissions from construction equipment and heavy-duty truck trips. Although locations for such improvements have not been identified, because of the nature of these improvements, they would most likely occur near industrial and commercial centers throughout the unincorporated areas of the County. Therefore, sensitive receptors including residences, schools, and childcare facilities could be located near the project locations and would be exposed to diesel PM emissions. Any diesel PM emissions associated with these improvements would be minimal and temporary and would not expose sensitive receptors to substantial pollutant concentrations. Also, these GHG reduction measures would have the co-benefit of reducing long-term diesel PM emissions through the reduction in fuel use and reduced VMT.

Vegetation Management Measures

GHG reduction measures that would result in the chipping, mastication, and hauling of biomass (AG-5, LU-3) would result in diesel PM emissions from mechanical equipment and heavy-duty truck trips. These types of activities are generally conducted in rural areas of the county, where there are fewer sensitive receptors. Truck trips would be dispersed across the County. Diesel PM emissions associated with these improvements would be highly dispersive, temporary, and minimal due to the relatively small fleet of construction equipment. Thus, these measures would not expose sensitive receptors to substantial pollutant concentrations.

GHG reduction and adaptation measures that would result in tree planting and restoration (LU-1, Temp-6, Flood-3, Flood-4) would not require heavy equipment but could result in a small amount of diesel PM emissions from truck trips to deliver trees. Any diesel PM emissions associated with these improvements would be minimal, intermittent, and dispersed and would not expose sensitive receptors to substantial pollutant concentrations.

Adaptation measures intended to improve resiliency to wildfire hazards (Fire-5) would include activities such as thinning, chipping, or prescribed burns would be implemented to avoid uncontrolled wildfires. These types of activities are generally conducted in rural areas of the county, where there are fewer sensitive receptors. Diesel PM emissions would result from mechanical equipment such as chippers, masticators, and loaders; as well as heavy-duty truck trips. Truck trips would be dispersed across the County. Diesel PM emissions associated with these improvements would be highly dispersive, temporary, and minimal due to the relatively small fleet of construction equipment. Smoke, which is considered an air pollutant of concern, would also be emitted during prescribed burns. As discussed in Section 3.3.2, “Regulatory Setting,” prescribed burns would be subject to BAAQMD’s rules and regulations and would be required to prepare a SMP to reduce air quality impacts. Furthermore, for the same reasons discussed in Impact 3.3-3, Vegetation Management Measures, these smoke emissions would be offset by the avoided emissions from uncontrolled wildfire.

Renewable Energy and Efficiency Upgrades Measures

GHG reduction measures that would result in retrofits to existing buildings and the construction of small-scale private renewable energy systems such as photovoltaic, wind turbines, solar water heating systems, geothermal ground source heat pump, and battery storage (BE-5, BE-8, BE-9, BE-10, and BE-11) would result in temporary diesel PM emissions from construction equipment. Although locations for such improvements have not been identified, these types of activities would generally occur in residential and commercial areas, which could be near potential sensitive receptors. However, these activities would involve minimal use of heavy-duty diesel equipment and thus, diesel PM emissions would be minimal as well.

As part of the County's discretionary review process all renewable energy projects would be evaluated under CEQA and would be required to implement measures to minimize air quality impacts.

Waste Diversion and Compost Measures

GHG reduction measures that would result in the expansion of existing composting programs and new or expanded waste processing and diversion facilities (SW-1, SW-2) would result in TAC emissions from construction equipment, vehicle trips, anaerobic decomposition, and stationary sources. Construction activities would primarily consist of grading and clearing land and construction of small structures. Stationary source operational TAC emissions are from air toxics (primarily hydrogen sulfide and ammonia) released as fugitives from the grinding system, anaerobic digester, boilers, diesel generators, flares, and organics processing operations and would be subject to BAAQMD Rule 34, Solid Waste Disposal Sites. As discussed above, a setback distance of 1,000 feet is required between the operating perimeter of the landfill or composting facility and any legal dwelling unit. Furthermore, it is unlikely that construction would last for longer than a year, which is a short exposure period relative to the 30- or 70-year exposure timeframe recommended for health risk assessments.

Operation of new or expanded composting programs and waste diversion facilities would result in increased haul truck trips to and from the facility; however, it is anticipated that these trips would displace the haul truck trips that would be diverted from the landfill. Although a net increase in the number of haul truck trips is not anticipated, new haul truck routes or additional haul truck traffic in some areas may subject receptors to new or increased diesel PM emissions. According to Attachment 1 of Appendix B of the CAP, up to 4,400 tons of compost per year would be diverted from landfills by 2050. Assuming a compost load of 10 tons per truck and two trips per trip (one for pick-up and one for drop-off), this would result in the potential rerouting of approximately 880 trucks-trips per year, or less than four truck trips per business day, by 2050. Using CARB's guidance for siting sensitive receptors near TAC sources, a truck distribution center with activity of 100 or more trucks per day would be considered a major source of TACs (CARB 2005). Thus, project-generated increases of four truck trips per day would not be considered a substantial increase in TAC emissions. Further, these truck haul routes and related emissions would likely be distributed across multiple roads throughout the county as pickups could occur throughout the county, reducing the level of TAC emissions at any one receptor along future potential haul routes. Nonetheless, even if the redirection of haul truck trips would occur on a single route, an increase in four truck trips per day would not result in substantial TAC emissions. In addition, TR-5 would reduce diesel PM emissions from solid waste collection vehicles through conversion to CNG; and CARB anticipates a 20 percent reduction in diesel PM emissions per mile from diesel solid waste collection vehicles between 2017 and 2050 (CARB 2018b). Thus, increases in mobile-related TAC emissions would not result in substantial TAC exposure to any single receptor.

Impact Summary

The CAP would not introduce or change land use designations that would increase traffic or have the potential to result in CO hotspots. Although there would be a temporary increase in vehicle trips related to construction worker commute and equipment delivery, the CAP would not result in substantial long- or short-term vehicle trip generation at levels that could cause unhealthy concentrations of CO on nearby roadways. Impacts regarding CO emissions would be less than significant. Also, the CAP would generally reduce emissions from mobile sources, which are the primary source of CO emissions, through reduced VMT and fossil fuel use.

In general, GHG reduction and adaptation measures contained in the CAP would result in minor TAC emissions during construction and result in beneficial long-term air quality impacts. These measures would involve the conversion of gas or diesel-powered equipment to electric or alternatively fueled equipment; building retrofits; installation of a landfill gas capture system; transportation infrastructure improvements; water, sewer, and stormwater infrastructure; vegetation management; small-scale renewables, and redirection of waste hauling. These types of activities would not be of the size or intensity to emit substantial TAC concentrations, would be sited at appropriate distances from sensitive receptors, or would have a relatively short exposure period. Thus, impacts to sensitive receptors would be **less than significant.**

Mitigation Measures

No mitigation required.

Impact 3.3-5: Create Objectionable Odors Affecting a Substantial Number of People

Construction activities associated with implementation of GHG reduction and adaptation measures could result in temporary generation of odorous emissions. Given the temporary and intermittent nature of the impacts, and dissipation of odors with increasing distance from the source, construction odor impacts would be less than significant. GHG reduction measures contained within the CAP would support the expansion of existing composting programs and new or expanded waste processing and diversion facilities, which could generate objectionable odors during operation. Impacts would be minimized through implementation of an OIMP, as required by CalRecycle, as well as all applicable project-specific mitigation measures. Therefore, impacts would be **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. However, implementation of some GHG reduction and adaptation measures would result in temporary and long-term emissions of odors from diesel-powered equipment; asphalt paving; water, sewer, and stormwater infrastructure; and composting and waste diversion facilities.

Infrastructure Efficiency and Replacement Measures

GHG reduction measures that would encourage the conversion of diesel or gas-powered agricultural equipment to electricity or alternative fuels, and require new or replacement water heating systems to be electrically powered or alternatively fueled (AG-1, AG-2, BE-4) would result in minor odorous emissions from diesel-powered equipment and vehicles. These emissions would be temporary, short-term, and intermittent in nature and would cease upon completion of construction. Because odors would be temporary and would disperse rapidly with distance from source, construction-generated odors would not result in the frequent exposure of nearby receptors to objectionable odor emissions. Furthermore, the conversion from gas or diesel to electric or alternative fuels would result in a long-term reduction in odor impacts due to decreases in the burning of fossil fuels.

GHG reduction measures that could result in new infrastructure on- or off-site to process landfill gas for use as energy (BE-7) would result in emissions of odors from construction equipment. The landfill gas to energy system would not increase the capacity of the landfill, and thus would not result in additional odor sources. Thus, these measures would not result in new operational sources of odor. Furthermore, as discussed above, a setback distance of 1,000 feet is required between the operating perimeter of the landfill or composting facility and any legal dwelling unit.

Transportation, Water, Sewer and Stormwater Infrastructure Measures

GHG reduction and adaption measures that would result in the construction of new facilities and infrastructure such as visitor-friendly infrastructure; park and ride facilities; EV charging stations; pedestrian, trail, and bicycle improvements; and water, sewage, solid waste management, and stormwater facilities (TR-8, TR-10, TR-12, TR-14, TR-15, Water-2, Water-5, Flood-7) would result in emissions of odors from construction equipment and heavy-duty truck trips. These emissions would be temporary, short-term, and intermittent in nature and would cease upon completion of construction. Because odors would be temporary and would disperse rapidly with distance from source, construction-generated odors would not result in the

frequent exposure of nearby receptors to objectionable odor emissions. Furthermore, improvements to water, sewage, and solid waste management are intended to support water conservation efforts and to reduce impacts due to flooding and inundation, thus, avoiding future odor impacts due to flooding and inundation.

Vegetation Management Measures

GHG reduction and adaptation measures that would result in the chipping, mastication, and hauling of biomass as opposed to open burning (AG-5, LU-3) would result in minor odorous emissions from mechanical equipment and heavy-duty truck trips. These types of activities are generally conducted in rural areas of the county, where there are fewer sensitive receptors, and are not likely to occur in a single location for a prolonged period. These emissions would be short-term and intermittent in nature and would cease upon completion of construction. Because odors would be minor and would disperse rapidly with distance from source, odors from biomass management would not result in the frequent exposure of nearby receptors to objectionable odor emissions. Additionally, these odorous emissions would be offset by the avoided odors from open burning of biomass.

GHG reduction and adaptation measures that would result in tree planting and restoration (LU-1, Temp-6, Flood-3, Flood-4) would not require heavy equipment but could result in a small amount of diesel PM emissions from truck trips to deliver trees. Any odorous emissions associated with these improvements would be minimal and infrequent and would not result in odors affecting a substantial number of people.

Adaptation measures intended to improve resiliency to wildfire hazards (Fire-5) would include activities such as thinning, chipping, or prescribed burns and would be implemented to avoid uncontrolled wildfires. Odorous emissions would result from mechanical equipment such as chippers, masticators, and loaders; heavy-duty truck trips, and smoke from prescribed burns. These types of activities are generally conducted in rural areas of the county, where there are fewer sensitive receptors. As discussed in Section 3.3.2, "Regulatory Setting," prescribed burns would be subject to BAAQMD's rules and regulations and would be required to prepare a SMP to reduce smoke and air quality impacts. Furthermore, for the same reasons discussed in Impact 3.3-3, Vegetation Management Measures, these emissions would be offset by the avoided smoke from uncontrolled wildfire.

Renewable Energy and Efficiency Upgrades Measures

GHG reduction measures that would result in retrofits to existing buildings and the construction of small-scale private renewable energy systems such as photovoltaic, wind turbines, solar water heating systems, geothermal ground source heat pump, and battery storage (BE-5, BE-8, BE-9, BE-10, and BE-11) would result in odorous emissions from construction equipment. Although locations for such improvements have not been identified, these types of activities would generally occur in residential and commercial areas, which could be near potential sensitive receptors. These emissions would be temporary, short-term, and intermittent in nature and would cease upon completion of construction. Because odors would be temporary and would disperse rapidly with distance from source, construction-generated odors would not result in the frequent exposure of nearby receptors to objectionable odor emissions.

Waste Diversion and Compost Measures

GHG reduction measures that would result in the expansion of existing composting programs and new or expanded waste processing and diversion facilities (SW-1, SW-2) would result in odorous emissions from construction equipment, haul truck trips, and anaerobic decomposition. Construction emissions would be temporary, short-term, and intermittent in nature and would cease upon completion of construction. Because odors would be temporary and would disperse rapidly with distance from source, construction-generated odors would not result in the frequent exposure of nearby receptors to objectionable odor emissions.

During operation, odors would be generated through the anaerobic decomposition of waste and through increased haul truck trips to the facility. As discussed above, a setback distance of 1,000 feet is required between the operating perimeter of the landfill or composting facility and any legal dwelling unit. BAAQMD's recommended odor screening distance for composting facilities is one mile, thus, it is possible that sensitive receptors may be located within one mile from expanded composting facilities. Facilities that are regulated

by CalRecycle (e.g. landfill, composting, etc.) are required to have OIMPs in place and have procedures that establish fence line odor detection thresholds.

Impact Summary

Construction activities associated with implementation of GHG reduction and adaptation measures could result in temporary generation of odorous emissions. The specific locations and emissions of possible future facilities are not known at this time. Therefore, the precise odor impacts cannot be identified at this time. Factors necessary to identify specific impacts include location, operational characteristics, frequency and duration, and the location of sensitive receptors. However, given the temporary and intermittent nature of the impacts, and dissipation of odor, construction odor impacts would be less than significant.

In terms of operational impacts, the CAP would support the expansion of existing composting programs and new or expanded waste processing and diversion facilities, which could generate objectionable odors during operation. All of the project types listed above would require discretionary review by the County and would be required to evaluate project-specific impacts under CEQA at the time of application. Project-specific mitigation would be required to minimize or avoid odor impacts to the extent feasible in compliance with CEQA Guidelines Section 15126.4. Impacts would be minimized through implementation of an OIMP, as required by CalRecycle, as well as all applicable project-specific mitigation measures. Therefore, impacts would be **less than significant**.

Mitigation Measures

No mitigation is required.

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3.4 BIOLOGICAL RESOURCES

This chapter evaluates existing common and sensitive biological resources within the county, including land cover types and special status plant and animal species, and the potential effects that implementation of the project may have on these resources.

The County did not receive any comments regarding biological resources during the Notice of Preparation (NOP) scoping process. A copy of the NOP and comment letters received in response to the NOP are included in Appendix A of this Draft EIR.

3.4.1 Environmental Setting

Napa County is located within the California Floristic Province, which is rich in endemic plant species. Comprising only 0.5 percent of land in California, the county has 1,102 native plant taxa, or 32 percent of the state's native flora (Thorne et al. 2004). This floristic diversity is a function of the county's diverse topographic and geologic landscape, from marsh habitat at sea level to the peak of Mt. St Helena, as well as the county's large variations in climate conditions (Napa County 2007).

LAND COVER TYPES

Major land cover types within the county include grassland, chaparral/scrub, oak woodland, riparian woodland and forest, coniferous forest, aquatic, agricultural cropland, and rock outcrops. Rural Lands are the predominant land use category within the unincorporated areas of Napa County, with 221,476 acres (43.7 percent). Parks and open space lands also comprise a large amount of land within Napa County (27.6 percent), and farming and grazing lands represent 19.3 percent of the county (Napa County 2007). Urban/suburban and rural residential uses are a relatively small percentage of land within the county (2 percent).

Grassland

Grassland is a relatively common land cover type in the county, covering more than 53,700 acres or nearly 11 percent of the county. Grasslands are most common in the southeastern portion of the county; however, large patches of grassland are dispersed throughout the county on flat to gently rolling hills. Three common grassland assemblages exist within the county: 1) annual grassland, 2) native grassland, and 3) serpentine (bunchgrass) grassland. Of these assemblages, both native grassland and serpentine grassland are considered sensitive natural communities. Vernal pools, which provide habitat for a number of special-status species, are found in some grassland areas (Napa County 2007).

Chaparral/Scrub

Chaparral/scrub is the second most common land cover type in the county, covering approximately 107,000 acres or 21 percent. This land cover type is dominated by woody shrubs, with less than 10 percent cover of trees, and generally occurs in settings that are too hot, dry, rocky, and steep to support tree-dominated habitats. They occur especially on south and southwest-facing slopes (Napa County 2007).

Chaparral/scrub occurs on a wide variety of geologic substrate including recent volcanic rocks with shallow soils, serpentinite, slates, and metamorphosed volcanic rock. Chaparral/scrub is particularly abundant in the Knoxville Area, forming approximately half of the land cover in that area, and is found throughout the rest of the county where soil and climate conditions are favorable. There are 12 subcategories of the chaparral/scrub group in the county; the three most common are chamise chaparral, leather oak–white leaf manzanita–chamise (a serpentine chaparral), and scrub interior live oak–scrub oak (*Quercus berberidifolia*) (Napa County 2007).

Oak Woodland

Oak woodland is the most common land cover type in the county, covering more than 167,000 acres or 33 percent of the county. It occurs throughout the county across a broad range of elevations, on gentle to steep slopes. Oak woodlands are most common in the southern interior valleys where it constitutes almost 70 percent of the land cover. There are 13 subcategories (alliances or associations) within the oak woodland group. Six of these are dominated by evergreen oak species, six are dominated by deciduous oak species, and one is a mixture of deciduous and evergreen oaks. The four most common oak woodland types/associations in the county are mixed oak woodlands, (evergreen) coast live oak (*Quercus agrifolia*) woodlands, interior live oak woodlands, and (deciduous) blue oak (*Quercus douglasii*) woodlands (Napa County 2007).

Riparian Woodland and Forest

Riparian woodlands and forests are relatively rare but highly valuable land cover types in the county. They commonly occur as linear and narrow assemblages, on more than 11,000 acres (2 percent) of the county. In general, they occur throughout the county along stream corridors. There are seven types (alliances or associations) of riparian woodland and forest; 1) Coast redwood alliance, 2) Coast redwood–Douglas-fir/California bay NFD (not formally defined) association, 3) Valley oak– (California bay-coast live oak-walnut-Oregon ash) riparian forest NFD association, 4) Valley oak–Fremont cottonwood–(coast live oak) riparian forest NFD association, 5) White alder (*Alnus rhombifolia*) (mixed willow–California bay–big leaf maple) riparian forest association, 6) Brewer willow alliance, and 7) Mixed willow super alliance. Valley oak woodlands are the most common riparian woodland type within the county, followed by Coast redwood-Douglas-fir/California bay forests (Napa County 2007).

Coniferous Forest

Coniferous forests are relatively common in localized areas of the county, occurring on almost 38,000 acres (7.5 percent). There are eleven types of coniferous forest in the county: four are Douglas-fir redwood forest types, five are pine forest types, and two are cypress woodland. Almost all coniferous forest (79 percent) in the county is concentrated in four general areas: Western Mountains, Eastern Mountains, Livermore Ranch, and Angwin (Napa County 2007).

Sargent cypress woodland, McNab cypress woodland, redwood forest, and old-growth Douglas-fir-Ponderosa pine forest are considered sensitive natural communities by California Department of Fish and Wildlife (CDFW). Ponderosa pine forests are considered sensitive natural communities because they are locally rare within the county, covering less than 170 acres or 0.03 percent, and occur at the edge of regional distribution. Foothill pine forests are also relatively rare in the county, covering less than 3,000 acres or 0.5 percent of the County's total area and primarily located in the northern portion of the county (Napa County 2007).

Sargent cypress forest covers approximately 2,000 acres (0.4 percent) of the county and is typically found on sites having rocky and infertile soil compared to surrounding soils. Approximately 2,300 acres (0.5 percent) of McNab cypress forest are found within the county (Napa County 2007).

Aquatic (Including Wetlands, Springs, Pools, Creeks/Streams and Open Water)

Wetlands (including freshwater and salt marsh) occur throughout the county, and are highly diverse in size, type, hydrology, water chemistry, and functions. Both perennial and seasonal wetlands are found within the county. There are freshwater wetlands, which are generally small and distributed throughout the county, and saline wetlands, occurring in the southern county covering an extensive area at the mouth of the Napa River. Vernal pools as well as springs and seeps are unique wetland types that also occur in the county (Napa County 2007).

Wetlands are highly productive habitats for plants and wildlife. Coastal wetlands and riparian wetlands are especially productive for plants, because recurrent flooding in these areas delivers influxes of soil and nutrients. This highly productive land cover type provides shelter and food sources for resident and migratory wildlife. The structural complexity and existence of native vegetation in these areas enhance the productivity of wetlands for wildlife species, by providing diverse sites for foraging and breeding. Four wetland types in

Napa County are considered sensitive natural communities by CDFW: coastal and valley freshwater marsh, coastal brackish marsh, northern coastal salt marsh, and northern vernal pool (Napa County 2007).

The combined acreage of freshwater wetlands in the county is roughly 553 acres. Twenty-nine percent of the freshwater wetlands mapped in the county occur in the Pope Valley area. Freshwater wetlands include bulrush-cattail freshwater marsh, and sedge-rush wet meadow grasses. Vernal pools are a subset of freshwater wetlands (Napa County 2007).

Salt marshes include saltgrass-pickleweed salt marsh and the related habitats of riverine, lacustrine, and tidal mudflats. More than 3,000 acres of salt marsh are mapped in the tidal areas around the mouth of the Napa River, mostly below Cuttings Wharf. In addition, nearly 200 acres of associated mud flats are found adjacent to salt marsh and tidally influenced portions of the Napa River. Overall however, salt marsh and its related habitats represent less than 2 percent of the total land area of the county (Napa County 2007).

Salt marsh in the county is dominated by salt grass (*Distichlis spicata*) and pickleweed. These species are generally mixed in a patchy mosaic. Associate species include alkali heath (*Frankenia salina*), arrow grasses (*Triglochin spp*.), cordgrass (*Spartina spp.*), sea-lavender (*Limonium californicum*), and gumplant (*Grindelia stricta*). Mud flats in the county remain largely unvegetated apart from a variety of algae species, although patches of vegetation are located at the mudflat-marsh fringe, typically including brass buttons (*Cotula coronopifolia*), fleshy jaumea (*Jaumea carnosa*), and Mason's lilaeopsis (*Lilaeopsis masonii*), a special-status species (Napa County 2007).

Open water aquatic habitats occur throughout the county and are highly diverse. Streams vary from narrow mountain streams to broad lowland rivers. The county contains approximately 6,650 miles of stream channels, including ephemeral washes with a bed and bank but no riparian vegetation or feeder streams (Napa County 2007).

Agricultural Cropland

Agricultural cropland, including vineyard, walnut orchard, olive orchard, and hay occupies more than 64,000 acres. Pasture, rangeland, and timberland are not included in this total (Napa County 2007).

Approximately half of the agricultural cropland in the county is located on the Napa Valley floor. The primary types of agricultural cropland in the county are vineyard, walnut and olive orchards, and hay. Vineyards occupy a majority of the county's cropland. The biological value of agricultural croplands depends on several factors, including the level of pesticides and herbicides used; the quantity, type, and timing of fertilizers applied; and whether a perennial cover crop is maintained. These factors affect the diversity of the soil microbial and invertebrate community, and the wildlife community generally. Agricultural cropland may provide valuable linkages between natural habitats for larger species of mammals and for birds and valuable foraging habitat (Napa County 2007).

Rock Outcrop

Rock outcrops provide important habitat features for special-status plant and wildlife species. Rock outcrops cover approximately 1,700 acres or 0.5 percent of the county. More than 50 percent of the county's rock outcrops are located along the mountain ridges of the central portions of the county, generally on the steeper ridgelines of the Sonoma Volcanics. Three types of rock outcrop are recognized in Napa County: volcanic rock outcrops, sandstone rock outcrops, and serpentine barren (Napa County 2007).

SPECIAL-STATUS SPECIES

Special-status species are defined as species that are legally protected or that are otherwise considered sensitive by federal, state, or local resource agencies. Special-status species are species, subspecies, or varieties that fall into one or more of the following categories, regardless of their legal or protection status:

- officially listed by California or the federal government as endangered, threatened, or rare;

- a candidate for state or federal listing as endangered or threatened;
- taxa (i.e., taxonomic category or group) that meet the criteria for listing, even if not currently included on any list, as described in California Code of Regulations (CCR) Section 15380 of the State CEQA Guidelines;
- species identified by CDFW as Species of Special Concern;
- species listed as Fully Protected under the California Fish and Game Code;
- species afforded protection under local planning documents; and
- plants considered by the CDFW to be "rare, threatened, or endangered in California" and assigned a California Rare Plant Rank (CRPR). The CDFW system includes five rarity and endangerment ranks for categorizing plant species of concern, which are summarized as follows:
  - CRPR 1A - Plants presumed to be extinct in California;
  - CRPR 1B - Plants that are rare, threatened, or endangered in California and elsewhere;
  - CRPR 2 - Plants that are rare, threatened, or endangered in California but more common elsewhere;
  - CRPR 3 - Plants about which more information is needed (a review list); and
  - CRPR 4 - Plants of limited distribution (a watch list).

All plants with a CRPR are considered "special plants" by CDFW. The term "special plants" is a broad term used by CDFW to refer to all of the plant taxa inventoried in CDFW's California Natural Diversity Database (CNDDB), regardless of their legal or protection status. Plants ranked as CRPR 1A, 1B, 2A, and 2B may qualify as endangered, rare, or threatened species within the definition of State CEQA Guidelines CCR Section 15380. CDFW recommends, and local governments may require, that CRPR 1A, 1B, 2A, and 2B species be addressed in CEQA documents.

The term "California species of special concern" is applied by CDFW to animals not listed under the federal Endangered Species Act (ESA) or California Endangered Species Act (CESA), but that are declining at a rate that could result in listing, or historically occurred in low numbers and known threats to their persistence currently exist. CDFW's fully protected status was California's first attempt to identify and protect animals that were rare or facing extinction. Most species listed as fully protected were eventually listed as threatened or endangered under CESA; however, some species remain listed as fully protected but do not have simultaneous listing under CESA. Fully protected species may not be taken or possessed at any time and no take permits can be issued for these species except for scientific research purposes or for relocation to protect livestock.

Special-Status Plants

Ninety-three special-status plant species occur, or are thought to occur, in the county. Most rare plant occurrences are concentrated in the central and northwestern portions of the county. Two plant species, Napa bluegrass (*Poa napensis*) and Calistoga popcorn flower (*Plagiobothrys strictus*), are strictly endemic to the county. Both species are associated with hot springs in the Calistoga area and both are known from only two well-documented occurrences. Estimated population size is less than 5,000 individuals. These species are representative of a subgroup of the county's special-status plants, namely, those that are associated with specific habitats that have always been rare (Napa County 2007).

Special-Status Wildlife

Sixty-five special-status wildlife species are known to occur in the county or there is suitable habitat present for the species and the county is within their known or suspected range. Although wildlife species commonly require use of multiple land cover types for different ecological needs and life-stage functions, some wildlife species have a strong association with specific habitats. The coniferous forests in the northwest portion of the county support populations of the threatened Northern spotted owl (*Strix occidentalis caurina*). The

county's baylands, at the mouth of the Napa River, are a component of the largest estuarine system on the west coast of North or South America—the San Francisco Bay-Delta—which supports a wealth of aquatic flora and fauna. The low-lying baylands of the county serve resident and migratory waterfowl and are home to the endangered ridgway's rail (*Rallus obsoletus*). The county's rivers and streams also provide habitat for many species of invertebrates and amphibians, including the threatened California red-legged frog (*Rana draytonii*) and endangered California freshwater shrimp (*Syncaris pacifica*) (Napa County 2007).

SENSITIVE HABITATS

Sensitive habitats include those that are of special concern to resource agencies or are afforded specific consideration through CEQA or other federal or State laws, as discussed previously in the Regulatory Setting section below. Sensitive habitats may be of special concern to regulatory agencies and conservation organizations for a variety of reasons, including their locally or regionally declining status, or because they provide important habitat to common and special-status species.

Sensitive Natural Communities

CDFW identifies sensitive natural communities, which they define as communities that are of limited distribution statewide or within a county or region and often vulnerable to environmental effects of projects. Natural communities are ranked at the state and global level on a scale of 1 (very rare and threatened) to 5 (demonstrably secure) based on their rarity and the level of threats to the community. Natural communities with a state rarity ranking of 1 to 3 are considered sensitive and should be addressed during the CEQA environmental review process. These communities may or may not contain special-status species or their habitat. Sensitive natural communities within the county include the following (Napa County 2007):

- serpentine bunchgrass grassland,
- wildflower field (located within native grassland),
- creeping ryegrass grassland,
- purple needlegrass grassland,
- one-sided bluegrass grassland,
- mixed serpentine chaparral,
- McNab cypress woodland,
- Oregon white oak woodland,
- California bay forests and woodlands,
- Fremont cottonwood riparian forests,
- arroyo willow riparian forests,
- black willow riparian forests,
- Pacific willow riparian forests,
- red willow riparian forests,
- narrowleaf willow riparian forests,
- mixed willow riparian forests,
- Sargent cypress woodland,
- Douglas-fir–ponderosa pine forest (old-growth),
- redwood forest,
- coastal and valley freshwater marsh,
- coastal brackish marsh,
- northern coastal salt marsh, and
- northern vernal pool.

Other natural communities in the county are considered sensitive because their distribution is limited locally. The following six communities each encompass less than 500 acres of cover within the county and are considered by local biological experts to be worthy of conservation. The 500-acre threshold was selected to focus regulatory protection on the rarest communities in the county for special protection (Napa County 2007).

- native grassland (perennial grassland, bunch grasslands),
- tanbark oak alliance,
- Brewer willow alliance,
- Ponderosa pine alliance,
- riverine, lacustrine, and tidal mudflats, and
- wet meadow grasses NFD super alliance.

Waters of the United States and State of California

Jurisdictionally protected wetlands and waters of the United States and of the State of California (waters of the state) have not been delineated for the entire county; however, land cover types within the county that could be considered jurisdictional wetlands and other waters of the United States and state include the aquatic land cover types (wetlands, springs, pools, creeks/streams, salt marsh, and open water) described above. Riparian areas associated with waters of the United States and state may or may not be jurisdictional

under the Clean Water Act (CWA) or Porter-Cologne Act; however, nearly all riparian habitats are subject to regulation under Section 1602 of the California Fish and Game Code.

WILDLIFE MOVEMENT CORRIDORS

The California Essential Habitat Connectivity Project is a peer-reviewed statewide assessment of important habitat linkages (Spencer et al. 2010). The project's goal was to identify large remaining blocks of intact habitat or natural landscape at a coarse spatial scale, and model linkages between them that are important to maintain as corridors for wildlife. This coarse-scale, statewide map was based primarily on the concept of ecological integrity over a very large region, rather than the specific movement and other life history requirements of particular species. The Lake Marie—The Cedars/Adams Ridge Essential Connectivity Area (ECA), which is primarily a north-south movement corridor is within Napa County. In addition, three major, regional north-south wildlife movement routes have been identified by Napa County: the Western Mountains, Napa River, and Blue Ridge-Berryessa Natural Area.

3.4.2 Regulatory Setting

FEDERAL

Federal Endangered Species Act

Pursuant to the federal Endangered Species Act (ESA) (16 U.S.C. Section 1531 *et seq*.), the U.S. Fish and Wildlife Service (USFWS) and the National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NMFS) regulate the taking of species listed in the ESA as threatened or endangered. In general, persons subject to ESA (including private parties) are prohibited from "taking" endangered or threatened fish and wildlife species on private property, and from "taking" endangered or threatened plants in areas under federal jurisdiction or in violation of state law. Under Section 9 of the ESA, the definition of "take" is to "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." USFWS has also interpreted the definition of "harm" to include significant habitat modification that could result in take.

Clean Water Act

Section 404 of the CWA requires project proponents to obtain a permit from the U.S. Army Corps of Engineers (USACE) before performing any activity that involves any discharge of dredged or fill material into waters of the United States, including wetlands. Many surface waters and wetlands in California meet the criteria for waters of the United States. In accordance with Section 401 of the CWA, projects that apply for a USACE permit for discharge of dredged or fill material must obtain water quality certification from the appropriate regional water quality control board (RWQCB) indicating that the action would uphold state water quality standards.

Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act, enacted in 1940 and amended multiple times since, prohibits the taking of bald and golden eagles without a permit from the Secretary of the Interior. Similar to the ESA, the Bald and Golden Eagle Protection Act defines "take" to include "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb" (16 USC 668–668c). For the purpose of the act, disturbance that would injure an eagle, decrease productivity, or cause nest abandonment, including habitat alterations that could have these results, are considered take and can result in civil or criminal penalties.

STATE

California Endangered Species Act

Pursuant to CESA, a permit from CDFW is required for projects that could result in the "take" of a plant or animal species that is listed by the state as threatened or endangered. Under CESA, "take" is defined as an activity that would directly or indirectly kill an individual of a species, but the CESA definition of take does not include "harm" or "harass," like the ESA definition does. As a result, the threshold for take is higher under CESA than under ESA. Authorization for take of state-listed species can be obtained through a California Fish and Game Code Section 2081 incidental take permit.

California Fish and Game Code Sections 3503 and 3503.5

Section 3503 of the Fish and Game Code states that it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird. Section 3503.5 of the California Fish and Game Code states that it is unlawful to take, possess, or destroy any raptors (i.e., species in the orders *Falconiformes* and *Strigiformes*), including their nests or eggs. Typical violations include destruction of active nests as a result of tree removal or disturbance caused by project construction or other activities that cause the adults to abandon the nest, resulting in loss of eggs and/or young.

Fully Protected Species

Sections 3511, 4700, 5050, and 5515 of the California Fish and Game Code describe the take prohibitions for fully protected birds, mammals, reptiles and amphibians, and fish. Species listed under these statutes may not be taken or possessed at any time, and no incidental take permits can be issued for these species except for scientific research purposes or for relocation to protect livestock.

California Fish and Game Code Section 1602—Streambed Alteration

All diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake in California that supports wildlife resources are subject to regulation by CDFW under Section 1602 of the California Fish and Game Code. Under Section 1602, it is unlawful for any person, governmental agency, or public utility to do the following without first notifying CDFW:

- substantially divert or obstruct the natural flow of, or substantially change or use any material from, the bed, channel, or bank of any river, stream, or lake; or

- deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake.

The regulatory definition of a stream is a body of water that flows at least periodically or intermittently through a bed or channel that has banks and supports fish or other aquatic life. CDFW's jurisdiction within altered or artificial waterways is based on the value of those waterways to fish and wildlife. A CDFW streambed alteration agreement must be obtained for any action that would result in an impact on a river, stream, or lake such as the project's three-sided culvert installation.

Porter-Cologne Water Quality Control Act

Under the Porter-Cologne Act, waters of the state fall under the jurisdiction of the appropriate RWQCB. The RWQCB must prepare and periodically update water quality control plans (basin plans). Each basin plan sets forth water quality standards for surface water and groundwater, as well as actions to control point and nonpoint sources of pollution to achieve and maintain these standards. The RWQCB's jurisdiction includes federally protected waters as well as all other areas that meet the definition of "waters of the state." Waters of the state is defined as any surface water or groundwater, including saline waters, within the boundaries of the state. The RWQCB has the discretion to take jurisdiction over areas not federally protected under Section 401 provided they meet the definition of waters of the state. Actions that affect waters of the state, including wetlands, must meet the RWQCB's waste discharge requirements.

Oak Woodlands Conservation Act

The Oak Woodlands Conservation Act (Senate Bill 1334) was signed into California law on September 24, 2004. Section 21083.5 of the California Public Resources Code requires counties to determine if a project within their jurisdiction may result in conversion of oak woodlands that would have a significant adverse effect on the environment. If the County determines that a project would result in a significant adverse effect on oak woodlands, mitigation measures to reduce the significant adverse effect of converting oak woodlands to other land uses are required.

LOCAL

Napa County General Plan

The following policies of the *Napa County General Plan* (Napa County 2008) related to biological resources are applicable to the project.

- **Policy CON-6**: The County shall impose conditions on discretionary projects which limit development in environmentally sensitive areas such as those adjacent to rivers or streamside areas and physically hazardous areas such as floodplains, steep slopes, high fire risk areas and geologically hazardous areas.

- **Policy CON-13:** The County shall require that all discretionary residential, commercial, industrial, recreational, agricultural, and water development projects consider and address impacts to wildlife habitat and avoid impacts to fisheries and habitat supporting special-status species to the extent feasible. Where impacts to wildlife and special-status species cannot be avoided, projects shall include effective mitigation measures and management plans including provisions to:

  a) Maintain the following essentials for fish and wildlife resources:

     1) Adequate amounts of feeding, escape, and nesting habitat.

     2) Proper temperature through maintenance and enhancement of streamside vegetation, volume of flows, and velocity of water.

  c) Employ supplemental planting and maintenance of grasses, shrubs and trees of like quality and quantity to provide adequate vegetation cover to enhance water quality, minimize sedimentation and soil transport, and provide adequate shelter and food for wildlife and special-status species and maintain the watersheds, especially stream side areas, in good condition.

  d) Provide protection for habitat supporting special-status species through buffering or other means.

  e) Provide replacement habitat of like quantity and quality on- or off-site for special-status species to mitigate impacts to special-status species.

  f) Enhance existing habitat values, particularly for special-status species, through restoration and replanting of native plant species as part of discretionary permit review and approval.

  g) Require temporary or permanent buffers of adequate size (based on the requirements of the subject special-status species) to avoid nest abandonment by birds and raptors associated with construction and site development activities.

  h) Demonstrate compliance with applicable provisions and regulations of recovery plans for federally listed species. (Pursuant to Mitigation Measure 4.5.1b of the Napa County General Plan EIR)

- **Policy CON-14:** To offset possible losses of fishery and riparian habitat due to discretionary development projects, developers shall be responsible for mitigation when avoidance of impacts is determined to be infeasible. Such mitigation measures may include providing and permanently maintaining similar quality

and quantity habitat within Napa County, enhancing existing riparian habitat, or paying in-kind funds to an approved fishery and riparian habitat improvement and acquisition fund. Replacement habitat may occur either on-site or at approved off-site locations, but preference shall be given to on-site replacement.

- **Policy CON-16:** The County shall require a biological resources evaluation for discretionary projects in areas identified to contain or potentially contain special-status species based upon data provided in the Baseline Data Report (BDR), CNDDB, or other technical materials. This evaluation shall be conducted prior to the approval of any earthmoving activities. The County shall also encourage the development of programs to protect special-status species and disseminate updated information to state and federal resource agencies.

- **Policy CON-17:** Preserve and protect native grasslands, serpentine grasslands, mixed serpentine chaparral, and other sensitive biotic communities and habitats of limited distribution. The County, in its discretion, shall require mitigation that results in the following standards:

  a) Prevent removal or disturbance of sensitive natural plant communities that contain special-status plant species or provide critical habitat to special-status animal species.

  b) In other areas, avoid disturbances to or removal of sensitive natural plant communities and mitigate potentially significant impacts where avoidance is infeasible.

  c) Promote protection from overgrazing and other destructive activities.

- **Policy CON-18**: To reduce impacts on habitat conservation and connectivity:

  a) In sensitive domestic water supply drainages where new development is required to retain between 40 and 60 percent of the existing (as of June 16, 1993) vegetation onsite, the vegetation selected for retention should be in areas designed to maximize habitat value and connectivity.

  c) Preservation of habitat and connectivity of adequate size, quality, and configuration to support special-status species should be required within the project area. The size of habitat and connectivity to be preserved shall be determined based on the specific needs of the species.

  d) The County shall require discretionary projects to retain movement corridors of adequate size and habitat quality to allow for continued wildlife use based on the needs of the species occupying the habitat. (Pursuant to Mitigation Measures 4.5.1b and 4.5.3a of the Napa County General Plan EIR)

- **Policy CON-24:** Maintain and improve oak woodland habitat to provide for slope stabilization, soil protection, species diversity, and wildlife habitat through appropriate measures including one or more of the following:

  a) Preserve, to the extent feasible, oak trees and other significant vegetation that occur near the heads of drainages or depressions to maintain diversity of vegetation type and wildlife habitat as part of agricultural projects.

  b) Comply with the Oak Woodlands Preservation Act (PRC Section 21083.5) regarding oak woodland preservation to conserve the integrity and diversity of oak woodlands, and retain, to the maximum extent feasible, existing oak woodland and chaparral communities and other significant vegetation as part of residential, commercial, and industrial approvals.

  c) Provide replacement of lost oak woodlands or preservation of like habitat at a 2:1 ratio when retention of existing vegetation is found to be infeasible. Removal of oak species limited in distribution shall be avoided to the maximum extent feasible.

e) Require no net loss of sensitive biotic communities and habitats of limited distribution through avoidance, restoration, or replacement where feasible. Where avoidance, restoration, or replacement is not feasible, preserve like habitat at a 2:1 ratio or greater within Napa County to avoid significant cumulative loss of valuable habitats.

- **Policy CON-26:** Consistent with Napa County's Conservation Regulations, natural vegetation retention areas along perennial and intermittent streams shall vary in width with steepness of the terrain, the nature of the undercover, and type of soil. The design and management of natural vegetation areas shall consider habitat and water quality needs, including the needs of native fish and special-status species and flood protection where appropriate. Site-specific setbacks shall be established in coordination with Regional Water Quality Control Boards, California Department of Fish and Game, U.S. Fish and Wildlife Service, National Oceanic and Atmospheric Administration National Marine Fisheries Service, and other coordinating resource agencies that identify essential stream and stream reaches necessary for the health of populations of native fisheries and other sensitive aquatic organisms within the County's watersheds. Where avoidance of impacts to riparian habitat is infeasible along stream reaches, appropriate measures will be undertaken to ensure that protection, restoration, and enhancement activities will occur within these identified stream reaches that support or could support native fisheries and other sensitive aquatic organisms to ensure a no net loss of aquatic habitat functions and values within the County's watersheds.

- **Policy CON-27**: The County shall enforce compliance and continued implementation of the intermittent and perennial stream setback requirements set forth in existing stream setback regulations, provide education and information regarding the importance of stream setbacks and the active management and enhancement/restoration of native vegetation within setbacks, and develop incentives to encourage greater stream setbacks where appropriate.

  Incentives shall include streamlined permitting for certain vineyard proposals on slopes between 5 and 30 percent and flexibility regarding yard and road setbacks for other proposals.

- **Policy CON-28:** To offset possible additional losses of riparian woodland due to discretionary development projects and conversions, developers shall provide and maintain similar quality and quantity of replacement habitat or in-kind funds to an approved riparian woodland habitat improvement and acquisition fund in Napa County. While on-site replacement is preferred where feasible, replacement habitat may be either on-site or off-site as approved by the County.

- **Policy CON-30:** All public and private projects shall avoid impacts to wetlands to the extent feasible. If avoidance is not feasible, projects shall mitigate impacts to wetlands consistent with state and federal policies providing for no net loss of wetland function.

Conservation Regulations

The County's conservation regulations (Napa County Code of Ordinances, Chapter 18.108, 1997) require development setbacks for earthmoving, grading, agricultural uses, and removal of vegetation. Setbacks vary from 35 feet to 150 feet from streams depending on size and slope as listed in Chapter 18.108.025 of the Napa County Code of Ordinances. The appropriate County decision-making body can grant exceptions to the Conservation Regulations upon determining that the project or improvement has been designed so as to avoid excessive grading; maintain, restore, or otherwise minimize removal of existing vegetation; protect water quality; and minimize disturbance to streams and sensitive habitats.

These regulations also require that existing vegetation be preserved in erosion hazard areas (EHAs) on slopes greater than 5 percent. Erosion control plans must show all trees on the project site with a 6-inch or larger diameter at breast height. Retained trees in EHAs need to be protected by barricades or other methods at their drip line during construction. If vegetation removal is necessary, the County may require planting of replacement vegetation (in kind, quality and quantity) in EHAs. Non-agricultural grading areas are required to be replanted according to a revegetation plan submitted and approved by the County. If

vegetation is required to be preserved but is removed, it is required to be replaced with 15-gallon trees at a ratio of 2:1 or smaller trees at a higher ratio as determined by the County.

3.4.3 Environmental Impacts and Mitigation Measures

ANALYSIS METHODOLOGY

The project impact analysis area includes the unincorporated County and the analysis of biological resources presented in this section is based on an evaluation of the proposed GHG reduction and adaptation measures as described in Table 2.4 of the Project Description. The analysis focuses on the potential for activities that could occur during implementation of the CAP to result in physical effects on the biological resources within the county.

PROPOSED CAP GHG REDUCTION MEASURES

Table 2.4 of the Draft EIR provides a list of proposed GHG reduction measures and adaptation measures that would be implemented by the CAP. However, only those measures that are relevant to biological resources and could potentially result in a significant impact within the county are described and evaluated below. None of the proposed measures indicate where specific improvements would be constructed, their size, or specific characteristics. As a program EIR, the Draft EIR does not, and cannot, speculate on the individual environmental impacts of specific future projects/improvements. However, implementation of all GHG reduction and adaptation measures were considered during preparation of the Draft EIR to the degree specific information about implementation is known. Consistent with the requirements of CEQA Guidelines Section 15168, this Draft EIR provides a program-level discussion of the potential general impacts of implementing these measures rather than project-level or site-specific physical impacts of such actions. Only those measures that have the potential to affect biological resources are listed below. Those measures not listed below but would have a beneficial effect are briefly noted in the following impact discussions. All other measures in Table 2.4 would have no effect on biological resources and are not discussed further.

- **Primary Measure AG-1: Support the conversion of all stationary diesel or gas-powered irrigation pumps to solar, electric, or other alternative fuels.** This measure would result in an incentive program that would aid in the conversion from diesel or gas-powered irrigation pumps to electric- powered pumps. It would result in beneficial physical impacts including improved air quality, and a reduction in GHGs. Nominal physical impacts related to conversion activities and an increase in energy consumption may result from the replacement of pumps. This may result in physical changes to biological resources resulting from ground disturbance related to conversion of irrigation pumps.

- **Primary Measure BE-5: Expand current renewable energy and green energy incentives and update local ordinances**. This measure would result in an expansion of incentives for renewable energy systems that would increase participation by individual property owners. This measure would result in the installation of new private renewable energy systems including new photovoltaic, small-scale wind turbines, solar water heating systems, geothermal ground source heat pump, and battery storage. This may result in physical changes to biological resources resulting from construction, operation, and maintenance of infrastructure.

- **Primary Measure BE-7: Support Waste-to-Energy Programs at unincorporated landfills.** This measure will result in gas that is captured through existing landfill gas capture systems being reused for energy, rather than being flared. This measure could result in new infrastructure on-site or off-site to process landfill gas so that it can be used for energy generation or other end-uses such as CNG for fuel in vehicles. This may result in physical changes to biological resources resulting from construction, operation, and maintenance of infrastructure.

- **Supporting Measure TR-8: Support Napa County's incorporated cities in developing transit-oriented development unique to the needs of the Napa Region.** This would result in collaboration among the County and incorporated cities to create a more robust visitor-friendly environment around the Soscol

Gateway Transit Center (and future transit centers) to encourage additional users. Typical construction activities could result in changes to biological resources.

- **Supporting Measure TR-10: Work with Napa County's incorporated cities, NVTA, and neighboring regions to increase presence of park and ride facilities near residential centers**. This effort would result in new park and ride facilities which would reduce GHG emissions by decreasing the amount of vehicles on the road. This may result in physical changes to biological resources resulting from construction of park and ride facilities.

- **Supporting Measure TR-12: Increase the supply of electric vehicle charging stations**. This measure would result in the installation of new electric vehicle charging stations (EV charging stations) in priority areas including existing commercial areas, major visitor attractions, and multifamily complexes. This would reduce GHG emissions associated with the regional vehicle fleet through greater fuel efficiency and improved air quality. This may result in physical changes to biological resources from construction of charging stations.

- **Supporting Measure TR-14: Develop and implement active transportation projects.** This measure would result in the development and construction of new pedestrian, trail, and bicycle improvements. This could result in construction impacts and is evaluated for consistency with policies related to circulation. This may result in physical changes to biological resources from construction of transportation projects.

- **Supporting Measure TR-15: Require new development projects to evaluate and reduce VMT.** This measure would implement roadway improvements to reduce VMT by calming traffic and improving the bicyclist and pedestrian infrastructure and would occur as part of resurfacing projects within existing paved areas. This may result in limited physical changes to biological resources from construction of roadway improvements; however, most development associated with this measure is expected to be in previously paved areas.

- **Primary Measure SW-1: Encourage expansion of composting program for both residential and commercial land uses**. This measure would result in the expansion of composting programs that would reduce GHG emissions by decreasing methane in landfills. This may result in physical changes to biological resources from construction of expanded composting facilities.

- **Primary Measure SW-2: Primary Measure SW-2: Meet an 80 percent Waste Diversion Goal by 2020 and a 90 percent Waste Diversion Goal by 2030**. This measure could result in new/expanded waste processing and diversion facilities throughout the unincorporated County. This could result in physical impacts to biological resources related to the construction and expansion of waste diversion facilities.

- **Adaptation Measure Fire-5: Collaborate on programs to reduce fire hazards.** This measure would result in increased collaboration to improve resiliency related to wildfire hazards. This could include thinning, removing, or chipping vegetation which would result in ground disturbance. This could include short-term physical impacts related to tree and vegetation removal.

- **Adaptation Measure Water-2: Consider innovative options to meet future demand**. This measure would result in the development and implementation of water supply resiliency strategies such as graywater systems, recycled water, and other water conservation strategies. The impacts related to this measure are speculative but could include physical impacts to biological resources related to the construction of new or updated infrastructure.

- **Adaptation Measure Water-5: Collaborate with agencies to identify future water supplies and explore alternative supply sources**. This measure would result in increased collaboration to identify future water supply options, including expanded use of on-site graywater, recycled water, or other water conservation options. The impacts related to this measure are speculative but could include physical impacts to biological resources related to the construction of new or updated infrastructure.

- **Adaptation Measure Flood-3: Identify potential streamside restoration areas.** This measure would result in the identification and restoration of stream banks within the unincorporated County to buffer buildings, roads, and crops from increased flooding potential. The impacts related to this measure are speculative. This measure could include short-term physical impacts related to restoration activities, but would result in long-term beneficial effects on biological resources.

- **Adaptation Measure Flood-4: Encourage replanting bare or disturbed areas.** This measure would result in the identification and restoration of areas that are subject to erosion within the unincorporated County to improve water quality and reduce stream sedimentation. The impacts related to this measure are speculative. This measure could include short-term physical impacts related to restoration activities, but would result in long-term beneficial effects on biological resources.

- **Adaptation Measure Flood-7: Improve capacity of storm water infrastructure.** This measure would result in improved storm water infrastructure and improved resilience for high intensity rain events. The impacts related to this measure are speculative but could include physical impacts to biological resources related to construction of new or updated infrastructure.

THRESHOLDS OF SIGNIFICANCE

Based on Appendix G of the State CEQA Guidelines and Appendix C of Napa County's Local Procedures for Implementing CEQA, an impact to biological resources is considered significant if implementation of the proposed project would:

- have a substantial adverse effect, either directly or through habitat modification, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW or USFWS;

- have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by CDFW or USFWS;

- have a substantial adverse effect on federally protected waters of the United States, including wetlands, as defined by Section 404 of the Clean Water Act through direct removal, filling, hydrological interruption, or other means;

- interfere substantially with the movement of any native resident or migratory 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; or

- conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan.

ISSUES NOT DISCUSSED FURTHER

As described in Chapter 2, Project Description, implementation of the CAP and the targets and strategies identified therein necessitate changes to Policy CON-65 e) of the County's General Plan (2008 GP). The proposed changes would require that all discretionary development projects demonstrate consistency with the CAP by substantiating compliance through the CAP Consistency Checklist. As described in Section 2.4.2, Project Description, proposed changes to the adopted policy of the General Plan requires the County to implement a General Plan Amendment (GPA) as part of the administrative approval process.

The CAP EIR evaluates the GPA as part of the series of actions associated with implementation of the CAP. The changes reflected in the GPA support and are consistent with implementation of the CAP, its GHG targets, and GHG reduction measures. No additional activities or measures, other than those described in

the CAP, would occur as a result of implementation of the GPA. Therefore, the GPA is not evaluated separately from the actions proposed by the CAP, but rather its implementation is within the scope of the overall impact analysis of the CAP. As described in Section 2.4.3, Project Description, to provide a mechanism by which projects can demonstrate consistency with the CAP, a CAP Consistency Checklist is included as Appendix D of the CAP. The CAP Consistency Checklist is a tool by which the County will track and determine a project's consistency with the CAP and how it delivers its appropriate GHG reductions. No physical projects or improvements other than those described in the CAP are included or would be approved with approval of the checklist. As such, like the GPA, the CAP Consistency Checklist is not evaluated separately from the actions proposed by the CAP.

In summary, the physical changes and associated environmental impacts of all GHG reduction and adaptation measures have been evaluated throughout the CAP EIR. The GPA and CAP Consistency Checklist which are included as part of the project, are not addressed as a separate impact discussion below. These administrative mechanisms on their own would not result in any physical impacts that would require separate evaluation below and are not discussed further.

Napa County is not located within the plan area of an adopted habitat conservation or natural community conservation plan, or other approved local, regional, or state conservation plan. Nor are any habitat conservation plans, natural community conservation plans, or similar plans being considered by the County. Therefore, the project would not conflict with a habitat conservation or natural community conservation plan, and this issue is not discussed further.

IMPACT ANALYSIS

Impact 3.4-1: Effects On Special-Status Species or Their Habitat

Implementation of GHG reduction and adaptation measures could result in new or updated utility service infrastructure, active transportation projects, and small-scale renewable energy systems that could have direct and indirect effects on special-status species and their habitat. Construction of new or expanded facilities as a result of measure implementation could result in short-term and long-term impacts to special-status species and their habitat if they are present in areas affected by the new or expanded facilities. Compliance with existing federal, State, and local regulations that protect sensitive resources, and completion of subsequent project-level planning and environmental review would reduce potential impacts to special-status species and their habitat. Therefore, this impact would be **less-than-significant**.

Ninety-three special-status plant species and 65 special-status wildlife species are known to or have the potential to occur within Napa County. The CAP is a policy-level document that does not include any site-specific designs or proposals or grant any entitlements for development; however, implementation of GHG reduction and adaptation measures that would be implemented with CAP adoption have the potential to directly or indirectly affect special-status species and their habitats as a result of construction of new facilities or expansion of existing facilities.

Most GHG reduction measures would result in improved air quality, which would be beneficial to special-status specific and their environment. Some of the co-benefits of the proposed GHG reduction measures (building efficiency, agricultural, off-road, land use, water, wastewater, solid waste, high GWP, and multi-sector measures) include the preservation and protection of natural ecosystems and habitat. Specific GHG reduction measures that would result in beneficial impacts related to special-status species and their habitats include LU-1 and LU-2, which would implement programs for preservation and restoration of oak woodlands, coniferous forest, and riparian lands, and Measure AG-4 which would reduce application of inorganic nitrogen fertilizer reducing fertilizer runoff to wetland habitats. Special- status species and all wildlife would benefit from improved air quality promoted by AG-5, which promotes a reduction in burning of removed agricultural biomass and flood debris. These measures are not discussed further below but are notable for the benefits they would provide. The detailed description of the referenced measures can be found in Table 2-4, Project Description.

Infrastructure Efficiency and Replacement Measures

GHG reduction measure AG-1 would provide an incentive for conversion of diesel or gas-powered irrigation pumps to electric-powered pumps. Although the disturbance associated with this measure is expected to be minimal, ground disturbance associated with replacement of irrigation pumps has the potential result in impacts to special-status species and their habitats. In addition, GHG reduction measure BE-7 may result in new infrastructure on-site or off-site to process landfill gas so that it can be used for energy generation. Ground disturbance associated with new infrastructure has the potential to result in impacts to special-status species and their habitats.

Transportation, Water, Sewer and Stormwater, and Grid Utility Infrastructure Measures

GHG reduction and adaptation measures that would require construction of new active transportation infrastructure such as visitor-friendly infrastructure, park and ride facilities, EV charging stations, pedestrian, trail, and bicycle improvements (TR-8, TR-10, TR-12, TR-14, TR-15) water, and stormwater facilities (Water-2, Water-5, Flood-7,) could result in impacts to special-status species and their habitats, if they are present in areas affected by construction of new or updated facilities. Most infrastructure projects would involve some level of construction and physical disturbance that would result in excavation and use of heavy equipment for earthmoving. Because of the nature of such improvements (i.e., limited size, along existing roadways, not accompanied by tall or expansive buildings) it is likely that most infrastructure improvements would occur within existing developed residential and commercial centers throughout the County and would not result in substantial impacts to special-status species and their habitats. However, the locations and extent of impacts is not known, and potential impacts to special-status species and their habitat that could occur as a result of construction including vegetation removal, habitat degradation, permanent conversion of habitat, direct mortality, and noise disturbance. These impacts could potentially affect the abundance, distribution, and viability of local and regional populations of the affected species or habitats depending on the location and extent of impacts.

Vegetation Management Measures

GHG adaptation measures that would involve vegetation management such as thinning, removing, or chipping vegetation (Fire-5) and restoration of floodplains (Flood-3, Flood-4) could both result in impacts to special-status species and their habitat. These measures would result in short-term construction-related effects such as vegetation removal, habitat degradation, permanent conversion of habitat, direct mortality, and noise disturbance. However, these measures would likely have long-term beneficial effects on special-status species and their habitat related to improved forest health, less frequent and less intense wildfires, creation of new and enhancement of existing floodplain and riparian habitat, and improved water quality.

Small-Scale Renewable Energy and Efficiency Upgrades Measures

GHG reduction measure BE-5 would result in the construction of new renewable energy infrastructure or retrofits could result in impacts to special-status species and their habitat. Measure BE-5 may result in construction of small-scale renewable systems and building retrofits, including photovoltaic, small-scale wind turbines, solar water heating systems, geothermal ground source heat pump, and battery storage. Ground disturbance and construction activities associated with the installation of this infrastructure could result impacts. Additionally, operation of small-scale wind turbines could result in impacts to special-status avian and bat species.

Waste Diversion and Compost Measure

GHG reduction measures that would require expansion of compost facilities and increase waste diversion (SW-1, SW-2) could result in impacts to special-status species and their habitat if they are present in unincorporated areas of the County where new/expanded waste processing and diversion facilities are constructed. It is unlikely that expansion of existing compost or waste diversion facilities would affect special-status species and their habitat because they would be developed on highly disturbed areas; Construction of new facilities in areas of the County that are not previously developed has the potential to result in similar impacts to special-status species and their habitat as those discussed above related to ground disturbance.

Impact Summary

The project types listed above would be discretionary projects within the County's purview that would be required to be evaluated for project-specific impacts under CEQA at the time of application.

Small-scale renewable energy systems and other energy efficiency retrofits typically would occur in areas of existing development. Implementation of new mechanical equipment or new renewable energy equipment would be regulated by existing County codes and policies that regulate the protection of special-status species and their habitat. Retrofits and renewable energy systems installed on existing buildings would not require ground disturbing activities that could disturb habitat; however, some small-scale energy systems would require ground disturbance. Small-scale renewable energy systems are regulated by the County's Zoning Code Sections 15.14 and 18.117 which allow small wind turbines and solar systems that meet the criteria of the code by right. Systems that don't comply with the criteria established in the Code are regulated by the County's Zoning Code Section 18.124.

Rooftop solar systems are regulated by the County's Zoning Code Section 15.14, which allows for the placement of small-scale renewable energy systems that meet the criteria of the code by obtaining a building permit. Rooftop systems would not result in a significant biological resources impacts. Ground mounted systems are not covered by this code section and would require a Use Permit, which is a discretionary review process and requires a CEQA evaluation. Discretionary review provides an opportunity to condition the project for impacts related to biological resources.

Small-scale wind turbines are regulated by the County's Zoning Code Section 18.117 which allows the installation of one small wind turbine outside of urbanized areas, on properties of at least two-acres, and providing that the locations of the systems do not interfere with special-status species or habitat. Height is limited to 50-feet on parcels greater than two acres and less than five acres, and 80-feet on parcels greater than 50-feet. Guy wires are to be avoided as feasible. Permitted turbines under the ordinance must submit a biological resources technical study and implement measures to avoid sensitive species and habitat, and implement resources avoidance measures resulting from a birds and bats study. In cases where small wind turbine projects cannot meet the criteria of Chapter 18.117, then a Use Permit must be obtained which is a discretionary process, and includes a comprehensive CEQA review, and would provide an opportunity to condition the project for impacts related to biological resources.

Future projects resulting from implementation of the CAP would generally require discretionary review and would be required to evaluate project-specific impacts under CEQA at the time of application. Project-specific mitigation would be required to minimize or avoid impacts to special-status species and their habitat to the extent feasible in compliance with CEQA Guidelines Section 15126.4. Impacts would be minimized through implementation of 2008 General Plan policies described above, which limit development in sensitive habitats, require implementation of resource protection measures, and require wetland avoidance, among other protections. In addition, federal and State requirements would be adhered to, and project-specific measures implemented to conserve, protect, and preserve special-status species and their habitat. Therefore, this impact would be **less-than-significant**.

Mitigation Measures

No mitigation is required.

Impact 3.4-2: Effects On Sensitive Natural Communities, Riparian Habitat, and Federally Protected Waters of the United States, Including Wetlands

Implementation of GHG reduction and adaptation measures implemented with CAP adoption could result in new or updated utility service infrastructure, active transportation projects, and small-scale renewable energy systems and could have the potential to directly or indirectly affect sensitive habitats (e.g., sensitive natural communities, riparian habitat, and waters of the United States, including wetlands) as a result of construction of new facilities or expansion of existing facilities. Future projects would be required to evaluate project-specific impacts under CEQA at the time of application and project-specific mitigation would be required to minimize or eliminate impacts to sensitive habitats. In addition, compliance with local general plan policies and existing regulations, would protect sensitive habitats from direct and indirect impacts. Therefore, this impact would be **less-than significant**.

There are a number of sensitive habitats throughout the County, including sensitive natural communities identified by the County and CDFW, riparian habitats, and waters of the United States (U.S.). Implementation of GHG reduction and adaptation measures that would be implemented with CAP adoption have the potential to directly or indirectly affect sensitive habitats as a result of construction of new facilities or expansion of existing facilities.

Most GHG reduction measure would result in improved air quality, which would be beneficial to sensitive natural communities. Some of the co-benefits of the proposed GHG reduction measures (building efficiency, agricultural, off-road, land use, water, wastewater, solid waste, high GWP, and multi-sector measures) include the preservation and protection of natural ecosystems and habitat. Specific GHG reduction measures that would result in beneficial impacts related to preservation of wildlife habitats include LU-1 and LU-2, that would serve to protect and preserve habitat through programs for preservation and restoration of oak woodlands, coniferous forest, and riparian lands; Measure AG-4 would support reduced application of inorganic nitrogen fertilizer, which would reduce fertilizer runoff to wetlands. These measures are not discussed further below but are notable for the benefits they would provide. The detailed description of the referenced measures can be found in Table 2-4, Project Description.

Infrastructure Efficiency and Replacement Measures

GHG reduction measure AG-1 would provide an incentive for conversion of diesel or gas-powered irrigation pumps to electric-powered pumps. Although the disturbance associated with this measure is expected to be minimal, ground disturbance associated with replacement of irrigation pumps has the potential result in impacts to sensitive habitats. In addition, GHG reduction measure BE-7 may result in new infrastructure on-site or off-site to process landfill gas so that it can be used for energy generation. Ground disturbance associated with new infrastructure has the potential to result in impacts sensitive habitats.

Transportation, Water, Sewer and Stormwater and Grid Utility Infrastructure Measures

GHG reduction and adaptation measures that would require construction of new or retrofitted facilities such as visitor-friendly infrastructure, park and ride facilities, EV charging stations, pedestrian, trail, and bicycle improvements (TR-8, TR-10, TR-12, TR-14, TR-15) water, and stormwater facilities (Water-2, Water-5, Flood-7,) could result in short-term and long-term impacts to sensitive habitats, if they are present in areas affected by construction of new or expanded facilities. Most infrastructure projects would involve some level of construction and physical disturbance of the land that would result in excavation and use of heavy equipment for earthmoving. Although the locations and extent of impacts is not known, potential impacts to sensitive habitats, including sensitive natural communities, wetlands, and riparian habitat that could occur as a result of construction include vegetation and tree removal, habitat degradation, permanent conversion of habitat, and fill of wetlands or other waters of the Unites States or state. These impacts could substantially affect the amount and quality of the affected habitats.

Vegetation Management Measures

GHG adaptation measures that would involve vegetation management such as thinning, removing, or chipping vegetation (Fire-5) and restoration of floodplains (Flood-3, Flood-4) could both result in impacts to sensitive

habitats. These measures would result in short-term construction-related effects such as vegetation removal, habitat degradation, and permanent conversion of habitat. However, these measures would likely have long-term beneficial effects on sensitive habitats related to improved forest health, less frequent and less intense wildfires, and creation of new and enhancement of existing floodplain and riparian habitat.

Small-Scale Renewable Energy and Efficiency Upgrades Measures

GHG reduction measure BE-5 would result in the construction of new renewable energy infrastructure or retrofits could result in impacts to sensitive habitats. GHG reduction measure BE-5 may result in construction of small-scale renewable systems and building retrofits, including photovoltaic, small-scale wind turbines, solar water heating systems, geothermal ground source heat pump, and battery storage. Ground disturbance and construction activities associated with the installation of this infrastructure could result impacts.

Waste Diversion and Compost Measures

GHG reduction measures that would require expansion of compost facilities and increase waste diversion (SW-1, SW-2) could result in impacts to sensitive habitats if they are present in unincorporated areas of the County where new/expanded waste processing and diversion facilities are constructed. It is unlikely that expansion of existing compost or waste diversion facilities would affect sensitive habitats because they would be developed or highly disturbed areas; however, construction of new facilities in areas of the county that are not previously developed has the potential to result in similar impacts to sensitive habitats as those discussed above related to ground disturbance.

Impact Summary

In general, the project types listed above would be discretionary projects within the County's purview that would be required to be evaluated for project-specific impacts under CEQA at the time of application.

As described in Section 3.4-1 above, small-scale renewable energy systems, including solar and wind turbines, would be required to either comply with the criteria designated by the County's Zoning Code Sections 15.14 or 18.117, or would be required to obtain a Use Permit and undergo a CEQA review. Both permitting mechanisms would minimize impacts to sensitive habitats and wetlands.

All other projects that could result from the GHG reduction and adaptation measures described above, would be discretionary and would be required to evaluate project-specific impacts under CEQA at the time of application. Projects would be required to implement project-specific mitigation to minimize or avoid impacts to special-status species and their habitat to the extent feasible in compliance with CEQA Guidelines Section 15126.4. Impacts would be minimized through implementation of 2008 General Plan policies described above, which limit development in sensitive habitats, require implementation of resource protection measures, and require wetland avoidance, among other protections. In addition, federal and State requirements would be adhered to, and project-specific measures implemented to conserve, protect, and preserve sensitive habitats and wetland areas. Therefore, this impact would be **less-than-significant**.

Mitigation Measures

No mitigation is required.

Impact 3.4-3: Interfere With the Movement of Native Resident or Migratory Wildlife or Impede the Use of Native Wildlife Nursery Sites

Several major regional wildlife movement corridors have been identified within the county. In addition, sensitive habitats throughout the county provide wildlife nursery sites and/or nesting, denning, or roosting habitat. Implementation of GHG reduction and adaptation measures have the potential to affect wildlife movement and nursery sites. Compliance with existing federal, State, and local regulations would reduce potential impacts to nursery sites and movement corridors. Therefore, this impact would be **less-than-significant**.

The California Essential Habitat Connectivity Project identifies The Lake Marie—The Cedars/Adams Ridge ECA, which is primarily a north-south wildlife movement corridor in the county. The County has also identified three major, regional north-south wildlife movement routes within its jurisdiction: the Western Mountains, Napa River, and Blue Ridge-Berryessa Natural Area. There are also habitats throughout the county that provide wildlife nursery sites and/or nesting, denning, or roosting habitat. Implementation of GHG reduction and adaptation measures that would be implemented with CAP adoption have the potential to directly or indirectly to interfere with the movement of native resident or migratory wildlife or effect nursery sites or breeding activities as a result of construction of new facilities or expansion of existing facilities.

Most GHG reduction measure would result in improved air quality, which would be beneficial to wildlife. Some of the co-benefits of the proposed GHG reduction measures (building efficiency, agricultural, off-road, land use, water, wastewater, solid waste, high GWP, and multi-sector measures) include the preservation and protection of natural ecosystems and habitat including preservation of migratory corridors. Specific GHG reduction measures that would result in beneficial impacts related to wildlife and their habitats include LU-1 and LU-2, that would serve to protect and preserve habitat through programs for preservation and restoration of oak woodlands, coniferous forest, and riparian lands; These measures are not discussed further below but are notable for the benefits they would provide. The detailed description of the referenced measures can be found in Table 2-4, Project Description.

Infrastructure Efficiency and Replacement Measures

GHG reduction measure BE-7 may result in new infrastructure on-site or off-site to process landfill gas so that it can be used for energy generation. This GHG reduction measure could result in short-term and long-term impacts to nursery sites or wildlife movement if infrastructure is constructed in areas with these habitat attributes. Although the locations and extent of impacts is not known, potential impacts to nursery sites and movement of wildlife that could occur as a result of construction includes vegetation and tree removal, habitat degradation, permanent conversion of habitat, noise, or construction of barriers that prohibit movement or migration or loss of visual continuity within a linkage or corridor. These impacts could result in interference with migration, nest abandonment, mortality of young, or loss of use of a nursery site.

Transportation, Water, Sewer and Stormwater and Grid Utility Infrastructure Measures

GHG reduction and adaptation measures that would require construction of new or retrofitted facilities such as visitor-friendly infrastructure, park and ride facilities, EV charging stations, pedestrian, trail, and bicycle improvements (TR-8, TR-10, TR-12, TR-14, TR-15) water, and stormwater facilities (Water-2, Water-5, Flood-7,) could result in impacts to nursery sites and movement corridors, if they are present in areas affected by construction of new or expanded facilities. Most infrastructure projects would involve some level of construction and physical disturbance of the land that would result in excavation and use of heavy equipment for earthmoving. Although the locations and extent of impacts is not known, potential impacts to nursery sites and movement corridors that could occur as a result of construction are the same as those described above.

Vegetation Management Measures

GHG adaptation measures that would involve vegetation management such as thinning, removing, or chipping vegetation (Fire-5) and restoration of floodplains (Flood-3, Flood-4) could both result in impacts to nursery sites and movement corridors. These measures would result in short-term construction-related effects similar to those described above. However, these measures would likely have long-term beneficial effects on nursery sites and movement corridors related to improved forest health, less frequent and less intense wildfires, creation of new and enhancement of existing floodplain and riparian habitat, and improved water quality.

Small-Scale Renewable Energy and Efficiency Upgrades Measures

GHG reduction measure BE-5 would result in the construction of new renewable energy infrastructure or retrofits could result in impacts to nursery sites and movement corridors. GHG reduction measure BE-5 may result in construction of small-scale renewable systems and building retrofits, including photovoltaic, small-scale wind turbines, solar water heating systems, geothermal ground source heat pump, and battery

storage. Ground disturbance and construction activities associated with the installation of this infrastructure could result in impacts to nursery sites and movement corridors.

Waste Diversion and Compost Measure

GHG reduction measures that would require expansion of compost facilities and increase waste diversion (SW-1, SW-2) could result in impacts to nursery sites and movement corridors if they are present in unincorporated areas of the County where new/expanded waste processing and diversion facilities are constructed. It is unlikely that expansion of existing compost or waste diversion facilities would affect nursery sites and movement corridors because they would be developed or highly disturbed areas; however, construction of new facilities in areas of the County that are not previously developed has the potential to result in similar impacts to nursery sites and movement corridors as those discussed above related to ground disturbance.

Impact Summary

In general, the project types listed above would be discretionary projects within the County's purview that would be required to be evaluated for project-specific impacts under CEQA at the time of application.

As described in Section 3.4-1 above, small-scale renewable energy systems, including solar and wind turbines, would be required to either comply with the criteria designated by Zoning Code Sections 15.14 or 18.117, or would be required to obtain a Use Permit and undergo a CEQA review. Both permitting mechanisms would minimize impacts to nursery sites and movement corridor.

All other projects that could result from the GHG reduction and adaptation measures described above, would be discretionary and would be required to evaluate project-specific impacts under CEQA at the time of application. Projects would be required to implement project-specific mitigation to minimize or avoid impacts to nursery sites and movement corridors to the extent feasible in compliance with CEQA Guidelines Section 15126.4. Impacts would be minimized through implementation of 2008 General Plan policies described above, which limit development in sensitive habitats, require implementation of resource protection measures, and require wetland avoidance, among other protections. In addition, federal and State requirements would be adhered to, and project-specific measures implemented to conserve, protect, and preserve nursery sites and movement corridors.

Therefore, this impact would be **less-than-significant**.

Mitigation Measures

No mitigation is required.

Impact 3.4-4: Conflict with Any Local Policies or Ordinances Protecting Biological Resources

All GHG reduction and adaptation measures that would require construction or expansion of new facilities or infrastructure could potentially conflict with local policies and ordinances established to protect biological resources. Future development projects would be required to follow County development requirements, including compliance with local policies, ordinances, and applicable permitting procedures related to protection of biological resources. This impact would be **less than significant**.

All GHG reduction and adaptation measures that would require construction or expansion of facilities or infrastructure could potentially conflict with local policies and ordinances established to protect biological resources. As described in Section 3.4.3, "Regulatory Framework," several federal, State, and local regulations and policies are in place to protect biological resources in the county. All future development projects would be required to follow County development requirements, including compliance with local policies, ordinances, and applicable permitting procedures related to protection of biological resources. Additionally, project-level planning, environmental analysis, and compliance with existing local regulations and policies would identify potentially significant conflicts with local policies; minimize or avoid those impacts through the design, siting, and permitting process; and provide mitigation for any significant effects

as a condition of project approval and permitting. Further, as described in Section 3.10, Land Use, implementation of the CAP would result in less-than-significant impacts related to the potential conflict with a plan, policy or regulation adopted for the purpose of avoiding or mitigating an environmental impact. Therefore, implementation of the CAP would not result in any project or cumulative impacts related conflicts with local policies or ordinances protecting biological resources. This would be a **less-than-significant** impact.

Mitigation Measures

No mitigation is required.

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3.5 CULTURAL, HISTORICAL, PALEONTOLOGICAL AND TRIBAL CULTURAL RESOURCES

This chapter evaluates existing conditions for cultural, historical, paleontological, and tribal cultural resources within the County, and the potential effects that implementation of the project may have on these resources.

The County received one comment regarding AB 52 requirements related to cultural, historical, paleontological or tribal cultural resources during the Notice of Preparation (NOP) scoping process. A copy of the NOP and comment letters received in response to the NOP are included in Appendix A of this Draft EIR.

3.5.1 Environmental Setting

Historical resources include standing buildings (e.g., houses, barns, outbuildings, cabins), intact structures (e.g., dams, bridges, wells), or other remains of human's alteration of the environment (foundation pads, remnants of rock walls).

Cultural resources include districts, sites, buildings, structures, or objects generally older than 50 years and considered to be important to a culture, subculture, or community for scientific, traditional, religious, or other reasons. They include pre-historic resources, historic-era resources, and "tribal cultural resources" (the latter as defined by Assembly Bill (AB) 52, Statutes of 2014, in Public Resources Code [PRC] Section 21074). Archaeological resources are locations where human activity has measurably altered the earth or left deposits of prehistoric or historic-era physical remains (e.g., stone tools, bottles, former roads, house foundations). Paleontological resources include fossil remains, as well as fossil localities and formations, which have produced fossil material in other nearby areas.

Tribal cultural resources (TCRs) were added as a resource subject to review under CEQA, effective January 1, 2015 under AB 52. This is a new category of resources under CEQA and includes site features, places, cultural landscapes, and sacred places or objects, which are of cultural value to a tribe.

ETHNOGRAPHIC SETTING

Napa County is located within a region of northern California that was historically occupied by the Patwin. Patwin territory encompassed a roughly 90-mile (north-south) by 40-mile (east-west) area between the Sacramento River on the east and the Coast Range foothills on the west, which extended from Suisun Bay north past the Sutter Buttes, excluding the banks of the Sacramento River until north of its fork with the Feather River lands. Research indicates the Patwin reached the Carquinez/Suisun area by about 1,500 years ago and occupied the southern end of Napa County. Neighboring groups included the Nisenan and Plains Miwok to the east, Bay Miwok and Costonoan south across Suisun Bay, Coast Miwok, Wappo, Lake Miwok, and Pomo to the west, and Nomlaki and Konkow to the north (Napa County 2016).

Patwin villages were generally established in the river valleys, with the highest populations occupying the Bear, Capay, Cortina, Long, and Napa Valley (Napa County 2016). In the Napa Valley, Southern Patwin villages included Napato, which is within today's City of Napa. Earth-covered, semi-subterranean structures and dwellings in the villages included a ceremonial dance house, a sweat lodge, and family dwellings. A cemetery was typically located at one end of the village (Napa County 2016).

Patwin used a wide variety of tools, implements, and enclosures. Hunting and fishing tools included bows and arrows, spears, harpoons, nets, traps, blinds, and weirs, as well as pole-propelled rafts to traverse the rivers and bays. Tool used to collect plant resources included sharpened digging sticks and woven burden

baskets, seed beaters, carrying nets, and rope. Bedrock mortars, portable mortars (predominantly basket hopper mortars) and pestles, stone and shell knives, and bone tools were among the implements used for processing food. Baskets produced by the Patwin were twined (Napa County 2016).

The Patwin had extensive contact with Franciscan missionaries beginning in the late 1700s. Patwin neophytes were brought to the three missions around San Francisco Bay (San Francisco, San José, and Sonoma). Their population declined drastically from missionization, introduced diseases, military conflicts, Mexican and American settlement starting in the 1830s and 1840s, and displacement. Today, people of Wintun descent live on the Colusa, Cortina, Grindstone, Redding, and Rumsey rancherias in Colusa, Glenn, Shasta and Yolo counties, as well as the Round Valley Reservation in Mendocino County (Napa County 2016).

HISTORIC SETTING

The first recorded European explorers in the upper Napa Valley, Don Francisco Castro and Franciscan Friar Jose Altimira, traveled through the area in 1823 in search of a site for a new mission. They explored present-day Petaluma, Sonoma, and Napa before eventually settling on Sonoma as the new mission site. The Mexican period (ca. 1821-1848) in California is an outgrowth of the Mexican Revolution, and its accompanying social and political views affected the mission system. In 1833 the missions were secularized, and their lands divided among the Californios as land grants called Ranchos (Napa County 2017).

George C. Yount was the first non-Native to settle in Napa County in 1836. He came to California in 1831 to hunt and trap sea otters, and eventually settled in San Rafael. Subsequently, he received the Rancho Caymus land grant in the Napa Valley from the Mexican government, which included more than 11,000 acres. The earliest viticulture efforts in the Napa Valley is attributed to Yount, who planted grapevines obtained from Mexico. Yount planted mission grapes, barley and wheat, and raised cattle and horses. Yount also laid out a town grid on his property in 1855. He called the town Sebastopol, which was renamed Yountville after his death (Napa County 2017).

American settlement of Napa Valley was slow to progress, but the discovery of gold at Sutter's Mill in Coloma in 1848, brought miners and entrepreneurs to California from all over the world, and Napa Valley prospered as a result. The Gold Rush facilitated the growth of Napa City, which attracted miners seeking alternative occupations. In 1848, Nathan Coombs laid out Napa City on property he acquired and when California was granted statehood in 1850, Napa became one of the original 27 counties of California with Napa City (later shortened to Napa) as the county seat (Napa County 2017).

In 1864, the county gained funding for a steam railroad line from Soscol north 4.5 miles to Napa City. Named the Napa Valley Railroad, the new line was completed in July 1865. The Napa Valley Railroad was extended north to Calistoga Avenue in 1868 and was extended south to Napa Junction—a tiny town near present-day American Canyon—the following year, where it met up with other local rail lines. With the completion of the first transcontinental railroad in 1869, there was fierce competition over transportation and shipping nationwide, and the line provided an important link between Napa City and the rest of the country (Napa County 2017). The arrival of interurban electric railroads in the first two decades of the 20th century linked Napa County to Vallejo, San Francisco, and the rest of the Bay Area, boosting its economy and encouraging residential growth through World War I. When the United States entered World War II in 1941, the entire Bay Area quickly became an arsenal for the production of wartime supplies as well as the departure point for the Pacific Theater. Nearly half a million people from all over the country flocked to the Bay Area for employment, and local communities experienced housing shortages and major demographic shifts. Napa's main contribution to the war effort came in supplying housing for defense workers, rather than in the actual production of goods. In 1930, Napa had a population of only 6,437; by 1950, that figure had jumped to over 13,000. Because of the large influx of people, infrastructure improvements and rapid suburban development occurred in Napa during the war and continued well into the postwar era (Napa County 2017).

Napa Valley's world-renowned viticulture industry began with the Spanish padres, who established the final and northernmost Spanish mission (San Francisco Solano de Sonoma) in 1823 at what is now the town of

Sonoma. The industry became well established when Charles Krug started making large quantities of wine in the late 1850s and early 1860s. The Charles Krug facility remains the valley's oldest operating winery. Also located in St. Helena, the Christian Brothers vintners built one of the world's largest stone wineries in 1889. By the end of the nineteenth century, there were more than 140 wineries in the valley. Prohibition and the Great Depression greatly curbed economic development in Napa County, and stifled the wine industry which did not recover until the 1950s. The recovery of the regional wine industry has been dramatic, with wine production and tourism steadily increasing in the Napa Valley and surrounding region. Today, Napa Valley is known for its vineyards and premier wines (Napa County 2017).

RECORDS, SEARCHES, SURVEYS, AND CONSULTATION

Archaeological, Historical, and Paleontological Resources

The prehistoric and historic Native American occupation of Napa County is generally related to the Houx and Augustine Patterns (periods of expansion of tribal lands approximately 2,500 years ago). Historic sites are primarily associated with the early Euroamerican settlement of Napa County and the development of cities and towns across the county. Historic sites include agricultural complexes, ranch complexes, and vineyard/winery complexes that consist of a variety of buildings/structures and features such as rural residences, wine processing and storage facilities, barns, corrals, and rock walls. The County's General Plan EIR (2007) indicates that approximately 1,138 previously recorded archaeological sites and 1,635 architectural features have been identified in the county. Other historic architectural features (e.g., buildings and structures) are also present across the County and include 82 buildings or structures that are listed in the National Register of Historic Places (NRHP) and the California Register of Historical Resources (CRHR). In addition, there are 238 buildings or structures that are determined eligible for inclusion in the NRHP and/or the CRHR and it appears that additional historic architectural features would be eligible for inclusion in the NRHP and/or the CRHR if they were subjected to research to formally determine their historic significance (Napa County 2008: 4.12-8).

Eight locations where paleontological resources have been found are located in in Napa County, and include 52 specimens, which are primarily plants (Napa County 2008: 4.12-11).

Tribal Cultural Resources

As required by SB 18 and AB 52, the County has consulted with all Native American tribes with an affiliation to Napa County to aid in the protection of traditional tribal cultural places and sacred lands as part of the Draft EIR process. AB 52 letters were sent to the Middletown Rancheria, Mishewal Wappo Tribe of Alexander Valley, and Yocha Dehe Wintun Nation on July 24, 2018 for a 30- day response period (ending on August 24, 2018). The County received responses from the Middletown Rancheria and Yocha Dehe Wintun Nation. SB 18 letters were sent to the Middletown Rancheria, Mishewal Wappo Tribe of Alexander Valley, Yocha Dehe Wintun Nation, Cortina Indian Rancheria of Wintun Indians, and Federated Indians of Graton Rancheria on September 11, 2018.

3.5.2 Regulatory Setting

FEDERAL

National Historic Preservation Act

Among those statutes enacted by Congress that affect historic properties, the National Historic Preservation Act of 1966 (NHPA) is the most significant law that addresses historic preservation. One of the most important provisions of the NHPA is the establishment of the National Register of Historic Places (NRHP), the official designation of historical resources. Districts, sites, buildings, structures, and objects are eligible for listing in the NRHP. Nominations are listed if they are significant in American history, architecture, archeology, engineering, and culture. The NRHP is administered by the National Park Service. To be eligible,

a property must be significant under criterion A (history), B (persons), or C (design/construction); possess integrity; and ordinarily be 50 years of age or more.

Listing in the NRHP does not entail specific protection or assistance for a property but it does guarantee recognition in planning for federal or federally-assisted projects, eligibility for federal tax benefits, and qualification for federal historic preservation assistance. Additionally, project effects on properties listed in the NRHP must be evaluated under CEQA.

Once a heritage resource has been recorded and if it is determined to be significant, the potential impacts (or effects) of a project on a heritage property are assessed. Federal regulatory impact thresholds are contained in Section 106 of the NHPA and accompanying regulations (36 Code of Federal Regulations [CFR] Part 800). Section 106 requires that federal agencies consider the effects of their actions on significant archaeological properties before implementing a project or "undertaking." The criteria of effect are found in 36 CFR 800.0(a) and state that:

> An undertaking has an effect on a historic property when the undertaking may alter characteristics of the property that may qualify the property for inclusion in the National Register.

The Advisory Council's regulations require that the federal agency apply the criteria of adverse effect to historic properties that would be affected by a proposed undertaking (36 CFR 800.9b). An undertaking is considered to have an adverse effect when the effect on a historic property may diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association, or the quality of data suitable for scientific analysis.

STATE

California Register of Historical Resources

All properties listed in or formally determined eligible for listing in the NRHP are eligible for the California Register of Historical Resources (CRHR). The CRHR is a listing of State of California resources that are significant within the context of California's history. The CRHR is a statewide program of similar scope and with similar criteria for inclusion as those used for the NRHP. In addition, properties designated under municipal or county ordinances are also eligible for listing in the CRHR.

A historic resource must be significant at the local, state, or national level under one or more of the criteria defined in the California Code of Regulations (CCR) Title 15, Chapter 11.5, Section 4850. The CRHR criteria are similar to the NRHP criteria and are tied to CEQA because any resource that meets the criteria below is considered a historical resource under CEQA. As noted above, all resources listed in or formally determined eligible for the NRHP are automatically listed in the CRHR.

The CRHR uses four evaluation criteria:

1. Is associated with events or patterns of events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States.

2. Is associated with the lives of persons important to local, California, or national history.

3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master, or possesses high artistic values.

4. Has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California or the nation.

Similar to the NRHP, a resource must meet one of the above criteria and retain integrity. The CRHR uses the same seven aspects of integrity as the NRHP.

California Environmental Quality Act

CEQA requires public agencies to consider the effects of their actions on both "historical resources," "unique archaeological resources," and "tribal cultural resources." Pursuant to PRC Section 21084.1, a "project that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment" and PRC Section 21084.2, a "project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment."

Historical Resources

"Historical resource" is a term with a defined statutory meaning (PRC, Section 21084.1; determining significant impacts to historical and archaeological resources is described in the State CEQA Guidelines, Sections 15064.5[a] and [b]). Under State CEQA Guidelines Section 15064.5(a), historical resources include the following:

1) A resource listed in or determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources (PRC Section 5024.1).

2) A resource included in a local register of historical resources, as defined in Section 5020.1(k) of the PRC or identified as significant in a historical resource survey meeting the requirements of Section 5024.1(g) of the PRC, will be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.

3) Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be a historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource will be considered by the lead agency to be historically significant if the resource meets the criteria for listing in the California Register of Historical Resources (PRC, Section 5024.1), including the following:

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

    b) Is associated with the lives of persons important in our past;

    c) 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; or

    d) Has yielded, or may be likely to yield, information important in prehistory or history.

4) The fact that a resource is not listed in or determined to be eligible for listing in the CRHR, not included in a local register of historical resources (pursuant to PRC, Section 5020.1(k)), or identified in a historical resources survey (meeting the criteria in PRC, Section 5024.1(g)) does not preclude a lead agency from determining that the resource may be an historical resource as defined in PRC, Section 5020.1(j) or 5024.1.

Tribal Cultural Resources

CEQA also requires lead agencies to consider whether projects will affect tribal cultural resources. PRC Section 21074 states the following:

a) "Tribal cultural resources" are either of the following:

    1) Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:

A) Included or determined to be eligible for inclusion in the California Register of Historical Resources.

B) Included in a local register of historical resources as defined in subdivision (k) of Section 5020.1.

2) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Section 5024.1. In applying the criteria set forth in subdivision (c) of Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.

b) A cultural landscape that meets the criteria of subdivision (a) is a tribal cultural resource to the extent that the landscape is geographically defined in terms of the size and scope of the landscape.

c) A historical resource described in Section 21084.1, a unique archaeological resource as defined in subdivision (g) of Section 21083.2, or a "nonunique archaeological resource" as defined in subdivision (h) of Section 21083.2 may also be a tribal cultural resource if it conforms with the criteria of subdivision (a).

California Native American Historical, Cultural, and Sacred Sites Act

The California Native American Historical, Cultural, and Sacred Sites Act applies to both state and private lands. The Act requires that upon discovery of human remains, construction or excavation activity cease and the County coroner be notified. If the remains are of a Native American, the coroner must notify the Native American Heritage Commission (NAHC), which notifies and has the authority to designate the most likely descendant (MLD) of the deceased. The Act stipulates the procedures the descendants may follow for treating or disposing of the remains and associated grave goods.

Health and Safety Code, Sections 7052 and 7050.5

Section 7052 of the Health and Safety Code states that the disturbance of Native American cemeteries is a felony. Section 7050.5 requires that construction or excavation be stopped in the vicinity of discovered human remains until the coroner can determine whether the remains are those of a Native American. If determined to be Native American, the coroner must contact the NAHC.

Public Resources Code, Section 5097

PRC Section 5097 specifies the procedures to be followed in the event of the unexpected discovery of human remains on nonfederal land. The disposition of Native American burial falls within the jurisdiction of the NAHC. Section 5097.5 of the Code states the following:

> No person shall knowingly and willfully excavate upon, or remove, destroy, injure, or deface any historic or prehistoric ruins, burial grounds, archaeological or vertebrate paleontological site, including fossilized footprints, inscriptions made by human agency, or any other archaeological, paleontological or historical feature, situated on public lands, except with the express permission of the public agency having jurisdiction over such lands. Violation of this section is a misdemeanor.

LOCAL

Napa County General Plan

The following policies of the *Napa County General Plan* (Napa County 2008) are applicable to the project.

- **Policy CC-17:** Significant cultural resources are sites that are listed in or eligible for listing in either the National Register of Historic Places or the California Register of Historic Resources due to their potential to yield new information regarding prehistoric or historic people and events or due to their intrinsic or traditional cultural value.
- **Policy CC-18:** Significant historical resources are buildings, structures, districts, and cultural landscapes that are designated Napa County Landmarks or listed in or eligible for listing in either the National

Register of Historic Places or the California Register of Historic Resources. Owner consent is a prerequisite for designation as a County Landmark.

- **Policy CC-19:** The County supports the identification and preservation of resources from the County's historic and prehistoric periods.

- **Policy CC-21**: Rock walls constructed prior to 1920 are important reminders of the County's agricultural past. Those walls which follow property lines or designated scenic roadways shall be retained to the extent feasible and modified only to permit required repair and allow for openings necessary to provide for access.

- **Policy CC-22**: The County supports efforts to recognize and perpetuate historic vineyard uses and should consider ways to provide formal recognition of "heritage" landscapes, trees, and other landscape features with owner consent.

- **Policy CC-23:** The County supports continued research into and documentation of the county's history and prehistory, and shall protect significant cultural resources from inadvertent damage during grading, excavation, and construction activities.

  - Action Item CC-23.1: In areas identified in the Baseline Data Report as having a significant potential for containing significant archaeological resources, require completion of an archival study and, if warranted by the archival study, a detailed on-site survey or other work as part of the environmental review process for discretionary projects.

  - Action Item CC-23.2: Impose the following conditions on all discretionary projects in areas which do not have a significant potential for containing archaeological or paleontological resources:

    - "The Planning Department shall be notified immediately if any prehistoric, archaeologic, or paleontological artifact is uncovered during construction. All construction must stop and an archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards in prehistoric or historical archaeology shall be retained to evaluate the finds and recommend appropriate action."

    - "All construction must stop if any human remains are uncovered, and the County Coroner must be notified according to Section 7050.5 of California's Health and Safety Code. If the remains are determined to be Native American, the procedures outlined in CEQA Section 15064.5 (d) and (e) shall be followed."

- **Policy CC-26**: Projects which follow the Secretary of the Interior's Standards for Preservation Projects shall be considered to have mitigated their impact on the historic resource.

- **Policy CC-26.5**: When discretionary projects involve potential historic architectural resources, the County shall require an evaluation of the eligibility of the potential resources for inclusion in the NRHP and the CRHR by a qualified architectural historian. When historic architectural resources that are either listed in or determined eligible for inclusion in the NRHP if the CRHR are proposed for demolition or modification, the County shall require an evaluation of the proposal by a qualified preservation architect to determine whether it complies with the Secretary of the Interior's Standards for Preservation projects. In the event that the proposal is determined to not comply with the Secretary of the Interior's Standards, the preservation architect shall recommend modifications to the project design for consideration and possible implementation by the project proponent. These recommendations may include modification of the design, re-use of the structure, or avoidance of the structure.

- **Policy CC-27**: Offer incentives for the appropriate rehabilitation and reuse of historic buildings and disseminate information regarding incentives available at the state and federal level. Such incentives shall include but are not limited to the following:

a) Apply the State Historical Building Code when building modifications are proposed.

b) Reduce County building permit fees when qualified preservation professionals are retained by applicants to verify conformance with the SHBC and the Secretary of the Interior's Standards.

c) Use of the federal historic preservation tax credit for qualified rehabilitation projects.

d) Income tax deductions for qualified donations of historic preservation easements.

- **Policy CC-28**: As an additional incentive for historic preservation, owners of existing buildings within agricultural areas of the County that are either designated as Napa County Landmarks or listed in the California Register of Historic Resources or the National Register of Historic Places may apply for permission to reuse these buildings for their historic use or a compatible new use regardless of the land uses that would otherwise be permitted in the area so long as the use is compatible with agriculture, provided that the historic building is rehabilitated and maintained in conformance with the U.S. Secretary of the Interior's Standards for Preservation Projects.

  This policy recognizes that, due to the small number of existing historic buildings in the County and the requirement that their historic reuse be compatible with agriculture, such limited development will not be detrimental to the Agriculture, Watershed or Open Space policies of the General Plan. Therefore, such development is consistent with all of the goals and policies of the General Plan.

- **Policy CC-29:** Significant historic resources that are damaged by flood, fire, neglect, earthquake, or other natural disaster should be carefully evaluated by a structural engineer with preservation experience before they are determined to be beyond repair and destroyed.

- **Policy CC-30:** Because the County encourages preservation of historic buildings and structures in place and those buildings and structure must retain "integrity" to be considered historically significant, the County shall discourage scavenging of materials from pre-1920 walls and other structures unless they are beyond repair.

3.5.3 Environmental Impacts and Mitigation Measures

ANALYSIS METHODOLOGY

The project impact analysis area includes all land within unincorporated Napa County and the analysis of cultural, historical, paleontological and tribal cultural resources presented in this section is based on an evaluation of the proposed GHG reduction and adaptation measures as described in Table 2.4 of Chapter 2, Project Description. Because there is the potential for unknown cultural, historical, paleontological or tribal cultural resources to occur within the County, the analysis conservatively assumes that any ground disturbing activities could affect these resources.

PROPOSED CAP GHG REDUCTION MEASURES

Table 2.4 of the Draft EIR, provides a list of proposed GHG reduction and adaptation measures that would be implemented by the CAP. However, only those measures that are relevant to cultural, historical, paleontological and tribal cultural resources and could potentially result in a significant impact within the county are described and evaluated below. None of the proposed measures indicate where specific improvements would be constructed, their size, or specific characteristics. As a program EIR, the Draft EIR does not, and cannot, speculate on the individual environmental impacts of specific future projects/improvements. However, implementation of all GHG reduction and adaptation measures were considered during preparation of the Draft EIR to the degree specific information about implementation is known. Consistent with the requirements of CEQA Guidelines Section 15168, this Draft EIR provides a

program-level discussion of the potential general impacts of implementing these measures, rather than project-level or site-specific physical impacts of such actions. Only those measures that have the potential to affect cultural, historical, paleontological or tribal cultural resources are listed below. All other measures in Table 2.4 would have no effect on those resources and are not discussed further.

- **Primary Measure AG-1: Support the conversion of all stationary diesel or gas-powered irrigation pumps to solar, electric, or other alternative fuels.** This measure would result in an incentive program that would aid in the conversion from diesel or gas-powered irrigation pumps to an alternatively fueled pump. The measure would result in beneficial physical impacts including improved air quality, and a reduction in GHGs. Nominal physical impacts related to conversion activities and an increase in energy consumption may result from the replacement of pumps. This may result in physical changes to cultural or tribal cultural resources resulting from ground disturbance related to conversion of irrigation pumps.

- **Primary Measure BE-5: Expand current renewable energy and green energy incentives and update local ordinances**. This measure would result in an expansion of incentives for renewable energy systems that would increase participation by individual property owners. This measure would result in the installation of new private renewable energy systems including new photovoltaic, small-scale wind turbines, solar water heating systems, geothermal ground source heat pump, and battery storage. This may result in physical changes to cultural, historical, paleontological, or tribal cultural resources resulting from construction of infrastructure because of ground disturbance.

- **Primary Measure BE-7: Support Waste-to-Energy Programs at Unincorporated Landfills.** This measure will result in gas that is captured through existing landfill gas capture systems being reused for energy, rather than being flared. This measure could result in new infrastructure on-site or off-site to process landfill gas so that it can be used for energy generation or other end-uses such as compressed natural gas (CNG) for fuel in vehicles. This may result in physical changes to cultural, historical, paleontological or tribal cultural resources resulting from construction, operation, and maintenance of infrastructure.

- **Supporting Measure BE-8: Work with PG&E, BayREN, MCE, PACE financing programs, and other regional partners to incentivize energy efficiency.** This measure would result in coordination among the County and partner organizations to incentivize energy efficiency improvements in existing buildings. Improved energy efficiency would reduce the consumption of carbon-based energy sources and reduce GHG emissions. This could result in physical changes to historic resources if any of the buildings affected are historical resources or eligible for listing as a historical resource because of the introduction of modern infrastructure or building features.

- **Supporting Measure BE-9: Require energy audits for major additions to or alterations of existing buildings.** This measure would result in an amendment to the County's Zoning Code to require energy audits to increase energy efficiency. This would result in a reduction of GHG emissions, but could result in nominal construction activities. This could result in physical changes to historic resources if any of the buildings affected are historical resources or eligible for listing as a historical resource because of the introduction of modern infrastructure or building features.

- **Supporting Measure BE-10: Develop a program to allow new development to offset project GHG emissions by retrofitting existing income-qualified homes and buildings.** This would result in the development of a program that would allow new development to contribute energy efficiency retrofits to existing income qualified homes and buildings. This would result in reduced GHG emissions but could result in nominal construction activities. This could result in physical changes to historic resources if any of the buildings affected are historical resources or eligible for listing as a historical resource because of the introduction of modern infrastructure or building features.

- **Supporting Measure BE-11: Encourage solar panel installations on commercial roof space.** This measure would result in an expansion of incentives for renewable energy systems that would increase participation by individual property owners. This measure would result in the installation of new private renewable energy systems on building roofs. This may result in construction, operation, and

maintenance-related impacts. This could result in physical changes to historic resources if any of the buildings affected are historical resources or eligible for listing as a historical resource.

- **Supporting Measure TR-8: Support Napa County's incorporated cities in developing transit-oriented development unique to the needs of the Napa Region.** This would result in collaboration among the County and incorporated cities to create a more robust visitor-friendly environment around the Soscol Gateway Transit Center (and future transit centers) to encourage additional users. This could result in physical changes to cultural, historical, paleontological or tribal cultural resources resulting from construction of facilities.

- **Supporting Measure TR-10: Work with Napa County's incorporated cities, NVTA, and neighboring regions to increase presence of park and ride facilities near residential centers**. This effort would result in new park and ride facilities which would reduce GHG emissions by decreasing the number of vehicles on the road. This may result in physical changes to cultural, historical, paleontological or tribal cultural resources resulting from construction of facilities.

- **Supporting Measure TR-12: Increase the supply of electric vehicle charging stations**. This measure would result in the installation of new electric vehicle charging stations (EV charging stations) in priority areas including existing commercial areas, major visitor attractions, and multifamily complexes. This would reduce GHG emissions associated with the regional vehicle fleet through greater fuel efficiency and improved air quality. This may result in physical changes to cultural, historical, paleontological or tribal cultural resources from construction of charging stations.

- **Supporting Measure TR-14: Develop and implement active transportation projects.** This measure would result in the development and construction of new pedestrian, trail, and bicycle improvements. This could result in construction impacts and is evaluated for consistency with policies related to circulation. This may result in physical changes to cultural, historical, paleontological or tribal cultural resources from construction of transportation projects.

- **Supporting Measure TR-15: Require new development projects to evaluate and reduce VMT.** This measure would implement roadway improvements to reduce VMT by calming traffic and improving the bicyclist and pedestrian infrastructure and would occur as part of resurfacing projects within existing paved areas. This may result in physical changes to cultural, historical, paleontological or tribal cultural resources from construction of roadway improvements.

- **Primary Measure SW-1: Encourage expansion of composting program for both residential and commercial land uses**. This measure would result in the expansion of composting programs which would reduce GHG emissions by decreasing methane in landfills. This may result in physical changes to cultural, historical, paleontological or tribal cultural resources from construction of expanded composting facilities.

- **Primary Measure SW-2: Meet an 80 percent Waste Diversion Goal by 2020 and a 90 percent Waste Diversion Goal by 2030**. This measure could result in new/expanded waste processing and diversion facilities throughout the unincorporated County. This could result in physical impacts to cultural, historical, paleontological or tribal cultural resources related to the construction of such facilities.

- **Adaptation Measure Fire-5**: **Collaborate on programs to reduce fire hazards.** This measure would result in increased collaboration to improve resiliency related to wildfire hazards. This could include thinning, removing, or chipping vegetation which would result in ground disturbing activities and may include prescribed burning. The impacts related to this measure are speculative, but could include physical impacts to cultural, historical, paleontological or tribal cultural resources related to the ground disturbing activities.

- **Adaptation Measure Water-2: Consider innovative options to meet future demand**. This measure would result in the development and implementation of water supply resiliency strategies such as graywater systems, recycled water, and other water conservation strategies. The impacts related to this measure

are speculative, but could include physical impacts to cultural, historical, paleontological, and tribal cultural resources related to the construction of alternative water supply infrastructure.

- **Adaptation Measure Water-5: Collaborate with agencies to identify future water supplies and explore alternative supply sources.** This measure would result in increased collaboration to identify future water supply options, including expanded use of on-site graywater, recycled water, or other water conservation options. The impacts related to this measure are speculative, but could include physical impacts to cultural, historical, paleontological and tribal cultural resources related to the development of alternative water supply infrastructure.

- **Adaptation Measure Flood-3: Identify potential streamside restoration areas.** This measure would result in the identification and restoration of stream banks within the unincorporated county to buffer buildings, roads, and crops from increased flooding potential. The impacts related to this measure are speculative, but could include physical impacts to cultural, historical, paleontological and tribal resources related to restoration activities.

- **Adaptation Measure Flood-4: Encourage replanting of bare or disturbed areas.** This measure would result in the identification and restoration of areas that are subject to erosion within the unincorporated county to improve water quality and reduce stream sedimentation. The impacts related to this measure are speculative, but could include physical impacts to cultural, historical, paleontological and tribal cultural resources related to restoration activities.

- **Adaptation Measure Flood-7: Improve capacity of storm water infrastructure.** This measure would result in improved storm water infrastructure and improved resilience for high intensity rain events. The impacts related to this measure are speculative, but could include physical impacts to cultural, historical, paleontological and tribal cultural resources related to improving infrastructure.

THRESHOLDS OF SIGNIFICANCE

Based on Appendix G of the State CEQA Guidelines and Appendix C of Napa County's Local Procedures for Implementing CEQA, an impact to cultural, historical, paleontological or tribal cultural resources is considered significant if implementation of the proposed project would:

- cause a substantial adverse change in the significance of an historical resource as defined in Section 15064.5;

- cause a substantial adverse change in the significance of an archaeological or paleontological resource pursuant to Section 15064.5 or disturb any human remains, including those interred outside of formal cemeteries; or

- cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC Section 21074.

ISSUES NOT DISCUSSED FURTHER

As described in Chapter 2, Project Description, implementation of the CAP and the targets and strategies identified therein necessitate changes to Policy CON-65 e) of the County's General Plan (2008 GP). The proposed changes would require that all discretionary development projects demonstrate consistency with the CAP by substantiating compliance through the CAP Consistency Checklist. As described in Section 2.4.2, Project Description, proposed changes to the adopted policy of the General Plan requires the County to implement a General Plan Amendment (GPA) as part of the administrative approval process.

The CAP EIR evaluates the GPA as part of the series of actions associated with implementation of the CAP. The changes reflected in the GPA support and are consistent with implementation of the CAP, its GHG

targets, and GHG reduction measures. No additional activities or measures, other than those described in the CAP, would occur as a result of implementation of the GPA. Therefore, the GPA is not evaluated separately from the actions proposed by the CAP, but rather its implementation is within the scope of the overall impact analysis of the CAP. As described in Section 2.4.3, Project Description, to provide a mechanism by which projects can demonstrate consistency with the CAP, a CAP Consistency Checklist is included as Appendix D of the CAP. The CAP Consistency Checklist is a tool by which the County will track and determine a project's consistency with the CAP and how it delivers its appropriate GHG reductions. No physical projects or improvements other than those described in the CAP are included or would be approved with approval of the checklist. As such, like the GPA, the CAP Consistency Checklist is not evaluated separately from the actions proposed by the CAP.

In summary, the physical changes and associated environmental impacts of all GHG reduction and adaptation measures have been evaluated throughout the CAP EIR. The GPA and CAP Consistency Checklist which are included as part of the project, are not addressed as a separate impact discussion below. These administrative mechanisms on their own would not result in any physical impacts that would require separate evaluation below and are not discussed further.

IMPACT ANALYSIS

Impact 3.5-1: Change in the Significance of a Historical Resource

GHG reduction and adaptation measures that would require construction of new or modifications to existing facilities could result in impacts to historical resources, if they are associated with improvements to a historical building or if the introduction of new infrastructure could disrupt the historical context of the resource or other resources in the vicinity. However, projects would be required to comply with existing federal, State, and local regulations that protect historical resources, and undergo the County's discretionary review process including completion of subsequent project-level planning and environmental review that would ensure that identified resources are appropriately protected. Therefore, this impact would be **less than significant**.

Although a comprehensive inventory of historical resources has not been conducted, there are many historical resources and resources that are currently eligible for listing as historical resources within the county. In addition, it is likely that other resources not yet evaluated within the county may be eligible for listing in the NRHP and/or CRHR. The CAP is a policy-level document that does not include any site-specific designs or proposals or grant any entitlements for development; however, implementation of GHG reduction or adaptation measures supported by the CAP have the potential to directly or indirectly effect listed or eligible historical resources as a result of construction of new facilities or expansion of existing facilities.

Transportation, Water, Sewer and Stormwater, and Grid Utility Infrastructure Measures

GHG reduction and adaptation measures that would require construction of new or retrofitted facilities such as visitor-friendly infrastructure, park and ride facilities, EV charging stations, pedestrian, trail, and bicycle improvements (TR-8, TR-10, TR-12, TR-14, TR-15) water, stormwater facilities, and grid utility infrastructure (Water-2, Water-5, Flood-7,) could result in impacts to historical or potentially eligible historical resources, if they are present in areas affected by construction. Types of impacts could include retrofits to existing historic buildings, disturbance of the ground or setting, or demolition or construction of facilities that could affect the historic setting. Projects that would alter historic building or historic landscape would result in direct effects on historical resources. Projects that would introduce new visual elements could indirectly affect historical resources by changing the visual setting in which the historical resource is located. Specific projects related to infrastructure upgrades that would result in increased resiliency for utility systems are not evaluated as it is too speculative to determine what facilities would be required at this time. It is assumed that some level of construction activities would be included in potential projects. Typical construction activities would require the use of trucks, staging areas for supplies and equipment, parking for workers, and signage and grading.

Small-Scale Renewable Energy and Efficiency Upgrades Measures

GHG reduction and adaptation measures (BE-5, BE-8, BE-9, BE-10, and BE-11) would result in the construction of new renewable energy infrastructure or building retrofits to improve energy efficiency, which could result in direct impacts to historical buildings or potentially eligible historical resources or change the historical context of a historical resource. Renewable energy and upgrade measures would include small-scale renewable systems (i.e. small-scale solar and wind turbines) and building retrofits (i.e. lighting upgrades, HVAC systems, air handling systems, etc.). Changes to the historical significance of a resource could occur with the introduction of new infrastructure.

Impact Summary

In general, the project types listed above would be discretionary projects within the County's purview that would be required to be evaluated for project-specific impacts under CEQA at the time of application.

Rooftop solar systems are regulated by the County's Zoning Code Section 15.14, which allows for the placement of small-scale renewable energy systems that meet the criteria of the code by obtaining a building permit. The code applies size and height limits for infrastructure, to minimize potential impacts. However, because the permit is a ministerial process with no discretionary review, it is possible that solar systems would be installed upon historic structures. While the locations of future rooftop solar installations are unknown, typically solar systems are low profile and do not tilt more than 5 feet. Impacts to disturbance of the historical context are not anticipated from small rooftop solar systems. If rooftop installations cannot meet the criteria, then a Use Permit must be obtained which is a discretionary process. Ground-mounted solar installations are not specifically covered by Section 15.14 and would, therefore, be subject to conditions pertaining to a Use Permit.

Small-scale wind turbines are regulated by the County's Zoning Code Section 18.117 which allows the installation of small systems outside of urbanized areas, on properties of at least two-acres, and providing that the locations of the systems do not interfere with special-status species or habitat, do not occur in floodplains, do not create new visual impacts, do not exceed noise standards, and do not create a silhouetting issue. In these cases, small wind systems can be installed after obtaining a building permit. In cases where systems cannot meet the criteria of Chapter 18.117, then a Use Permit must be obtained which is a discretionary process. Wind turbines would be prohibited where the project site is listed in the National Register of Historic Places or the California Register of Historical Resources which would prevent impacts to historical context.

Projects that include active transportation projects and utility infrastructure improvement projects would also be subject to discretionary review by the County. Project-specific evaluation of environmental impacts and implementation of feasible mitigation, as well as compliance with existing federal, State, and local regulations that protect historical resources would be required

Therefore, project-specific mitigation would minimize or eliminate impacts to historic resources to the extent feasible in compliance with CEQA Guidelines Section 15126.4. The types of projects that would result from implementation of the CAP would not typically result in the substantial alteration of known historic resources, because the County's discretionary review process would provide an opportunity to condition projects such that damage to historical resources would not occur. The CAP project would be required to comply with all applicable federal, State, and local regulations related to protection of historic resources. Impacts would be **less than significant**.

Mitigation Measures

No mitigation is required.

Impact 3.5-2: Potential Disturbance of Known or Undiscovered Cultural Resources or Paleontological Resources

Ground-disturbing activities associated with implementation of some GHG reduction and adaptation measures could result in damage to unknown cultural resources, including human remains or paleontological resources as defined in State CEQA Guidelines Section 15064.5. However, compliance with existing federal, State, and local regulations and completion of subsequent project-level planning and environmental review would reduce potential impacts to these resources. Impacts would be **less than significant**.

Although a comprehensive inventory of cultural resources including human remains and paleontological resources has not been conducted, there are many known resources within the county, as described above in Section 3.5 "Environmental Setting." In addition, there is a high likelihood of discovering new, previously unidentified cultural resources within the county during construction activities. Impacts to cultural resources generally occur because of ground-disturbing activities, including grading, excavation, and utilities installation. The potential for disturbance may be reduced through surveying a site to determine the likelihood that cultural resources are present, review of records to determine if cultural resources are known to occur in the area, and then designing future development to avoid areas where resources may be present. However, if surface evidence and cultural records do not exist for a site, construction activities associated with the future development, including grading and excavation, would have the potential to disturb cultural resources.

The following section describes the GHG reduction and adaptation measures that could result in impacts to cultural or paleontological resources.

Infrastructure Efficiency and Replacement Measures

GHG reduction measure AG-1 would provide an incentive for conversion of diesel or gas-powered irrigation pumps to alternatively fueled pumps. Although the disturbance associated with this measure is expected to be minimal, ground disturbance associated with replacement of irrigation pumps has the potential to disturb or damage undiscovered cultural resources. In addition, GHG reduction measure BE-7 may result in new infrastructure on-site or off-site to process landfill gas so that it can be used for energy generation. Ground disturbance associated with new infrastructure has the potential to disturb or damage undiscovered cultural or paleontological resources.

Transportation, Water, Sewer and Stormwater, and Grid Utility Infrastructure Measures

GHG reduction and adaptation measures that would require construction of new or retrofitted active transportation facilities such as visitor-friendly infrastructure, park and ride facilities, EV charging stations, pedestrian, trail, and bicycle improvements (TR-8, TR-10, TR-12, TR-14, TR-15) water, stormwater facilities, and grid utility infrastructure (Water-2, Water-5, Flood-7,) could result in impacts to cultural or paleontological resources, if they are present in areas affected by construction of new or expanded facilities. Most infrastructure projects would involve some level of construction and physical disturbance of the land that would result in excavation and use of heavy equipment for earthmoving that could potentially disturb or damage undiscovered resources.

Vegetation Management Measures

GHG adaptation measures that would involve vegetation management such as thinning, removing, or chipping vegetation (Fire-5) and restoration of floodplains (Flood-3, Flood-4) could result in impacts to cultural or paleontological resources as a result of ground disturbing activities. In addition, areas of the county along rivers and creeks are particularly sensitive for cultural resources, and Flood-3 and Flood-4 measures that would require ground disturbing activities near waterways would have a higher potential to disturb or damage undiscovered resources.

Waste Diversion and Compost Measures

GHG reduction measures that would require expansion of compost facilities and increase waste diversion (SW-1, SW-2) could result in impacts to cultural resources if they are present in unincorporated areas of the County where new/expanded waste processing and diversion facilities are constructed. It is unlikely that

expansion of existing compost or waste diversion facilities would affect cultural resources because they would be developed on highly disturbed areas; however, construction of new facilities in areas of the County that are not previously developed has the potential to disturb or damage undiscovered cultural resources during construction.

Small-Scale Renewable Energy and Efficiency Upgrades Measures

GHG reduction and adaptation measures that would result in new small-scale renewable systems (BE-5 and BE-11) could result in cultural or paleontological resources impacts because of ground disturbing activities that could occur from the installation of new infrastructure. Small-scale renewable energy systems would typically occur in areas of existing development and could include ground-mounted small-scale energy systems and accessory infrastructure would result in ground disturbance that has the potential to disturb or damage undiscovered cultural or paleontological resources during construction.

Impact Summary

In general, projects that would result from the implementation of the GHG reduction and adaptation measures described above would be required to undergo discretionary review by the County. Projects would be required to be evaluated for project-specific impacts under CEQA at the time of application and project-specific mitigation would minimize or eliminate impacts to cultural or paleontological resources to the extent feasible in compliance with CEQA Guidelines Section 15126.4.

As described above in Section 3.5-1, small-scale solar systems are regulated by the County's Zoning Code Section 15.14. Ground-mounted solar installations are not specifically covered by Chapter 15.14 and would, therefore, be subject to obtaining a Use Permit which would require the completion of a CEQA analysis and would be subject to project mitigation. Small-scale wind turbines are regulated by the County's Zoning Code Section 18.117 and would also be subject to a Use Permit and project mitigation if zoning criteria could not be met. Therefore, impacts to cultural or paleontological resources would be minimized through project conditioning.

In summary, project-specific mitigation would minimize or eliminate impacts to cultural or paleontological resources to the extent feasible in compliance with CEQA Guidelines Section 15126.4. While the majority of projects that would result from implementation of the CAP would not typically result in substantial impacts to known cultural or paleontological resources, the County's discretionary permit process and compliance with federal, State, and local regulations, including CEQA evaluation and project mitigation, would ensure that impacts are reduced. Therefore, impacts related to cultural and paleontological resources would be **less than significant**

Mitigation Measures

No mitigation is required.

Impact 3.5-3: Impacts to Tribal Cultural Resources

Ground-disturbing activities associated with implementation of some GHG reduction and adaptation measures could result in disturbance to tribal cultural places and sacred lands (tribal cultural resources). However, compliance with existing federal, State, and local regulations and completion of subsequent project-level planning and environmental review would reduce potential impacts to these resources. Impacts to TCRs would be **less than significant**.

The NAHC confirms that both cultural resources and tribal cultural resources are present within the County and there is potential for tribal cultural resources within the county to be disturbed as a result of implementation of the GHG reduction measures. No specific projects are authorized by the CAP and a comprehensive inventory of cultural resources has not been conducted. However, appropriate Native American tribes have been consulted for their knowledge of potential known resources and history of the areas affected by the project, in accordance with SB 18 and AB 52. Further consultation will take place as

part of future environmental reviews associated with specific project proposals in order to avoid or minimize disturbance to tribal cultural resources.

The following section describes the GHG reduction and supporting measures that could result in impacts to tribal cultural resources.

Infrastructure Efficiency and Replacement Measures

GHG reduction measure AG-1 would provide an incentive for conversion of diesel or gas-powered irrigation pumps to alternatively fueled pumps. Although the disturbance associated with this measure is expected to be minimal, ground disturbance associated with replacement of irrigation pumps has the potential to disturb or damage undiscovered tribal cultural resources. In addition, GHG reduction measure BE-7 may result in new infrastructure on-site or off-site to process landfill gas so that it can be used for energy generation. Ground disturbance associated with new infrastructure has the potential to disturb tribal cultural resources.

Transportation, Water, Sewer and Stormwater, and Grid Utility Infrastructure Measures

GHG reduction and adaptation measures that would require construction of new or retrofitted active transportation facilities such as visitor-friendly infrastructure, park and ride facilities, EV charging stations, pedestrian, trail, and bicycle improvements (TR-8, TR-10, TR-12, TR-14, TR-15) water, stormwater facilities, and grid utility infrastructure (Water-2, Water-5, Flood-7,) could result in impacts to tribal cultural resources, if they are present in areas affected by construction of new or expanded facilities. Most infrastructure projects would involve some level of construction and physical disturbance of the land that would result in excavation and use of heavy equipment for earthmoving that could potentially disturb or damage tribal resources.

Vegetation Management Measures

GHG adaptation measures that would involve vegetation management such as thinning, removing, or chipping vegetation (Fire-5) and restoration of floodplains (Flood-3, Flood-4) could result in impacts to tribal cultural resources as a result of ground disturbing activities. In addition, areas of the county along rivers and creeks are particularly sensitive for cultural resources, and Flood-3 and Flood-4 measures that would require vegetation and ground disturbing activities near waterways would have a higher potential to disturb or tribal cultural resources.

Waste Diversion and Compost Measures

GHG reduction measures that would require expansion of compost facilities and increase waste diversion (SW-1, SW-2) could result in impacts to tribal cultural resources if they are present in unincorporated areas of the County where new/expanded waste processing and diversion facilities are constructed. It is unlikely that expansion of existing compost or waste diversion facilities would affect cultural resources because they would be developed on highly disturbed areas; however, construction of new facilities in areas of the County that are not previously developed has the potential to disturb tribal cultural resources during construction.

Small-Scale Renewable Energy and Efficiency Upgrades Measures

GHG reduction and adaptation measures that would result in new small-scale renewable systems (BE-5 and BE-11) could result in tribal cultural resources impacts because of ground disturbing activities that could occur from the installation of new infrastructure. Small-scale renewable energy systems would typically occur in areas of existing development and could include ground-mounted small-scale energy systems and accessory infrastructure would result in ground disturbance that has the potential to disturb tribal cultural resources.

Impact Summary

Implementation of GHG reduction and adaptation measures could result in construction of new or updated utility service infrastructure, active transportation projects, and small-scale renewable energy systems. Construction of new or expanded facilities as a result of CAP implementation could result in impacts to traditional tribal cultural places and sacred lands if they are present in areas affected by the new or expanded facilities. However, no specific projects are authorized by the CAP, Future projects that would result from the implementation of the GHG reduction, supporting, and adaptation measures described above

would be required to undergo discretionary review by the County. The County is required to consult with appropriate Native American tribes for their knowledge of potential known resources and history of the areas affected by the project, in accordance with SB 18 and AB 52. Project-specific mitigation would minimize or eliminate impacts to tribal cultural resources. Therefore, this impact would be **less than significant.**

Mitigation Measures

No mitigation is required.

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3.6 ENERGY

This section was prepared pursuant to CEQA Guidelines Section 15126 and Appendix F, which require that EIRs include a discussion of the potential energy impacts of projects. It describes existing energy production and consumption within Napa County, as well as potential energy use and related impacts from the project. This chapter evaluates the potential effects that implementation of the project may have on energy resources.

The County did not receive any comments regarding energy use and consumption during the Notice of Preparation (NOP) scoping process. A copy of the NOP and comment letters received in response to the NOP are included in Appendix A of this Draft EIR.

3.6.1 Environmental Setting

PHYSICAL SETTING

Energy Providers in Napa County

The majority of electricity in Napa County is produced and delivered by the Pacific Gas and Electric Company (PG&E). PG&E provides electrical energy to residences and commercial, industrial, mining, agricultural customers as well as transportation, communication, and utility service providers throughout the county. There are currently two major energy producing facilities in the county: the Coca Cola American Canyon facility which uses natural gas and is rated at 1.1 MW and the GRS American Canyon landfill gas facility which is rated at 1.6 MW (EPA 2018).

Marin Clean Energy (MCE), a community choice aggregation program (CCA), is also a major electricity provider in Napa County and provides retail electric generation services and complementary energy programs to member communities which include Marin County, Napa County, Contra Costa County, and the City of Benicia. MCE provides service to more than 80 percent of electricity customers within its service area and is the default electric generation provider for any new or relocated customers therein. MCE's current portfolio of energy sources, which are detailed in MCE's *2019 Integrated Resource Plan* includes suppliers from California, Washington and Oregon. Presently, there are no suppliers within Napa County. MCE's procurement targets are 90 percent renewable energy by 2019 and 100 percent greenhouse gas (GHG)-free renewable energy by 2022. (MCE 2018).

Energy Types and Sources

California relies on a regional power system comprised of a diverse mix of natural gas, renewable, hydroelectric, and nuclear generation resources. One-third of energy commodities consumed in California is natural gas. In 2014, approximately 35 percent of natural gas consumed in the state was used to generate electricity. Residential land uses represented approximately 17 percent of California's natural gas consumption with the balance consumed by the industrial, resource extraction, and commercial sectors (EIA 2014). Power plants in California generate approximately 70 percent of the in-state electricity demand, with large hydroelectric in the Pacific Northwest and power plants in the Southwestern U.S. generating the remaining electricity (CEC 2018a). The contribution of in- and out-of-state power plants depends on the precipitation that occurred in the previous year, the corresponding amount of hydroelectric power that is available, and other factors. As of 2017, PG&E was powered by 32.9 percent renewables, including biomass, geothermal, small hydroelectric, solar, and wind (CPUC 2017). MCE's estimated resource mix for 2018 was 41 percent wind, 22 percent conventional, 20 percent large hydroelectric, 11 percent solar, 2 percent small hydroelectric, 2 percent geothermal, and 2 percent biomass (MCE 2017).

Alternative Fuels

A variety of alternative fuels are used to reduce demand for petroleum-based fuel. The use of these fuels is encouraged through various statewide regulations and plans (e.g., Low Carbon Fuel Standard, Assembly Bill [AB] 32 Scoping Plan). Conventional gasoline and diesel may be replaced (depending on the capability of the vehicle) with many transportation fuels, including:

- biodiesel,
- electricity,
- ethanol (E-10 and E-85),
- hydrogen,
- natural gas (methane in the form of compressed and liquefied natural gas),
- propane,
- renewable diesel (including biomass-to-liquid),
- synthetic fuels, and
- gas-to-liquid and coal-to-liquid fuels.

California has a growing number of alternative fuel vehicles (AFVs) through the joint efforts of the California Energy Commission (CEC), California Air Resources Board (CARB), local air districts, federal government, transit agencies, utilities, and other public and private entities. As of March 2018, California contained 6,078 alternative fueling stations (AFDC 2018).

COMMERCIAL AND RESIDENTIAL ENERGY USE

Homes built between 2000 and 2015 used 14 percent less energy per square foot than homes built in the 1980s, and 40 percent less energy per square foot than homes built before 1950. However, the increase size of newer homes has offset these efficiency improvements. Primary energy consumption in the residential sector total 21 quadrillion Btu in 2009 (the latest year the EIA's *Residential Energy Consumption Survey* was completed), equal to 54 percent of consumption in the buildings sector and 22 percent of total primary energy consumption in the U.S. Energy consumption increased 24 percent from 1990 to 2009. However, because of projected improvements in building and appliance efficiency, the EIA 2012 Annual Energy Outlook forecast a 13 percent increase in energy consumption from 2009 to 2035 (EIA 2012).

Commercial buildings represent just under one-fifth of U.S. energy consumption with office space, retail, and educational facilities representing about half of commercial sector energy consumption. In aggregate, commercial buildings consumed 46 percent of building energy consumption and approximately 19 percent of U.S. energy consumption. In comparison, the residential sector consumed approximately 22 percent of U.S. energy consumption (U.S. Department of Energy 2012).

ENERGY USE FOR TRANSPORTATION

On-road vehicles use about 90 percent of the petroleum consumed in California. The California Department of Transportation (Caltrans) projected 81 million gallons of gasoline and diesel would be consumed in Napa County in 2020, an increase of approximately 16 million gallons of fuel from 2010 levels (Caltrans 2008).

Energy Use and Climate Change

Scientists and climatologists have produced evidence that the burning of fossil fuels by vehicles, power plants, industrial facilities, residences, and commercial facilities has led to an increase of the earth's temperature. For an analysis of GHG production and the project's impacts on climate change, refer to Chapter 3.7, Greenhouse Gas Emissions of this Draft EIR.

3.6.2 Regulatory Setting

Federal and State agencies regulate energy consumption through various policies, standards, and programs. At the local level, individual cities and counties establish policies in their general plans and CAPs related to the energy efficiency of new development and land use planning and to the use of renewable energy sources. Energy conservation is embodied in many federal, state, and local statutes and policies, as described below.

FEDERAL

Energy Policy and Conservation Act, and CAFE Standards

The Energy Policy and Conservation Act of 1975 established nationwide fuel economy standards to conserve oil. Pursuant to this Act, the National Highway Traffic and Safety Administration, part of the U.S. Department of Transportation (DOT), is responsible for revising existing fuel economy standards and establishing new vehicle fuel economy standards.

The Corporate Average Fuel Economy (CAFE) program was established to determine vehicle manufacturer compliance with the government's fuel economy standards. Compliance with CAFE standards is determined based on each manufacturer's average fuel economy for the portion of their vehicles produced for sale in the United States. The EPA calculates a CAFE value for each manufacturer based on city and highway fuel economy test results and vehicle sales. The CAFE values are a weighted harmonic average of the EPA city and highway fuel economy test results. Based on information generated under the CAFE program, DOT is authorized to assess penalties for noncompliance. Under the Energy Independence and Security Act of 2007 (described below), the CAFE standards were revised for the first time in 30 years.

Energy Policy Act of 1992 and 2005

The Energy Policy Act of 1992 (EPAct) was passed to reduce the country's dependence on foreign petroleum and improve air quality. EPAct includes several parts intended to build an inventory of AFVs in large, centrally fueled fleets in metropolitan areas. EPAct requires certain federal, state, and local government and private fleets to purchase a percentage of light duty AFVs capable of running on alternative fuels each year.

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

Energy Independence and Security Act of 2007

The Energy Independence and Security Act of 2007 is designed to improve vehicle fuel economy and help reduce U.S. dependence on oil. It represents a major step forward in expanding the production of renewable fuels, reducing dependence on oil, and confronting global climate change. The Energy Independence and Security Act of 2007 increases the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard requiring fuel producers to use at least 36 billion gallons of biofuel in 2022, which represents a nearly five-fold increase over current levels; and reduces U.S. demand for oil by setting a national fuel economy standard of 35 miles per gallon by 2020—an increase in fuel economy standards of 40 percent.

By addressing renewable fuels and CAFE standards, the Energy Independence and Security Act of 2007 will build on progress made by the Energy Policy Act of 2005 in setting out a comprehensive national energy strategy for the 21st century.

STATE

Warren-Alquist Act

The 1975 Warren-Alquist Act established the California Energy Resources Conservation and Development Commission, now known as the CEC. The Act established state policy to reduce wasteful, uneconomical, and unnecessary uses of energy by employing a range of measures. The California Public Utilities Commission (CPUC) regulates privately-owned utilities in the energy, rail, telecommunications, and water fields.

State of California Energy Action Plan

The CEC, CPUC, and now defunct Consumer Power and Conservation Financing Authority prepared the first State of California Energy Action Plan in 2003 to establish shared goals and specific actions to ensure that adequate, reliable, and reasonably-priced electrical power and natural gas supplies are achieved and provided through policies, strategies, and actions that are cost-effective and environmentally sound for California's consumers and taxpayers. The plan was updated in 2005 and 2008 to address policy the emerging importance of climate change, transportation-related energy issues, and research and development activities (CEC and CPUC 2008).

Assembly Bill 2076: Reducing Dependence on Petroleum

Pursuant to AB 2076 (Chapter 936, Statutes of 2000), CEC and CARB prepared and adopted in 2003 a joint agency report, *Reducing California's Petroleum Dependence*. Included in this report are recommendations to increase the use of alternative fuels to 20 percent of on-road transportation fuel use by 2020 and 30 percent by 2030, significantly increase the efficiency of motor vehicles, and reduce per- capita vehicles miles traveled (CEC and CARB 2003). Further, in response to the CEC's 2003 and 2005 *Integrated Energy Policy Reports*, the Governor directed CEC to take the lead in developing a long-term plan to increase alternative fuel use.

A performance-based goal of AB 2076 was to reduce petroleum demand to 15 percent below 2003 demand by 2020.

Integrated Energy Policy Report

Senate Bill (SB) 1389 (Chapter 568, Statutes of 2002) required CEC to: "[C]onduct assessments and forecasts of all aspects of energy industry supply, production, transportation, delivery and distribution, demand, and prices. The Energy Commission shall use these assessments and forecasts to develop energy policies that conserve resources, protect the environment, ensure energy reliability, enhance the state's economy, and protect public health and safety" (Public Resources Code [PRC] Section 25301(a)). This work culminated in the Integrated Energy Policy Report (IEPR).

CEC adopts an IEPR every two years and an update every other year. The 2017 IEPR is the most recent IEPR, which was adopted February 2018. The 2018 IEPR Update is currently being prepared. The 2017 IEPR provides a summary of priority energy issues currently facing the State, outlining strategies and recommendations to further the State's goal of ensuring reliable, affordable, and environmentally-responsible energy sources. Energy topics covered in the report include progress toward statewide renewable energy targets and issues facing future renewable development; efforts to increase energy efficiency in existing and new buildings; progress by utilities in achieving energy efficiency targets and potential; improving coordination among the State's energy agencies; streamlining power plant licensing processes particularly for new energy sources such as bioenergy; results of forecasts of electricity, natural gas, and transportation fuel supply and demand; future energy infrastructure needs; the need for research and development efforts to statewide energy policies; progress towards emerging energy technologies; development of energy storage technologies. In recent years, the IEPR, including the 2017 IEPR, have focused particular attention on issues from climate impacts facing California's energy infrastructure and adaptation strategies to ensure a secure energy infrastructure in the state.

Senate Bill 1078: California Renewables Portfolio Standard Program

SB 1078 (Chapter 516, Statutes of 2002) establishes a renewable portfolio standard (RPS) for electricity supply. The RPS requires that retail sellers of electricity, including investor-owned utilities and community choice aggregators, provide 20 percent of their supply from renewable sources by 2017. This target date was moved forward by SB 1078 to require compliance by 2010. In addition, electricity providers subject to the RPS must increase their renewable share by at least 1 percent each year. The outcome of this legislation will impact regional transportation powered by electricity. As of 2016, the state has reported that 21 percent of electricity is sourced from certified renewable sources (see Section 3.6.1, "Environmental Setting").

Senate Bill X1-2: California Renewable Energy Portfolio Standard

SB X1-2 of 2011 requires all California utilities to generate 33 percent of their electricity from renewables by 2020. SB X1-2 sets a three-stage compliance period requiring all California utilities, including independently-owned utilities, energy service providers, and community choice aggregators, to generate 20 percent of their electricity from renewables by December 31, 2013; 25 percent by December 31, 2016; and 33 percent by December 31, 2020. SB X1-2 also requires the renewable electricity standard to be met increasingly with renewable energy that is supplied to the California grid from sources within, or directly proximate to, California. SB X1-2 mandates that renewables from these sources make up at least 50 percent of the total renewable energy for the 2011-2013 compliance period, at least 65 percent for the 2014–2016 compliance period, and at least 75 percent for 2016 and beyond.

Senate Bill 100: California Renewables Portfolio Standard Program

SB 100 requires that all California utilities, including independently-owned utilities, energy service providers, and community choice aggregators, supply 44 percent of retail sales from renewable resources by December 31, 2024, 50 percent by December 31, 2026, 52 percent by December 31, 2027, and 60 percent by December 31, 2030. The law requires that eligible renewable energy resources and zero-carbon resources supply 100 percent of retail sales of electricity to California end-use customers and 100 percent of electricity procured to serve all state agencies by December 31, 2045.

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

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

Assembly Bill 1007: State Alternative Fuels Plan

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

Executive Order S-06-06

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

State can meet its clean energy, waste reduction, and climate protection goals. The 2012 Bioenergy Action Plan updates the 2011 plan and provides a more detailed action plan to achieve the following goals:

- increase environmentally- and economically-sustainable energy production from organic waste;
- encourage development of diverse bioenergy technologies that increase local electricity generation, combined heat and power facilities, renewable natural gas, and renewable liquid fuels for transportation and fuel cell applications;
- create jobs and stimulate economic development, especially in rural regions of the state; and
- reduce fire danger, improve air and water quality, and reduce waste.

As of 2015, 3.2 percent of the total electricity system power in California was derived from biomass.

California Building Energy Efficiency Standards

CCR Title 24, Part 6, is California's Energy Efficiency Standards for Residential and Non-Residential Buildings. Title 24 was established by CEC in 1978 in response to a legislative mandate to create uniform building codes to reduce California's energy consumption, and provide energy efficiency standards for residential and non-residential buildings. In 2013, CEC updated Title 24 standards with more stringent requirements, effective July 1, 2014. All buildings for which an application for a building permit is submitted on or after July 1, 2014 must follow the 2013 standards. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases GHG emissions. The CEC *Impact Analysis for California's 2013 Building Energy Efficiency Standard*s estimates that the 2013 standards are 23.3 percent more efficient than the previous 2008 standards for residential construction and 21.8 percent more efficient for non-residential construction. In 2016, CEC updated Title 24 standards again, effective January 1, 2017. While the impact analysis of these standards has not yet been released, CEC estimates that the 2016 standards are 28 percent more efficient than 2013 standards for residential construction and are 5 percent more efficient for non-residential construction.

The 2019 Title 24 Part 6 Building Energy Efficiency Standards were adopted by CEC on May 9, 2018 and will apply to projects constructed after January 1, 2020. The standards are designed to move the State closer to its zero-net energy goals for new residential development. It does so by required all new residences to install enough renewable energy to offset all the electricity needs of each residential unit (CCR, Title 24, Part 6, Section 150.1(c)4). CEC estimates that the combination of mandatory on-site renewable energy and prescriptively-required energy efficiency standards will result in a 53 percent reduction in new residential construction as compared to the 2016 standards. Non-residential buildings are anticipated to reduce energy consumption by 30 percent as compared to the 2016 standards primarily through prescriptive requirements for high-efficiency lighting (CEC 2018b). The building efficiency standards are enforced through the local plan check and building permit process. Local government agencies may adopt and enforce additional energy standards for new buildings as reasonably necessary due to local climatologic, geologic, or topographic conditions, provided that these standards exceed those provided in Title 24 Part 6.

Assembly Bill 32, Climate Change Scoping Plan and Update

In December 2008, CARB adopted its Climate Change Scoping Plan, which contains the main strategies California will implement to achieve reduction of approximately 118 million metric tons (MMT) of carbon dioxide equivalent (CO_2e) emissions, or approximately 21.7 percent from the State's projected 2020 emission level of 545 MMT of CO_2e under a business-as-usual scenario (this is a reduction of 47 MMT CO_2e, or almost 10 percent, from 2008 emissions). In May 2014, CARB released and has since adopted the *First Update to the Climate Change Scoping Plan* to identify the next steps in reaching AB 32 goals and evaluate progress that has been made between 2000 and 2012 (CARB 2014). According to the update, California is on track to meet the near-term 2020 GHG limit and is well positioned to maintain and continue reductions beyond 2020 (CARB 2014). The update also reports the trends in GHG emissions from various emissions sectors (e.g., transportation, building energy, agriculture).

On December 14, 2017, CARB approved its 2017 Climate Change Scoping Plan Update (2017 Scoping Plan), which lays out the framework for achieving the 2030 reductions as established in more recent legislation (discussed below). The Scoping Plan identifies the GHG reductions needed by each emissions sector to achieve a statewide emissions level that is 40 percent below 1990 levels before 2030.

The measures identified in the proposed 2017 Scoping Plan will have the co-benefit of reducing California's dependency of fossil fuels and making land use development and transportation systems more energy efficient. More details about the statewide GHG reduction goals and Scoping Plan measures are provided in the regulatory setting of Chapter 3.7, "Greenhouse Gas Emissions."

Senate Bill 375

SB 375, signed by the Governor in September 2008, aligns regional transportation planning efforts, regional GHG emission reduction targets, and land use and housing allocation. SB 375 requires metropolitan planning organizations (MPOs) to adopt a sustainable communities strategy (SCS) or Alternative Planning Strategy, showing prescribed land use allocation in each MPO's Regional Transportation Plan. CARB, in consultation with the MPOs, is to provide each affected region with reduction targets for GHGs emitted by passenger cars and light trucks in their respective regions for 2020 and 2035. Implementation of SB 375 will have the co-benefit of reducing California's dependency of fossil fuels and making land use development and transportation systems more energy efficient.

The Association of Bay Area Governments (ABAG) and the Metropolitan Transportation Commission (MTC) serve as the MPO for Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, and Sonoma Counties. ABAG and MTC adopted Plan Bay Area 2040, the long-range Regional Transportation Plan/Sustainable Communities Strategy in 2017.

Executive Order B-30-15

On April 20, 2015 Governor Edmund G. Brown Jr. signed EO B-30-15 to establish a California GHG reduction target of 40 percent below 1990 levels by 2030. The Governor's EO aligns California's GHG reduction targets with those of leading international governments such as the 28-nation European Union which adopted the same target in October 2014. California is on track to meet or exceed the target of reducing GHG emissions to 1990 levels by 2020, as established in the California Global Warming Solutions Act of 2006 (AB 32, discussed above). California's new emission reduction target of 40 percent below 1990 levels by 2030 will make it possible to reach the ultimate goal of reducing emissions 80 percent below 1990 levels by 2050. This is in line with the scientifically established levels needed in the U.S. to limit global warming below 2 degrees Celsius, the warming threshold at which major climate disruptions are projected, such as super droughts and rising sea levels.

Senate Bill 32 and Assembly Bill 197 of 2016

In August 2016, Governor Brown signed SB 32 and AB 197, which serve to extend California's GHG reduction programs beyond 2020. SB 32 amended the Health and Safety Code to include Section 38566, which contains language to authorize CARB to achieve a statewide GHG emission reduction of at least 40 percent below 1990 levels by no later than December 31, 2030. SB 32 codified the targets established by EO B-30-15 for 2030, which set the next interim step in the State's continuing efforts to pursue the long-term target expressed in EOs S-3-05 and B-30-15 of 80 percent below 1990 emissions levels by 2050. Achievement of these goals will have the co-benefit of reducing California's dependency of fossil fuels and making land use development and transportation systems more energy efficient.

Advanced Clean Cars Program

In January 2012, CARB approved the Advanced Clean Cars program which combines the control of GHG emissions and criteria air pollutants, as well as requirements for greater numbers of zero-emission vehicles, into a single package of standards for vehicle model years 2017 through 2025. The new rules strengthen the GHG standard for 2017 models and beyond. This will be achieved through existing technologies, the use of stronger and lighter materials, and more efficient drivetrains and engines. The program's zero-emission vehicle

regulation requires battery, fuel cell, and/or plug-in hybrid electric vehicles to account for up to 15 percent of California's new vehicle sales by 2025. The program also includes a clean fuels outlet regulation designed to support the commercialization of zero-emission hydrogen fuel cell vehicles planned by vehicle manufacturers by 2015 by requiring increased numbers of hydrogen fueling stations throughout the state. The number of stations will grow as vehicle manufacturers sell more fuel cell vehicles. By 2025, when the rules will be fully implemented, the statewide fleet of new cars and light trucks will emit 34 percent fewer global warming gases and 75 percent fewer smog-forming emissions than the statewide fleet in 2016 (CARB 2016).

LOCAL

Napa County General Plan

The following policies of the *Napa County General Plan* (Napa County 2008) are applicable to the project:

- **Policy CON-66:** The County shall promote the implementation of sustainable practices and green technology in agriculture, commercial, industrial, and residential development through the following actions:

  a) Project Construction

  - Utilize recycled, low-carbon, and otherwise climate-friendly building materials such as salvaged and recycled content materials for buildings, hard surfaces, and landscaping materials.
  - Minimize, reuse, and recycle construction-related waste.
  - Utilize alternative fuels in construction equipment and require construction equipment to utilize the best available technology to reduce emissions.

  c) Education and Outreach

  - Assure that County staff is trained to provide guidance, if requested, to residents and agricultural, commercial, and industrial users on sustainable practices and green technology.
  - Cooperate with and develop partnerships with public, private, and non-profit groups to further the knowledge and implementation of sustainable practices.
  - Encourage residential, commercial, industrial, processing, and agricultural projects to develop methods to reduce and capture CO_2 produced and emitted and to sequester that which is captured.

  e) Residential Development

  - Increase the supply of affordable and workforce housing to encourage local workers to live in the County, minimize commuting and reduce GHG emissions.
  - Consistent with policies in the Agriculture Preservation and Land Use Element, residential development shall be focused in urbanized areas.

- **Policy CON-67:** The County shall promote and encourage "green building" design, development, and construction through the achievement of Leadership in Energy and Environmental Design (LEED) standards set by the U.S. Green Building Council, the Green Point Rated system standards set by Builditgreen.org, or equivalent programs. Actions in support of this policy shall include:

a) Audit current County practices to assess opportunities and barriers to implementation of current sustainable practices.

b) Amend the County Code as necessary to remove barriers to and encourage "green" construction.

c) Develop new County buildings as "green buildings," utilizing sustainable construction and practices.

d) Encourage all new large development projects and major renovation of existing facilities to be based on Green Building Council standards utilizing sustainable construction and practices to achieve a minimum LEED rating of Silver, or comparable level on the Green Point Rated system per standards set by Builditgreen.org or other comparable updated rating systems.

e) Support state and federal incentive programs that offer rebates and cost sharing related to the implementation of "green building" standards and LEED certification.

- **Policy CON-68:** The County shall promote research and the development and use of advanced and renewable energy technology through the following actions:

  a) Use expedited permit processing or other incentives as promotion mechanisms.

  b) Assist in securing grants to support the implementation of photovoltaic, wind, and other renewable energy technologies to provide a portion of the County's energy needs.

  c) Encourage the use of renewable energy resources in residential, commercial, industrial, and agricultural projects and uses.

- **Policy CON-69:** The County shall provide incentives and opportunities for the use of energy-efficient forms of transportation such as public transit, carpooling, walking, and bicycling. This shall include the provision and/or the extension of transit to urban areas where development densities (residential and nonresidential) would support transit use, as well as bus turnouts/access, bicycle storage, and carpool/vanpool parking where appropriate.

- **Policy CON-70:** The County shall seek to increase the amount of energy produced through locally available energy sources, including establishing incentives for, and removing barriers to, renewable and alternative energy resources (solar, wind) where they are compatible with the maintenance and preservation of environmental quality.

- **Policy CON-71:** The County shall encourage the use of bio-fuels and geothermal resources where feasible and environmentally sustainable.

- **Policy CON-72:** The County shall seek to reduce the energy impacts from new buildings by applying Title 24 energy standards as required by law and providing information to the public and builders on available energy conservation techniques, products, and methods available to exceed those standards by 15 percent or more.

- **Policy CON-74**: The County shall evaluate new technologies for energy generation and conservation and solid waste disposal as they become available, and shall pursue their implementation as appropriate in a manner consistent with the principle of adaptive management. This evaluation shall include review of promising technological advances which may be useful in decreasing County GHG emissions, increase in renewable energy that is generated locally, and review of the County's success in meeting targets for GHG emission reductions.

- **Policy CON-88:** The County shall provide information to businesses and residents on available options to implement waste reduction targets. Other actions may include:

a) Actively promoting a comprehensive, consistent, and effective recycled materials procurement effort among other governmental agencies and local businesses.

b) Encouraging all companies that do business in Napa County to recycle and reuse construction scraps, demolition materials, concrete, industrial waste, and green waste.

- **Policy CON-89:** The County itself shall be a leader in promoting waste reduction and recycling through a variety of means when feasible, including:

  a) Adopting requirements for the use of recycled base materials (e.g., recycled raw batch materials, rubberized asphalt from recycled tires, and other appropriate materials), if practicable, in requests for bids for public roadway construction projects.

  b) Procurement policies and procedures, which facilitate purchase of recycled, recyclable, or reusable products and materials where feasible.

  c) Requiring contractors to provide products and services to the County, including printing services, demonstrating that they will comply with the County's recycled materials policies.

  d) Providing recycling centers at County facilities to the public free of charge.

- **Policy E-16:** The County supports the expansion of energy and telecommunication services consistent with provisions of County Code Chapter 18.119 and other applicable state and federal regulations to all areas of the county where these services are needed to support the development of locally appropriate jobs and services, including home-based businesses.

- **Policy H-6a:** The County shall encourage mixed-use development and appropriate housing densities in suitable locations within designated urban areas to facilitate access by foot, bicycle, and/or mass transit to and from commercial services and job locations, educational facilities and to minimize energy and water usage.

- **Policy H-6b:** In its site development standards for major projects, the County shall promote and encourage design and landscaping to reduce the use of fossil fuels and water and encourage utilization of solar energy and recycled water, through such means as mixed- use guidelines, drought-resistant vegetation, solar access design, shading standards, modified parking standards when appropriate, and reduced street widths.

- **Policy H-6d:** The County will use its building code to encourage and provide incentives for retro- fitting existing buildings and designing new buildings that reduce the use of fossil fuels and water through energy conservation and the utilization of renewable resources.

Napa County Code

Article I. - Green Building Standards of the Napa County Code of Ordinances is intended to encourage sustainable building construction practices and incorporates the 2016 California Green Building Standards (CALGreen) Code. Chapter 15.14 provides an expedited, streamlined permitting process for installation of small residential rooftop solar. Chapter 18.117 provides an expedited, streamlined permitting process for installation of small wind turbine facilities.

3.6.3 Environmental Impacts and Mitigation Measures

ANALYSIS METHODOLOGY

This analysis addresses the CAP's potential energy use, including electricity, natural gas, and transportation fuel consumption. Appendix F of the CEQA Guidelines requires consideration of the potentially significant energy implications of a project and mitigation measures to reduce "wasteful, inefficient and unnecessary" energy usage (PRC Section 21100, subdivision [b][3]). However, neither the law nor the CEQA Guidelines establish thresholds that define wasteful, inefficient, or unnecessary use of energy. Therefore, this section includes a qualitative discussion of the potential for the project to result in the inefficient, wasteful, and unnecessary consumption of energy. Evaluation of potential energy impacts is based on a review of documents that regulate development within the County, including the Napa County General Plan (2008) and General Plan EIR (2007), and the Napa County Zoning Code (Zoning Ordinance). In determining the level of significance, this analysis assumes that the project would comply with relevant state regulations and local ordinances.

PROPOSED CAP GHG REDUCTION AND ADAPTATION MEASURES

Table 2.4 of the Draft EIR, provides a list of proposed GHG reduction and adaptation measures that would be implemented by the CAP. None of the proposed measures indicate where specific improvements would be constructed, their size, or specific characteristics. As a program EIR, the Draft EIR does not, and cannot, speculate on the individual environmental impacts of specific future projects/improvements. However, implementation of all GHG reduction and adaptation measures were considered during preparation of the Draft EIR to the degree specific information about implementation is known. Consistent with the requirements of CEQA Guidelines Section 15168, this Draft EIR provides a program-level discussion of the potential general impacts of implementing these measures, rather than project-level or site-specific physical impacts of such actions. Only those measures that have the potential to result in the wasteful, inefficient, and unnecessary use of energy are listed below. Those measures not listed below but would have a beneficial effect are briefly noted in the following impact discussions. All other measures in Table 2.4 would have no effect on energy and are not discussed further.

- **Primary Measure AG-1: Convert all stationary diesel or gas-powered irrigation pumps to solar, electric, or other alternative fuels**. This measure would result in an incentive program that would aid in the conversion from diesel or gas-powered irrigation pumps to alternative fueled pumps. Worker trips during pump replacement would result in a temporary and minor increase in fuel consumption. A nominal long-term increase in electricity consumption and decrease in fossil fuel consumption may result.

- **Primary Measure AG-2: Support use of electric or alternatively-fueled agricultural equipment.** This measure would result in the development of an incentive program that would aid in the transition from gas and diesel-powered engines to electric engines in agricultural equipment. A nominal long-term increase in electricity consumption and decrease in fossil fuel consumption may result.

- **Primary Measure AG-5: Support the Bay Area Air Quality Management District (BAAQMD) in ending open burning of removed agricultural biomass and flood debris**. This measure would result in the promotion of alternatives to burning biomass materials, such as chipping, mastication, use of materials onsite, and/or hauling materials to off-site locations. These activities would require the use of heavy mechanical equipment that consumes fuel.

- **Primary Measure BE-4: Require new or replacement water heating systems to be electrically powered or alternatively fueled (e.g., solar water heating) for all residential land uses.** This measure would result in a new ordinance or revisions to the County Code that would require replacement water heaters to be electric or alternatively fueled, leading to a reduction in the number of gas water heaters in use. A nominal long-term increase in electricity consumption and decrease in fossil fuel consumption may result.

- **Primary Measure BE-5: Expand current renewable energy and green energy incentives and update local ordinances.** This measure would result in an expansion of incentives for renewable energy systems that would increase participation by individual property owners. This measure would result in the installation of new private renewable energy systems including new photovoltaic, small-scale wind turbines, solar water heating systems, geothermal ground source heat pump, and battery storage. This would result in minor temporary construction activities that use fuels.

- **Primary Measure BE-7: Support Waste-to-Energy Programs at Unincorporated Landfills.** This measure will result in gas that is captured through existing landfill gas capture systems being reused for energy, rather than being flared. This measure could result in new infrastructure on-site or off-site to process landfill gas so that it can be used for energy generation or other end-uses such as compressed natural gas (CNG) for fuel in vehicles. This would result in temporary construction activities that use fuels.

- **Supporting Measure BE-8: Work with PG&E, BayREN, MCE, PACE financing programs, and other regional partners to incentivize energy efficiency improvements in existing buildings.** This measure would result in coordination among the County and partner organizations to incentivize energy efficiency improvements in existing buildings. This would result in temporary construction activities that use fuels.

- **Supporting Measure BE-9: Require energy audits for major additions to or alterations of existing buildings.** This measure would result in an amendment to the County Code to require energy audits when a building permit application is submitted to increase energy efficiency. Permit applicants would be required to incorporate all cost-effective improvements into the project to increase energy efficiency per the recommendations of the audit. This may result in minor temporary construction activities that use fuels.

- **Supporting Measure BE-10: Develop a program to allow new development to offset project GHG emissions by retrofitting existing income-qualified homes and buildings.** This would result in the development of a program that would allow new development to contribute energy efficiency retrofits to existing income qualified homes and buildings. This may result in minor temporary construction activities that use fuels.

- **Supporting Measure BE-11: Encourage Solar Panel Installations on Commercial Roof Spaces.** This measure would result in an expansion of incentives for renewable energy systems that would increase participation by individual property owners. This measure would result in the installation of new private renewable energy systems. This may result in minor temporary construction activities that use fuels.

- **Primary Measure LU-1: Establish targets and enhanced programs for oak woodland and coniferous forest preservation and mandatory replanting.** This effort would result in preservation activities aimed at reducing the net loss of oak woodlands and coniferous forests. A nominal temporary increase in energy consumption related to distribution, installation, and early maintenance of trees could occur.

- **Primary Measure LU-3: Repurpose or otherwise prevent burning of removed trees and other woody material from land use conversions of oak**. This effort would result in repurposing timber and woody materials that are collected during oak woodlands and forest conversion. This could include chipping, masticating, or removing vegetation, which would require the use of heavy mechanical equipment that consumes fuel.

- **Supporting Measure TR-8: Support Napa County's incorporated cities in developing transit-oriented development unique to the needs of the Napa Region.** This would result in collaboration among the County and incorporated cities to create a more robust visitor-friendly environment around the Soscol Gateway Transit Center (and future transit centers) to encourage additional users. This would result in the use of fuels during construction, operation, and maintenance activities.

- **Supporting Measure TR-10: Work with Napa County's incorporated cities, the Napa Valley Transportation Authority, and neighboring regions to increase presence of park and ride facilities near residential centers.** This effort would result in new park and ride facilities which would encourage carpooling and reduce the amount of vehicles on the road. Although this measure would result in temporary construction activities that use fuels, a long-term reduction in fuel consumption would result from fewer vehicles on the road.

- **Supporting Measure TR-12: Increase the supply of electric vehicle charging stations.** This measure would result in the installation of new electric vehicle charging stations (EV charging stations) in priority areas including existing commercial areas, major visitor attractions, and multifamily complexes. Although this measure would result in minor temporary construction activities that use fuels, a long-term reduction in fuel consumption would result from switching to electric vehicles.

- **Supporting Measure TR-14: Develop and implement active transportation projects.** This measure would result in the development and construction of new pedestrian, trail, and bicycle improvements. Although this measure would result in temporary construction activities that use fuels, a long-term reduction in fuel consumption would result from encouraging alternative transportation methods.

- **Supporting Measure TR-15: Require new development projects to evaluate and reduce vehicle miles traveled (VMT).** This measure would implement roadway improvements to reduce VMT by calming traffic and improving the bicyclist and pedestrian infrastructure and would occur as part of resurfacing projects within existing paved areas. Although this measure would result in temporary construction activities that use fuels, a long-term reduction in fuel consumption would result from encouraging alternative transportation methods.

- **Supporting Measure TR-16: Convert 50% of County fleet vehicles to alternative fuels by 2030.** This measure would result in the conversion of the County's fleet to alternative fuels. This may result in a nominal increase in consumption of electricity but would decrease fuel use overall and resulting GHG emissions.

- **Primary Measure SW-1: Encourage expansion of composting programs for both residential and commercial land uses.** This measure would result in the expansion of composting programs which would reduce GHG emissions by decreasing methane in landfills. This would result in temporary construction activities that use fuels.

- **Primary Measure SW-2: Meet an 80 percent Waste Diversion Goal by 2020 and a 90 percent Waste Diversion Goal by 2030.** This measure could result in new/expanded waste processing and diversion facilities throughout the unincorporated County. This would result in temporary construction activities that use fuels.

- **Adaptation Measure Temp-6: Improve Parking Lot Shading and Landscaping**. This measure would result in increased parking lot shading and trees and landscaping to help reduce heat island effect. A nominal temporary increase in energy consumption related to distribution, installation, and early maintenance of trees could occur.

- **Adaptation Measure Fire-5: Collaborate on Programs to Reduce Fire Hazards**. This measure would result in increased collaboration to improve resiliency related to wildfire hazards. This could include thinning, removing, or chipping vegetation and prescribed burning, which would require the use of heavy mechanical equipment that consumes fuel.

- **Adaptation Measure Water-2: Water Supply and Quality.** This measure would result in the development and implementation of water supply resiliency strategies such as graywater systems, recycled water, and other water conservation strategies. This would result in temporary construction activities and long-term operational activities that use fuels.

- **Adaptation Measure Water-5: Collaborate with Agencies to Identify Future Water Supplies and Explore Alternative Supply Sources.** This measure would result in increased collaboration to identify future water supply options, including expanded use of on-site graywater, recycled water, or other water conservation options. This would result in temporary construction activities and long-term operational activities that use fuels.

- **Adaptation Measure Flood-3: Identify Potential Streamside Restoration Areas**. This measure would result in the identification and restoration of stream banks within the unincorporated county to buffer buildings, roads, and crops from increased flooding potential. A nominal temporary increase in energy consumption related to distribution, installation, and early maintenance of trees could occur.

- **Adaptation Measure Flood-4: Encourage Replanting Bare or Disturbed Areas**. This measure would result in the identification and restoration of areas that are subject to erosion within the unincorporated county to improve water quality and reduce stream sedimentation. A nominal temporary increase in energy consumption related to distribution, installation, and early maintenance of trees could occur.

- **Adaptation Measure Flood-7: Improve Capacity of Storm Water Infrastructure**. This measure would result in improved storm water infrastructure and improved resilience for high intensity rain events. This would result in temporary construction activities and long-term operational activities that use fuels.

THRESHOLDS OF SIGNIFICANCE

The following significance criteria area based on CEQA Guidelines Appendix F (energy), under which implementation of the project would have a potentially significant adverse impact if the project would:

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

- Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

ISSUES NOT DISCUSSED FURTHER

As described in Chapter 2, Project Description, implementation of the CAP and the targets and strategies identified therein necessitate changes to Policy CON-65 e) of the County's General Plan (2008 GP). The proposed changes would require that all discretionary development projects demonstrate consistency with the CAP by substantiating compliance through the CAP Consistency Checklist. As described in Section 2.4.2, Project Description, proposed changes to the adopted policy of the General Plan requires the County to implement a General Plan Amendment (GPA) as part of the administrative approval process.

The CAP EIR evaluates the GPA as part of the series of actions associated with implementation of the CAP. The changes reflected in the GPA support and are consistent with implementation of the CAP, its GHG targets, and GHG reduction measures. No additional activities or measures, other than those described in the CAP, would occur as a result of implementation of the GPA. Therefore, the GPA is not evaluated separately from the actions proposed by the CAP, but rather its implementation is within the scope of the overall impact analysis of the CAP. As described in Section 2.4.3, Project Description, to provide a mechanism by which projects can demonstrate consistency with the CAP, a CAP Consistency Checklist is included as Appendix D of the CAP. The CAP Consistency Checklist is a tool by which the County will track and determine a project's consistency with the CAP and how it delivers its appropriate GHG reductions. No physical projects or improvements other than those described in the CAP are included or would be approved with approval of the checklist. As such, like the GPA, the CAP Consistency Checklist is not evaluated separately from the actions proposed by the CAP.

In summary, the physical changes and associated environmental impacts of all GHG reduction and adaptation measures have been evaluated throughout the CAP EIR. The GPA and CAP Consistency Checklist which are included as part of the project, are not addressed as a separate impact discussion below. These administrative mechanisms on their own would not result in any physical impacts that would require separate evaluation below and are not discussed further.

IMPACT ANALYSIS

Impact 3.6-1: Result in Potentially Significant Environmental Impact Due to Wasteful, Inefficient, or Unnecessary Consumption Of Energy Resources, During Project Construction or Operation

GHG reduction and adaptation measures have the potential to result in the consumption of energy resources during construction and operation of new or expanded facilities and infrastructure that would increase the County's ability to reduce GHG emissions. Standard best management practices would discourage unnecessary idling and the operation of poorly maintained equipment during construction. New facilities would be required to meet current building code requirements including requirements for achieving appropriate energy efficiency standards (e.g., Title 24 standards or better), and would be required to comply with the adopted 2008 General Plan policies related to energy resources. Moreover, while GHG reduction and adaptation measures were formulated to reduce GHGs, many would improve energy efficiency and decrease reliance on fossil fuels. Thus, implementation of the GHG reduction and adaptation measures would not result in wasteful, inefficient, or unnecessary consumption of energy, during project construction or operation. Therefore, this impact would be **less than significant.**

Implementation of the GHG reduction and adaptation measures have the potential to result in the consumption of energy resources during construction and operation of new or expanded facilities and infrastructure that would increase the County's ability to reduce GHG emissions. During construction activities, energy resources including electricity, fuels, and non-renewable resources would be utilized. Demand for energy resources during construction would vary throughout the construction period and would generally cease upon completion of construction. During operation, some projects would consume energy resources to operate and maintain new or expanded facilities and infrastructure.

While GHG reduction and adaptation measures were formulated to reduce GHGs, many of the primary and supporting measures would improve energy efficiency and decrease reliance on fossil fuels. Primary measures such as AG-1, AG-2, and AG-3 support the conversion of fossil fueled pumps to solar or other alternative fuels and supporting the use of electric or alternative fueled agricultural equipment. Primary measures BE-1 and BE-2, would require compliance with CALGreen Tier 1 energy efficiency standards for alterations to existing buildings and for new construction. Primary measures BE-3 through BE-7 and supporting measures BE-8 through BE-11 would incentivize energy efficiency improvements in existing buildings, require energy audits, develop a program to offset project GHG emissions with retrofits to existing buildings, and encourage solar panel installations on commercial roofs. Not all these measures are discussed further below but are notable for the benefits they would provide. The detailed description of the referenced measures can be found in Table 2-4, Project Description.

Infrastructure Efficiency and Replacement Measures

GHG reduction measures that could result in new infrastructure on- or off-site to process landfill gas (BE-7) would require the use of heavy mechanical equipment and worker trips during construction, resulting in the short-term consumption of diesel fuel and gasoline. However, this measure would harness landfill gas to be reused for energy, rather than being flared and wasted. Fossil fuel-based energy displaced over the life of these facilities would more than compensate for any temporary increases in energy use from construction activities.

GHG reduction measures that would encourage the conversion of diesel- or gas-powered equipment (i.e. water heaters, irrigation pumps, and agricultural equipment) to electrically powered or alternatively fueled

equipment (BE-4, AG-1, AG-2, TR-16) may result in a nominal long-term increase in electricity consumption to power the new equipment. However, a long-term reduction in consumption of non-renewable energy sources would result because an increasing percentage of electricity in Napa County is generated by renewable energy sources, as detailed in in Section 3.6.1 Environmental Setting.

Transportation, Water, Sewer and Stormwater, and Grid Utility Infrastructure Measures

Supporting measures that would result in the construction of new facilities and active transportation infrastructure such as visitor-friendly infrastructure; park and ride facilities; EV charging stations; and pedestrian, trail, and bicycle improvements (TR-8, TR-10, TR-12, TR-14, TR-15) would require the use of heavy mechanical equipment and worker trips during construction, resulting in the short-term consumption of diesel fuel and gasoline. These measures are intended to encourage alternative modes of transportation, reduce VMT, and to support switching to electric vehicles. Thus, a long-term reduction in fuel consumption would result.

Adaptation measures that would result in the construction and operation of water, stormwater facilities, and grid utilities infrastructure (Water-2, Water-5, Flood-7) would require the use of heavy mechanical equipment and worker trips during construction, resulting in the short-term consumption of diesel fuel and gasoline. Maintenance and operation of new infrastructure could result in increased fuel-consumption. However, these measures are intended to improve water supply resiliency and reduce climate change vulnerabilities related to flooding, storm surge, and inundation. Therefore, these projects would be considered necessary and beneficial uses of energy resources.

Vegetation Management Measures

GHG reduction and adaptation measures that would result in short-term impacts during chipping, mastication, and hauling of biomass; replanting and restoration activities; prescribed burns; and installation of parking lot shading and landscaping (AG-5, LU-1, LU-3, Temp-6, Fire-5, Flood-3, Flood-4) would require the use of heavy mechanical equipment and worker trips during construction, resulting in the short-term consumption of diesel fuel and gasoline. However, these measures are intended to improve air quality, protect biological resources, reduce the urban heat island effect, and improve resiliency to climate change effects such as wildfire and flooding. Therefore, these projects would be considered necessary and beneficial uses of energy resources.

Renewable Energy and Efficiency Upgrades Measures

GHG reduction and adaptation measures that could result in the small-scale renewable energy infrastructure (BE-5, BE-8, and BE-11) would require the use of heavy mechanical equipment and worker trips during construction, resulting in the short-term consumption of diesel fuel and gasoline. However, operation of renewable energy infrastructure would generate clean electricity, which would be added to the power grid. The increase in renewable energy resources would result in a reduction in fossil fuel-based energy production and would add new energy resources to the regional supply of electricity. With implementation of these renewable energy projects, fossil fuel-based energy displaced over the life of these facilities would more than compensate for any temporary increases in energy use from construction activities.

Supporting measures that could result in implementation of energy efficiency measures for major additions to or alterations of existing buildings, or result in retrofits to existing buildings (BE-9, BE-10) would require the use of heavy mechanical equipment and worker trips during construction, resulting in the short-term consumption of diesel fuel and gasoline. However, these measures would improve building energy efficiency, conserving energy over the long-term.

Waste Diversion and Compost Measures

GHG reduction measures that would result in the expansion of compost and waste diversion facilities (SW-1 and SW-2) would require the use of heavy mechanical equipment and worker trips during construction, resulting in the short-term consumption of diesel fuel and gasoline. However, these measures are intended to decrease methane emissions from landfills and to increase waste diversion and recycling of resources. Therefore, these projects would be considered necessary and beneficial uses of energy resources.

Impact Summary

Implementation of GHG reduction and adaptation measures have the potential to result in the consumption of energy resources during construction and operation of new infrastructure that would increase the County's ability to reduce GHG emissions.

The goal of the CAP is to reduce GHG emissions generated within the County by using alternatively fueled vehicles, reducing VMT, using renewable energy, reducing waste generation, and increasing water conservation. Although the majority of GHG reduction and adaptation measures would result in temporary construction activities that would consume energy resources, standard best management practices would discourage unnecessary idling and the operation of poorly maintained equipment during construction. New facilities would be required to meet current building code requirements including requirements for achieving appropriate energy efficiency standards (e.g., Title 24 standards or better), and would be required to comply with the adopted 2008 General Plan policies related to energy resources. Moreover, while GHG reduction and adaptation measures were formulated to reduce GHGs, many would improve energy efficiency and decrease reliance on fossil fuels. Thus, implementation of the CAP would not result in wasteful, inefficient, or unnecessary consumption of energy, during project construction or operation. This impact would be **less than significant**.

Mitigation Measures

No mitigation is required.

Impact 3.6-2: Conflict With or Obstruct a State or Local Plan for Renewable Energy or Energy Efficiency

Relevant plans that pertain to the efficient use of energy include the State's 2008 Update Energy Action Plan (EAP). The EAP focuses on energy efficiency; demand response; renewable energy; the supply and reliability of electricity, natural gas, and transportation fuels; and achieving GHG reduction targets (CEC and CPUC 2008). Overall, the CAP is intended to reduce GHG emissions generated within the County. GHG reduction and adaptation measures aimed at improving energy efficiency, conversion from gasoline or diesel to electricity or alternative fuels, and renewable energy would directly support EAP goals and strategies. Therefore, the CAP would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. **No impact** would occur.

Relevant plans that pertain to the efficient use of energy include the EAP, which focuses on energy efficiency; demand response; renewable energy; the supply and reliability of electricity, natural gas, and transportation fuels; and achieving GHG reduction targets (CEC and CPUC 2008). As discussed above in Impact 3.6-1, although implementation of the GHG reduction and adaptation measures have the potential to result in the consumption of energy resources during construction and operation, it was determined that the measures would not constitute the wasteful, inefficient, or unnecessary consumption of energy. Furthermore, many of the measures would support the goals of the EAP, as discussed below.

Infrastructure Efficiency and Replacement Measures

GHG reduction measures that could result in new infrastructure on- or off-site to process landfill gas (BE-7) would support strategies related to the supply of electricity and natural gas and achieving climate targets. GHG reduction measures that would encourage the conversion of diesel- or gas-powered equipment (i.e. water heaters, irrigation pumps, and agricultural equipment) to electrically powered or alternatively fueled equipment (BE-4, AG-1, AG-2, TR-16) would support strategies related to renewable energy, the supply of natural gas, and achieving climate targets.

Transportation, Water, Sewer and Stormwater, and Grid Utility Infrastructure Measures

GHG supporting measures that would result in the construction of new facilities and active transportation infrastructure such as visitor-friendly infrastructure; park and ride facilities; EV charging stations; and pedestrian, trail, and bicycle improvements (TR-8, TR-10, TR-12, TR-14, TR-15) would support strategies related to transportation fuels and achieving climate targets. Adaptation measures that would result in the

construction and operation of water, stormwater facilities, and grid utility infrastructure (Water-2, Water-5, Flood-7) would support strategies related to achieving climate targets.

Vegetation Management Measures

GHG reduction and adaptation measures that would result in chipping, mastication, and hauling of biomass; replanting and restoration activities; prescribed burns; and installation of parking lot shading and landscaping (AG-5, LU-1, LU-3, Temp-6, Fire-5, Flood-3, Flood-4) would support strategies related to achieving climate targets.

Renewable Energy and Efficiency Upgrades Measures

GHG reduction and adaptation measures that could result in the construction of small-scale renewable energy infrastructure (BE-5, BE-8, and BE-11) would support strategies related to renewable energy, the supply and reliability of electricity, and achieving climate targets. GHG reduction measures that could result in implementation of energy efficiency measures for major additions to or alterations of existing buildings, or result in retrofits to existing buildings (BE-9, BE-10) would support strategies related to energy efficiency and achieving climate targets.

Waste Diversion and Compost Measures

GHG reduction measures that would result in the expansion of compost and waste diversion facilities (SW-1 and SW-2) would support strategies related to achieving climate targets.

Impact Summary

Overall, the CAP is intended to reduce GHG emissions generated within the County by using alternatively fueled vehicles, reducing VMT, using renewable energy, reducing waste generation, and increasing water conservation. While the GHG reduction and adaptation measures were formulated to reduce GHGs, they also act to conserve energy and reduce reliance on fossil fuels. Measures aimed at improving energy efficiency, conversion from gasoline or diesel to electricity or alternative fuels, and renewable energy would directly support EAP goals and strategies. Therefore, the CAP would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. **No impact** would occur.

Mitigation Measures

No mitigation is required.

3.7 GREENHOUSE GAS EMISSIONS

This section presents a summary of climate change science and greenhouse gas (GHG) emissions sources in California, a summary of applicable regulations, discussion of GHG emissions generated during the Climate Action Plan (CAP) implementation, and discussion about their contribution to global climate change. In addition, mitigation measures are recommended to reduce the project's potential impacts.

Comments received during the Notice of Preparation (NOP) scoping process regarding environmental impacts and potential alternatives and mitigation measures included the following: in evaluating the 2050 state goal, the CAP should not rely on the federal government in achieving emissions reduction targets. These concerns are addressed in Impact 3.7-1, below. A copy of the NOP and comment letters received in response to the NOP are included in Appendix A of this Draft Program Environmental Impact Report (Draft EIR).

3.7.1 Environmental Setting

THE PHYSICAL SCIENTIFIC BASIS OF GREENHOUSE GAS EMISSIONS AND CLIMATE CHANGE

Certain gases in the earth's atmosphere, classified as GHGs, play a critical role in determining the earth's surface temperature. Solar radiation enters the atmosphere from space. A portion of the radiation is absorbed by the earth's surface, and a smaller portion of this radiation is reflected toward space. The absorbed radiation is then emitted from the earth as low-frequency infrared radiation. The frequencies at which bodies emit radiation are proportional to temperature. The earth has a much lower temperature than the sun; therefore, the earth emits lower frequency radiation. Most solar radiation passes through GHGs; however, infrared radiation is absorbed by these gases. As a result, radiation that otherwise would have escaped back into space is instead "trapped," resulting in a warming of the atmosphere. This phenomenon, known as the greenhouse effect, is responsible for maintaining a habitable climate on earth.

Prominent GHGs contributing to the greenhouse effect are carbon dioxide (CO_2), methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. Human-caused emissions of these GHGs in excess of natural ambient concentrations are found to be responsible for intensifying the greenhouse effect and leading to a trend of unnatural warming of the earth's climate, known as global climate change or global warming. It is "extremely likely" that more than half of the observed increase in global average surface temperature from 1951 to 2010 was caused by the anthropogenic increase in GHG concentrations and other anthropogenic forcing (Intergovernmental Panel on Climate Change [IPCC] 2014:5).

Climate change is a global problem. GHGs are global pollutants, unlike criteria air pollutants and toxic air contaminants, which are pollutants of regional and local concern. Whereas most pollutants with localized air quality effects have relatively short atmospheric lifetimes (approximately 1 day), GHGs have long atmospheric lifetimes (1 year to several thousand years). GHGs persist in the atmosphere long enough to be dispersed around the globe. Although the lifetime of any GHG molecule depends on multiple variables and cannot be determined with any certainty, it is understood that more CO_2 is emitted into the atmosphere than is sequestered by ocean uptake, vegetation, and other forms of sequestration. Of the total annual human-caused CO_2 emissions, approximately 55 percent are estimated to be sequestered through ocean and land uptake every year, averaged over the last 50 years, whereas the remaining 45 percent of human-caused CO_2 emissions remain stored in the atmosphere (IPCC 2013:467).

The quantity of GHGs in the atmosphere responsible for climate change is not precisely known, but it is enormous. No single project alone would measurably contribute to an incremental change in the global average temperature or to global or local climates or microclimates. From the standpoint of the California Environmental Quality Act (CEQA), GHG impacts relative to global climate change are inherently cumulative.

Greenhouse Gas Emission Sources

The total GHG inventory for California in 2016 was 429 million metric tons of carbon dioxide equivalent ($MMTCO_2e$) (CARB 2018b). This is less than the 2020 target of 431 $MMTCO_2e$ established under Assembly Bill (AB 32) (CARB 2018c:1). Transportation, industry, and electricity generation are the largest GHG emission sectors in California. A GHG inventory for the unincorporated portion of Napa County is summarized in Table 2-1 of Chapter 2, "Project Description."

EFFECTS OF CLIMATE CHANGE ON THE ENVIRONMENT

According to the IPCC, which was established in 1988 by the World Meteorological Organization and the United Nations Environment Programme, global average temperature will increase by 3.8 to 4.8 degrees Celsius (°C) (6.7 to 8.6 degrees Fahrenheit [°F]) by the end of the century unless additional efforts to reduce GHG emissions are made (IPCC 2014:10). According to the California Energy Commission (CEC), temperatures in California will warm by approximately 2.7°F above 2000 averages by 2050 and by 4.1°F to 8.6°F by 2100, depending on emission levels (CEC 2012:2).

Other environmental resources could be indirectly affected by the accumulation of GHG emissions and the resulting rise in global average temperature. In recent years, California has been marked by extreme weather and its effects. According to the California Natural Resources Agency's (CNRA) *Safeguarding California Plan: 2018 Update*, California experienced the driest 4-year statewide precipitation on record from 2012 through 2015; the warmest years on average in 2014, 2015, and 2016; and the smallest and second smallest Sierra snowpack on record in 2015 and 2014 (CNRA 2018:55). In contrast, the northern Sierra Nevada experienced its wettest year on record during the 2016-2017 water year (CNRA 2018:64). The changes in precipitation exacerbate wildfires throughout California, increasing their frequency, size, and devastation. As temperatures increase, the amount of precipitation falling as rain rather than snow also increases, which could lead to increased flooding because water that would normally be held in the snowpack of the Sierra Nevada and Cascade Range until spring would flow into the Central Valley during winter rainstorm events. This scenario would place more pressure on California's levee/flood control system (CNRA 2018:190–192). Furthermore, in the extreme scenario involving the rapid loss of the Antarctic ice sheet, the sea level along California's coastline could rise up to 10 feet by 2100, which is approximately 30–40 times faster than the sea-level rise experienced over the last century (CNRA 2017:102). Changes in temperature, precipitation patterns, extreme weather events, wildfires, and sea-level rise have the potential to threaten transportation and energy infrastructure and crop production (CNRA 2018:64, 116–117, 127).

Cal-Adapt is a climate change scenario planning tool developed by CEC that downscales global climate model data to local and regional resolution under two emissions scenarios. The Representative Concentration Pathway (RCP) 8.5 scenario represents a business-as-usual future emissions scenario, and the RCP 4.5 scenario represents a future with reduced GHG emissions. According to Cal-Adapt, annual average temperatures in Napa County are projected to rise by 5.2 to 8°F by 2100, with the range based on low and high emissions scenarios (CEC 2018a).

3.7.2 Regulatory Setting

FEDERAL PLANS, POLICIES, LAWS, AND REGULATIONS

Regulations for Greenhouse Gas Emissions from Passenger Cars and Trucks and Corporate Average Fuel Economy Standards

In October 2012, EPA and the National Highway Traffic Safety Administration, issued final rules to further reduce GHG emissions and improve corporate average fuel economy (CAFE) standards for light-duty vehicles for model years 2017 and beyond (77 Federal Register [FR] 62624). These rules would increase fuel economy to the equivalent of 54.5 miles per gallon, limiting vehicle emissions to 163 grams of CO_2 per mile for the fleet of cars and light-duty trucks by model year 2025 (77 FR 62630). However, on April 2, 2018, the

EPA administrator announced a final determination that the current standards are not appropriate and should be revised. On August 2, 2018, the United States Department of Transportation and EPA proposed the Safer Affordable Fuel-Efficient Vehicles Rule, which would amend existing CAFE and tailpipe CO_2 emissions standards for passenger cars and light trucks and establish new standards covering model years 2021 through 2026. The proposal would retain the model year 2020 standards for both programs through model year 2026 (NHTSA 2018).

Clean Power Plan

In 2015, EPA unveiled the Clean Power Plan. The purpose of the plan was to reduce CO_2 emissions from electrical power generation by 32 percent relative to 2005 levels within 25 years. EPA is proposing to repeal the Clean Power Plan because of a change to the legal interpretation of Section 111(d) of the federal Clean Air Act, on which the Clean Power Plan was based. The comment period on the proposed repeal closed April 26, 2018. A final ruling by EPA has not yet been issued.

STATE PLANS, POLICIES, LAWS, AND REGULATIONS

Plans, policies, regulations, and laws established by state agencies are generally presented in the order they were established.

Statewide GHG Emission Targets and the Climate Change Scoping Plan

Reducing GHG emissions in California has been the focus of the state government for approximately two decades (State of California 2018). GHG emission targets established by the state legislature include reducing statewide GHG emissions to 1990 levels by 2020 (Assembly Bill [AB] 32 of 2006) and reducing them to 40 percent below 1990 levels by 2030 (Senate Bill [SB] 32 of 2016). Executive Order (EO) S-3-05 calls for statewide GHG emissions to be reduced to 80 percent below 1990 levels by 2050. EO B-55-18 calls for California to achieve carbon neutrality by 2045 and achieve and maintain net negative GHG emissions thereafter. These targets are in line with the scientifically established levels needed in the United States to limit the rise in global temperature to no more than 2°C, the warming threshold at which major climate disruptions, such as super droughts and rising sea levels, are projected; these targets also pursue efforts to limit the temperature increase even further to 1.5°C (United Nations 2015:3).

California's 2017 Climate Change Scoping Plan (2017 Scoping Plan), prepared by the California Air Resources Board (CARB), outlines the main strategies California will implement to achieve the legislated GHG emission target for 2030 and "substantially advance toward our 2050 climate goals" (CARB 2017:1, 3, 5, 20, 25–26). It identifies the reductions needed by each GHG emission sector (e.g., transportation, industry, electricity generation, agriculture, commercial and residential, pollutants with high global warming potential, and recycling and waste). CARB and other state agencies are currently developing a Natural and Working Lands Climate Change Implementation Plan consistent with the carbon neutrality goal of EO B-55-18.

The state has also passed more detailed legislation addressing GHG emissions associated with industrial sources, transportation, electricity generation, and energy consumption, as summarized below.

Cap-and-Trade Program

CARB administers the state's cap-and-trade program, which covers GHG emission sources that emit more than 25,000 metric tons of carbon dioxide equivalent ($MTCO_2e$) per year, such as refineries, power plants, and industrial facilities. This market-based approach to reducing GHG emissions provides economic incentives for achieving GHG emission reductions.

Transportation-Related Standards and Regulations

As part of its Advanced Clean Cars program, CARB established more stringent GHG emission standards and fuel efficiency standards for fossil fuel–powered on-road vehicles. In addition, the program's zero-emission vehicle (ZEV) regulation requires battery, fuel cell, and plug-in hybrid electric vehicles to account for up to 15 percent of California's new vehicle sales by 2025 (CARB 2016a:15). By 2025, when the rules will be fully implemented,

GHG emissions from the statewide fleet of new cars and light-duty trucks will be reduced by 34 percent and cars will emit 75 percent less smog-forming pollution than the statewide fleet in 2016 (CARB 2016b:1).

EO B-48-18, signed into law in January 2018, requires all state entities to work with the private sector to have at least 5 million ZEVs on the road by 2030, as well as 200 hydrogen fueling stations and 250,000 electric vehicle–charging stations (EVCS) installed by 2025. It specifies that 10,000 of these charging stations must be direct-current fast chargers.

CARB adopted the Low Carbon Fuel Standard (LCFS) in 2007 to reduce the carbon intensity of California's transportation fuels. The LCFS applies to fuels used by on-road motor vehicles and by off-road vehicles, including construction equipment (Wade, pers. comm., 2017).

In addition to regulations that address tailpipe emissions and transportation fuels, the state legislature has passed regulations to address the amount of driving by on-road vehicles. Since passage of SB 375 in 2008, CARB requires metropolitan planning organizations (MPOs) to adopt plans showing reductions in GHG emissions from passenger cars and light trucks in their respective regions for 2020 and 2035 (CARB 2018a:1). These plans link land use and housing allocation to transportation planning and related mobile-source emissions. The Association of Bay Area Governments (ABAG) and the Metropolitan Transportation Commission (MTC) serve as the MPO for Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, and Sonoma Counties. ABAG and MTC adopted Plan Bay Area 2040, the long-range Regional Transportation Plan and Sustainable Communities Strategy (RTP/SCS) in 2017. CARB's targets for the MTC/ABAG region call for a 7 percent reduction in GHG emissions per capita from automobiles and light-duty trucks compared to 2005 levels by 2020, and a 15 percent reduction by 2035 (CARB 2018a:1).

Under SB 743 of 2013, the Governor's Office of Planning and Research (OPR) proposed changes to the State CEQA Guidelines, including the addition of Section 15064.3, which would require that CEQA transportation analysis move away from focusing on vehicle delay and level of service (OPR 2017a:77–90). In support of these changes, OPR published its *Technical Advisory on Evaluating Transportation Impacts in CEQA*, which recommends that the transportation impact of a project be based on whether the project would generate a level of vehicle miles traveled (VMT) per capita (or VMT per employee) that is 15 percent lower than that of existing development in the region (OPR 2017b:12–13). OPR's technical advisory explains that this criterion is consistent with Section 21099 of the California Public Resources Code, which states that the criteria for determining significance must "promote the reduction in GHG emissions" (OPR 2017b:18). This metric is intended to replace the use of delay and level of service to measure transportation-related impacts. More detail about SB 743 is provided in the "Regulatory Setting" section of Section 3.8, "Transportation." OPR's proposed addition of Section 15064.3 to the State CEQA Guidelines was adopted in November 2018. However, at the time this Draft EIR was prepared, the Office of Administrative Law has not yet approved the proposed changes to the State CEQA Guidelines.

Legislation Associated with Electricity Generation

The state has passed legislation requiring the increasing use of renewables to produce electricity for consumers. California utilities are required to generate 33 percent of their electricity from renewables by 2020 (SB X1-2 of 2011); 52 percent by 2027 (SB 100 of 2018); 60 percent by 2030 (also SB 100 of 2018); and 100 percent by 2045 (also SB 100 of 2018).

Building Energy Efficiency Standards (Title 24, Part 6)

The energy consumption of new residential and nonresidential buildings in California is regulated by the state's Title 24, Part 6, Building Energy Efficiency Standards (California Energy Code). The CEC updates the California Energy Code every 3 years with more stringent design requirements for reduced energy consumption, which results in the generation of fewer GHG emissions. The current California Energy Code (2016) is scheduled to be replaced by the 2019 standards on January 1, 2020. The 2019 California Energy Code will require builders to use more energy-efficient building technologies for compliance with increased restrictions on allowable energy use. Additionally, new residential units will be required to include solar panels, sized to offset the estimated electrical requirements of each unit (CCR, Title 24, Part 6, Section

150.1[c]14). CEC estimates that the combination of required energy-efficiency features and mandatory solar panels in the 2019 California Energy Code will result in new residential buildings that use 53 percent less energy than those designed to meet the 2016 California Energy Code. The CEC also estimates that the 2019 California Energy Code will result in new commercial buildings that use 30 percent less energy than those designed to meet the 2016 standards, primarily through the transition to high-efficacy lighting (CEC 2018b).

LOCAL PLANS, POLICIES, LAWS, AND REGULATIONS

Bay Area Air Quality Management District

The Bay Area Air Quality Management District (BAAQMD) is the primary agency responsible for addressing air quality concerns in Napa County. BAAQMD also recommends methods for analyzing project-generated GHGs in CEQA analyses and offers multiple potential GHG reduction measures for land use development projects. BAAQMD developed thresholds of significance to provide a uniform scale to measure the significance of GHG emissions from land use and stationary source projects in compliance with CEQA and AB 32. However, since the passage of SB 32 and AB 197 and the associated adoption of a revised statewide emissions target of 40 percent below 1990 levels by 2030, BAAQMD has not developed new thresholds in compliance with this target.

Napa County General Plan

The *Napa County General Plan* includes the following applicable policies related to reducing GHG emissions in Napa County (Napa County 2013):

- **Policy CON-65:** The County shall support efforts to reduce and offset GHG emissions and strive to maintain and enhance the County's current level of carbon sequestration functions through the following measures (Pursuant to Mitigation Measure 4.8.7 of the Napa County General Plan EIR):

  a) Study the County's natural, agricultural, and urban ecosystems to determine their value as carbon sequesters and how they may potentially increase.

  b) Preserve and enhance the values of Napa County's plant life as carbon sequestration systems to recycle GHGs.

  c) Perpetuate policies in support of urban-centered growth and agricultural preservation preventing sprawl.

  d) Perpetuate policies in support of alternative modes of transportation, including transit, paratransit, walking, and biking.

  e) Consider GHG emissions in the review of discretionary projects. Consideration may include an inventory of GHG emissions produced by the traffic expected to be generated by the project, any changes in carbon sequestration capacities caused by the project, and anticipated fuel needs generated by building heating, cooling, lighting systems, manufacturing, or commercial activities on the premises. Projects shall consider methods to reduce GHG emissions and incorporate permanent and verifiable emission offsets.

  f) Establish partnerships with experts, trade associations, non-governmental associations, and community and business leaders to support and participate in programs related to global climate change.

- **Policy CON-66:** The County shall promote the implementation of sustainable practices and green technology in agriculture, commercial, industrial, and residential development through the following actions:

  a) Project Construction

     1) Utilize recycled, low-carbon, and otherwise climate-friendly building materials such as salvaged and recycled content materials for buildings, hard surfaces, and landscaping materials.

2) Minimize, reuse, and recycle construction-related waste.

3) Utilize alternative fuels in construction equipment and require construction equipment to utilize the best available technology to reduce emissions.

- **Policy CON-67:** The County shall promote and encourage "green building" design, development, and construction through the achievement of Leadership in Energy and Environmental Design (LEED) standards set by the U.S. Green Building Council, the Green Point Rated system standards set by Builditgreen.org, or equivalent programs. Actions in support of this policy shall include:

  a) Audit current County practices to assess opportunities and barriers to implementation of current sustainable practices.

  b) Amend the County Code as necessary to remove barriers to and encourage "green" construction.

  c) Develop new County buildings as "green buildings," utilizing sustainable construction and practices.

  d) Encourage all new large development projects and major renovation of existing facilities to be based on Green Building Council standards utilizing sustainable construction and practices to achieve a minimum LEED rating of Silver, or comparable level on the Green Point Rated system per standards set by Builditgreen.org or other comparable updated rating systems.

  e) Support state and federal incentive programs that offer rebates and cost sharing related to the implementation of "green building" standards and LEED certification.

- **Policy CON-73:** The County shall monitor the ecological effects of climate change in Napa County over time, including sea level rise, effects on water resources, local microclimates, native vegetation, agriculture, and the economy. Consistent with the principle of adaptive management, the County shall adapt policies and operations to address identified effects as feasible.

- **Policy CON-74:** The County shall evaluate new technologies for energy generation and conservation and solid waste disposal as they become available and shall pursue their implementation as appropriate in a manner consistent with the principle of adaptive management. This evaluation shall include review of promising technological advances which may be useful in decreasing County GHG emissions, increase in renewable energy that is generated locally, and review of the County's success in meeting targets for GHG emission reductions.

- **Policy CON-75:** The County shall work to implement all applicable local, state, and federal air pollution standards, including those related to reductions in GHG emissions.

3.7.3 Environmental Impacts and Recommended Mitigation Measures

METHODS AND ASSUMPTIONS

The overarching intent of the CAP is to reduce GHG emissions; however, certain measures may lead to a temporary increase in GHG emissions in the City and are analyzed below.

PROPOSED CAP GHG REDUCTION AND ADAPTATION MEASURES

Table 2.4 of the Draft EIR provides a list of proposed GHG reduction measures, including both primary and supporting measures, and climate adaptation measures in the CAP that would be implemented by the County. None of the proposed measures indicate where specific improvements would be constructed, their size, or specific characteristics. As a program EIR, the Draft EIR does not, and cannot, speculate on the

individual environmental impacts of specific future projects or improvements. However, implementation of all GHG reduction and adaptation measures was considered during preparation of the Draft EIR to the degree specific information about implementation is known. Consistent with the requirements of the CEQA Guidelines Section 15168, this Draft EIR provides a program-level discussion of the potential general impacts of implementing these measures, rather than project-level or site-specific physical impacts of such actions. Only those measures that have the potential to affect GHG emissions are listed below. All other measures in Table 2.4 would have no effect on air quality and are not discussed further.

- **Primary Measure AG-1: Support the conversion of stationary diesel or gas-powered irrigation pumps to solar, electric, or other alternative fuel.** This measure would result in an incentive program that would aid in the conversion from diesel or gas-powered irrigation pumps to electric, solar, or alternatively-powered pumps. This would have a long-term beneficial GHG impact as it reduces the burning of fossil fuels. A short-term GHG impact would result during pump replacement activities, primarily from worker trips.

- **Primary Measure AG-2: Support use of electric or alternatively-fueled agricultural equipment.** This measure would result in the development of an incentive program that would aid in the transition from gas and diesel-powered engines to electric engines in agricultural equipment. This would have a long-term beneficial GHG impact as it reduces the burning of fossil fuels.

- **Primary Measure AG-5: Support BAAQMD in efforts to reduce open burning of removed agricultural biomass and flood debris**. This measure would result in the promotion of alternatives to burning biomass materials, such as chipping, mastication, use of materials onsite, and/or hauling materials to off-site locations. While chipping, mastication, and hauling offsite could result in the production of some new GHG emissions, it would result in fewer GHG emissions than if the materials were burned.

- **Primary Measure BE-4: Require new or replacement water heating systems to be electrically powered or alternatively fueled (e.g., solar water heating) for all residential land uses.** This measure would result in a new ordinance or revisions to the County Code that would require replacement water heaters to be electric or alternatively fueled. This would reduce the number of gas water heaters in use. This would have a long-term beneficial GHG impact as it reduces the burning of fossil fuels.

- **Primary Measure BE-5: Expand current renewable energy and green energy incentives and update local ordinances.** This measure would result in an expansion of incentives for renewable energy systems that would increase participation by individual property owners. This measure would result in the installation of new private renewable energy systems including new photovoltaic, small-scale wind turbines, solar water heating systems, geothermal ground source heat pump, and battery storage. GHGs would be emitted during project construction, operation, and maintenance of infrastructure. However, this measure would lead to a long-term reduction in GHG emissions as it reduces the burning of fossil fuels.

- **Primary Measure BE-7: Support Waste-to-Energy Programs at Unincorporated Landfills.** This measure will result in gas that is captured through existing landfill gas capture systems being reused for energy, rather than being flared. This measure could result in new infrastructure on-site or off-site to process landfill gas so that it can be used for energy generation or other end-uses such as CNG for fuel in vehicles. GHGs would be emitted during project construction, operation, and maintenance of infrastructure. However, this measure would lead to a long-term reduction in GHG emissions as it reduces the burning of fossil fuels.

- **Supporting Measure BE-8: Work with PG&E, BayREN, MCE, PACE financing programs, and other regional partners to incentivize energy efficiency improvements in existing buildings.** This measure would result in coordination among the County and partner organizations to incentivize energy efficiency improvements in existing buildings. This could result in nominal construction activities, which would generate short-term GHG emissions. However, this measure would lead to a long-term reduction in GHG emissions as it reduces the burning of fossil fuels.

- **Supporting Measure BE-9: Require energy audits for major additions to or alterations of existing buildings.** This measure would result in an amendment to the County Code to require energy audits when a building permit application is submitted to increase energy efficiency. Permit applicants would be required to incorporate all cost-effective improvements into the project to increase energy efficiency per the recommendations of the audit. This could result in nominal construction activities, which would generate short-term GHG emissions. However, this measure would lead to a long-term reduction in GHG emissions as it reduces the burning of fossil fuels.

- **Supporting Measure BE-10: Develop a program to allow new development to offset project GHG emissions by retrofitting existing income-qualified homes and buildings.** This would result in the development of a program that would allow new development to contribute energy efficiency retrofits to existing income qualified homes and buildings. This could result in nominal construction activities, which would generate short-term GHG emissions. However, this measure would lead to a long-term reduction in GHG emissions as it reduces the burning of fossil fuels.

- **Supporting Measure BE-11: Encourage Solar Panel Installations on Warehouse Roof Space.** This measure would result in an expansion of incentives for renewable energy systems that would increase participation by individual property owners. This measure would result in the installation of new private renewable energy systems. GHGs would be emitted during project construction, operation, and maintenance of infrastructure. However, this measure would lead to a long-term reduction in GHG emissions as it reduces the burning of fossil fuels.

- **Primary Measure LU-1: Establish targets and enhanced programs for oak woodland and coniferous forest preservation and mandatory replanting.** This effort would result in preservation activities aimed at reducing the net loss of oak woodlands and coniferous forests. The program would include replanting activities that could result in minor GHG emissions impacts due to worker trips and use of heavy equipment. However, this measure would lead to a long-term reduction in GHG emissions as it increases carbon sequestration.

- **Primary Measure LU-3: Repurpose or otherwise prevent burning of removed trees and other woody material from land use conversions of oak**. This effort would result in repurposing timber and woody materials that are collected during oak woodlands and forest conversion. While chipping, mastication, and hauling offsite could result in the production of some new GHG emissions, it would result in fewer GHG emissions than if the materials were burned.

- **Primary Measure TR-8: Support Napa County's incorporated cities in developing transit-oriented development unique to the needs of the Napa Region.** This would result in collaboration among the County and incorporated cities to create a more robust visitor-friendly environment around the Soscol Gateway Transit Center (and future transit centers) to encourage additional users. Short-term GHG emissions would be generated during the construction, operation, and maintenance of visitor-friendly infrastructure.

- **Primary Measure TR-10: Work with Napa County's incorporated cities, Napa Valley Transportation Authority, and neighboring regions to increase presence of park and ride facilities near residential centers.** This effort would result in new park and ride facilities which would reduce long-term GHG emissions by decreasing the amount of vehicles on the road. Short-term GHG emissions would be generated during the construction of park and ride facilities.

- **Primary Measure TR-12: Increase the supply of electric vehicle charging stations.** This measure would result in the installation of new EVCS in priority areas including existing commercial areas, major visitor attractions, and multifamily complexes. Short-term GHGs would be emitted during the installation of EVCS. However, these emissions would be offset by long-term reduction in GHGs due to decreased fuel consumption.

- **Primary Measure TR-14: Develop and implement active transportation projects.** This measure would result in the development and construction of new pedestrian, trail, and bicycle improvements. Short-term GHGs would be emitted during construction. However, these emissions would be offset by long-term reduction in GHGs due to decreased fuel consumption.

- **Primary Measure TR-15: Require new development projects to evaluate and reduce VMT.** This measure would implement roadway improvements to reduce VMT by calming traffic and improving the bicyclist and pedestrian infrastructure and would occur as part of resurfacing projects within existing paved areas. Short-term GHGs would be emitted during construction. However, these emissions would be offset by long-term reduction in GHGs due to decreased fuel consumption.

- **Primary Measure TR-16: Convert 50 percent of County fleet vehicles to alternative fuels by 2030.** This measure would convert 50 percent of the County vehicle fleet to alternative fuels by 2030. This would have a long-term beneficial GHG impact as it reduces the burning of fossil fuels.

- **Primary Measure SW-1: Encourage expansion of composting programs for both residential and commercial land uses.** This measure would result in the expansion of composting programs which would reduce GHG emissions by decreasing methane in landfills. Although this would result in new vehicle trips related to new or expanded composting collection services, the associated GHG emissions would be offset by a reduction in vehicle trips to landfills as well as a reduction in methane emissions at landfills.

- **Primary Measure SW-2: Meet an 80 percent Waste Diversion Goal by 2020 and a 90 percent Waste Diversion Goal by 2030.** This measure could result in new/expanded waste processing and diversion facilities throughout the unincorporated County. GHGs would be emitted during project construction, operation, and maintenance of new or expanded facilities. However, a long-term reduction in GHG emissions would result from methane emissions reductions.

- **Adaptation Measure Temp-6: Improve Parking Lot Shading and Landscaping**. This measure would result in increased parking lot shading and trees and landscaping to help reduce heat island effect. This would result in nominal GHG emissions related to increased tree planting/landscaping efforts and installation of solar PV canopies. However, a long-term reduction in GHG emissions would result due to decreased energy consumption.

- **Adaptation Measure Fire-5: Collaborate on Programs to Reduce Fire Hazards**. This measure would result in increased collaboration to improve resiliency related to wildfire hazards. This could include thinning, removing, or chipping vegetation and prescribed burning, which would result in short-term GHG emissions. However, these emissions would be lower than GHG emissions from a wildfire on untreated lands.

- **Adaptation Measure Water-2: Consider Innovative Options to Meet Future Demand.** This measure would result in the development and implementation of water supply resiliency strategies such as graywater systems, recycled water, and other water conservation strategies. This could result in GHG emissions related to the construction and operation of new or updated infrastructure. However, a long-term reduction in GHG emissions would result due to water conservation and associated savings in energy consumption.

- **Adaptation Measure Water-5: Collaborate with Agencies to Identify Future Water Supplies and Explore Alternative Supply Sources.** This measure would result in increased collaboration to identify future water supply options, including expanded use of on-site graywater, recycled water, or other water conservation options. This could result in GHG emissions related to the construction and operation of new or updated infrastructure. However, a long-term reduction in GHG emissions would result due to water conservation and associated savings in energy consumption.

- **Adaptation Measure Flood-3: Identify Potential Streamside Restoration Areas**. This measure would result in the identification and restoration of stream banks within the unincorporated county to buffer buildings, roads, and crops from increased flooding potential. GHGs would be emitted during construction activities but would be minor and temporary in nature.

- **Adaptation Measure Flood-4: Encourage Replanting Bare or Disturbed Areas**. This measure would result in the identification and restoration of areas that are subject to erosion within the unincorporated county to improve water quality and reduce stream sedimentation. GHGs would be emitted during construction but would be minor and temporary in nature.

- **Adaptation Measure Flood-7: Improve Capacity of Storm Water Infrastructure**. This measure would result in improved storm water infrastructure and improved resilience for high intensity rain events. GHGs would be emitted during project construction and maintenance of new or updated infrastructure.

THRESHOLDS OF SIGNIFICANCE

The issue of global climate change is inherently a cumulative issue, as the GHG emissions of individual projects cannot be shown to have any material effect on global climate. Thus, the project's impact to climate change is addressed only as a cumulative impact.

CEQA Guidelines Section 15064 and relevant portions of Appendix G recommend that a lead agency consider a project's consistency with relevant adopted plans, and discuss any inconsistencies with applicable regional plans, including plans to reduce GHG emissions. In Appendix G of the State CEQA Guidelines, two questions are provided to help assess if the project would result in a potentially significant impact on climate change. These questions ask whether the project would:

- Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment; or

- conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs.

ISSUES NOT DISCUSSED FURTHER

As described in Chapter 2, Project Description, implementation of the CAP and the targets and strategies identified therein necessitate changes to Policy CON-65 e) of the County's General Plan (2008 GP). The proposed changes would require that all discretionary development projects demonstrate consistency with the CAP by substantiating compliance through the CAP Consistency Checklist. As described in Section 2.4.2, Project Description, proposed changes to the adopted policy of the General Plan requires the County to implement a General Plan Amendment (GPA) as part of the administrative approval process.

The CAP EIR evaluates the GPA as part of the series of actions associated with implementation of the CAP. The changes reflected in the GPA support and are consistent with implementation of the CAP, its GHG targets, and GHG reduction measures. No additional activities or measures, other than those described in the CAP, would occur as a result of implementation of the GPA. Therefore, the GPA is not evaluated separately from the actions proposed by the CAP, but rather its implementation is within the scope of the overall impact analysis of the EIR. As described in Section 2.4.3, Project Description, to provide a mechanism by which projects can demonstrate consistency with the CAP, a CAP Consistency Checklist is included as Appendix D of the CAP. The CAP Consistency Checklist is a tool by which the County will track and determine a project's consistency with the CAP and how it would achieve GHG reductions through project design features or project-specific mitigation measures that are consistent with the GHG reduction measures in the CAP. No physical projects or improvements other than those described in the CAP are included or would be approved with approval of the checklist. As such, like the GPA, the CAP Consistency Checklist is not evaluated separately from the actions proposed by the CAP.

In summary, the physical changes and associated environmental impacts of all GHG reduction measures and adaptation measures have been evaluated throughout the CAP EIR. The GPA and CAP Consistency Checklist which are included as part of the project are not addressed as a separate impact discussion below. These administrative mechanisms on their own would not result in any physical impacts that would require separate evaluation below and are not discussed further.

IMPACT ANALYSIS

Impact 3.7-1: Generate GHG Emissions, Either Directly or Indirectly, that may have a Significant Impact on the Environment

The GHG reduction and adaptation measures would directly or indirectly emit GHG emissions during construction and operations. GHG emissions would result from the operation of construction equipment, construction worker vehicle trips, and truck hauling trips. During the operational phase, some CAP measures may require additional staffing, resulting in increased vehicle trips and associated GHG emissions. Overall, the CAP is intended to reduce GHG emissions generated within the County by using alternatively fueled vehicles, reducing VMT, using renewable energy, reducing waste generation, and increasing water conservation. Thus, the effects associated with the reduction of GHG emissions in the County would be beneficial. Implementation of the GHG reduction and adaptation measures would not generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment. Impacts would be **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; however, construction and operation of GHG reduction and adaptation measures that would be implemented with CAP adoption have the potential to directly or indirectly emit GHG emissions. GHG emissions would result from the operation of construction equipment, construction worker vehicle trips, and truck hauling trips. During the operational phase, some CAP measures may require additional staffing, resulting in increased vehicle trips and associated GHG emissions. The following section describes the GHG emissions that could result from the implementation of the CAP.

Fuel Efficiency and Replacement Measures

GHG reduction measures that would encourage the conversion of diesel or gas-powered agricultural equipment to electricity or alternative fuels and require new or replacement water heating systems to be electrically powered or alternatively fueled (AG-1, AG-2, BE-4) would result in minor GHG emissions from equipment and vehicle trips. These types of small conversion and replacement activities would not require the use of heavy construction equipment and would rely on small hand-held equipment, if any at all. Any emissions associated with these improvements would be minimal and temporary and would not generate substantial GHG emissions. Furthermore, the conversion from gas or diesel to electric or alternative fuels could result in a long-term reduction in GHG emissions due to decreases in the burning of fossil fuels.

GHG reduction measure TR-16 would convert 50 percent of the County vehicle fleet to alternative fuels by 2030. This measure would not result in new temporary or operational GHG emissions and would result in a long-term reduction in GHG emissions due to decreases in the burning of fossil fuels.

Transportation, Water, Stormwater, and Grid Utility Infrastructure Measures

GHG reduction measures that would result in the construction of new active transportation facilities and infrastructure such as visitor-friendly infrastructure; park and ride facilities; EVCS; and pedestrian, trail, and bicycle improvements (TR-8, TR-10, TR-12, TR-14, TR-15) would result in GHG emissions from construction equipment and vehicle trips. Construction activities may include grading, clearing, and paving, but would not include construction of new buildings or structures. Operational emissions associated with these improvements would be minimal and generated by occasional use of maintenance equipment. Furthermore, these measures would encourage a shift towards alternative modes of transportation and reduce single-occupancy vehicle trips, resulting in an overall reduction in County-wide GHG emissions.

Adaptation measures that would result in the construction and operation of water, and stormwater facilities (Water-2, Water-5Flood-7,) would result in GHG emissions from the operation of construction equipment and additional vehicle trips. Construction activities may include grading and site preparation, excavation and trenching, and the construction of new infrastructure. If additional staff and energy to power new facilities are required, long-term emissions may result from increased vehicle trips and energy consumption.

Vegetation Management Measures

GHG reduction measures that would result in the chipping, mastication, and hauling of biomass as opposed to open burning (AG-5, LU-3) would result in GHG emissions from mechanical equipment such as chippers, masticators, and loaders; as well as vehicle trips for worker commute and transport of materials. However, these GHG emissions would be offset by the avoided emissions from open burning of the same material.

GHG reduction and adaptation measures that would result in tree planting and restoration (LU-1, Temp-6, Flood-3, Flood-4) would result in minor GHG emissions from equipment and vehicle trips. These activities would not require heavy equipment but could result in a small amount of GHG emissions due to distribution of trees and watering at the beginning of the establishment period. Any emissions associated with these improvements would be minimal and temporary and would not generate substantial GHG emissions.

Adaptation measure Fire-5 is intended to improve resiliency to wildfire hazards. Activities such as thinning, chipping, or prescribed burns would be implemented to avoid uncontrolled wildfires. GHG emissions would result from mechanical equipment such as chippers, masticators, and loaders; as well as vehicle trips for worker commute and transport of materials. GHGs would also be emitted during prescribed burns. However, these GHG emissions would be offset by the avoided emissions from uncontrolled wildfire.

Small Scale Renewable Energy and Efficiency Measures

GHG reduction and adaptation measures that would result in retrofits to existing buildings and the construction of small-scale private renewable energy systems such as photovoltaic, wind turbines, solar water heating systems, geothermal ground source heat pump, and battery storage (BE-5, BE-9,BE-8, BE-10, BE-11) would not involve large amounts of labor, construction equipment, or long-term maintenance activities. Thus, these measures would not be expected to result in substantial GHG emissions. Furthermore, any temporary GHG emissions would be offset by the by the overall net benefit of GHG emissions reduction during the operation of the small-scale private renewable energy systems.

Waste Diversion and Compost Measures

GHG reduction measures that would result in the expansion of existing composting programs and new or expanded waste processing and diversion facilities (SW-1, SW-2) would result in GHG emissions from construction equipment, vehicle trips, anaerobic decomposition, and stationary sources. Construction activities would primarily consist of grading and clearing land and construction of small structures. The anaerobic decomposition of the waste would result in emissions of methane; however, the diversion of waste from landfills to organics processing facilities would reduce emissions from decomposition of organic waste in landfills. Generators used for aeration and powering water pumps generate GHG emissions, but the emissions are typically minimal. Operation of new or expanded composting programs and waste diversion facilities would result in increased haul truck trips to and from the facility; however, it is anticipated that these trips would displace the haul truck trips that would be diverted from the landfill. Therefore, a net increase in the number of haul truck trips and associated GHG emissions within the County is not anticipated. Similarly, increased construction and demolition waste recycling and collection of commercial food scraps and household hazardous waste is expected to displace trips already occurring to transport this waste to landfills.

GHG reduction measures that could result in new infrastructure on- or off-site to process landfill gas for use as energy (BE-7) would result in GHG emissions from construction equipment and vehicle trips. Construction activities may involve site preparation, trenching for utilities and pipeline connections, and installation of new tanks and equipment. If additional staff are required to operate new infrastructure, long-term emissions may result from increased vehicle trips. However, the increase in alternative fuel use would result in a decrease in the burning of fossil fuels and an overall reduction in County-wide GHG emissions.

Impact Summary

Overall, the CAP is intended to reduce GHG emissions generated within the County by using alternatively fueled vehicles, reducing VMT, using renewable energy, reducing waste generation, and increasing water conservation. In addition, energy efficiency measures to reduce electricity use and renewable energy generation would reduce energy demand and associated GHG emissions at power plants generating electricity in the region. The effects associated with the reduction of GHG emissions in the County would be beneficial. Thus, implementation of the GHG reduction and adaptation measures would not generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment. Impacts would be **less than significant**.

Mitigation Measures

No mitigation is required.

Impact 3.7-2: Conflict with an Applicable Plan, Policy, or Regulation Adopted for the Purpose of Reducing the Emissions of GHGs

Applicable plans, policies, or regulations include statewide GHG emission targets for 2020 and 2030 established by AB 32 and SB 32; a longer-term 2050 goal established by EO S-3-05; the 2017 Scoping Plan, which identifies a statewide strategy to achieve the SB 32 target for 2030; Plan Bay Area 2040; regulations regarding increased use renewables for electricity production (SB X1-2 and SB 100); California Energy Code; and the Napa County General Plan (2013). Implementation of the GHG reduction measures would be consistent with the County's overall goal to reduce GHG emissions consistent with statewide targets and would support a variety of other state and local plans, policies, and regulations. The proposed CAP would reduce emissions by 2020 and 2030, consistent with legislatively-adopted State targets, through both local actions and legislative actions by state and federal agencies. The proposed CAP would also achieve substantial post-2030 emission reductions, in furtherance of the State's longer-term 2050 goals; and, the County would continuously monitor the CAP and update the targets, goals, and GHG reduction measures over time to reflect future state actions to update the Scoping Plan in view of the long-term 2050 goal, along with new or modified local measures to complement state actions needed to achieve the state's 2050 goal. Therefore, because the CAP would not conflict with applicable plans, policies, or regulations, this impact would be **less than significant**.

Based on Appendix G of the CEQA Guidelines, the project would have a significant impact if it would conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions. Applicable plans, policies, or regulations include statewide GHG emission targets established by AB 32 and SB 32; a longer-term statewide policy goals established by EO S-3-05; the 2017 Scoping Plan (which establishes a specific statewide plan to achieve the 2030 target); Plan Bay Area 2040, the region's long-range RTP/SCS; regulations regarding increased use renewables for electricity production (SB X1-2 and SB 100); California Energy Code; and the Napa County General Plan (2013).

As discussed in Section 2.4, "Reduction Targets," of the CAP, this CAP primarily focuses on reducing emissions by 2020 and 2030, consistent with and proportional to State mandates established in AB 32 and SB 32, per guidance for local targets and goals established in the 2017 Scoping Plan. While setting goals beyond 2030 is important to provide long-term objectives consistent with scientific evidence regarding global emissions levels, it is difficult for local governments to establish achievable post-2030 targets for which defensible reduction assumptions can be made. Local governments do not have jurisdictional authority to reduce GHG emissions for all activities and in all sectors required to achieve the State's long-term 2050 goal, as authority to regulate certain emissions activities or sources rests solely with state or federal agencies. Currently, considerable uncertainty exists regarding future changes in state and federal law beyond 2030, as well as the level of technological advancement required for cost-effective market transformation in many sectors. The 2017 Scoping Plan is focused on meeting the 2030 reduction target as directed in SB 32, but it does not identify a specific and achievable pathway for meeting the longer-term 2050 goal. Therefore, the County's CAP sets a 2030 target that is aligned with State targets and takes into

account associated State actions to achieve the 2030 target, along with a longer-term 2050 goal and foreseeable effects from both local actions and existing legislative actions that are aligned with the State's longer-term goal.

Section 2.3, "Forecasts," of the CAP provides an assessment of how the County's GHG emissions would change over time without further action from the County. In addition to accounting for the County's growth, a legislative-adjusted business as usual (BAU) forecast accounts for legislative actions at the local, State, and federal levels that would affect emissions, such as through local participation in MCE or statewide regulatory requirements to increase vehicle fuel efficiency (see Appendix B to the CAP for a comprehensive list of legislative actions included in the legislative-adjust BAU forecast). The selected future milestone years of 2020, 2030, and 2050 are generally based on the State's GHG reduction target years established in key State legislation and policies, including AB 32, SB 32, and EO S-3-05.

Based on the County's 2014 inventory, shown in Table 2-1 of the CAP, the targets and long-term goals above aim to reduce annual County emissions to 474,598, 290,570, and 111,385 $MTCO_2e$ by 2020, 2030, and 2050, respectively. As shown in Table 3.7-1 below, the County is already meeting the 2020 target due to existing legislative actions but would require substantial additional GHG reductions to meet the 2030 target and the long-term 2050 goal. The County would need to reduce annual legislative-adjusted BAU 2030 emissions by 57,683 $MTCO_2e$ (17 percent). However, meeting the long-term 2050 goal would require annual emissions reduction of 258,178 $MTCO_2e$, or 70 percent, beyond the effect of current legislative reductions.

Table 3.7-1 Recommended Greenhouse Gas Emissions Reduction Targets: 2020, 2030, and 2050

Scenario or Target	2014	2020	2030	2050
Baseline and Projections				
2014 Baseline GHG Inventory ($MTCO_2e$)	484,283	NA	NA	NA
Legislative-Adjusted BAU Forecast ($MTCO_2e$)	NA	463,821	348,253	369,563
Legislative-Adjusted BAU Forecast: Percent below Baseline (%)	NA	4	28	24
Targets				
Target Percent Reduction below Baseline (%)	NA	2	40	77
Target Annual Emissions ($MTCO_2e$)	NA	474,598	290,570	111,385
Gap Analysis				
Reduction from Baseline needed to meet Target ($MTCO_2e$)	NA	9,686	193,713	372,898
Reduction from Legislative-Adjusted BAU needed to meet Target ($MTCO_2e$)	NA	0	57,683	258,178
Additional Percent Reduction below Legislative-Adjusted BAU needed to meet Target (%)[1]	NA	0	17	70

Notes: BAU = Business as usual, $MTCO_2e$ = metric tons of carbon dioxide equivalent, GHG = greenhouse gas, NA = Not Applicable

Source: Appendix B Napa County Climate Action Plan

The scale of reductions required to achieve the much more aggressive longer-term 2050 goal outlined above would require significant improvements in the availability and/or cost of near-zero and zero-emissions technology, as well as potential increased reductions from ongoing State and federal legislative actions that are currently unknown. In the long term, the quantifiable measures in the CAP fall short of meeting the County's 2050 reduction goal, despite new innovations and technologies that will likely become available over the coming decades to enable further GHG reductions.

However, as stated in Chapter 5 of the CAP (Implementation and Monitoring), the CAP as a whole, along with the status and performance of individual GHG reduction measures, would be implemented, monitored and updated continuously starting in 2020 to ensure that the CAP stays on track to meet the 2030 target, and to provide for increasingly-effective reductions that will apply to longer-term goals or any future legislative

interim State targets that may be established on the downward trajectory towards the 2050 goal. The specific implementation and monitoring provisions in Section 5.3, "Monitoring and Updates" in the CAP include the following:

(1) Updates to the GHG Emission Inventory: The County will conduct periodic GHG emissions inventory updates at least every three years, beginning with the year 2020, to quantify whether overall progress is being made towards achieving emission reduction targets. The inventory updates will also serve as an opportunity to reevaluate the scope, methods, and assumptions in the inventory using the most recent GHG accounting and reporting protocols, which are constantly evolving along with global climate change science and policy.

(2) Monitor Implementation Status and Performance of Measures:

Implementation monitoring: County staff will monitor the implementation status of all GHG and adaptation measures in the plan on a quarterly basis.

Performance Monitoring: County staff will also monitor the overall performance of both primary and supporting GHG reduction measures and climate adaptation measures in meeting specified targets or goals by describing or quantifying GHG reductions achieved on an annual basis. County staff will evaluate and, where feasible, quantify the effectiveness of each primary measure in achieving the GHG reductions or other benefits described in the CAP. Performance of supporting measures will generally be described qualitatively, unless specific quantitative monitoring methods become available. Primary measure performance monitoring requires analyzing the level of community participation, costs, or barriers to implementation; and, quantifying actual reductions in fuel consumption, vehicle miles traveled, energy usage, water usage, landfilled waste, or other activities that result in GHG emissions reductions. By evaluating whether the implementation of a measure is on track to achieve its reduction potential, the County can identify successful measures and determine whether to modify or replace under-performing measures.

(3) Public Reporting on CAP Progress: The County will prepare annual CAP progress reports that summarize the status of implementation and monitoring efforts for the performance of individual GHG measures. The annual reports will also provide the opportunity to include new information about potential new measures or related activities in the region or State that may help the County meet its goals. County staff will make the annual reports available to the public (e.g., posted to the County website) and present a summary of the annual report to the Board of Supervisors.

"Additionally, beginning in 2021 and every three years after, County staff will prepare a more detailed CAP progress report to the Board of Supervisors that describes:

- results of the latest three-year update to the inventory;
- estimated annual GHG reductions associated with measure implementation or legislative reductions;
- estimated participation rates (where applicable);
- implementation costs and funding needs;
- community benefits realized;
- remaining barriers to implementation;
- projections of whether the CAP is on track to achieve the 2030 target, along with updates to post-2030 forecasts and estimated reductions considering the longer-term 2050 goal; and,
- recommendations for changes or updates to the CAP required to achieve the 2030 target, as well as making increasingly- effective progress towards achieving the 2050 goal (see also items 4, 5, and 6 below).

(4) CAP Updates: Based on the findings of items 1 through 3 above, the County will initiate updates or amendments to the CAP document as needed to ensure that (a) the CAP remains on track to meet the 2030 GHG reduction target; and, (b) the County is making substantial and increasingly-effective progress towards achieving its longer-term goal for 2050.

(5) Specified Regulatory Triggers for CAP Updates: The County is committed to keeping the CAP up to date with both evolving State and Federal statutes, policies, and plans that are designed to reduce GHG emissions beyond 2030 consistent with scientific findings. Thus, the County will take immediate action to initiate a CAP update if any of the following events occur:

> (a) Adoption of an update to the Climate Change Scoping Plan by the California Air Resources Board (CARB), pursuant to executive orders or other legislative actions, that identifies specific regulations, programs, or other reasonably-foreseeable State actions that define a specific pathway to achieving the State's longer-term goals. These longer-term goals could include the 2050 GHG reduction goal established in EO S-3-05 and EO B-30-15; other new post-2030 interim targets related to achievement of the GHG reduction goal for 2050 (e.g., a new 2040 legislative target); or, any new or modified target related to the zero-net carbon goal for 2045 as stated in EO B-55-15.
>
> (b) Enactment of new State or Federal legislation that codifies into statute post-2030 GHG emission reduction or zero-net carbon targets or goals; and, that would require CARB, EPA, or other entities to update existing plans (i.e., Scoping Plan) to identify specific regulations, programs, or other reasonably-foreseeable actions that define a specific pathway to achieving post-2030 targets or goals.

(6) Updates Consistent with State Guidance: The County's actions to update the CAP will be consistent with current guidance and best-available methods recommended by CARB, OPR, or other appropriate regulatory agencies that demonstrate how local government efforts to reduce GHG emissions should be aligned with and complement State efforts."

The following section describes the potential conflicts with plans, policies, or regulations adopted to reduce or avoid GHG emissions from the implementation of GHG reduction and adaptation measures.

Fuel Efficiency and Replacement Measures

GHG reduction measures that would encourage the conversion of diesel or gas-powered agricultural equipment to electricity or alternative fuels, require new or replacement water heating systems to be electrically powered or alternatively fueled, and convert 50 percent of the County vehicle fleet to alternative fuels by 2030 (AG-1, AG-2, BE-4, TR-16) would be consistent with the County's overall goal to reduce GHG emissions consistent with statewide targets. These measures would also adhere to the California Energy Code and support Napa County General Plan policies CON-65 and CON-67.

Transportation, Water, Stormwater, and Grid Utility Infrastructure Measures

GHG reduction measures that would result in the construction of new facilities and infrastructure such as visitor-friendly infrastructure; park and ride facilities; EVCS; and pedestrian, trail, and bicycle improvements (TR-8, TR-10, TR-12, TR-14, TR-15) would be consistent with the County's overall goal to reduce GHG emissions consistent with statewide targets. These measures would also support Plan Bay Area, state standards and regulations related to transportation, and Napa County General Plan policy CON-65.

Vegetation Management Measures

GHG reduction measures that would result in the chipping, mastication, and hauling of biomass as opposed to open burning; tree planting and restoration; and improve resiliency to wildfire hazards (AG-5, LU-3, LU-1, Temp-6, Flood-3, Flood-4, Fire-5) would be consistent with the County's overall goal to reduce GHG emissions consistent with statewide targets. These measures would also support Napa County General Plan policies CON-65 and CON-73.

Small-Scale Renewable Energy and Efficiency Measures

GHG reduction and adaptation measures that would result in retrofits to existing buildings and the construction of small-scale private renewable energy systems such as photovoltaic, wind turbines, solar water heating systems, geothermal ground source heat pump, and battery storage (BE-5, BE-9, BE-10, BE-11) would be consistent with the County's overall goal to reduce GHG emissions consistent with statewide targets. These measures would also support SB X1-2, SB 100, the California Energy Code, and Napa County General Plan policies CON-65 and CON-74.

Waste Diversion and Compost Measures

GHG reduction measures that would result in the expansion of existing composting programs, new or expanded waste processing and diversion facilities, and new infrastructure on- or off-site to process landfill gas for use as energy (SW-1, SW-2, BE-7) would be consistent with the County's overall goal to reduce GHG emissions consistent with statewide targets. These measures would also support Napa County General Plan policies CON-65, CON-66, and CON-74.

Impact Summary

Adoption of the CAP and implementation of the specific GHG reduction and adaptation measures in the CAP would be consistent with the County's overall goal to reduce GHG emissions that achieve local targets consistent with statewide targets for 2020 and 2030. The CAP would also be consistent with the statewide strategy to achieve these targets per the 2017 Scoping Plan, as well as a variety of other state and local plans, policies, and regulations design to achieve or contribute towards meeting these targets.

The CAP would achieve additional longer-term, post-2030 GHG reductions that would contribute towards achievement of the County's long-term 2050 goal, which was developed consistent with the State's long-term 2050 goal and guidance per the 2017 Scoping Plan. It is not currently possible for the CAP to demonstrate how a local 2050 goal can be achieved because the County does not have jurisdictional control over all activities or emissions sources over all post-2030 activities or sources of emissions. However, the CAP includes specific implementation and monitoring procedures that require the County to achieve increasingly-effective post-2030 reductions over time and demonstrate substantial progress on the pathway towards long-term 2050 goal. The County would identify new or modified local measures to complement future state actions needed to achieve the state's 2050 goal through future CAP updates. Moreover, the County would update the CAP following specific State actions, such as future updates to the Scoping Plan or new interim post-2030 targets, which would be needed to demonstrate how achievement of the State's longer-term 2050 goal would be feasible and, in turn, the role of local government agencies in complementing the State's regulatory actions. Therefore, the proposed CAP would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions. This impact would be **less than significant**.

Mitigation Measures

No mitigation is required.

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3.8 HAZARDS AND HAZARDOUS MATERIALS

This chapter evaluates the potential for the CAP to create new or exacerbate existing hazards in the county related to hazardous materials, conflicts with adopted emergency response plans or airport hazards, or related to wildfire hazards.

The County did not receive comments regarding hazards during the Notice of Preparation (NOP) scoping process. A copy of the NOP and comment letters received in response to the NOP are included in Appendix A of this Draft EIR.

3.8.1 Environmental Setting

DEFINITIONS OF TERMS

For purposes of this section, the term "hazardous materials" refers to both hazardous substances and hazardous wastes. A "hazardous material" is defined in the Code of Federal Regulations (CFR) as "a substance or material that … is capable of posing an unreasonable risk to health, safety, and property when transported in commerce" (49 CFR 171.8). California Health and Safety Code Section 25501 defines a hazardous material as follows:

> "Hazardous material" means any material that, because of its quantity, concentration, or physical, or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment. "Hazardous materials" include, but are not limited to, hazardous substances, hazardous waste, and any material which a handler or the administering agency has a reasonable basis for believing that it would be injurious to the health and safety of persons or harmful to the environment if released into the workplace or the environment.

"Hazardous wastes" are defined in California Health and Safety Code Section 25141(b) as wastes that:

> … because of their quantity, concentration, or physical, chemical, or infectious characteristics, [may either] cause, or significantly contribute to an increase in mortality or an increase in serious illness [or] pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, disposed of, or otherwise managed.

HAZARDOUS MATERIALS AND CONTAMINATED SITES

Contaminated Sites

Contaminated sites are those areas within the county where hazardous wastes were released to soil or groundwater during storage, use, transfer, and disposal. These include sites that were historically contaminated but have been remediated and sites that are known, or believed, to be contaminated. Releases can be localized, or may migrate and contaminate nearby areas.

The State of California maintains the linked EnviroStor and Geotracker databases of known contamination sites pursuant to Government Code Section 65962.5. Based on the information gathered from these databases, there are there are no sites within Napa County listed on the Cortese list. Geotracker lists sites for which the State Water Resources Control Board (SWRCB) is the lead oversight agency, which are generally sites where surface or groundwater are the primarily effected media. Geotracker lists 44 active, open sites, including eight leaking underground storage tank (LUST) cases, 23 cleanup program sites, and 13 California Department of Toxic Substances Control (DTSC) cleanup sites within the county (SWRCB 2018). EnviroStor lists 25 sites in Napa County for which DTSC has primary oversight, including nine active

sites in the Voluntary Cleanup Program, eight sites that are under evaluation, one school cleanup site, five school sites under evaluation, one active State response site, and one military site that is under evaluation (DTSC 2018).

Hazardous Waste Generation

There are approximately 500 facilities permitted to generate hazardous waste within Napa County. Napa County Department of Environmental Health (NCDEH) conducts regulatory oversight (review of plans and inspections) of all businesses including farms, federal agencies, State agencies, and local agencies that handle quantities of hazardous materials/hazardous waste greater than or equal to 55 gallons of liquid, 500 pounds of solids, and 200 cubic feet of a compressed gas at any time within the county. There are an estimated 1,250 facilities throughout Napa County that are subject to the regulatory requirements of this program (NCDEH 2018).

Underground Storage Tanks

There are 46 documented underground storage tank facilities in Napa County. LUSTs in Napa County are the most common source of groundwater pollution. Over time, the tanks may corrode, crack, and develop leaks, causing potentially serious contamination of local groundwater resources. Many LUSTs are associated with existing gas stations or areas where gas stations have been in the past. Volatile organic compounds (VOCs), such as benzene, xylene, toluene, and methyl tertiary butyl ether (MTBE) are the most common contaminants associated with LUSTs. MTBE is of particular concern, and the EPA requires all large drinking water systems, and a representative sample of small systems, to monitor and report the presence of MTBE (reporting began in 2001). Volatilization of contaminants may also occur, creating risk of exposure via the respiratory system.

Transport of Hazardous Materials

Hazardous materials, hazardous wastes, and petroleum products are a subset of the goods routinely shipped along the transportation corridors in the county. In California, unless specifically exempted, it is unlawful for any person to transport hazardous wastes unless the person holds a valid registration issued by DTSC. DTSC maintains a list of active registered hazardous waste transporters throughout California, and the California Department of Public Health regulates the haulers of hazardous waste. Three agencies maintain searchable databases that track hazardous material releases in reportable quantities: U.S. Environmental Protection Agency (EPA) maintains the Hazardous Materials Incident Report System that contains data on hazardous material spill incidents reported to the U.S. Department of Transportation (USDOT); the California Office of Emergency Services (OES) maintains the California Hazardous Materials Incident Report System that contains information on reported hazardous material accidental releases or spills; and SWRCB's Site Cleanup Program maintains information on reported hazardous material accidental releases or spills. USDOT also provides grants to local agencies for preparation and training for hazardous materials incidents through its Hazardous Materials Emergency Preparedness Program administered by OES.

SCHOOLS

Napa County is served by six school districts. The primary school district within the county is Napa Valley Unified School District, which includes 20 elementary schools, seven middle schools, and six high schools (NVUSD 2018). Saint Helena Unified School District includes a primary school and elementary school, a middle school and a high school (SHUSD 2018). Calistoga Joint Unified School District includes one elementary school and one high school (CJUSD 2018). Howell Mountain Elementary School District and Pope Valley Union Elementary School District are both single-school districts and each district includes one elementary school (HMESD 2018; PVUESD 2018). Fairfield-Suisun Joint Unified School District also serves a portion of Napa County; however, all of the schools in this district are within Solano County. Napa Valley Community Colleges is also located within the county.

AIRPORT HAZARDS

There are two public use airports located in Napa County: Napa County Airport and Angwin-Parrett Field. The Napa Airport Industrial Area, which includes the Napa County Airport, is located in the southern end of Napa County between the Cities of Napa and American Canyon along Highway 29. Angwin-Parrett Field Airport is located approximately 1 mile east of Angwin. There are also four private airstrips and/or heliports in Napa County:

- Moskowite Airport,
- Mysterious Valley Airport,
- Pope Valley Airport, and
- River Meadow Farm Heliport.

WILDFIRE HAZARDS

In accordance with California Public Resource Code Section 4201-4204 and Government Code Section 51175-51189, the California Department of Forestry and Fire Protection (CAL FIRE) has mapped areas of significant fire hazards based on fuels, terrain, weather, and other relevant factors. These zones, referred to as Fire Hazard Severity Zones (FHSZ), represent the risks associated with wildland fires. Most of the county has been classified as having moderate to very-high wildfire risk, with the very high fire risk areas concentrated in the northwest, west, and central portions of the county (CAL FIRE 2007).

In California, responsibility for wildfire prevention and suppression is shared by federal, State, and local agencies. Federal agencies are responsible for federal lands in Federal Responsibility Areas (FRAs). The State of California has determined that some non-federal lands in unincorporated areas with watershed value are of statewide interest and have classified those lands as State Responsibility Areas (SRAs), which are managed by CAL FIRE. All incorporated areas and other unincorporated lands are classified as Local Responsibility Areas (LRAs). Most of the county has been classified as SRAs, with FRAs in the eastern portion of the county and LRAs surrounding the Highway 29 corridor (CAL FIRE 2007).

3.8.2 Regulatory Setting

FEDERAL

Hazardous Materials Management

The Environmental Protection Agency (EPA) has the primary responsibility for enforcing and implementing federal laws and regulations pertaining to hazardous materials. Applicable regulations are contained mainly in Titles 29, 40, and 49 of the CFR. Hazardous materials, as defined in the CFR, are listed in 49 CFR 172.101. Management of hazardous materials is governed by the laws summarized below.

- **Resource Conservation and Recovery Act of 1976 (RCRA):** The RCRA (42 U.S. Code [USC] 6901 et seq.) established a federal regulatory program for the generation, transport, and disposal of hazardous substances. Under the RCRA, EPA regulates the generation, transportation, treatment, storage, and disposal of hazardous substances. The RCRA was amended by the Hazardous and Solid Waste Amendments of 1984, which banned the disposal of hazardous waste on land and strengthened EPA's reporting requirements. EPA has delegated authority for many RCRA requirements to DTSC.

- **Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA):** CERCLA, also called the Superfund Act (42 USC 9601 et seq.), provided broad federal authority and created a trust fund for addressing releases and threatened releases of hazardous substances that could endanger public health or the environment.

- **Superfund Amendments and Reauthorization Act of 1986 (SARA):** The Superfund Hazardous Substance Cleanup Program (Public Law 96-510) was established on December 11, 1980. The program was expanded and reauthorized by the Superfund Amendments and Reauthorization Act of 1986 (Public Law 99-499), also known as SARA Title III. SARA created the Emergency Planning and Community Right-to-Know Act of 1986, also known as SARA Title III, a statute designed to improve community access to information about chemical hazards and to facilitate the development of chemical emergency response plans by State, tribal, and local governments.

- **Toxic Substances Control Act:** The Toxic Substances Control Act (15 USC 2601 et seq.) provides EPA with authority to require reporting, recordkeeping and testing, and restrictions related to chemical substances and/or mixtures. The Toxic Substances Control Act addresses the production, importation, use, and disposal of specific chemicals including polychlorinated biphenyls (PCBs), asbestos, radon, and lead-based paint.

- **Clean Air Act:** Regulations under the Clean Air Act (42 USC 7401 et seq., as amended) are designed to prevent accidental releases of hazardous materials. The regulations require facilities that store a threshold quantity or greater of listed regulated substances to develop a risk management plan that includes hazard assessments and response programs to prevent accidental releases of listed chemicals. The Clean Air Act is discussed further in Section 3.4, "Air Quality."

These laws and associated regulations include specific requirements for facilities that generate, use, store, treat, and/or dispose of hazardous materials. EPA is responsible for compiling the National Priorities List for known or threatened release sites of hazardous substances, pollutants, or contaminants (commonly referred to as "Superfund sites"). EPA provides oversight of and supervision for Superfund investigation/remediation projects, evaluates remediation technologies, and develops hazardous materials disposal restrictions and treatment standards.

Occupational Safety and Health Administration Worker Safety Requirements

The Occupational Safety and Health Administration (OSHA) is responsible for ensuring worker safety. OSHA sets federal standards for implementation of workplace training, exposure limits, and safety procedures for handling hazardous substances and addressing other potential industrial hazards. OSHA also establishes criteria by which each state can implement its own health and safety program. The Hazard Communication Standard (CFR Title 29, Part 1910) requires that workers be informed of the hazards associated with the materials they handle. Workers must be trained in safe handling of hazardous materials, use of emergency response equipment, and building emergency response plans and procedures. Containers must be labeled appropriately, and material safety data sheets must be available in the workplace.

Hazardous Materials Transportation Act

USDOT has developed regulations in Titles 10 and 49 of the CFR pertaining to the transport of hazardous substances and hazardous wastes. The Hazardous Materials Transportation Act is administered by the Research and Special Programs Administration of the USDOT. The act provides the USDOT with a broad mandate to regulate the transport of hazardous materials, with the purpose of adequately protecting the nation against risk to life and property that is inherent in the commercial transportation of hazardous materials. USDOT regulations that govern the transportation of hazardous materials are applicable to any person who transports, ships, causes to be transported or shipped, or who is involved in any way with the manufacture or testing of hazardous materials packaging or containers.

STATE

Hazardous Materials Management

Several state agencies regulate the transportation and use of hazardous materials to minimize potential risks to public health and safety. The California Environmental Protection Agency (Cal/EPA) and the OES establish rules governing the use of hazardous substances in California. Within Cal/EPA, DTSC is primarily

responsible for regulating the generation, transport, and disposal of hazardous substances under the authority of the Hazardous Waste Control Law; enforcement is delegated to local jurisdictions. Regulations implementing the Hazardous Waste Control Law list hazardous chemicals and common substances that may be hazardous; establish criteria for identifying, packaging, and labeling hazardous substances; prescribe hazardous-substances management; establish permit requirements for treatment, storage, disposal, and transportation of hazardous substances; and identify hazardous substances prohibited from landfills. These regulations apply to the protection of human health and the environment during construction.

State regulations applicable to hazardous materials are contained primarily in Title 22 of the California Code of Regulations (CCR). CCR Title 26 is a compilation of those CCR chapters or titles that are applicable to hazardous materials management. California Department of Industrial Relations, Cal/OSHA standards are presented in CCR Title 8; these standards are more stringent than federal OSHA regulations and address workplace regulations involving the use, storage, and disposal of hazardous materials.

California Hazardous Materials Release Response Plans and Inventory Law of 1985

This law requires preparation of hazardous materials business plans and disclosure of hazardous materials inventories. Such plans must include an inventory of hazardous materials handled, as well as facility floor plans showing where hazardous materials are stored, an emergency response plan, and emergency response procedures that provide for employee training (California Health and Safety Code, Division 20, Chapter 6.95, Article 1). The business plan program is administered by the California Emergency Management Agency.

Cal/OSHA Worker Safety Requirements

Cal/OSHA assumes primary responsibility for developing and enforcing workplace safety regulations in California. Cal/OSHA regulations for the use of hazardous materials in the workplace (CCR Title 8) require safety training, available safety equipment, accident and illness prevention programs, hazardous-substance exposure warnings, and preparation of emergency action and fire prevention plans. Cal/OSHA enforces regulations on hazard communication programs and mandates specific training and information requirements. These requirements include procedures for identifying and labeling hazardous substances, providing hazard information about hazardous substances and their handling, and preparing health and safety plans to protect workers and employees at hazardous-waste sites. Employers must make material safety data sheets available to employees and document employee information and training programs.

California Accidental Release Prevention Program

The goal of the California Accidental Release Prevention Program (CCR Title 19, Division 2, Chapter 4.5) is to reduce the likelihood and severity of consequences of any releases of extremely hazardous materials. Any business that handles regulated substances (chemicals that pose a major threat to public health and safety or the environment because they are highly toxic, flammable, or explosive, including ammonia, chlorine gas, hydrogen, nitric acid, and propane) must prepare a risk management plan. The risk management plan is a detailed engineering analysis of the potential accident factors present at a business and the measures that can be implemented to reduce this accident potential. The plan must provide safety information, hazard data, operating procedures, and training and maintenance requirements. The list of regulated substances is found in Article 8, Section 2770.5 of the program regulations.

Emergency Response to Hazardous Materials Incidents

California has developed an emergency response plan to coordinate emergency services provided by federal, State, and local governments and private agencies. Response to hazardous material incidents is one part of this plan. The plan is managed by the California Emergency Management Agency, which coordinates the responses of other agencies, including Cal/EPA, the California Highway Patrol, the California Department of Fish and Wildlife, and regional water quality control boards (RWQCBs).

Unified Program

Cal/EPA has adopted regulations implementing the Unified Hazardous Waste and Hazardous Materials Management Regulatory Program (Unified Program). The six program elements of the Unified Program are hazardous-waste generation and onsite treatment, underground storage tanks, aboveground storage tanks, hazardous-material release response plans and inventories, risk management and prevention programs, and Uniform Fire Code hazardous materials management plans and inventories. The program is implemented at the local level by a local agency, referred to as the Certified Unified Program Agency (CUPA), which is responsible for consolidating the administration of the six program elements within its jurisdiction. The NCDEH is the CUPA for Napa County.

California Government Code Section 65962.5 (Cortese List)

The provisions of California Government Code Section 65962.5 are commonly referred to as the "Cortese List" (after the legislator who authored the law). The Cortese List is a planning document used by state and local agencies to comply with CEQA requirements in providing information about the location of hazardous materials release sites. Section 65962.5 requires Cal/EPA to develop an updated Cortese List at least annually. DTSC is responsible for a portion of the information contained in the Cortese List. Other state and local government agencies in California, such as the SWRCB, also must provide additional release information.

Asbestos Abatement

Asbestos abatement efforts must be completed in compliance with 7 CCR Section 5208, 8 CCR Section 1529, and 8 CCR Sections 341.6 through 341.14. The regulations in 7 CCR Section 5208 implement worker exposure limits, require exposure monitoring, implement compliance programs, require employee protection and hazard communication, and require employee medical surveillance and reporting. Asbestos exposure for construction work is regulated by 8 CCR Section 1529, which includes exposure limits and procedures for handling and removal. Requirements for transport and disposal are included in 8 CCR Sections 341.6 through 341.14.

Section 19827.5 of the California Health and Safety Code, adopted January 1, 1991, prohibits local agencies from issuing demolition or alteration permits until the applicant has demonstrated compliance with applicable regulations. If there is 100 square feet or more of asbestos-containing material, renovation or demolition of buildings containing asbestos must be conducted by a licensed contractor and the work must comply with requirements included in 8 CCR Sections 1529 and 341.6 through 341.14. Cal/OSHA must be notified 10 days before the start of construction and demolition activities. Asbestos encountered during demolition of an existing building must be transported and disposed of at an appropriate facility. The contractor and hauler of the material must file a hazardous-waste manifest that provides disposal details.

Lead and Lead-Based Paint Abatement

Regulation of lead and lead-based paint is described in 29 CFR 1926.62 and 8 CCR Section 1532.1. These regulations cover the demolition, removal, cleanup, transportation, storage, and disposal of lead-containing material. The regulations outline the permissible exposure limit, protective measures, and monitoring. Cal/OSHA's Lead in Construction Standard requires notification and a lead compliance plan with safe work practices and a detailed plan to protect workers from lead exposure.

California Fire Code

The California Fire Code (CFC) is Chapter 9 of CCR Title 24. It is the primary means for authorizing and enforcing procedures and mechanisms to ensure the safe handling and storage of any substance that may pose a threat to public health and safety. The CFC regulates the use, handling, and storage requirements for hazardous materials at fixed facilities. The CFC and the California Building Code use a hazard classification system to determine what protective measures are required to protect fire and life safety. These measures may include construction standards, separations from property lines, and specialized equipment. To ensure that these safety measures are met, the CFC employs a permit system based on hazard classification. The CFC is updated every 3 years.

LOCAL

Napa County General Plan

The following policies of the *Napa County General Plan* (Napa County 2008) are applicable to the project.

- **Policy CON-6**: The County shall impose conditions on discretionary projects which limit development in environmentally sensitive areas such as those adjacent to rivers or streamside areas and physically hazardous areas such as floodplains, steep slopes, high fire risk areas and geologically hazardous areas.

- **Policy SAF-3**: The County shall evaluate potential safety hazards when considering General Plan Amendments, rezonings, or other project approvals (including but not limited to new residential developments, roads or highways, and all structures proposed to be open to the public and serving 50 persons or more) in areas characterized by:

  1) Slopes over 15 percent,
  2) Identified landslides,
  3) Floodplains,
  4) Medium or high fire hazard severity,
  5) Former marshlands, or
  6) Fault zones.

- **Policy SAF-8:** Consistent with County ordinances, require a geotechnical study for new projects and modifications of existing projects or structures located in or near known geologic hazard areas, and restrict new development atop or astride identified active seismic faults in order to prevent catastrophic damage caused by movement along the fault. Geologic studies shall identify site design (such as setbacks from active faults and avoidance of on-site soil-geologic conditions that could become unstable or fail during a seismic event) and structural measures to prevent injury, death and catastrophic damage to structures and infrastructure improvements (such as pipelines, roadways and water surface impoundments not subject to regulation by the Division of Safety of Dams of the California Department of Water Resources) from seismic events or failure from other natural circumstances.

- **Policy SAF-10:** No extensive grading shall be permitted on slopes over 15 percent where landslides or r geologic hazards are present unless the hazard(s) are eliminated or reduced to a safe level.

- **Policy SAF-16**: Consistent with building and fire codes, development in high wildland fire hazard areas shall be designed to minimize hazards to life and property.

- **Policy SAF-17**: The County supports the use of prescribed fuel management programs, including prescribed burns and brush clearing, for managing fire hazardous areas; to reduce wildfire hazard, improve watershed capabilities, promote wildlife habitat diversification, and improve grazing.

- **Policy SAF-20:** All new development shall comply with established fire safety standards. Design plans shall be referred to the appropriate fire agency for comment as to:

  1) Adequacy of water supply.
  2) Site design for fire department access in and around structures.
  3) Ability for a safe and efficient fire department response.
  4) Traffic flow and ingress/egress for residents and emergency vehicles.
  5) Site-specific built-in fire protection.
  6) Potential impacts to emergency services and fire department response.

- **Policy SAF-30**: Potential hazards resulting from the release of liquids (wine, water, petroleum products, etc.) from the possible rupture or collapse of aboveground tanks should be considered as part of the review and permitting of these projects.

- **Policy SAF-31**: All development projects proposed on sites that are suspected or known to be contaminated by hazardous materials and/or are identified in a hazardous material/ waste search shall be reviewed, tested, and remediated for potential hazardous materials in accordance with all local, State, and federal regulations.

- **Policy SAF-33**: For maximum safety, all land uses and zoning within airport areas shall be reviewed for compatibility with the adopted plans for the Napa County Airport, Angwin Airport, and other general aviation facilities in the county.

Certified Unified Program Agency

Senate Bill 1082 (1993) established the Unified Hazardous Waste and Hazardous Materials Management Regulatory Program. The Unified Program consolidates, coordinates, and makes consistent hazardous materials and hazardous waste program elements. A CUPA is a county, city, or joint powers agency approved and designated by Cal/EPA to implement the Unified Program and is responsible for all six program elements of the Unified Program within its jurisdiction. The NCDEH is the CUPA for Napa County, including all of its cities. As the CUPA, NCDEH administers the following Unified Programs:

- Hazardous Materials Release Response Plans and Inventory (Business Plan) Program,
- California Accidental Release Prevention Program,
- Underground Storage Tank Program,
- Hazardous Waste Generator and Hazardous Waste On-Site Treatment Programs, and
- Above Ground Storage Tank Program (Spill Prevention, Control and Countermeasure Plans).

Napa County Airport Land Use Compatibility Plan

The Airport Land Use Compatibility Plan (ALUCP) prepared by the Napa County Airport Land Use Commission includes policies and criteria used for evaluating land use plans and development in the vicinity of public use airports. The ALUCP provides guidance to the Airport Land Use Commission in reviewing land use plans and zoning regulations to ensure compatible land uses within the plan area (Napa County 1999).

Napa Operational Area Hazard Mitigation Plan

In 2004, Napa County adopted the *Napa Operational Area Hazard Mitigation Plan* (OAHMP), which includes mitigation for addressing the most significant hazards in the County (floods, earthquakes, and wildland interface fires). The OAHMP's Mitigation Strategy includes goals, programs, objectives, and action items that help to ensure effective emergency response to significant hazards. Objectives and action items in the OAHMP include prevention, property protection, public education and awareness, natural resource protection, emergency services, and structural projects. The OAHMP is required to be updated every 5 years; the last update was initiated in 2013 (Napa County 2013).

3.8.3 Environmental Impacts and Mitigation Measures

METHODS AND ASSUMPTIONS

The project impact analysis area includes all land within the jurisdiction of the county. The analysis of hazards and hazardous materials presented in this section is based on the range and nature of foreseeable hazardous materials use, storage, and disposal resulting from the CAP, and identifies the primary ways that hazardous materials or events could expose individuals or the environment to health and safety risks. Local and State agencies would be expected to continue to enforce applicable requirements to the extent that they do so now. The following evaluation is based on a review of documents and publicly available information about hazardous and potentially hazardous conditions within the County to determine the potential for CAP implementation to result in an increased health or safety hazard to people or the environment.

PROPOSED CAP GHG REDUCTION MEASURES

Table 2.4 of the Draft EIR, provides a list of proposed GHG reduction and adaptation measures that would be implemented by the CAP. However, only those measures that are relevant to hazards and hazardous materials and could potentially result in a significant impact within the county are described and evaluated below. None of the proposed measures indicate where specific improvements would be constructed, their size, or specific characteristics. As a program EIR, the Draft EIR does not, and cannot, speculate on the individual environmental impacts of specific future projects/improvements. However, implementation of all GHG reduction and adaptation measures were considered during preparation of the Draft EIR to the degree specific information about implementation is known. Consistent with the requirements of CEQA Guidelines Section 15168, this Draft EIR provides a program-level discussion of the potential impacts of implementing these measures, rather than project-level or site-specific physical impacts of such actions. While many of the GHG reduction, supporting, and adaptation measures would provide economic or efficiency benefits, only those measures that have the potential to have adverse effects related to hazards and hazardous materials are listed below. All other measures in Table 2.4 would have no effect or beneficial effects related to hazards and hazardous materials and are not discussed further.

- **Primary Measure BE-7: Support Waste-to-Energy Programs at unincorporated landfills.** This measure will result in gas that is captured through existing landfill gas capture systems being reused for energy, rather than being flared. This measure could result in new infrastructure on-site or off-site to process landfill gas so that it can be used for energy generation or other end-uses such as CNG for fuel in vehicles. This may result in hazards associated with construction, operation, and maintenance of infrastructure.

- **Supporting Measure BE-11: Encourage solar panel installations on commercial roof space.** This measure would result in an expansion of incentives for renewable energy systems that would increase participation by individual property owners. This measure would result in the installation of new private renewable energy systems. This may result in hazards associated with construction, operation, and maintenance of solar panels.

- **Supporting Measure TR-8: Support Napa County's incorporated cities in developing transit-oriented development unique to the needs of the Napa Region.** This would result in collaboration among the County and incorporated cities to create a more robust visitor-friendly environment around the Soscol Gateway Transit Center (and future transit centers) to encourage additional users. This may result in hazards associated with construction, operation, maintenance of visitor-friendly infrastructure.

- **Supporting Measure TR-10: Work with Napa County's incorporated cities, NVTA, and neighboring regions to increase presence of park and ride facilities near residential centers**. This effort would result in new park and ride facilities which would reduce GHG emissions by decreasing the amount of vehicles on the road. This may result in hazards associated with construction, operation, and maintenance of park and ride facilities.

- **Supporting Measure TR-12: Increase the supply of electric vehicle charging stations**. This measure would result in the installation of new electric vehicle charging stations (EV charging stations) in priority areas including existing commercial areas, major visitor attractions, and multifamily complexes. This would reduce GHG emissions associated with the regional vehicle fleet through greater fuel efficiency and improved air quality. This may result in hazards associated with construction, operation, and maintenance of EV charging stations.

- **Supporting Measure TR-14: Develop and implement active transportation projects.** This measure would result in the development and construction of new pedestrian, trail, and bicycle improvements. This could result in construction impacts and is evaluated for consistency with policies related to circulation. This may result in hazards associated with construction, operation, and maintenance of transportation projects.

- **Supporting Measure TR-15: Require new development projects to evaluate and reduce VMT.** This measure would implement roadway improvements to reduce VMT by calming traffic and improving the bicyclist and pedestrian infrastructure and would occur as part of resurfacing projects within existing paved areas. This may result in hazards associated with construction of roadway improvements.

- **Primary Measure SW-2: Meet an 80 percent Waste Diversion Goal by 2020 and a 90 percent Waste Diversion Goal by 2030**. This measure could result in new/expanded waste processing and diversion facilities throughout the unincorporated County. This could result in hazards associated with the construction and operation of waste processing and diversion facilities.

- **Adaptation Measure Fire-5: Collaborate on programs to reduce fire hazards.** This measure would result in increased collaboration to improve resiliency related to wildfire hazards. This could include thinning, removing, or chipping vegetation which would result in ground disturbance. This could result in long-term beneficial effects related to wildfire hazards.

- **Adaptation Measure Water-2: Consider innovative options to meet future demand**. This measure would result in the development and implementation of water supply resiliency strategies such as graywater systems, recycled water, and other water conservation strategies. The impacts related to this measure are speculative, but could result in hazards related to the development of alternative water supply facilities.

- **Adaptation Measure Water-5: Collaborate with agencies to identify future water supplies and explore alternative supply sources**. This measure would result in increased collaboration to identify future water supply options, including expanded use of on-site graywater, recycled water, or other water conservation options. The impacts related to this measure are speculative, but could result in hazards associated with the construction of alternative water supply facilities.

- **Adaptation Measure Flood-3: Identify potential streamside restoration areas**. This measure would result in the identification and restoration of stream banks within the unincorporated County to buffer buildings, roads, and crops from increased flooding potential. The impacts related to this measure are speculative, but could include hazards associated with restoration activities.

- **Adaptation Measure Flood-4: Encourage replanting of bare or disturbed areas**. This measure would result in the identification and restoration of areas that are subject to erosion within the unincorporated County to improve water quality and reduce stream sedimentation. The impacts related to this measure are speculative, but could result in hazards associated with restoration activities.

- **Adaptation Measure Flood-7: Improve capacity of storm water infrastructure**. This measure would result in improved storm water infrastructure and improved resilience for high intensity rain events. The impacts related to this measure are speculative, but could result in hazards associated with improving infrastructure.

THRESHOLDS OF SIGNIFICANCE

Based on Appendix G of the State CEQA Guidelines and Appendix C of Napa County's Local Procedures for Implementing CEQA, impacts related to hazards and hazardous materials are considered significant if implementation of the project would do any of the following:

- 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 the reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;

- emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or wastes, within 0.25 mile of an existing or proposed school;
- be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment;
- be located within an airport land use plan, or within two miles of a public airport or public use airport where such a plan has not been adopted, and result in a safety hazard for people working or residing in the area;
- be located in the vicinity of a private airstrip and result in a safety hazard for people working or residing in the project area;
- impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan; or
- expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

ISSUES NOT DISCUSSED FURTHER

As described in Chapter 2, Project Description, implementation of the CAP and the targets and strategies identified therein necessitate changes to Policy CON-65 e) of the County's General Plan (2008 GP). The proposed changes would require that all discretionary development projects demonstrate consistency with the CAP by substantiating compliance through the CAP Consistency Checklist. As described in Section 2.4.2, Project Description, proposed changes to the adopted policy of the General Plan requires the County to implement a General Plan Amendment (GPA) as part of the administrative approval process.

The CAP EIR evaluates the GPA as part of the series of actions associated with implementation of the CAP. The changes reflected in the GPA support and are consistent with implementation of the CAP, its GHG targets, and GHG reduction measures. No additional activities or measures, other than those described in the CAP, would occur as a result of implementation of the GPA. Therefore, the GPA is not evaluated separately from the actions proposed by the CAP, but rather its implementation is within the scope of the overall impact analysis of the CAP. As described in Section 2.4.3, Project Description, to provide a mechanism by which projects can demonstrate consistency with the CAP, a CAP Consistency Checklist is included as Appendix D of the CAP. The CAP Consistency Checklist is a tool by which the County will track and determine a project's consistency with the CAP and how it delivers its appropriate GHG reductions. No physical projects or improvements other than those described in the CAP are included or would be approved with approval of the checklist. As such, like the GPA, the CAP Consistency Checklist is not evaluated separately from the actions proposed by the CAP.

In summary, the physical changes and associated environmental impacts of all GHG reduction and adaptation measures have been evaluated throughout the CAP EIR. The GPA and CAP Consistency Checklist which are included as part of the project, are not addressed as a separate impact discussion below. These administrative mechanisms on their own would not result in any physical impacts that would require separate evaluation below and are not discussed further.

As discussed above, there are no hazardous materials sites listed on the Cortese List that is compiled pursuant to Government Code Section 65962.5 within the County (Cal/EPA 2018). Therefore, this issue is not evaluated further.

IMPACT ANALYSIS

Impact 3.8-1: Expose People or the Environment to Hazardous Materials or Emit Hazardous Emissions; or Handle Materials Within 0.25-Mile of an Existing or Proposed School

The routine storage, transport, and handling of hazardous materials, and accidental release of hazardous materials during construction, maintenance, or operation of new facilities as a result of implementation of the CAP could expose people, the environment, or schools within 0.25-mile to hazardous materials. However, compliance with existing federal, State, and local regulations that protect people and the environment from exposure to hazardous materials would be required with the discretionary review of future projects. Completion of subsequent project-specific evaluation and environmental review would reduce potential impacts. Therefore, this impact would be **less than significant**.

As discussed above in Section 3.8.2 Regulatory Setting, Geotracker lists 44 active, open sites within the County and EnviroStor lists 25 sites that are actively being cleaned up or evaluated for cleanup. In addition, there are 25 elementary schools, eight middle schools, eight high schools, and one community college within Napa County. Although schools are located throughout the county, they are concentrated near the population centers within the southern portion of the county.

Some of the co-benefits of the proposed GHG reduction measures (building efficiency, agricultural, off-road, land use, water, wastewater, solid waste, high GWP, and multi-sector measures) include improved public health, improved air quality, and reduced fossil fuel reliance all of which would result in reduced exposure of people and school children to hazardous emissions. These measures are not discussed further below but are notable for the benefits they would provide. The detailed description of the referenced measures can be found in Table 2-4, Project Description.

Infrastructure Efficiency and Replacement; Transportation, Water, Stormwater, and Grid Utility Infrastructure; Vegetation Management; Small-Scale Renewable Energy; and Waste Diversion Measures

Implementation of GHG reduction and adaptation measures BE-7, BE-11, TR-8, TR-10, TR-12, TR-14, TR-15, Water-2, Water-5, Flood-3, Flood-4, Flood-7, Fire-5, and SW-2 may result in the development of new infrastructure or expansion of facilities including small-scale renewable energy systems, landfill gas capture systems, visitor-friendly infrastructure, park and ride facilities, EV charging stations, pedestrian, trail, and bicycle improvements, water, stormwater facilities, grid utility infrastructure, vegetation management, and floodplain restoration. Specific locations for projects and retrofits have not been identified; however construction, operation, and maintenance activities associated with the above improvements would require the use, transport, and storage of hazardous materials including fuels, solvents, paints, etc. The potential for accidental releases of hazardous materials, primarily fuel and lubricants, could result from construction and maintenance activities including equipment fuel leaks and fuel spills. Additionally, grading and site preparation activities have the potential to disturb previously contaminated sites and pose health concerns to workers and nearby sensitive receptors, including schools.

Hazardous materials are controlled through numerous federal, State, and local regulations that require strict adherence to guidelines regarding the safe use, transportation, and disposal of hazardous materials as well as ensuring the reduction of the potential for humans or the environment to be affected by an accidental release of hazardous materials. Regulations that would be required of those transporting, using or disposing of hazardous materials include RCRA, CERCLA, the Hazardous Materials Transportation Act, Title 22, and the California Fire Code. Similarly, with regard to the use or storage of hazardous materials near schools and the potential to site sensitive land uses upon a contaminated site, multiple local and State regulations require a discretionary process that results in the consultation of databases which store information related to contaminated sites, soils testing of potential project sites, project-level environmental assessments before grading, and compliance with many regulations which heavily restrict the use and storage of hazardous materials within one-quarter mile of a school.

Impact Summary

Future projects resulting from the implementation of the CAP would be discretionary and would be required to evaluate project-specific impacts under CEQA at the time of application. Project-specific mitigation would be required to minimize or avoid exposing people, the environment, and schools to hazardous materials to the extent feasible. Improvements would be required to implement 2008 General Plan policies and other applicable local regulations, including State and federal regulations listed above. Therefore, impacts would be **less than significant**.

Mitigation Measures

No mitigation is required.

Impact 3.8-2: Result In a Safety Hazard for People Working or Residing In the Area Because of Proximity to Airports or Private Airstrips

There are two public use airports and four private airstrips and/or heliports located in Napa County. Safety hazards associated with airports are generally related to tall structures and creation of wildlife attractants that could interfere with airplane flight paths. Small-scale wind turbines that could result in airport safety hazards would be required to comply with existing federal, State, and local regulations that minimize airport safety hazards, including 2008 General Plan policies and airport land use plans. Therefore, this impact would be **less than significant**.

As discussed above, there are two public use airports and four private airstrips and/or heliports located in Napa County. Safety hazards associated with airports are generally related to airspace obstructions (building height, antennas, etc.) and hazards to flight (wildlife attractants, distracting lighting or glare, etc. that could interfere with airplane flight paths. Napa County Airport has an ALUCP that provides guidance to the Airport Land Use Commission in reviewing land use plans and zoning regulations to ensure compatible land uses within the plan area. The CAP is a policy-level document that does not include any site-specific designs or proposals or grant any entitlements for development; however, implementation of GHG reduction and adaptation measures could result in the construction of project or improvements that may be in the vicinity of airports.

Small-Scale Renewable Energy Measures

GHG reduction and adaptation measures (BE-5 and BE-11) may result in the development of new small-scale renewable energy systems, and could result in safety hazards if they are located near an airport. This would occur if the structures were located too close to an airport runway, were too tall, or produced glare or lighting that could cause a distraction to pilots.

Small-scale wind turbines could also pose conflicts with airports if the turbines were sited in such a way to produce visual or electronic impairment to navigation. Specific locations for small-scale renewable energy projects have not been chosen; however, it is possible that turbines would be constructed within an Airport Influence Area (area around an airport for which an Airport Land Use Compatibility Plan exists), within 2 miles of a public airport, within the safety zone for an airport, or within a private airstrip and could potentially result, in a safety risk. The County's Zoning Code Chapter 18.117 regulates the placement of wind turbines and establishes criteria that must be met to receive a building permit to install one wind turbine by right. The code requires that parcels be at least 2 acres or larger, be located outside urbanized areas, in the following zoning districts only: Agricultural Preserve (AP), Agricultural Watershed (AW), Industrial (I), or Timber Preserve (TP) zoning. The code also limits height of wind turbines to a 55-foot maximum or 80-feet on larger parcels and requires that turbines not conflict with other applicable regulations or policies. In cases where the criteria for the administrative permit cannot be met, then applicants must obtain a Use Permit. Therefore, it is not possible that individual wind turbines would conflict with policies related to airports.

Vegetation Management Measures

Measures that would result in the restoration of floodplains (Flood-3, Flood-4) would improve floodplain habitat within the County, which could attract wildlife. If wildlife is attracted to an area in proximity to a public or private airport, this could result in a safety hazard. However, floodplains are inherently connected to waterways that already provide habitat for and are an attractant for wildlife. Therefore, these GHG adaptation measures are not expected to substantially increase the amount of wildlife attracted to any areas in proximity to an airport.

Impact Summary

As described above, projects resulting in small scale renewable energy projects and floodplain restoration would be largely discretionary projects under the County's land use permitting authority. At the time of permitting, projects would be required to evaluate project-specific impacts under CEQA at the time of application and project-specific mitigation would minimize or avoid airport safety hazards. All projects that could result in airport hazards resulting from implementation of the CAP would be required to undergo the County's discretionary review process, which would ensure compliance with local, State, and federal regulations related to airport safety. Additionally, projects would be required to be compliant with all applicable 2008 General Plan policies as well as with adopted and applicable ACLUPs to ensure compliance with airport safety zones. Therefore, this impact would be **less than significant**.

Mitigation Measures

No mitigation is required.

Impact 3.8-3: Impair Implementation of or Physically Interfere With an Adopted Emergency Response Plan or Emergency Evacuation Plan

Utility upgrades and linear improvements such as bike and pedestrian infrastructure have the potential to interfere with emergency response plans and evacuation routes. However, all projects would be evaluated for project-specific conflicts with applicable local, State, and federal regulations intended to ensure safety, including the County's OAHMP. Therefore, this impact would be **less than significant**.

As noted above, the *Napa Operational Area Hazard Mitigation Plan* (OAHMP) includes goals, programs, objectives, and action items that help to ensure effective emergency response to significant hazards. Objectives and action items in the OAHMP include community education programs, post-emergency power generation plans, remote area detection systems, and communication and response systems that contribute to effective emergency response in the County (Napa County 2013).

Transportation, Water Stormwater, and Grid Utility Infrastructure Measures

GHG reduction and adaptation measures that would result in the construction of new or retrofitted active transportation facilities such as visitor-friendly infrastructure, park and ride facilities, pedestrian, trail, and bicycle improvements (TR-8, TR-10, TR-14, TR-15) water, stormwater facilities, and grid utility infrastructure (Water-2, Water-5, Flood-7) could interfere with emergency response and evacuation plans through construction-related road closures.

As described above in issue areas 3.8-1 and 3.8-2, projects resulting from implementation of the CAP that would have the potential to interfere with emergency response plans, or evacuation would be subject to a discretionary review process by the County before development. During the review, projects would be evaluated under CEQA for physical impacts and would be required to implement mitigation. Additionally, projects would be evaluated for compliance with applicable local, State, and federal regulations related to hazards, including the County's OAHMP, which would ensure that projects would not interfere with emergency response plans or evacuation routes.

Impact Summary

Projects would be required to undergo the County's discretionary review process, which included CEQA and would require mitigation to minimize or avoid impacts. Projects would also be evaluated for consistency with applicable local, State, and federal regulations regarding emergency response plans, including the County's OAHMP and 2008 General Plan policies which would prevent interference with emergency response plans. Therefore, projects would not conflict with or interfere with emergency response plans and impacts would be **less than significant**.

Significance after Mitigation

No mitigation is required

Impact 3.8-4: Expose People or Structures to a Significant Risk of Loss, Injury, or Death Involving Wildfires

Most of the county has been classified as having moderate to very high wildfire risk. Implementation of the GHG reduction measures could result in construction-related increases in potential wildfire risk if caution is not exerted at the time of development. However, compliance with existing federal, State, and local regulations that minimize the potential for wildfire and completion of subsequent project-level planning and environmental review would reduce potential impacts as part of the discretionary review process. Therefore, this impact would be **less-than-significant**.

As discussed above, most of the county has been classified as having moderate to very high wildfire risk, with the very high wildfire risk areas concentrated in the northwest, west, and central portions of the County (CAL FIRE 2007). GHG reduction and adaptation measures would not include construction of any structures for human occupancy; however, construction of facilities and infrastructure in wildland areas could exacerbate the risk for wildfire during construction and to a more limited extent during operation of some facilities.

Infrastructure Efficiency and Replacement; Transportation, Water, Stormwater, and Grid Utility Infrastructure; Vegetation Management; Small-Scale Renewable Energy; and Waste Diversion Measures

Implementation of GHG reduction and adaptation measures BE-7, BE-11, TR-8, TR-10, TR-12, TR-14, TR-15, Water-2, Water-5, Flood-3, Flood-4, Flood-7, Fire-5, and SW-2 may result in the development of new infrastructure or expansion of facilities including small-scale renewable energy systems, landfill gas capture systems, visitor-friendly infrastructure, park and ride facilities, EV charging stations, pedestrian, trail, and bicycle improvements, water, stormwater facilities, grid utility infrastructure, vegetation management, and floodplain restoration. Specific locations for projects and retrofits have not been identified; however, construction, operation, and maintenance activities associated with the above improvements would result in the introduction of mechanical elements and infrastructure in areas that may be subject to very-high fire potential. The potential for ignition exists primarily as a result of the introduction of hot motorized equipment into areas that may be dry and prone to sparking wildfires during grading and site preparation activities.

Impact Summary

All project types listed above would be required to undergo the County's discretionary review process, including subsequent project-specific environmental review and mitigation consistent with CEQA. Projects would be required to implement project-specific mitigation which would minimize or avoid wildfire risks to the extent feasible in compliance with CEQA Guidelines Section 15126.4. Impacts would be minimized through implementation of the 2008 General Plan policies and standard project conditions that would reduce the potential for wildfire consistent with federal and State requirements, as well as all applicable project-specific mitigation measures that would minimize impacts. Therefore, this impact would be **less than significant**.

Mitigation Measures

No mitigation is required.

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3.9 HYDROLOGY AND WATER QUALITY

This section describes the existing hydrological setting within the County, including runoff, drainage, flood control, and other hydrologic issues including water quality, water supply, and groundwater sustainability, and the potential effects that implementation of the project may have on these resources. Impacts associated with potential exposure to contaminated groundwater are addressed in Section 3.9, "Hazards and Hazardous Materials."

The County did not receive comments regarding hydrology, water quality, or water supply during the Notice of Preparation (NOP) scoping process. A copy of the NOP and comment letters received in response to the NOP are included in Appendix A of this Draft EIR.

3.9.1 Environmental Setting

REGIONAL HYDROLOGY

Napa County is located within the Coast Range physiographic province northeast of San Francisco. The county is bordered to the east by California's Central Valley and to the west by the Coast Ranges. The topography of Napa County consists of a series of parallel northwest-trending mountain ridges and intervening valleys of varying sizes. These parallel northwest-trending mountain ridges subdivide the County into three principal watersheds: Napa River watershed, Putah Creek/Lake Berryessa watershed, and Suisun Creek watershed (Figure 3.9-1).

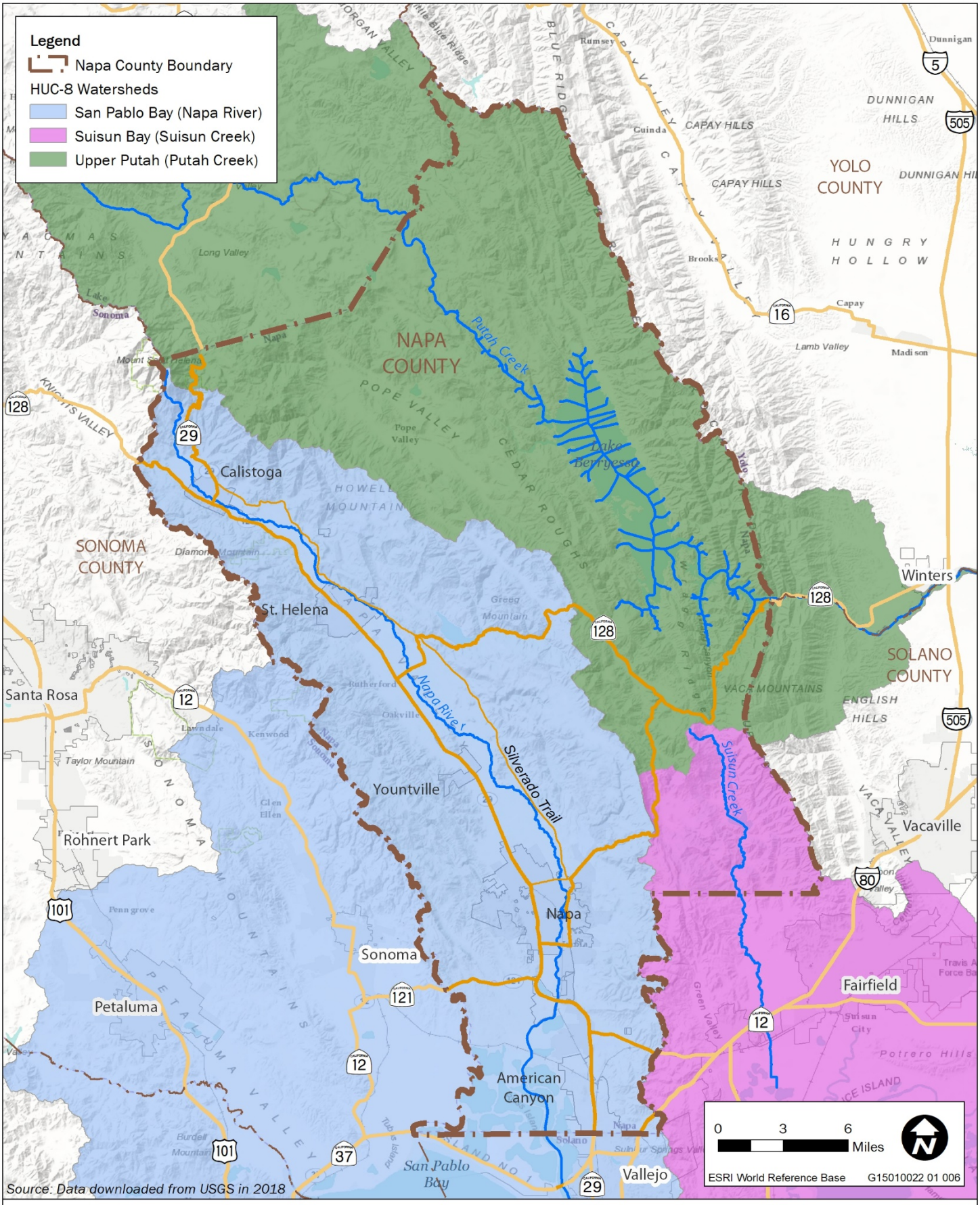
Napa County has a Mediterranean climate, with distinct wet and dry seasons. Approximately 90 percent of the precipitation occurs between November and April, and precipitation varies significantly throughout the county, both in a north-south direction and with elevation. Storms approach the county both from the west, rising over the Mayacamas Mountains and moving into the Napa Valley and beyond, and from San Pablo and San Francisco Bay to the south, and moving northward up the valleys. Rainfall distribution is strongly correlated with elevation (Napa County 2007).

Annual precipitation varies not only spatially across the county, but it also varies significantly from year to year, and deviations can be as high as 200 percent from the 85-year average. In general, precipitation increases from south to north and with increasing elevation, and average annual precipitation varies by more than a factor of three throughout the county, from 22.5 to 75 inches/year (Napa County 2007). The average annual precipitation is approximately 25 inches (City of Napa 2017).

Napa River Watershed

The Napa River watershed, which extends in a northwesterly direction approximately 45 miles from San Pablo Bay to the hills north of Calistoga, and includes primarily a central valley floor and eastern and western mountains to either side of the valley floor. The watershed is bounded by Mount St. Helena to the north; the Mayacamas Mountains to the west; Howell Mountain, Atlas Peak, and Mt. George to the east; and the Napa-Sonoma Marsh to the south. Napa River, the largest river in the County, drains the watershed and empties into San Pablo Bay to the south (WICC 2018). The lowest reaches of the Napa River and tributaries in the lower Napa Valley are tidally influenced by San Pablo Bay. Along the Napa River, the tidal influence is observed into the City of Napa (Napa County 2007).

The Napa River watershed has the following major storage facilities: Kimball Reservoir, Bell Canyon Reservoir, Lake Hennessey, Rector Reservoir, and Milliken Reservoir. Twenty-eight dams are located in the Napa River watershed (Napa County 2007).



Source: Data downloaded from USGS in 2018

Figure 3.9-1 **Watershed Map**

Putah Creek/Lake Berryessa Watershed

East of the Napa River watershed is the Putah Creek watershed, which contains Lake Berryessa. This region consists of several small valleys, including the Pope and Capell Valleys, surrounded by topography that is generally mountainous and steep. Elevations in the Lake Berryessa watershed are generally higher than in the Napa Valley. To the west of the Napa Valley, hills rise to an elevation of approximately 1,500 to 2,000 feet above sea level (asl), forming a divide between the Napa Valley and the adjacent Putah Creek (Napa County 2007).

Putah Creek is the largest river in the Lake Berryessa basin. It originates in Lake County to the north, flows into Napa County and into Lake Berryessa, and flows out of the county at Lake Berryessa's outlet (Monticello Dam) along the eastern border where it eventually flows into the Sacramento River. Other notable tributaries in the drainage include Pope Creek, Capell Creek, and Eticuera Creek (Napa County 2007).

Lake Berryessa is the largest waterbody in the county, with a storage capacity of 1.6 million acre-feet (af). It is controlled by Monticello Dam. Lake Berryessa spills at an elevation of 439.96 feet asl. Approximately 40 streams flow into Lake Berryessa, which has a total drainage area of 576 square miles. The U.S. Bureau of Reclamation owns Monticello Dam, and the Solano Irrigation District operates it (Napa County 2007).

Suisun Creek Watershed

The Suisun Creek watershed lies south of Lake Berryessa and the Putah Creek watershed, and contains Lake Curry and Wooden Valley. Suisun Creek flows south and into Solano County, and only the upper portions of the watershed are located within Napa County. The valley elevations range from approximately 200 to 600 feet asl. To the north of the watershed, mountains rise to an elevation of approximately 2,000 to 2,500 feet asl, and to the east, mountains rise to an elevation of approximately 2,500 feet asl (Napa County 2007).

DRAINAGE

Tributaries to major drainages typically form canyons in their steeper upstream reaches, where they flow over the more resistant bedrock of the mountainous areas. County streams typically descend from steep headwater reaches (possibly through side valley canyons) onto alluvial fan surfaces, and then on to a valley floor setting. As describe above, most of the tributaries drain into one of the three major waterways within the county: Napa River, Putah Creek, and Suisun Creek (Napa County 2007).

Some of the upstream reaches of tributaries are seasonal (ephemeral or intermittent), and others are perennial; downstream reaches, especially of the larger streams, are generally perennial. In some areas, mountain streams drain into alluvial fan deposits and are perennial in upstream reaches and intermittent in downstream reaches, because water tables fall below the level of the streambed during the dry season due to the contrasting permeabilities of mountain bedrock and adjacent unconsolidated alluvial fan deposits (Napa County 2007).

Streamflows generally peak in January or February and are lowest from August through November. Average and maximum stream flows are scaled with drainage area (Napa County 2007).

FLOODING

The Mediterranean climate of the Napa County region (which can bring a sequence of mid-winter powerful storms) combined with the ridge-valley topography and drainage network, (which quickly delivers runoff from side valley tributaries) and a constricted river channel have historically resulted in flooding along the Napa River. The majority of the flooding within the county occurs within the Napa Valley floor. The City of Napa and areas surrounding the Napa-Sonoma Marshes are the most heavily affected by flooding; although Yountville, St. Helena, American Canyon, and Calistoga all experience flooding from the 100-year flood event. There are currently 2,500 properties within the county that are located in a floodplain. Tidal conditions along the Napa River can also increase flooding in the City of Napa (Napa County 2007).

The 100-year flood event refers to the flood resulting from a storm event that has a probability of occurring once every 100 years, or a 1 percent chance of occurring in any given year. Areas mapped in the 100-year floodplain area are subject to inundation during a 100-year storm event. The 200-year flood event refers to a flood with a 1-in-200 chance of occurring in any given year. Areas in the county that are within the 100-year and 200-year floodplains are shown in Figure 3.9-2.

In addition, there are 16 major dams within the county that could result in severe flooding in the event of a catastrophic failure. The area of potential inundation varies for each dam, but are primarily located along the Napa River corridor (Napa County 2008).

GROUNDWATER

The California Department of Water Resources (DWR) has identified the major groundwater basins and subbasins in and around Napa County, including the Napa-Sonoma Valley, Berryessa Valley, Pope Valley, and a small part of the Suisun-Fairfield Valley Groundwater Basins (Napa County 2013a). These groundwater basins defined by DWR are not confined within County boundaries, and DWR-designated "basin" or "subbasin" designations do not cover all of Napa County. The Napa Valley Subbasin is the only medium priority designated groundwater basin under the Sustainable Groundwater Management Act (SGMA), which is described below under Section 3.9.2 Regulatory Framework. All other Napa County basins and subbasins were ranked as very low priority. For medium-priority groundwater basins and subbasins, SGMA requires the designation of groundwater sustainability agencies and the adoption of groundwater sustainability plans (GSP); or development of an alternative to a GSP. In response to SGMA, Napa County prepared a Basin Analysis Report for the Napa Valley Subbasin and submitted it to the DWR in December 2016. Groundwater level trends in the alluvial aquifer system of the Napa Valley Subbasin of the Napa-Sonoma Valley Groundwater Basin are stable in the majority of wells with long-term groundwater level records (Napa County 2018). Groundwater level trends in the alluvial aquifer system of the Napa Valley Subbasin of the Napa-Sonoma Valley Groundwater Basin are stable in the majority of wells with long-term groundwater level records. While many wells showed some level of response to recent drought conditions, the water levels observed in recent years are generally higher than groundwater levels in the same wells during the 1976 to 1977 drought. Groundwater levels showed continued stable conditions with decreasing depths to groundwater in 2017, consistent with the very wet water year conditions (WICC 2018).

Groundwater conditions outside of the DWR-designated areas are also very important in Napa County. An example of such an area is the Milliken-Sarco-Tulucay (MST) Basin, a locally identified groundwater deficient area. For purposes of local planning, the County has been subdivided into a series of groundwater subareas, including the Knoxville, Livermore Ranch, Pope Valley, Berryessa, Angwin, Central Interior Valleys, Eastern Mountains, Southern Interior Valleys, Jameson/American Canyon, Napa River Marshes, Carneros, Western Mountains Subareas, and five Napa Valley Floor Subareas (Calistoga, St. Helena, Yountville, Napa, and MST).

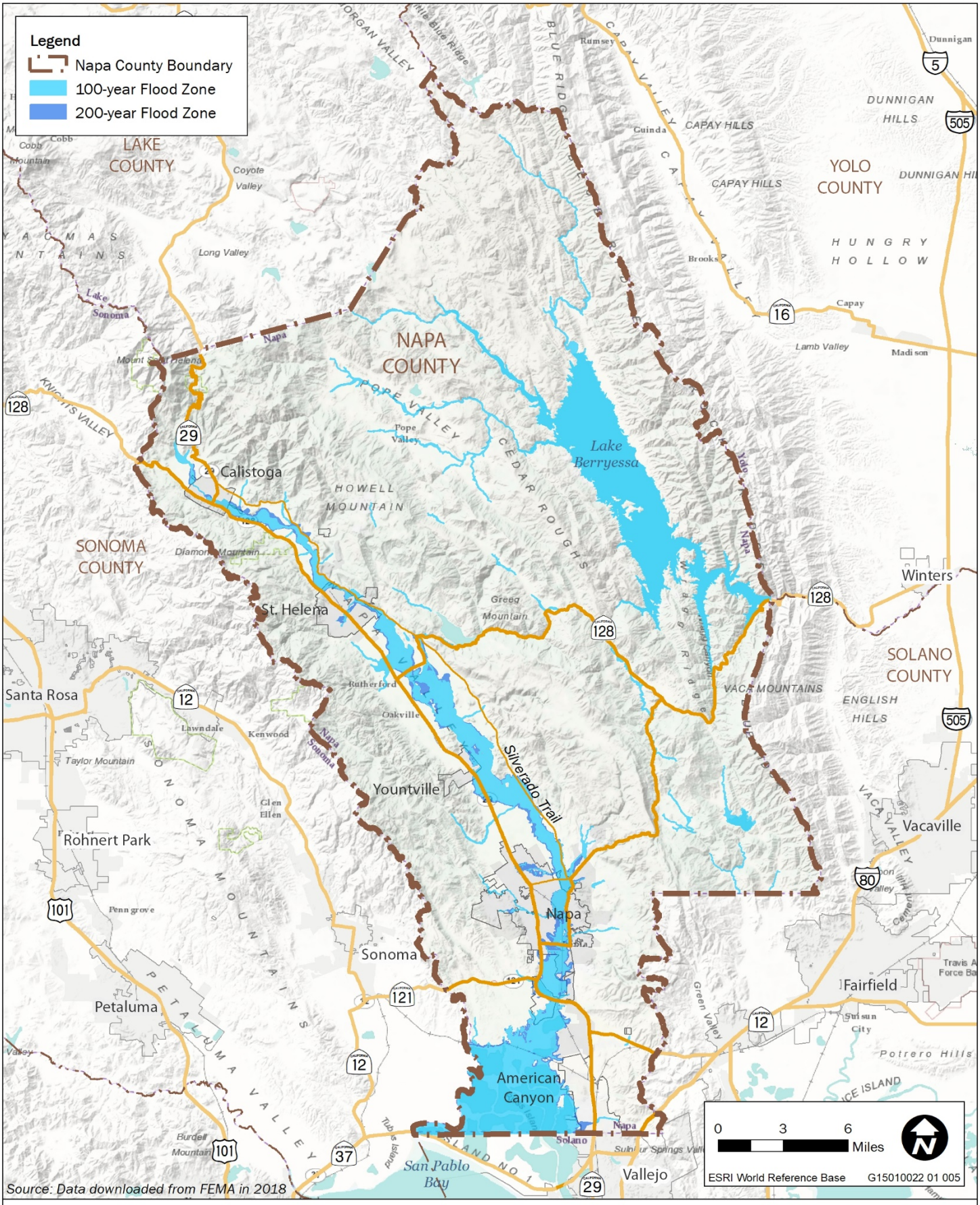
WATER QUALITY

Surface Water

Currently, the Napa River and its tributaries are listed under Section 303(d) of the Clean Water Act (CWA) as water quality impaired for sediment and pathogens, and a portion of the river is listed as impaired for nutrients (WICC 2018). The Putah Creek Watershed/Lake Berryessa is listed as water quality impaired for mercury. San Pablo Bay, into which the Napa River drains, has been listed as impaired for chlordane, DDT, diazinon, dieldrin, dioxins and furans, invasive species, mercury, PCBs, and selenium (SWRCB 2010).

Sediment

Sediment in the Napa River is primarily from four sources: channel incision and bank erosion, paved and unpaved roads, agricultural lands, and urban and rural lands (WICC 2018). Channel incision rates vary substantially with location along the Napa River, although average rates of incision on the mainstream Napa River over the past four decades (0.5 cm/yr) is 50 times greater than natural background rates.



Source: Data downloaded from FEMA in 2018

Figure 3.9-2 **Floodplain Map**

Other processes that contribute to erosion/sedimentation issues in the County include mass wasting and sediment input to channels from colluvial stream bank, gullies, shallow landslides, and road crossing type erosive sources (Napa County 2007).

The construction of several large dams between 1924 and 1959 on major tributaries in the eastern Napa River Watershed and northern headwater areas of the Napa River has affected sediment transport processes into the main Napa River by reducing the delivery of the coarse load sediments to the river. In addition to the larger dams, many smaller dams also intercept coarse sediment supply and contribute to this overall trapping of coarse material (Napa County 2007).

Historically, the Napa River system was a gravel bed river that over time has become increasingly dominated by finer sediments. The source for these finer sediments is found from a variety of land use, infrastructure, and in-stream erosion sediment sources (Napa County 2007).

Nutrients

A study of potential sources of nutrients within the Napa River watershed identified numerous nutrient load contributors, including point sources such as wastewater treatment plants, and non-point sources such as septic system seepage, agricultural and urban runoff, and atmospheric deposition (Napa County 2007). The Napa River was added to the CWA section 303(d) list of impaired waters in 1976 for nutrients (excess nitrogen and phosphorous); however, the upper portion of the watershed was removed from the impaired list in 2014 (WICC 2018).

Pathogens

High concentrations of fecal bacteria have been observed in the Napa River since the 1960s. Consequently, the San Francisco Bay Regional Water Quality Control Board (RWQCB) identified the Napa River as impaired by excessive fecal bacteria according to Section 303(d) of the CWA. The following sources have been associated as contributors of significant pathogen loads in the watershed: faulty septic systems, failing sanitary sewer lines, municipal runoff, pet waste, and livestock (WICC 2018).

Groundwater Quality

Groundwater in Napa County discharges are a function of local water level gradients between the aquifer system and the river. In general, groundwater quality throughout most of the region is suitable for most urban and agricultural uses with only local impairments. The primary constituents of concern are high total dissolved solids, nitrate, boron, and organic compounds (Napa County 2007). Overall, groundwater quality appears to be good except in select areas in the most northern and southern parts of Napa County. Areas near Calistoga exhibit geothermal influences and the southern lowlands of the county exhibit elevated levels of naturally occurring dissolved solids and chlorides, likely due to their proximity to San Pablo Bay (Napa County 2018).

Water Supply

The cities of Napa, American Canyon, Calistoga, St. Helena, and the Town of Yountville provide public water within their respective jurisdictional boundaries as well as deliver water to the unincorporated portions of the county. Other public water providers serving the county include: the Circle Oaks County Water District, Congress Valley Water District, Lake Berryessa Resort Improvement District, Napa-Berryessa Resort Improvement District, and the Spanish Flat Water District. There are also several private water purveyors that supply water to the smaller communities in the County. The Napa County Flood and Water Conservation District is the “State Water” contractor and the individual cities, towns, and water districts are considered “subcontractors” for potable water sources. The Town of Yountville and the City of American Canyon receive treated water from the State Water Project and the Congress Valley Water District receives treated water via City of Napa treatment and conveyance facilities (Napa County 2007, WICC 2018).

The primary source of water for the cities within Napa County is surface water, while the primary source of water for the unincorporated area is groundwater (though some areas do utilize surface water, such as a portion of the unincorporated community of Angwin). The largest source of groundwater for the county is the North Napa Valley Basin, MST Subbasin, and the Carneros Subbasin (Napa County 2007).

Municipal water supplies within Napa County for normal years are anticipated to be adequate through 2050. Water supply shortages are projected to occur in the cities for multiple dry years in 2050 and for single dry years for all study periods through 2050. Single dry years were modeled using a worst-case year equivalent to the 1977 drought and multiple dry year events were modeled using the droughts in the 1930s and late 1980s (WICC 2018).

Estimated local municipal water supplies for cities within Napa County include the following:

- Napa - Lake Hennessey (31,000 af) and Milliken Reservoir (1,400 af)
- Yountville - Rector Reservoir (4,500 af) and groundwater
- St. Helena - Bell Canyon Reservoir (2,350 af)
- Calistoga - Kimball Reservoir (275 af)
- Other municipal supplies include imported water (State Water Project), groundwater, and recycled wastewater

In addition, the Napa County Flood and Water Conservation District has a State Water Project entitlement of 29,025 af; however, allocations vary annually (WICC 2018).

Estimated water demand within Napa County includes the following:

- American Canyon - 4,000 af,
- Napa - 15,500 af,
- Yountville - 600 af,
- St. Helena - 2,000 af,
- Calistoga - 820 af, and
- Unincorporated county - 39,600 af (WICC 2018).

3.9.1 Regulatory Setting

FEDERAL

Clean Water Act

Overview

The CWA is the primary federal statute governing the protection of water quality and was established to provide a comprehensive program to protect the nation's surface waters. The U.S. Environmental Protection Agency (EPA) is the federal agency with primary authority for implementing regulations adopted pursuant to the CWA. The basis of the CWA consists of the Federal Water Pollution Prevention and Control Act (Water Pollution Act) passed in 1948. The Water Pollution Act was substantially reorganized and expanded in subsequent amendments passed in 1972 and in 1977, when "Clean Water Act" became its common name. The Water Pollution Act required the EPA to establish nationwide effluent standards on an industry-by-industry basis. The 1972 amendment established the National Pollutant Discharge Elimination System (NPDES) program. As a result of the reauthorization of the CWA in 1987, Sections 402(p) through 405 were added. One of the results of the new sections was the creation of a framework for regulating discharges under the NPDES permit program, which is discussed later in this section.

Under federal law, EPA has published water quality regulations under Volume 40 of the Code of Federal Regulations (CFR). Section 303 of the CWA requires states to adopt water quality standards for all surface waters of the United States. As defined by the CWA, water quality standards consist of two elements: (1)

designated beneficial uses of the water body in question, and (2) criteria that protect the designated uses. Section 304(a) requires EPA to publish advisory water quality criteria that accurately reflect the latest scientific knowledge on the kind and extent of all effects on health and welfare that may be expected from the presence of pollutants in water. Where multiple uses exist, water quality standards must protect the most sensitive use. EPA has designated the State Water Resources Control Board (SWRCB) and its nine RWQCBs with the authority to identify beneficial uses and adopt applicable water quality objectives. EPA has delegated to the State of California the authority to implement and oversee most of the programs authorized or adopted for CWA compliance through the Porter-Cologne Water Quality Control Act of 1969 (Porter-Cologne Act), described below.

Section 303(d) List of Impaired Water Bodies

Section 303(d) of the CWA requires states to identify water bodies that do not meet water quality objectives and are not supporting their beneficial uses. Each state must submit an updated list, called the 303(d) list, to EPA periodically. In addition to identifying the water bodies that are not supporting beneficial uses, the list also identifies the pollutant or stressor causing impairment, and establishes a priority for developing a control plan to address the impairment. On June 28, 2007, EPA gave final approval to California's 2006 Section 303(d) List of Water Quality Limited Segments. The 303(d) list includes the Napa River for nutrients, pathogens, and sedimentation/siltation.

Safe Drinking Water Act

Under the Safe Drinking Water Act (Public Law 93-523), passed in 1974, EPA regulates contaminants of concern to domestic water supply. Contaminants of concern relevant to domestic water supply are defined as those that pose a public health threat or that alter the aesthetic acceptability of the water. These types of contaminants are regulated by EPA's primary and secondary maximum contaminant levels (MCLs), which are applicable to treated water supplies delivered to a distribution system. MCLs and the process for setting these standards are reviewed triennially. Amendments to the Safe Drinking Water Act enacted in 1986 established an accelerated schedule for setting MCLs for drinking water.

EPA has delegated to the California Department of Public Health (CDPH) the responsibility for administering California's drinking-water program. CDPH is accountable to EPA for program implementation and for adopting standards and regulations that are at least as stringent as those developed by EPA. The applicable state primary and secondary MCLs are set forth in 22 CCR, Division 4, Chapter 15, Article 4.

Federal Emergency Management Agency

In 1968, Congress created the National Flood Insurance Program (NFIP) in response to the rising cost of taxpayer funded disaster relief for flood victims and the increasing amount of damage caused by floods. The Federal Emergency Management Agency (FEMA) administers the NFIP to provide subsidized flood insurance to communities that comply with FEMA regulations to limit development in floodplains. FEMA also issues flood insurance rate maps (FIRMs) that identify which land areas are subject to flooding. These maps provide flood information and identify flood hazard zones in the community. FEMA has established a minimum level of flood protection for new development as the 1-in-100 Annual Exceedance Probability (i.e., 100-year flood event). Participants in the NFIP must satisfy certain mandated floodplain management criteria.

STATE

Title 22 Standards

Water quality standards are enforceable limits composed of two parts: (1) the designated beneficial uses of water and (2) criteria (i.e., numeric or narrative limits) to protect those beneficial uses. Municipal and domestic supply is among the "beneficial uses" as defined in Section 13050(f) of the Porter-Cologne Act, which defines them as uses of surface water and groundwater that must be protected against water quality degradation. Maximum contaminant levels, MCLs, are components of the drinking water standards adopted by CDPH pursuant to the California Safe Drinking Water Act. California MCLs may be found in 22 CCR, Division 4, Chapter 15, Domestic Water Quality and Monitoring. CDPH is responsible for 22 CCR (Article 16,

Section 64449) as well, which also defines secondary drinking-water standards, established primarily for reasons of consumer acceptance (i.e., taste) rather than because of health issues.

Drinking-water MCLs are directly applicable to water supply systems "at the tap" (i.e., at the point of use by consumers in their home, office, and other locations), and are enforceable by CDPH. California MCLs, both primary and secondary, are directly applicable to groundwater and surface water resources when they are specifically referenced as water quality objectives in the pertinent water quality control plan (basin plan). In such cases, MCLs become limits enforceable by the SWRCB and RWQCBs. When fully health protective, MCLs may also be used to interpret narrative water quality objectives prohibiting toxicity to humans in water designated as a source of drinking water in the basin plan.

Porter-Cologne Water Quality Control Act of 1969

The Porter-Cologne Act of 1969 is California's statutory authority for the protection of water quality. Under the Porter-Cologne Act, the state must adopt water quality policies, plans, and objectives that protect the state's waters for the use and enjoyment of the people. The act sets forth the obligations of the SWRCB and nine RWQCBs to adopt and periodically update basin plans. Basin plans are the regional water quality control plans required by both the CWA and Porter-Cologne Act in which beneficial uses, water quality objectives, and implementation programs are established for each of the nine regions in California.

The Porter-Cologne Act also requires waste dischargers to notify the RWQCBs of their activities through the filing of reports of waste discharge (RWD) and authorizes the SWRCB and RWQCBs to issue and enforce WDRs, NPDES permits, Section 401 water quality certifications, or other approvals. The RWQCBs also have the authority to issue waivers to RWD/WDRs for broad categories of "low threat" discharge activities that have minimal potential for adverse water quality effects when implemented according to prescribed terms and conditions.

San Francisco Bay (Region 2) Water Quality Control Plan

The *San Francisco Bay (Region 2) Water Quality Control Plan (Basin Plan)* (San Francisco Bay RWQCB 2017) defines the beneficial uses, water quality objectives, implementation programs, and surveillance and monitoring programs for waters of the San Francisco Bay. State law defines beneficial uses as "domestic; municipal; agricultural and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves" (California Water Code Section 13050[f]). This basin plan contains specific numeric water quality objectives that are applicable to certain water bodies or portions of water bodies.

NPDES Permit System and Waste Discharge Requirements for Construction

The 1972 amendment to the CWA established the NPDES permit program. The NPDES permit program outlined in the CWA contains effluent limitation guidelines, water quality requirements, and permit program requirements for discharges to waters of the United States. EPA has overall responsibility for the NPDES program, but administration of the program in California has been delegated to the SWRCB and the nine RWQCBs.

The 1987 amendment to the CWA established a framework for regulating discharges under the NPDES program. In 1990, EPA promulgated regulations for permitting stormwater discharges from industrial sites, including construction sites that disturb 5 acres or more, and from municipal separate storm sewer systems (MS4s) serving a population of 100,000 people or more. The November 16, 1990 regulations, known as the Phase I regulations (Title 55 [FR] 47990), rely on NPDES permit coverage to address stormwater runoff from operators of medium and large MS4s, construction activity disturbing 5 acres of land or greater, and 10 categories of industrial activity.

On December 8, 1999, EPA promulgated regulations known as Phase II. The regulations set forth in the Storm Water Phase II Final Rule (Volume 64 *Federal Register* 68722) require permit coverage for discharges from small municipalities, including nontraditional small MS4s, which are governmental facilities (such as military bases, public campuses, and prison and hospital complexes) and from construction sites disturbing

at least 1 acre of land. Phase II is intended to further reduce adverse impacts on water quality in receiving waters and aquatic habitats by instituting controls on the unregulated sources of stormwater discharges that have the greatest likelihood of continued environmental degradation. The goal of the NPDES nonpoint source regulations is to improve the quality of stormwater discharged to receiving waters to the "maximum extent practicable" through the use of best management practices (BMPs). The focus of the Phase II program is the implementation of the following six minimum control measures: public education and outreach, public participation and involvement, illicit discharge detection and elimination, construction site runoff control, post-construction runoff control, and pollution prevention and good housekeeping.

Under Phase II regulations in California, small MS4s are covered under SWRCB Water Quality Order No. 2003-0005–Division of Water Quality (DWQ), NPDES General Permit No. CAS000004 (Small MS4 Permit).

Construction projects disturbing at least 1 acre of land are covered under the General Construction Permit: SWRCB Water Quality Order No. 99-08-DWQ, NPDES General Permit No. CAS000002. Compliance with the NPDES General Construction Permit requires that any construction activity affecting 1 acre or more obtain the General Construction Activity Storm Water Permit. Permit applicants are required to submit a notice of intent to the SWRCB and to prepare a storm water pollution prevention plan (SWPPP). The SWPPP identifies BMPs that must be implemented to reduce construction effects on receiving water quality. The BMPs identified are directed at implementing both sediment and erosion control measures and other measures to control potential chemical contaminants. Examples of construction BMPs identified in SWPPPs include using temporary mulching, seeding, or other stabilization measures to protect uncovered soils; storing materials and equipment to ensure that spills or leaks cannot enter the storm drain system or surface water; developing and implementing a spill prevention and cleanup plan; installing traps, filters, or other devices at drop inlets to prevent contaminants from entering storm drains; and using barriers, such as straw wattles or silt fencing, to minimize the amount of uncontrolled runoff that could enter drains or surface water.

Construction activities subject to the general construction activity permit include clearing, grading, stockpiling, and excavation. Dischargers are required to eliminate or reduce nonstormwater discharges to storm sewer systems and other waters. The permit also requires dischargers to consider the use of postconstruction permanent BMPs that will remain in service to protect water quality throughout the life of the project. All NPDES permits also have inspection, monitoring, and reporting requirements.

Napa County is a co-permittee on an MS4 municipal stormwater NPDES permit along with the cities of Napa, St. Helena, and Calistoga, and the town of Yountville. A stormwater management plan (SWMP) in support of the County's stormwater management program was completed in 2003, which outlines the County's approach to compliance with the requirements of the NPDES permit and addresses the program areas required under the MS4 permit. It also includes a voluntary water quality monitoring program. The program is funded through a Joint Powers Authority administered by the Napa County Flood Control and Water Conservation District. Stormwater is also managed under Napa County Ordinance 1240, Stormwater Management and Discharge Control, administered by the Napa County PBESs.

California Water Code (Division 3, Dams and Reservoirs)

Since 1929, the State of California has supervised dams to prevent failure to safeguard life and protect property. The legislation resulted from the failure of St. Francis Dam in March 1928. Legislation enacted in 1965, as a result of the failure of Baldwin Reservoir in 1963, revised the statutes to include off stream storage. This legislation is regulated by the DWR Division of Safety of Dams. Two classifications of dam types are covered: (1) dam structures that are or will be in the future 25 feet or more in height from the natural bed of the stream or water course at the downstream toe of the barrier and (2) dams that have an impounding capacity of 50 acre-feet or more. Implementing the legislation involves use of geology and geotechnical engineering over the entirety of the dam's useful life for site selection, dam design and construction, and on-going inspection of the impounding structures.

Groundwater Management Act (CWC Sections10750-10755.4)

The Act provides a systematic procedure for a management agency to develop a groundwater management plan. Napa County has developed a groundwater management plan consistent with the California Water Code (CWC Sections 10750-10755.4), and is actively managing groundwater resources. In 2014, the Legislature enacted the Sustainable Groundwater Management Act.

Under that Act, local agencies, individually or in combination, are required to develop GSP for each basin or subbasin designated by DWR. That Act requires that a plan demonstrate how the basin or subbasin will be operated within its sustainable yield within approximately 20 years of the plan's adoption. An Alternative GSP must provide an analysis of the basin that demonstrates it has operated within its sustainable yield for a period of 10 years and that it is being managed consistent with the Act.

This Act applies to basins or subbasins that DWR designates as medium- or high-priority basins. The plans for most basins and subbasins are due in 2022. Plans for basins and subbasins that DWR finds to be "critically overdraft" are due in 2020. Napa-Sonoma Valley Basin has not been identified by DWR as a critically overdrafted basin. However, the Napa Valley Subbasin, located within the Napa-Sonoma Valley Basin, was ranked by DWR as medium priority under the California Statewide Groundwater Elevation Monitoring Program (Napa County 2017). Under the Act, Alternative GSP's for medium and high priority groundwater subbasins must be submitted to DWR by January 1, 2017. Napa County has prepared an Alternative GSP for the Napa Valley Subbasin and submitted it to DWR (Napa County 2018).

LOCAL

Napa County General Plan

The following policies of the *Napa County General Plan* (Napa County 2008) are applicable to the project.

- **Policy CON-44:** The County shall identify, improve, and conserve Napa County's surface water resources through the following measures:

  a) Evaluate and develop land use policies resulting in the appropriate density and mix of impervious surface and stable vegetation cover to improve water quality and reduce surface water pollution and siltation within domestic water supply watersheds.

  b) Encourage public agencies and private individuals to explore environmentally sensitive ways to store winter runoff in consultation with the State Department of Water Resources and other regulatory agencies.

  c) Promote a balanced approach to managing reservoir outflows, particularly municipal supply reservoirs, through coordination with cities and town to maintain a reliable water supply for domestic uses, minimize flooding, and preserve fish habitat and riparian vegetation.

  d) Work with other agencies to develop a comprehensive understanding of potential deficiencies in surface water supplies, and coordinate with private property owners on a voluntary basis to collect additional surface water data and implement an expanded voluntary monitoring effort to ensure development of effective water management and conservation strategies where appropriate.

- **Policy CON-48**: Proposed developments shall implement project-specific sediment and erosion control measures (e.g., erosion control plans and/or stormwater pollution prevention plans) that maintain pre-development sediment erosion conditions or at minimum comply with state water quality pollution control (i.e., Basin Plan) requirements and are protective of the County's sensitive domestic supply watersheds. Technical reports and/or erosion control plans that recommend site-specific erosion control measures shall meet the requirements of the County Code and provide detailed information regarding site specific geologic, soil, and hydrologic conditions and how the proposed measure will function.

- **Policy CON-50**: The County will take appropriate steps to protect surface water quality and quantity, including the following:

  c) The County shall require discretionary projects to meet performance standards designed to ensure peak runoff in two-, ten-, 50-, and 100-year events following development is not greater than predevelopment conditions.

  e) In conformance with NPDES requirements, prohibit grading and excavation unless it can be demonstrated that such activities will not result in significant soil erosion, silting of lower slopes or waterways, slide damage, flooding problems, or damage to wildlife and fishery habitats.

  f) Adopt development standards, in conformance with NPDES Phase II requirements, for post-construction storm water control.

  g) Address potential soil erosion by maintaining sections of the County Code that require all construction-related activities to have protective measures in place or installed by the grading deadlines established in the Conservation Regulations. In addition, the County shall ensure enforceable fines are levied upon code violators and shall require violators to perform all necessary remediation activities.

- **Policy CON-53**: The County shall ensure that the intensity and timing of new development are consistent with the capacity of water supplies and protect groundwater and other water supplies by requiring all applicants for discretionary projects to demonstrate the availability of an adequate water supply prior to approval. Depending on the site location and the specific circumstances, adequate demonstration of availability may include evidence or calculation of groundwater availability via an appropriate hydrogeologic analysis or may be satisfied by compliance with County Code "fair-share" provisions or applicable State law. In some areas, evidence may be provided through coordination with applicable municipalities and public and private water purveyors to verify water supply sufficiency.

- **Policy CON-54**: The County shall maintain or enhance infiltration and recharge of groundwater aquifers by requiring all projects in designated groundwater deficient areas as identified in the County's groundwater ordinance (County Code Chapter 13.15) be designed (at minimum) to maintain a site's predevelopment groundwater recharge potential, to the extent feasible, by minimizing impervious surfaces and promoting recharge (e.g., via the use of water retention/detention structures, use of permeable paving materials, bio-swales, water gardens, cisterns, and other best management practices).

- **Policy SAF-3**: The County shall evaluate potential safety hazards when considering General Plan Amendments, rezonings, or other project approvals (including but not limited to new residential developments, roads or highways, and all structures proposed to be open to the public and serving 50 persons or more) in areas characterized by:

  1) Slopes over 15 percent,
  2) Identified landslides,
  3) Floodplains,
  4) Medium or high fire hazard severity,
  5) Former marshlands, or
  6) Fault zones.

- **Policy SAF-23**: New construction in flood plains shall be evaluated and placed above the established flood elevation or flood-proofed to minimize the risks of flooding and provide protection to the same level as required under County's Floodplain Management Ordinance.

- **Policy SAF-25**: The review of new proposed projects in a floodway as mapped on the County's Flood Insurance Rate Maps (FIRM) shall include an evaluation of the potential flood impacts that may result from the project. This review shall be conducted in accordance with the County's FEMA approved Flood

Plain Management Ordinance, incorporated herein by reference, and at minimum include an evaluation of the project's potential to affect flood levels on the Napa River; the County shall seek to mitigate any such effects to ensure that freeboard on the Napa River in the area of the Napa River Flood Protection Project is maintained.

- **Policy SAF-26**: Development proposals shall be reviewed with reference to the dam failure inundation maps in order to determine evacuation routes.

Napa County Code

The County's Zoning Code (Chapter 18.108, Conservation Regulations) addresses erosion control and protection of the County's streams and waterways. The intent of these regulations is to protect lands from excessive soil loss and maintain or improve water quality of watercourses by minimizing soil erosion from earthmoving, land disturbing, and grading activities. The following are key provisions of the conservation regulations.

Section 18.108.025 – General Provisions, Intermittent/Perennial Streams

This section of the County code establishes stream setbacks for earthmoving activities and grading for all new developments, including agricultural and residential developments, and for replanting of existing vineyards when replanting occurs outside of the existing vineyard footprint and when the project would require a grading permit pursuant to the California Building Code.

Setbacks included in the Code range from 35 to 150 feet and are dependent on the slope of the terrain parallel to the top of bank of the stream, with wider setbacks required on steeper slopes. Where the outboard dripline of upper canopy vegetation is located outside the setback required by the slope steepness, the setback will extend to the outboard dripline. Re-vegetation of portions of the streamside setbacks may be required as a part of an erosion control plan, grading permit, or NPDES related permit.

Section 18.108.075 – Requirements for Structural Erosion Control Measures

This section establishes erosion control requirements for structural developments (anything built or constructed on, above, or below the surface of the land), and requires the submission of Evidence of Erosion Control Measures, and the incorporation of such measures in all applicable building, grading, septic, or other required plans or plot plans submitted for County approval.

Section 18.108.135 – Oversight and Operation Requirements

Maintenance and monitoring is a requirement of any erosion control plan and is the ultimate responsibility of the property owner. Section 18.108.135 requires that maintenance and monitoring be implemented for any erosion control plan. Specific actions are required under Napa County Code Section 18.108.135 in the event of existing or pending erosion control measure failures.

Finally, to assure the erosion control measures are adequately in place, the County may perform annual inspections of the project site, after the first major storm event of each winter and until the project has been completed and stable for 3 years. During these inspections, County staff may require that remedial actions be implemented where non-functioning or ineffective measures are identified. Additionally, once the project has been deemed complete, random site inspections by County staff may also occur with the same consequences.

Chapter 16.28 – Stormwater Management and Discharge Control

As part of the County's compliance with the requirements of the NPDES stormwater permitting program, the County adopted Ordinance No. 1240 (Stormwater Management and Discharge Control) on June 22, 2004. The purpose of this ordinance is to protect water resources and improve water quality through the use of BMPs and meet the requirements of the CWA, Porter-Cologne Water Quality Act, and the Basin Plan. Specifically, Section 16.28.100 requires the identification and use of BMPs to control the volume, rate, and potential pollutant discharge (including soil erosion) from construction, new development, redevelopment projects, existing businesses, and other activities that may cause or contribute to stormwater pollution. The

County currently accepts the California Stormwater Quality Association California Stormwater Best Management Practice Handbooks as effective standards for implementation and installation of stormwater pollution prevention measures, which provides detailed information on BMPs associated with use and design for maximum treatment effectiveness.

Napa County Flood Plain Management Ordinance

The purpose of the County's Flood Plain Management Ordinance is to reduce the potential for flood related damage within the county which may result in loss of life and property, pose possible health and safety hazards, disrupt commerce and governmental services, produce extraordinary public expenditure for flood protection and relief, and impair the tax base, all of which adversely affect the public health, safety, and general welfare. The ordinance seeks to perform the following:

- protect human life and health;
- minimize expenditure of public money for costly flood-control projects;
- minimize the need for rescue and relief efforts associated with flooding;
- minimize prolonged business interruptions;
- minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, and streets and bridges located in floodplain areas;
- help maintain a stable tax base by providing for the sound use and development of areas of special flood hazard to minimize future blighted areas caused by flood damage;
- assist prospective purchasers in receiving notification that property is in a flood insurance zone;
- to establish that those who occupy the special flood hazard areas assume responsibility for their actions; and
- to improve the normal functioning of floodplains and flood zones and effectively garner and preserve the numerous environmental benefits they afford.

The County's Flood Plain Management Ordinance identifies flood hazard zones and incorporates by reference official FIRM maps approved by FEMA. The County further maintains floodway and floodplain mapping, identifying possible inundation areas related to the 100-year (floodway) and 500-year (floodplain) flood events, as well as a Dam Failure Inundation Map, documenting areas that may be subject to severe flooding in the event of catastrophic failure of one of sixteen major dams in the county.

Napa County Flood Control and Water Conservation District

The Napa County Flood Control and Water Conservation District's (NCFCWCD) mission is the conservation and management of flood and storm waters to protect life and property; the maintenance of the County watershed using the highest level of environmentally sound practices; and the provision of coordinated planning for water supply needs of the community. Additionally, while the NCFCWCD is primarily charged with flood protection in Napa County, it also provides management and monitoring of groundwater, and assistance to the community in complying with NPDES requirements, and watershed maintenance activities among other services.

The Napa Countywide Stormwater Pollution Prevention Program (NCSPPP), administered by the NCFCWCD, is a joint effort of Napa County; cities of American Canyon, Napa, St. Helena, and Calistoga; and the Town of Yountville to:

- prevent stormwater pollution,
- protect and enhance water quality in creeks and wetlands,

- preserve beneficial uses of local waterways, and
- comply with federal and state regulations.

Though the entities of the NCSPPP carry out their own individual stormwater pollution prevention programs, the NCSPPP provides for the coordination and consistency of approaches between the individual participants and documents their efforts in annual reports.

Napa County Groundwater Ordinance

Through the groundwater permit issuance process, the Napa County Groundwater Ordinance (No. 1294) is intended to regulate the extraction and use of groundwater resources in Napa County and prohibits extraction for wasteful, unreasonable, or non-beneficial purposes to promote groundwater conservation and use of the BMPs and maximize the long-term beneficial use of County groundwater resources (Napa County 2007).

Napa County Water Availability Analysis Guidance Document

The County's Water Availability Analysis (WAA), adopted with revisions on May 13, 2015, is used as a screening process for discretionary groundwater permit applications and determines if a proposal may have an adverse impact on the groundwater basin as a whole or on the water levels of neighboring non-project wells or on surface waters.

The WAA is used procedurally as the baseline to commence CEQA analysis of a discretionary project. The WAA is not an ordinance, is not prescriptive, and project specific conditions may require more, less, or different analysis to meet the requirements of CEQA. A WAA is required for any discretionary project that may utilize groundwater or will increase the intensity of groundwater use of any parcel through an existing, improved, or new water supply system. The WAA is most commonly used for discretionary development applications using groundwater such as wineries and commercial uses.

Napa County Groundwater Monitoring Plan 2013

The purpose of the Napa County Groundwater Monitoring Plan is to formalize groundwater monitoring efforts to better understand the groundwater resources of Napa County and regularly evaluate trends to identify changes in levels and/or quality and factors related to those changes that warrant further examination to ensure sustainable water resources (Napa County 2013a).

Napa Operational Area Hazards Mitigation Plan

As discussed in Section 3.8, "Hazards and Hazardous Materials," Napa County has an adopted *Napa Operational Area Hazard Mitigation Plan* (OAHMP), which includes mitigation for addressing the most significant hazards in the County. The OAHMP includes goals, programs, objectives, and action items related to floods (Napa County 2013b).

3.9.2 Environmental Impacts and Mitigation Measures

ANALYSIS METHODOLOGY

Evaluation of potential hydrologic, water quality, and water supply impacts is based on a review of existing documents and studies that address water resources in Napa County. Information obtained from these sources was reviewed and summarized to describe existing conditions and to identify potential environmental effects, based on the standards of significance presented in this section. In determining the level of significance, the analysis assumes that implementation of the CAP would comply with relevant federal, state, and local laws, ordinances, and regulations.

PROPOSED CAP GHG REDUCTION MEASURES

- Table 2.4 of the Draft EIR, provides a list of proposed GHG reduction, supporting, and adaptation measures that would be implemented by the CAP. However, only those measures that are relevant to hydrology, water quality, and water supply and could potentially result in a significant impact are described and evaluated below. None of the proposed measures indicate where specific improvements would be constructed, their size, or specific characteristics. As a program EIR, the Draft EIR does not, and cannot, speculate on the individual environmental impacts of specific future projects/improvements. However, implementation of all GHG reduction, supporting, and adaptation measures were considered during preparation of the Draft EIR to the degree specific information about implementation is known. Consistent with the requirements of CEQA Guidelines Section 15168, this Draft EIR provides a program-level discussion of the potential impacts of implementing these measures, rather than project-level or site-specific physical impacts of such actions. While many of the GHG reduction, supporting, and adaptation measures would provide economic or efficiency benefits, only those measures that have the potential to have adverse effects related to hydrology, water quality, and water supply are listed below. All other measures in Table 2.4 would have no effect related to hydrology, water quality, and water supply and are not discussed further. Those measures not listed below but would have a beneficial effect are briefly noted in the following impact discussions. **Primary Measure BE-5: Expand current renewable energy and green energy incentives and update local ordinances**. This measure would result in an expansion of incentives for renewable energy systems that would increase participation by individual property owners. This measure would result in the installation of new private renewable energy systems including new photovoltaic, small-scale wind turbines, solar water heating systems, geothermal ground source heat pump, and battery storage. This may result in impacts to hydrology, water quality, and water supply resulting from construction, operation, and maintenance of infrastructure.

- **Primary Measure BE-7: Support Waste-to-Energy Programs at unincorporated landfills.** This measure will result in gas that is captured through existing landfill gas capture systems being reused for energy, rather than being flared. This measure could result in new infrastructure on-site or off-site to process landfill gas so that it can be used for energy generation or other end-uses such as CNG for fuel in vehicles. This may result in impacts to hydrology and water quality resulting from construction, operation, and maintenance of infrastructure.

- **Supporting Measure TR-8: Support Napa County's incorporated cities in developing transit-oriented development unique to the needs of the Napa Region.** This would result in collaboration among the County and incorporated cities to create a more robust visitor-friendly environment around the Soscol Gateway Transit Center (and future transit centers) to encourage additional users. This may result in impacts to hydrology and water quality resulting from construction, operation, and maintenance of infrastructure.

- **Supporting Measure TR-10: Work with Napa County's incorporated cities, NVTA, and neighboring regions to increase presence of park and ride facilities near residential centers**. This effort would result in new park and ride facilities which would reduce GHG emissions by decreasing the amount of vehicles on the road. This may result in impacts to hydrology and water quality resulting from construction of park and ride facilities.

- **Supporting Measure TR-14: Develop and implement active transportation projects.** This measure would result in the development and construction of new pedestrian, trail, and bicycle improvements. This could result in construction impacts and is evaluated for consistency with policies related to circulation. This may result in impacts to hydrology and water quality from construction of transportation projects.

- **Supporting Measure TR-15: Require new development projects to evaluate and reduce VMT.** This measure would implement roadway improvements to reduce VMT by calming traffic and improving the bicyclist and pedestrian infrastructure and would occur as part of resurfacing projects within existing paved areas. This may result in impacts to hydrology and water quality from construction of roadway

improvements; however, most development associated with this measure is expected to be in previously paved areas.

- **Primary Measure SW-1: Encourage expansion of composting program for both residential and commercial land uses**. This measure would result in the expansion of composting programs that would reduce GHG emissions by decreasing methane in landfills. This may result in impacts to hydrology and water quality from construction of expanded composting facilities.

- **Primary Measure SW-2: Primary Measure SW-2: Meet an 80 percent Waste Diversion Goal by 2020 and a 90 percent Waste Diversion Goal by 2030**. This measure could result in new/expanded waste processing and diversion facilities throughout the unincorporated County. This could result in impacts to hydrology and water quality related to the construction and expansion of waste diversion facilities.

- **Adaptation Measure Fire-5: Collaborate on programs to reduce fire hazards.** This measure would result in increased collaboration to improve resiliency related to wildfire hazards. This could include thinning, removing, or chipping vegetation which would result in ground disturbance. This could include short-term impacts to hydrology and water quality related to tree and vegetation removal.

- **Adaptation Measure Water-2: Consider innovative options to meet future demand**. This measure would result in the development and implementation of water supply resiliency strategies such as graywater systems, recycled water, and other water conservation strategies. The impacts related to this measure are speculative but could include impacts to hydrology and water quality related to the construction of new or updated infrastructure.

- **Adaptation Measure Water-5: Collaborate with agencies to identify future water supplies and explore alternative supply sources**. This measure would result in increased collaboration to identify future water supply options, including expanded use of on-site graywater, recycled water, or other water conservation options. The impacts related to this measure are speculative but could include impacts to hydrology and water quality related to the construction of new or updated infrastructure.

- **Adaptation Measure Flood-3: Identify potential streamside restoration areas**. This measure would result in the identification and restoration of stream banks within the unincorporated County to buffer buildings, roads, and crops from increased flooding potential. The impacts related to this measure are speculative. This measure could include short-term impacts to hydrology and water quality related to restoration activities, but would result in long-term beneficial effects on flooding.

- **Adaptation Measure Flood-4: Encourage replanting bare or disturbed areas**. This measure would result in the identification and restoration of areas that are subject to erosion within the unincorporated County to improve water quality and reduce stream sedimentation. The impacts related to this measure are speculative. This measure could include short-term impacts to hydrology and water quality related to restoration activities.

- **Adaptation Measure Flood-7: Improve capacity of storm water infrastructure**. This measure would result in improved storm water infrastructure and improved resilience for high intensity rain events. The impacts related to this measure are speculative but could include impacts to impacts to hydrology and water quality related to construction of new or updated infrastructure.

THRESHOLDS OF SIGNIFICANCE

Based on Appendix G of the State CEQA Guidelines and Appendix C of Napa County's Local Procedures for Implementing CEQA, impacts related to hydrology, water quality, and water supply are considered significant if implementation of the project would do any of the following:

- violate any water quality standards or waste discharge requirements;

- substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of preexisting nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted);
- substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on- or off-site;
- substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site;
- create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff;
- otherwise substantially degrade water quality;
- place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map;
- place within a 100-year flood hazard area structures that would impede or redirect flood flows;
- expose people or structures to significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam;
- result in inundation by seiche, tsunami or mudflow; or
- have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed.

ISSUES NOT DISCUSSED FURTHER

As described in Chapter 2, Project Description, implementation of the CAP and the targets and strategies identified therein necessitate changes to Policy CON-65 e) of the County's General Plan (2008 GP). The proposed changes would require that all discretionary development projects demonstrate consistency with the CAP by substantiating compliance through the CAP Consistency Checklist. As described in Section 2.4.2, Project Description, proposed changes to the adopted policy of the General Plan requires the County to implement a General Plan Amendment (GPA) as part of the administrative approval process.

The CAP EIR evaluates the GPA as part of the series of actions associated with implementation of the CAP. The changes reflected in the GPA support and are consistent with implementation of the CAP, its GHG targets, and GHG reduction measures. No additional activities or measures, other than those described in the CAP, would occur as a result of implementation of the GPA. Therefore, the GPA is not evaluated separately from the actions proposed by the CAP, but rather its implementation is within the scope of the overall impact analysis of the CAP. As described in Section 2.4.3, Project Description, to provide a mechanism by which projects can demonstrate consistency with the CAP, a CAP Consistency Checklist is included as Appendix D of the CAP. The CAP Consistency Checklist is a tool by which the County will track and determine a project's consistency with the CAP and how it delivers its appropriate GHG reductions. No physical projects or improvements other than those described in the CAP are included or would be approved with approval of the checklist. As such, like the GPA, the CAP Consistency Checklist is not evaluated separately from the actions proposed by the CAP.

In summary, the physical changes and associated environmental impacts of all GHG reduction and adaptation measures have been evaluated throughout the CAP EIR. The GPA and CAP Consistency Checklist which are included as part of the project, are not addressed as a separate impact discussion below. These

administrative mechanisms on their own would not result in any physical impacts that would require separate evaluation below and are not discussed further.

Because of the distance from the nearest open waterbody, the Pacific Ocean (approximately 30 miles to the west), measures implemented under the CAP are not likely to be affected by inundation as a result of seiche or tsunami. Therefore, these issues are not addressed further in this Draft EIR.

IMPACT ANALYSIS

Impact 3.9-1: Violate Water Quality Standards, Exceed Stormwater Capacity, or Degrade Water Quality or Alter Drainage Patterns of a Site Resulting In Erosion or Siltation, or Flooding

Implementation of GHG reduction and adaptation measures that would be implemented with CAP adoption have the potential to violate a water quality standard, degrade water quality, or exceed stormwater capacity as a result of construction, operation, or maintenance of new facilities. Future projects would be required to evaluate project-specific impacts under CEQA at the time of application and project-specific mitigation would be required to minimize or eliminate impacts to water quality and stormwater runoff. In addition, compliance with local general plan policies and existing regulations, would protect water quality and stormwater systems. Therefore, this impact would be **less than significant**.

Currently, the Napa River and its tributaries have been listed under Section 303(d) as water quality impaired for nutrients, pathogens, and sedimentation/siltation. The Putah Creek Watershed/Lake Berryessa is listed as water quality impaired for mercury. San Pablo Bay, into which the Napa River drains, has been listed as impaired for chlordane, DDT, diazinon, dieldrin, dioxins and furans, exotic species, mercury, nickel, PCBs, and selenium. The use of heavy equipment, paving, ground disturbance, and other typical construction activities associated with GHG reduction and adaptation measures could adversely affect water quality where projects are located near waterways or discharges runoff to stormwater drainage systems. Similar ground disturbing activities or poor management of chemicals, fuels, etc. could contribute to polluted runoff during the operation of projects could also result.

Some of the co-benefits of the proposed GHG reduction measures (building efficiency, agricultural, off-road, land use, water, wastewater, solid waste, high GWP, and multi-sector measures) include preservation of natural habitats, which would result in beneficial impacts to hydrology and water quality. Specific measures that would result in positive impacts on water quality and provide water system benefits include measures such as AG-4 and AG-6, which would support reduced application of inorganic nitrogen fertilizer and the use of carbon farming and other sustainable agricultural practices that could help protect water quality. Other measures that would promote programs for preservation and restoration of oak woodlands, coniferous forest, and riparian lands include LU-1 and LU-2; These measures are not discussed further below but are notable for the benefits they would provide. A more detailed description of the referenced measures can be found in Table 2-4, Project Description.

Infrastructure Efficiency and Transportation, Water, Stormwater, and Grid Utility Infrastructure

GHG reduction and adaptation measures that would require construction of new or retrofitted facilities such as visitor-friendly infrastructure, park and ride facilities, pedestrian, trail, and bicycle improvements (TR-8, TR-10, TR-14, TR-15) water, and stormwater facilities (Water-2, Water-5, Flood-7,), new/expanded waste processing and diversion facilities (SW-1, SW-2), new landfill gas capture systems (BE-7),) could violate water quality standards, degrade water quality, or exceed stormwater capacity during construction, operation, and maintenance activities.

Construction of new or retrofitted facilities would require the use of heavy equipment, paving, vegetation removal, ground disturbance from construction, operation, and maintenance activities. These activities could increase pollution conveyed in stormwater runoff through erosion or siltation that could violate water quality standards or degrade water quality. In addition, new infrastructure and facilities could result in increased

impervious surfaces by converting vegetated surfaces to paved areas, thereby increasing the amount of stormwater runoff which could collect pollutants and deposit into nearby waterways and stormdrains, or increase the potential for onsite or offsite flooding, or exceed the capacity of stormwater systems. Soil compaction from activities at these facilities could also reduce the local permeability of natural surfaces. Overall, an increase in impervious surfaces could increase the rate and volume of runoff and eliminate some natural storage and infiltration capacity along drainage paths. Consequently, sites could be subject to increases in erosion, siltation, onsite ponding, or onsite or offsite flooding, especially during the wet season or during storm events.

Vegetation Management Measures

GHG adaptation measures that would involve vegetation management such as thinning, removing, or chipping vegetation (Fire-5) and restoration of floodplains (Flood-3, Flood-4) could violate water quality standards or degrade water quality during construction and maintenance as a result of vegetation removal and ground disturbance. These measures are not expected to result in any operational water quality impacts and would not increase the area of impervious surfaces, however, construction activities could result in increased erosion, or siltation.

Impact Summary

Project types listed above, and that would be implemented as part of the CAP, could result in increased water quality issues, because of erosion, siltation and a change in drainage patterns that may lead to increased stormwater runoff. Construction activities would require the use of heavy equipment, paving, vegetation removal and ground disturbance. However, all of the project types listed above would be discretionary projects under the County's purview that would be required to be evaluated for project-specific impacts under CEQA at the time of application. Additionally, while specific locations for such improvements have not been identified; because of the nature of these improvements, most would occur near residential and commercial areas throughout the county and would be small in nature with less potential to result in significant erosion or water quality issues.

All project types would be required to comply with existing federal, State, and local regulations related to water quality, including, the County's Grading Ordinance. 2008 General Plan policies listed above to minimize impacts, the Watershed Protection, Stormwater Management, and Discharge Control Ordinance, the Flood Damage Prevention Ordinance, and the Resource Protection Ordinance. The configuration of individually proposed new projects would be designed to address onsite ponding and discharges to offsite waterways. While development projects would divert stormwater flows differently from the current pattern of drainage on both developed and undeveloped land, new drainage systems would be designed in a manner to minimize erosion, sedimentation and flooding, in compliance with local and state laws and regulations.

Compliance with existing federal, state, and local regulations that protect water quality and reduce stormwater runoff and completion of subsequent project-level planning and environmental review would reduce potential impacts, would be reduced to a level below significance. Therefore, this impact would be **less than significant**.

Mitigation Measures

No mitigation is required.

Impact 3.9-2: Groundwater Recharge and Water Supplies

There are four major groundwater basins within the County. If implementation of GHG reduction and adaptation measures would result in a substantial increase in impervious surfaces or compaction of soils such that it would interfere with groundwater recharge, those measures could adversely affect groundwater. However, small-scale projects would not be of a large enough scale to interfere substantially with groundwater recharge. Therefore, this impact would be **less than significant**.

The primary source of water for the cities within the County is surface water, while the primary source of water for the unincorporated area is groundwater. There are four major groundwater basins in Napa County. These groundwater basins defined by DWR are not confined within County boundaries. The Napa Valley Subbasin, located within the Napa-Sonoma Valley Basin, was ranked by DWR as medium priority under the California Statewide Groundwater Elevation Monitoring, and a groundwater sustainability plan has been prepared for this subbasin (Napa County 2018). While construction of new facilities may require short-term increases in demand for water for dust suppression, these increases would be minimal and temporary and would not result in a substantial increase in demand for water or require new or expanded water entitlements. Therefore, these short-term increases in water demand would be considered less than significant and the discussion below focuses on long-term increases in water demand. If implementation of GHG reduction and adaptation measures would result in a substantial increase in impervious surfaces or compact soils such that it would interfere with groundwater recharge, there would be a potentially significant impact on groundwater.

Adaptation measures Water-2, and Water-5 would result in the development and implementation of water supply resiliency strategies such as graywater systems, recycled water, and other water conservation strategies that would increase the supply of available water which would have positive impacts related to water supply. Other measures that would result in positive impacts related to water supply include:WA-3, which would expedite and/or reduce permit fees associated with water conservation installations in existing facilities that could result in water conservation; AG-6 that would promote the use of sustainable agricultural practices such as carbon farming; LU-1 and LU-2 that would promote programs for preservation and restoration of oak woodlands, coniferous forest, and riparian lands; and WA-1, WA-2, WA-3, and WA-4 that would promote water conservation by requiring revised water conservation regulations for landscape design, new ordinances for limitations on outdoor watering for commercial and residential land uses, expedite and promote installation of water conservation technology on existing facilities, and require water audits for large new or expanded commercial and industrial projects. Not all of these measures are discussed further below but are notable for the benefits they would provide. A more detailed description of the referenced measures can be found in Table 2-4, Project Description.

Infrastructure Efficiency and Transportation, Water, Stormwater, and Grid Utility Infrastructure Measures

GHG reduction and adaptation measures that would require construction of new or retrofitted facilities such as visitor-friendly infrastructure, park and ride facilities, pedestrian, trail, and bicycle improvements (TR-8, TR-10, TR-14, TR-15) water, and stormwater facilities (Water-2, Water-5, Flood-7), new/expanded waste processing and diversion facilities (SW-1, SW-2), or new landfill gas capture systems (BE-7) could result in an increase of impervious surfaces or soil compaction which could negatively affect groundwater recharge.

Construction of new facilities would result in the use of heavy equipment for construction and maintenance which would result in the compaction of soils in construction areas. However, although the number and extent of the new facilities is not known, it is unlikely that the impervious surfaces or compacted soils associated with these facilities would be substantial in relation to the recharge area of any groundwater basin. In addition, these facilities would be constructed in various parts of the county and would not be concentrated within one groundwater basin area. Although the Napa Valley SubBasin was ranked by DWR as a medium priority basin, there are no basins or subbasins within the County that are designated as high priority or “critically overdraft.” Additionally, the County has prepared and submitted a groundwater sustainability plan for the basin which would ensure that the basin is managed sustainably.

Impact Summary

The project types listed above would be discretionary projects within the County’s purview that would be required to be evaluated for project-specific impacts to groundwater under CEQA at the time of application.

Projects would be conditioned to minimize or eliminate environmental impacts to groundwater resources to the extent feasible in compliance with CEQA Guidelines Section 15126.4. In addition, Use Permits are subject to all State and local regulations, including SGMA, any approved groundwater managements plans, 2008 General

Plan policies, and any other local or regional plans, policies, or regulations implemented to reduce impacts on groundwater resources. Therefore, impacts to groundwater supply and recharge would be **less than significant**.

Mitigation Measures

No mitigation is required.

Impact 3.9-3: Place Housing or Structures in Flood Hazard Area, Dam Inundation Zone, or Other Flood Hazard

Implementation of GHG reduction and adaptation measures that would be implemented with CAP adoption have the potential to be located within a floodplain or dam inundation area. Future projects would be required to evaluate project-specific impacts under CEQA at the time of application and project-specific mitigation would be required to minimize or eliminate flooding hazards. In addition, compliance with local general plan policies and existing regulations, would minimize flooding hazards. Therefore, this impact would be **less than significant**.

The 100-year and 200-year floodplains within the County are shown in Figure 3.9-2. In addition, there are 16 major dams within the County that pose a severe flooding risk in the event of a dam failure. Implementation of the CAP does not include construction of any housing; therefore, no structures for human occupancy would be placed within a floodplain or dam inundation area. However, structures that could house employees or other infrastructure may be constructed under the CAP. Although the location of these facilities is not known, if structures are placed within a floodplain or inundation area, this could result in potentially significant impacts related to flooding.

Some of the co-benefits of the proposed GHG reduction measures (building efficiency, agricultural, off-road, land use, water, wastewater, solid waste, high GWP, and multi-sector measures) include preservation of natural habitats, which would result in beneficial impacts to hydrology and water quality. Measures that would result in positive impacts related to adaptation to climate-change induced flooding include adaptation measures Flood-1 through Flood-9, which include flood-related strategies into the County's Operational Area Hazard Mitigation Plan; increase coordination between the County and other local stakeholders to plan for flooding potential along the Napa River; promote restoration of stream banks; promote restoration of areas subject to erosion, improve the capacity and resiliency of evacuation and transportation supply routes during flooding events; improve stormwater infrastructure and resilience for high intensity rain events; increase the use of pervious surfaces to help build resiliency during high rainfall events; and increase mapping efforts to facilitate identification of infrastructure vulnerable to flood and storm events. These measures are not discussed further below but are notable for the benefits they would provide. The detailed description of the referenced measures can be found in Table 2-4, Project Description.

Infrastructure Efficiency and Transportation, Water, Stormwater, and Grid Utility Infrastructure

GHG reduction and adaptation measures that would result in the construction of new or retrofitted facilities such as visitor-friendly infrastructure, park and ride facilities, pedestrian, trail, and bicycle improvements (TR-8, TR-10, TR-14, TR-15) water, and stormwater facilities (Water-2, Water-5, Flood-7,). could result in impacts related to flooding if the structures were developed in a floodplain, or in a dam inundation area.

Development within a floodplain can reduce the capacity of the waterway to convey water by increasing the stage height (or water level) within the waterway and its floodplain at a constant discharge. Additionally, development could result in people and structures being exposed to existing flood risk in areas that could be inundated by flood waters from the failure of a dam or levee breach. Additionally, development could result in people and structures being exposed to existing flood risk in areas that could be inundated by flood waters from the failure of a dam or levee breach. These measures would not involve construction of new housing or housing developments; therefore, the CAP will not produce new or exacerbate existing flooding risks associated with housing placement.

Measures that would result in bicycle, pedestrian, and trail improvements as well as water, and stormwater improvement projects would generally be constructed in areas that are urbanized or suburban. These improvements are typically linear and would not be placed in a floodplain because of the nature of the infrastructure.

Impact Summary

Implementation of projects described above have the potential to influence flooding risk, and expose individuals and structures to flood hazards with construction and operation of projects. However, while these project locations are unknown all projects described above are discretionary under the County's permitting authority. All project types would be evaluated for environmental impact under CEQA and project-specific mitigation would be implemented to minimize or eliminate impacts to flood hazards to the extent feasible in compliance with CEQA Guidelines Section 15126.4. Compliance with local and state laws, regulations, plans and policies relating to drainage and flood control would be required, including those listed above in Section 3.9-2. Additionally, all projects proposed for development would be expected to conform with flood risk laws and regulations, including the National Flood Insurance Act, National Flood Insurance Reform Act, and Cobey-Alquist Flood Plain Management Act.

Compliance with existing federal, State, and local regulations that reduce flooding hazards and completion of subsequent project-level planning and environmental review would reduce potential impacts. Therefore, this impact would be **less than significant**.

Mitigation Measures

No mitigation is required.

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3.10 LAND USE AND PLANNING

This chapter evaluates existing conditions for land use and planning within the County and evaluates the potential for the project to result in the physical division of an established community, or to conflict with any applicable land use plans, policies, or regulations adopted for the purpose of avoiding or mitigating an environmental impact.

The County did not receive comments regarding land use and planning during the Notice of Preparation (NOP) scoping process. A copy of the NOP and comment letters received in response to the NOP are included in Appendix A of this Draft EIR.

3.10.1 Environmental Setting

REGIONAL SETTING

Napa County is located north of the San Francisco Bay Area, in California. The county is bounded on the north and northeast by Yolo County, on the south and southeast by Solano County, on the west and northwest by Lake County, and on the west by Sonoma County. Non-urban land uses comprise the vast majority of land within Napa County, which is comprised of approximately 506,000 acres. Approximately 479,000 acres (95 percent) of the County is within the unincorporated area (Napa County 2007:4.2-1). The remaining area is distributed among the five incorporated areas in the County: City of American Canyon, City of Calistoga, City of Napa, City of St. Helena, and the Town of Yountville.

Land uses within the county primarily consist of cultivated agriculture mainly concentrated in the Napa Valley and Carneros areas, rural lands (typically large parcels greater than 10 acres used for vineyards or grazing, and residential uses), grazing lands, and parks and open space. (Napa County 2007:4.2-2). Scattered unincorporated rural residential communities are located mainly in the Lake Berryessa and Napa Valley areas. The unincorporated communities of Angwin, which includes Pacific Union College, and nearby Deer Park, which includes St. Helena Hospital are located just east of the northern portion of Napa Valley. Unincorporated communities in Napa Valley include Big Ranch Road and Coombsville (both adjacent to City of Napa), and Silverado, located on the northeast edge of the City of Napa. South St. Helena is an area of agricultural, commercial, and industrial uses located adjacent to the southern city limits of St. Helena.

Small communities in the vicinity of Berryessa Lake include Berryessa Highlands, Pope Creek, Spanish Flat, and Moskowite Corners.

The “south county” industrial area is area located in the southern portion of Napa County, generally between the cities of Napa and American Canyon. These industrial areas represent the largest urbanized (non-agricultural) area in the unincorporated county. A wide variety of uses are located in these areas, including the Napa Airport, a rock quarrying operation, light and heavy industries, offices, and a number of vineyards. Urban land uses (including incorporated areas) in the area located between the City of Napa and City of American Canyon include industrial and public-institutional land uses and make up approximately 7 percent of the County area (Napa County 2007: 4.2-2).

3.10.2 Regulatory Setting

FEDERAL

No federal plans, policies, regulations, or laws related to land use apply to the project.

STATE

State Planning and Zoning Laws

California Government Code Section 65300 *et seq*. establishes the obligation of cities and counties to adopt and implement general plans. The general plan is a comprehensive, long-term, and general document that describes plans for the physical development of a city or county and of any land outside its boundaries that, in the city's or county's judgment, bears relation to its planning. The general plan addresses a broad range of topics, including at a minimum land use, circulation, housing, conservation, open space, noise, and safety. In addressing these topics, the general plan identifies the goals, objectives, policies, principles, standards, and plan proposals that support the city's or county's vision for the area.

LOCAL

Napa County General Plan

The following *Napa County General Plan* (2008) policies are applicable to the project.

- **Policy AG/LU-22:** Urban uses shall be concentrated in the incorporated cities and towns and designated urbanized areas of the unincorporated County in order to preserve agriculture and open space, encourage transit-oriented development, conserve energy, and provide for healthy, "walkable" communities.

- **Policy AG/LU-29**: Governmental uses and public utility uses shall be permitted in appropriate locations. Only those new governmental and public utility uses which specifically implement programs mandated by the state or federal government shall be permitted in non-urban areas. On parcels which are designated Agricultural Resource or Agriculture, Watershed and Open Space on the Napa County Land Use Map, governmental uses and public utility uses existing at of 1983 shall be allowed to continue to operate and to use the existing buildings and/or facilities but shall be allowed to expand in size and volume of business only for the purpose of modernizing the facilities and meeting additional demonstrated public needs to the extent permitted by law.

- **Policy AG/LU-39**: The County will plan for the reservation of sufficient industrial property to satisfy future demands for orderly growth and economic development of the County. Non-agriculturally oriented industry shall not be located on productive agricultural lands but should be located in areas more suitable for industrial purposes.

In addition, the Napa County General Plan includes the following policies, which were adopted to preserve the integrity and character of rural communities and other unincorporated urbanized areas.

- **Policy AG/LU-64:** To maintain the rural atmosphere of the Angwin community, the County will not promote policies that encourage land uses that are incompatible with or out of character with the area, recognizing that a large part of the community's character is derived from its wooded setting.

- **Policy AG/LU-69**: Recognize the character of this community and the quality of the environment in the review of future development projects in the Berryessa Highlands area. All new subdivisions, use permits, and other discretionary actions shall conform to the General Plan Land Use Map and be reviewed to determine impacts and mitigations related to water quality, water availability, slope stability, habitat protection, and other environmental issues.

- **Policy AG/LU-71:** Recognize the character of this community and the quality of the environment in the review of future development projects in the Big Ranch Road area. All new development, including subdivisions, use permits, and other discretionary actions, shall conform to the General Plan Land Use Map and be reviewed to determine impacts and mitigations related to water quality, water availability, slope stability, habitat protection, and other environmental issues.

- **Policy AG/LU-72**: Recognize the character of this community and the quality of the environment in the review of future development projects in the Coombsville area. All new development, including subdivisions, use permits, and other discretionary actions, shall conform with the General Plan Land Use Map and be reviewed to determine impacts and mitigations related to water quality, water availability, slope stability, habitat protection, and other environmental issues.

- **Policy AG/LU-77**: Recognize the character of this community and the quality of the environment in the review of future development projects in the Deer Park area. All new development, including subdivisions, use permits, and other discretionary actions, shall conform to the General Plan Land Use Map and be reviewed to determine impacts and mitigations related to water quality, water availability, slope stability, habitat protection, and other environmental issues.

- **Policy AG/LU-89**: Recognize the character of this community and the quality of the environment in the review of future development projects in the Silverado area. All new development, including subdivisions, use permits, and other discretionary actions, shall conform with the General Plan Land Use Map and be reviewed to determine impacts and mitigations related to water quality, water availability, slope stability, habitat protection, and other environmental issues.

- **Policy AG/LU-95**: New land uses in the South County Industrial Areas shall be compatible with or buffered from adjacent industrial uses and consistent with the Land Use Compatibility Plan for Napa Airport.

- **Policy AG/LU-96:** The Airport Industrial Area is planned for industrial and business/industrial park uses that support agriculture and meet industrial and business park needs consistent with the 1986 Airport Industrial Area Specific Plan. In 2004, the Airport Industrial Area Specific Plan was amended to recognize two hotels which were subsequently approved for construction. Further commercial uses in the area shall be limited to local-serving uses that support or serve the industrial and business park uses.

- **Policy AG/LU-99:** The County shall recognize and preserve the rural character of Pope Valley by ensuring that future decisions do not adversely affect the quality of Pope Valley's environment.

- **Policy AG/LU-102**: The County recognizes the role of the South St. Helena area in providing a transition in land use intensity from the more urban areas of St. Helena to the north and the more agricultural and rural areas of the unincorporated county to the south.

Napa County Code

The Napa County Zoning Ordinance, Title 18 of the County Code, establishes standards and regulations to implement the policies contained in the General Plan and guides development within the County.

The Napa County Conservation Regulations (Napa County Code 18.108) also require evaluation of agricultural/vineyard or other development plans on slopes over 5 percent through the review of an Agricultural Erosion Control Plan. The review includes evaluation of conformance with the Conservation Regulations and CEQA.

Airport Land Use Planning

Napa County has two public use airports, Napa County Airport and Parrett Field in Angwin. The Airport Industrial area, which includes the Napa County Airport, is located in the southern end of Napa County between the cities of Napa and American Canyon along State Highway 29. The following is a discussion of the two plan documents that apply to land use planning in the areas around airports in Napa County. Both plans include specific land use regulations affecting the area's development patterns, as well as further development review requirements to ensure these areas are developed with the most compatible land uses for an airport area.

Napa County Airport Land Use Compatibility Plan (Revised 1999)

The Napa County Airport Land Use Compatibility Plan (Compatibility Plan), adopted April 22, 1991 and amended December 1999, provides guidance to the Airport Land Use Commission in reviewing the land use plans and zoning regulations of affected local jurisdictions to ensure future development adjacent to the airports in the County is compatible with airport activities. The Compatibility Plan sets forth the type of actions subject to review; the review process; primary review policies related to land use actions, review of airport plans, plans for new airports and heliports; and supporting compatibility policies related to noise, safety, airspace protection, and overflight. The authority of the Airport Land Use Commission includes the review of general and specific plans for consistency with the adopted Compatibility Plan for determination of consistency.

1986 Napa County Airport Industrial Area Specific Plan/Napa Valley Business Park Specific Plan

The Airport Industrial Area Specific Plan, was adopted by the Board of Supervisors on July 29, 1986, and has been amended through the years, most recently in October 2013.

The Napa County Airport Industrial Area Specific Plan (Specific Plan) was intended to guide and facilitate development of the 2,945-acre Napa County Airport Industrial Area. Land uses in the planning area are General Industrial, Business/Industrial Park, and Institutional (airport). The Specific Plan outlines development standards for the industrial areas that will provide for a long-term industrial environment with minimal internal land use conflicts and proposes regional road improvements. The Specific Plan provides goals, objectives, and policies related to land use for the area (Napa County 2007: 4.2-13).

3.10.3 Environmental Impacts and Mitigation Measures

ANALYSIS METHODOLOGY

The project impact analysis area includes all lands within the jurisdiction of Napa County and the analysis of impacts presented in this chapter is based on an evaluation of the proposed GHG reduction and adaptation measures as described in Table 2.4 of Chapter 2, Project Description and a review of documents, including the *Napa County General Plan* (2008), *General Plan EIR* (2007), and the Napa County Code (Zoning Ordinance). This analysis assumes that in general, future projects resulting from implementation of the CAP would comply with relevant state and local ordinances and regulations, as well as the adopted General Plan policies presented above. However, if a policy conflict would occur, it would not in and of itself, constitute a significant environmental impact. Potential conflicts would result in environmental impacts only when they would result in physical impacts. Therefore, land use policies are discussed in this section for informational purposes only. All other associated physical impacts are discussed in the appropriate sections of this Draft EIR.

PROPOSED CAP GHG REDUCTION MEASURES

Table 2.4 of the Draft EIR, provides a list of proposed GHG reduction and adaptation measures that would be implemented by the CAP. However, only those measures that are relevant to land use and could potentially result in a significant impact within the County are described and evaluated below. None of the proposed measures indicate where specific improvements would be constructed, their size, or specific characteristics. As a program EIR, the Draft EIR does not, and cannot, speculate on the individual environmental impacts of specific future projects/improvements. However, implementation of all measures were considered during preparation of the Draft EIR to the degree specific information about implementation is known. Consistent with the requirements of CEQA Guidelines Section 15168, this Draft EIR provides a program-level discussion of the potential general impacts of implementing these measures, rather than project-level or site-specific physical impacts of such actions. Only those measures that have the potential to affect land use are listed below. All other measures in Table 2.4 would have no effect on land use and are not discussed further.

- **Primary Measure BE-5: Expand current renewable energy and green energy incentives and update local ordinances.** This measure would result in an expansion of incentives for renewable energy systems that would increase participation by individual property owners. This measure would result in the installation of new private renewable energy systems including new photovoltaic, small-scale wind turbines, solar

water heating systems, geothermal ground source heat pump, and battery storage. This would result in minor temporary construction activities that use fuels.

- **Supporting Measure BE-11: Encourage Solar Panel Installations on Commercial Roof Spaces.** This measure would result in an expansion of incentives for renewable energy systems that would increase participation by individual property owners. This measure would result in the installation of new private renewable energy systems. This may result in minor temporary construction activities that use fuels.

THRESHOLDS OF SIGNIFICANCE

Based on Appendix G of the State CEQA Guidelines an impact related to land use is considered significant if implementation of the project would do any of the following:

- physically divide an established community (for the purposes of this Draft EIR, established communities are defined as incorporated cities, and unincorporated communities described in the Agriculture and Land Use Element of the Napa County General Plan (June 4, 2013); or

- conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.

ISSUES NOT DISCUSSED FURTHER

As described in Chapter 2, Project Description, implementation of the CAP and the targets and strategies identified therein necessitate changes to Policy CON-65 e) of the County's General Plan (2008 GP). The proposed changes would require that all discretionary development projects demonstrate consistency with the CAP by substantiating compliance through the CAP Consistency Checklist. As described in Section 2.4.2, Project Description, proposed changes to the adopted policy of the General Plan requires the County to implement a General Plan Amendment (GPA) as part of the administrative approval process.

The CAP EIR evaluates the GPA as part of the series of actions associated with implementation of the CAP. The changes reflected in the GPA support and are consistent with implementation of the CAP, its GHG targets, and GHG reduction measures. No additional activities or measures, other than those described in the CAP, would occur as a result of implementation of the GPA. Therefore, the GPA is not evaluated separately from the actions proposed by the CAP, but rather its implementation is within the scope of the overall impact analysis of the CAP. As described in Section 2.4.3, Project Description, to provide a mechanism by which projects can demonstrate consistency with the CAP, a CAP Consistency Checklist is included as Appendix D of the CAP. The CAP Consistency Checklist is a tool by which the County will track and determine a project's consistency with the CAP and how it delivers its appropriate GHG reductions. No physical projects or improvements other than those described in the CAP are included or would be approved with approval of the checklist. As such, like the GPA, the CAP Consistency Checklist is not evaluated separately from the actions proposed by the CAP.

In summary, the physical changes and associated environmental impacts of all GHG reduction and adaptation measures have been evaluated throughout the CAP EIR. The GPA and CAP Consistency Checklist which are included as part of the project, are not addressed as a separate impact discussion below. These administrative mechanisms on their own would not result in any physical impacts that would require separate evaluation below and are not discussed further.

Implementation of the CAP could result in the construction and installation of small-scale facilities such as rooftop or ground-mounted photovoltaic solar arrays or small wind turbines, solar water heating systems, geothermal ground source heat pumps, and battery storage. These types of projects would typically be small and would be located within existing urbanized areas and would not have the potential to physically divide an established community. Implementation of the CAP would not result in the construction new, large-scale

facilities such as utility wind, solar, and biogas facilities that in some cases would require large areas of land and that would have the potential to physically divide an established community. This topic is not discussed further.

IMPACT ANALYSIS

Impact 3.10-1: Conflict with Applicable Land Use Plan, Policy or Regulation Adopted for the Purpose of Avoiding or Mitigating an Environmental Effect

Implementation of GHG reduction and adaptation measures could result in the development of new small-scale renewable energy systems. Construction or installation of small-scale projects would be required to comply with existing state and local land-use policies and regulations. Any such projects that could result in conflicts with applicable land use plans, policies or regulations that have been adopted for the purpose of avoiding or mitigating environmental impacts would be required to obtain a Use Permit, complete project-level planning, conduct environmental review of potential impacts, and comply with all applicable federal, state and local regulations. Projects would be required to mitigate environmental impacts through the discretionary review process. Therefore, impacts related to policy conflicts would be **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; however, implementation of GHG reduction and adaptation measures supported by the CAP has the potential to result in construction of new facilities or expansion of existing facilities, which may conflict with existing land use plans, policies or regulations that are described above.

Small-Scale Renewable Energy Infrastructure

GHG reduction and adaptation measures could result in the development of new facilities such as small-scale renewable energy systems including rooftop or ground-mounted photovoltaic solar arrays or small wind turbines, solar water heating systems, geothermal ground source heat pumps, and battery storage (BE-5 and BE-11,). Because the amount of demand generated by such a program and the mix of renewable energy types that would be constructed to satisfy demand is unknown, this Draft EIR evaluates the potential for impacts at the program level. Specific locations for projects have not been identified.

In general, small-scale renewable energy infrastructure would be constructed in existing urbanized areas or added to existing structures in urban rural areas. These types of projects typically would not require the construction of multiple components to support energy production including substations, transmission systems, maintenance buildings, internal and external access roads, etc.

Impact Summary

Small-scale renewable energy projects would be required to comply with federal, state and local land-use policies and regulations. Any projects that conflict with land use policies and regulations would be required to obtain a Use Permit prior to development and would undergo the County's discretionary review process, including a CEQA evaluation. Projects would be evaluated for consistency and compliance with all federal, State, and local regulations and would be required to implement mitigation as needed for project-level impacts. Because renewable energy projects would not be approved unless they meet the goals and policies of applicable land use plans, implementation of the project would result in less-than-significant land use policy conflict impacts. Project-specific mitigation would minimize or eliminate impacts stemming from policy conflicts to the extent feasible in compliance with CEQA Guidelines Section 15126.4. Compliance with 2008 General Plan policies described above that regulate the placement of utilities and provide for separation of land uses by appropriateness would generally minimize policy conflicts. At the time of discretionary review, completion of subsequent project-level planning and environmental review would reduce potential impacts to land use to a level below significance. Therefore, this impact would be **less than significant**.

Mitigation Measures

No mitigation is required.

3.11 NOISE

This section includes definitions of common noise descriptors; summaries of applicable noise regulations, acoustic fundamentals, and existing ambient noise conditions; and an analysis of potential short- and long-term noise impacts associated with implementation of the project. Potential impacts of the project are analyzed, and mitigation measures are provided for those impacts determined to be significant.

There were no comments related to noise received during the Notice of Preparation (NOP) scoping process. A copy of the NOP and comment letters received in response to the NOP are included in Appendix A of this Draft EIR.

3.11.1 Environmental Setting

ACOUSTIC FUNDAMENTALS

Acoustics is the scientific study that evaluates perception and properties of sound waves. Table 3.11-1 contains definitions of acoustic terms used to establish the environmental setting and analyze impacts to noise resulting from implementation of the CAP.

Table 3.11-1 Acoustic Term Definitions

Term	Definition
Noise	Noise is generally defined as sound that is loud, disagreeable, unexpected, or unwanted.
Decibel (dB)	Sound levels are measured using the decibel scale, developed to relate to the range of human hearing. A decibel is logarithmic; it does not follow normal algebraic methods and cannot be directly summed. For example, a 65-dB source of sound, such as a truck, when joined by another 65 dB source results in a sound amplitude of 68 dB, not 130 dB (i.e., doubling the source strength increases the sound pressure by 3 dB). A sound level increase of 10 dB corresponds to 10 times the acoustical energy, and an increase of 20 dB equates to a 100-fold increase in acoustical energy.
A-weighted decibel (dBA)	The human ear is not equally sensitive to loudness at all frequencies in the audible spectrum. To better relate overall sound levels and loudness to human perception, frequency-dependent weighting networks were developed, identified as A through E. There is a strong correlation between the way humans perceive sound and A-weighted sound levels. For this reason, the A-weighted sound levels are used to predict community response to noise from the environment, including noise from transportation and stationary sources, and are expressed as A-weighted decibels. All sound levels discussed in this section are A-weighted decibels unless otherwise noted.
Equivalent Noise Level (L_{eq})	The average noise level during a specified time period; that is, the equivalent steady-state noise level in a stated period of time that would contain the same acoustic energy as the time-varying noise level during the same period (i.e., average noise level).
Maximum Noise Level (L_{max})	The highest instantaneous noise level during a specified time period.
Day-Night Noise Level (L_{dn})	The 24-hour L_{eq} with a 10-dB penalty applied during the noise-sensitive hours from 10 p.m. to 7 a.m., which are typically reserved for sleeping.
Community Noise Equivalent Level (CNEL)	Similar to the L_{dn} described above with an additional 5-dB penalty applied during the noise-sensitive hours from 7 p.m. to 10 p.m., which are typically reserved for evening relaxation activities.

Source: Caltrans 2013a

Noise Generation and Attenuation

Noise can be generated by several sources, including mobile sources such as automobiles, trucks, and airplanes and stationary sources such as activity at construction sites, machinery, and commercial and industrial operations. As sound travels through the atmosphere from the source to the receiver, noise levels

attenuate (i.e., decrease) depending on ground absorption characteristics, atmospheric conditions, and the presence of physical barriers. Noise generated from mobile sources generally attenuate at a rate of 4.5 decibels (dB) per doubling of distance from the source. Noise from stationary sources spread with more spherical dispersion patterns that attenuate at a rate of 6 to 7.5 dB per doubling of distance from the source.

Atmospheric conditions such as wind speed, wind direction, turbulence, temperature gradients, and humidity also alter the propagation of noise and affect levels at a receiver. Furthermore, the presence of a barrier (e.g., topographic feature, intervening building, and dense vegetation) between the source and the receptor can provide substantial attenuation of noise levels at the receiver. Both natural (e.g., berms, hills, and dense vegetation) and human-made features (e.g., buildings and walls) may function as noise barriers.

To provide context for sound levels described throughout this section, Table 3.11-2 presents sound levels associated with common outdoor and indoor activities.

Table 3.11-2 Typical Noise Levels

Common Outdoor Activities	Noise Level (dB)	Common Indoor Activities
	— 110 —	Rock band
Jet fly-over at 1,000 feet	— 100 —	
Gas lawn mower at 3 feet	— 90 —	
Diesel truck at 50 feet at 50 miles per hour	— 80 —	Food blender at 3 feet, Garbage disposal at 3 feet
Noisy urban area, daytime, Gas lawn mower at 100 feet	— 70 —	Vacuum cleaner at 10 feet, Normal speech at 3 feet
Commercial area, Heavy traffic at 300 feet	— 60 —	
Quiet urban daytime	— 50 —	Large business office, Dishwasher next room
Quiet urban nighttime	— 40 —	Theater, large conference room (background)
Quiet suburban nighttime	— 30 —	Library, Bedroom at night
Quiet rural nighttime	— 20 —	
	— 10 —	Broadcast/recording studio
Lowest threshold of human hearing	— 0 —	Lowest threshold of human hearing

Notes: dB = decibels

Source: Caltrans 2013a

Human Response to Changes in Noise Levels

In typical noisy environments, changes in noise of 1–2 dB are generally not perceptible. However, it is widely accepted that people are able to begin to detect sound level increases of 3 dB in typical noisy environments. Further, a 5-dB increase is generally perceived as a distinctly noticeable increase, and a 10-dB increase is generally perceived as a doubling of loudness. Therefore, a doubling of sound energy (e.g., doubling the volume of traffic on a highway) that would result in a 3-dB increase in sound would generally be perceived as barely detectable.

Excessive and chronic (long-term) exposure to elevated noise levels can result in auditory and non-auditory effects on humans. Auditory effects are those related to temporary or permanent hearing loss caused by loud noises. Exposure to noise may result in physical damage to the auditory system, which may lead to gradual or traumatic hearing loss. Gradual hearing loss is caused by sustained exposure to moderately high noise levels over a period of time; traumatic hearing loss is caused by sudden exposure to extremely high noise levels over a short period. Gradual and traumatic hearing loss both may be permanent.

Non-auditory effects are those related to behavior and physiology. The non-auditory behavioral effects of noise on humans are primarily subjective effects such as annoyance, nuisance, and dissatisfaction, which lead to interference with activities such as communications, sleep, and learning. The non-auditory physiological health effects of noise on humans have been the subject of considerable research into possible correlations between exposure to elevated noise levels and health problems, such as hypertension and cardiovascular disease. The mass of research implies that noise-related health issues are predominantly the result of behavioral stressors and not a direct noise-induced response. The degree to which noise contributes to such diseases depends on the frequency, bandwidth, and level of the noise and the exposure time (Caltrans 2013a).

Vibration

Vibration is the periodic oscillation of a medium or object with respect to a given reference point. Sources of vibration include natural phenomena (e.g., earthquakes, volcanic eruptions, sea waves, landslides) and those introduced by human activity (e.g., explosions, machinery, traffic, trains, construction equipment). Vibration sources may be continuous, (e.g., operating factory machinery) or transient in nature (e.g., explosions). Vibration levels can be depicted in terms of amplitude and frequency, relative to displacement, velocity, or acceleration.

Vibration amplitudes are commonly expressed in peak particle velocity (PPV) or root-mean-square (RMS) vibration velocity. PPV is defined as the maximum instantaneous positive or negative peak of a vibration signal. PPV is typically used in the monitoring of transient and impact vibration and has been found to correlate well to the stresses experienced by buildings (FTA 2006; Caltrans 2013b). PPV and RMS vibration velocity are normally described in inches per second (in/sec).

Although PPV is appropriate for evaluating the potential for building damage, it is not always suitable for evaluating human response. It takes some time for the human body to respond to vibration signals. In a sense, the human body responds to average vibration amplitude. The RMS of a signal is the average of the squared amplitude of the signal, typically calculated over a 1-second period. As with airborne sound, the RMS velocity is often expressed in decibel notation as vibration decibels (VdB), which serves to compress the range of numbers required to describe vibration (FTA 2006). Table 3.11-3 includes the general human response to different ground vibration-velocity levels.

Table 3.11-3 Human Response to Different Levels of Ground Noise and Vibration

Vibration-Velocity Level	Human Reaction
65 VdB	Approximate threshold of perception.
75 VdB	Approximate dividing line between barely perceptible and distinctly perceptible. Many people find that transportation-related vibration at this level is unacceptable.
85 VdB	Vibration acceptable only if there are an infrequent number of events per day.

Notes: VdB = vibration decibels referenced to 1 µ inch/second and based on the root mean square (RMS) velocity amplitude.

Source: FTA 2006:7-8

The typical background vibration-velocity level in residential areas is approximately 50 VdB. Typical outdoor sources of perceptible ground vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. If a roadway is smooth, the ground vibration is rarely perceptible. The range of interest is from approximately 50 VdB, which is the typical background vibration-velocity level, to 100 VdB, which is the general threshold where minor damage can occur in fragile buildings. Construction activities can generate sufficient ground vibrations to pose a risk to nearby structures. Constant or transient vibrations can weaken structures, crack facades, and disturb occupants (FTA 2006).

SENSITIVE LAND USES

Noise-sensitive land uses are generally considered to include those uses where noise exposure could result in health-related risks to individuals, as well as places where quiet is an essential element of their intended purpose. Residential dwellings are of primary concern because of the potential for increased and prolonged exposure of individuals to both interior and exterior noise levels. Additional land uses such as parks, schools, historic sites, cemeteries, and recreation areas are also generally considered sensitive to increases in exterior noise levels. Those noted above are also considered vibration-sensitive land uses in addition to commercial and industrial buildings where vibration would interfere with operations within the building, including levels that may be well below those associated with human annoyance.

EXISTING NOISE SOURCES AND AMBIENT LEVELS

Transportation noise sources within the county include roadways, railroads, and airports. State Route (SR) 12, SR 29, SR 121, SR 128, and Silverado Trail are major sources of traffic noise. Some County roads, primarily those that serve as collectors and arterials, are also significant sources of traffic noise. Existing noise levels at 100 feet from these roads range from 54 dB day-night noise level (L_{dn}) to 76 dB L_{dn}. The California Northern Railroad (CFNR) is headquartered at the Lombard Yard in American Canyon, also known as Napa Junction, and operates trains in Napa and Vallejo and east to Davis, California. The Napa Valley Wine Train is a diesel locomotive operating on the old Southern Pacific Railroad line. The 36-mile rail line runs from the City of Napa to the City of St. Helena daily for lunch and dinner trips and between the City of Napa and the City of Rutherford for weekend lunch trips. Modeling conducted for the Napa Valley Wine Train indicated that noise levels increase to approximately 59 dB L_{dn} in the residential areas of the City of Napa (Napa County 2007). There are several airports in the county, but the two main airports in operation are the Napa County Airport in Napa and Angwin-Virgil O Parrett Field in Angwin. There are also a number of local landing strips located in the proximity of the county (Napa County 2007).

Non-transportation noise sources within the county include farming, wineries, quarries, and construction. Primary sources of noise related to farming activity in Napa County are tractors, harvesters, pesticide/herbicide application equipment, crushers, and frost protection equipment (wind turbines). Typical noise levels from tractors, as measured at a distance of 50 feet, range from approximately 75 dB to 95 dB, with an average of approximately 84 dB (Napa County 2007). Wineries are the predominant non-residential land uses within the county. Noise from winery operations is generally intermittent, meaning that sound levels vary over the course of the year, depending on activities at the winery. The primary noise-generating activities and equipment associated with wineries include refrigeration equipment, bottling equipment, barrel washing, destemmer and press activities occurring during the harvest crush season, and delivery trucks and other vehicles. Noise associated with quarries is intermittent and variable depending on the activities that are occurring, and sources of the noise such as forklifts and other equipment activity, delivery trucks, and other facility operations.

3.11.2 Regulatory Setting

FEDERAL

Federal Transit Administration

To address the human response to groundborne vibration, the Federal Transit Administration (FTA) set forth guidelines for maximum-acceptable vibration criteria for different types of land uses. Among these guidelines are the following maximum-acceptable vibration limits:

- 65 VdB, referenced to 1 microinch per second and based on the RMS velocity amplitude, for land uses where low ambient vibration is essential for interior operations (e.g., hospitals, high-tech manufacturing, laboratory facilities);

- 80 VdB for residential uses and buildings where people normally sleep; and
- 83 VdB for institutional land uses with primarily daytime operations (e.g., schools, churches, clinics, offices) (FTA 2006).

STATE

California Department of Transportation

In 2013, the California Department of Transportation (Caltrans) published the Transportation and Construction Vibration Manual (Caltrans 2013b). The manual provides general guidance on vibration issues associated with construction and operation of projects in relation to human perception and structural damage. Table 3.11-4 presents recommendations for levels of vibration that could result in damage to structures exposed to continuous vibration.

Table 3.11-4 Caltrans Recommendations Regarding Levels of Vibration Exposure

PPV (in/sec)	Effect on Buildings
0.4-0.6	Architectural damage and possible minor structural damage
0.2	Risk of architectural damage to normal dwelling houses
0.1	Virtually no risk of architectural damage to normal buildings
0.08	Recommended upper limit of vibration to which ruins and ancient monuments should be subjected
0.006-0.019	Vibration unlikely to cause damage of any type

Notes: PPV= Peak Particle Velocity; in/sec = inches per second

Source: Caltrans 2013b

LOCAL

Napa County General Plan

The following policies of the *Napa County General Plan* (Napa County 2008) are applicable to the project.

- **Policy CC- 37:** Residential and other noise-sensitive activities shall not be located where noise levels exceed the standards contained in the Noise Element without provision of noise attenuation features that result in noise levels meeting the current standards of the County for exterior and interior noise exposure.
- **Policy CC-38:** The following are the County's standards for maximum exterior noise levels for various types of land uses established in the County's Noise Ordinance. Additional standards are provided in the Noise Ordinance for construction activities (i.e., intermittent or temporary noise) [Table 3.11-5].

Table 3.11-5 Exterior Noise Level Standards

Land Use Type	Time Period	Noise Level (dB) by Noise Zone Classification[1]		
		Rural	Suburban	Urban
Single-Family Homes and Duplexes[2]	10 p.m. to 7 a.m.	45	45	50
	7 a.m. to 10 p.m.	50	55	60
Multiple Residential 3 or More Units Per Building (Triplex)[2]	10 p.m. to 7 a.m.	45	50	55
	7 a.m. to 10 p.m.	50	55	60
Office and Retail	10 p.m. to 7 a.m.	60		
	7 a.m. to 10 p.m.	65		
Industrial and Wineries[3]	Anytime	75		

Notes: dB = decibels

1 noise levels not to be exceeded more than 30 minutes in any hour

2 For the purposes of implementing this policy, standards for residential uses shall be measured at the housing unit in areas subject to noise levels in excess of the desired levels shown above.

3 Industrial noise limits are intended primarily for use at the boundary of industrial zones rather than for noise reduction at the industrial use.

Source: Napa County 2013

The *Napa County General Plan* provides noise compatibility guidelines for use in determining the general compatibility of planned land uses, shown in Table 3.11-6.

Table 3.11-6 Noise Compatibility Guidelines (CNEL/L_{dn})

Land Use	Completely Compatible	Tentatively Compatible	Normally Incompatible	Completely Incompatible
Residential	Less than 55 dB	55-60 dB	60-75 dB	Greater than 75 dB
Commercial	Less than 65 dB	65-75 dB	75-80 dB	Greater than 80 dB
Industrial	Less than 70 dB	70-80 dB	80-85 dB	Greater than 85 dB

Notes: dB = decibels, CNEL =-community noise equivalent level

1 Completely Compatible means that the specified land use is satisfactory, and both the indoor and outdoor environments are pleasant.

2 Tentatively Compatible means that noise exposure may be of concern, but common building construction practices will make the indoor living environment reasonably pleasant.

3 Normally Incompatible means that noise exposure warrants special attention, and new construction or development should generally be undertaken only after a detailed analysis of noise reduction requirements is made and needed noise insulation features are included in the design. Careful site planning or exterior barriers may be needed to make the outdoor environment tolerable.

4 Completely Incompatible means that the noise exposure is so severe that new construction or development should generally not be undertaken.

Source: County of Napa County 2013

The Napa County General Plan contains standards for acceptable indoor intermittent noise levels for various types of land uses. These standards should receive special attention when projects are considered in "Tentatively Compatible" or "Normally Incompatible" areas. New uses shall incorporate design features to ensure that these standards are met. Interior noise level criteria for intermittent noise are shown in Table 3.11-7.

Table 3.11-7 Interior Noise Level Criteria for Intermittent Noise

Land Use Type	Acceptable Noise Level (dB CNEL)
Residential (Single- and Multi- Family)	
Living Areas, Daytime	60 dB
Living Areas, Nighttime	55 dB
Sleeping Areas	45 dB
School Classrooms or Library	55 dB
Church Sanctuary	45 dB
Commercial, Educational, Office, Light and Heavy Industrial, Warehousing	Conform with applicable state and federal workplace safety standards

Notes: dB = decibels, CNEL =-community noise equivalent level

Source: Napa County 2013

- **Policy CC-44:** The County shall require that appropriate noise mitigation measures be included when new residential developments are to be built in close proximity to significant noise sources.

- **Policy CC-45**: Development in the area covered by any Airport Land Use Compatibility Plan (ALUCP) shall be consistent with the noise levels projected for the airport. Where necessary, noise insulation or other measures shall be included to maintain desired interior noise levels.

- **Policy AG/LU-49**: The County shall use zoning to ensure that land uses in airport approach zones comply with applicable Airport Land Use Compatibility policies. If necessary, the County shall acquire development rights in airport approach zones. This policy shall apply to the Napa County Airport and Angwin Airport (Parrett Field).

Napa County Code

Section 8.16.060 – Interior noise standards

Section 8.16.060 of the Napa County Code identifies maximum permissible dwelling interior sound levels for residential uses. Daytime (7:00 a.m.–10:00 p.m.) maximum interior noise levels for residential uses are limited to 60 dB; nighttime (10:00 p.m.–7:00 a.m.) maximum interior noise levels are limited to 55 dB. Section 8.16.060 indicates that no person shall operate or cause to be operated within a dwelling unit any source of sound or allow creation of any noise which causes exceedance of these noise levels for a cumulative period of more than 5 minutes in any hour, or these noise standards plus 5 dB for a cumulative period of more than 1 minute in any hour, or these noise standards plus 10 dB for the maximum measured ambient noise for any period of time.

Section 8.16.070 – Exterior noise limits

Section 8.16.070 of the Napa County Code identifies the noise standards for the various categories of land use identified by the noise control office (see Table 3.11-5). Section 8.16.070 states that no person shall operate, or cause to be operated, any source of sound at any location within the unincorporated area of the county, or allow the creation of any noise on property owned, leased, occupied or otherwise controlled by such person, which causes the noise level, when measured on any other property, either incorporated or unincorporated, to exceed:

- the noise standard for that land use (see Table 3.11-5) for a cumulative period of more than 30 minutes in any hour;

- or the noise standard plus five dB for a cumulative period of more than 15 minutes in any hour;

- or the noise standard plus ten dB for a cumulative period of more than 5 minutes in any hour;

- or the noise standard plus fifteen dB for a cumulative period of more than 1 minute in any hour;
- the noise standard plus twenty dB or the maximum measured ambient level, for any period of time.

To compensate for the character of sound, Section 8.16.070 states that if an offensive noise, as judged by the noise control officer, contains a steady, audible tone such as a whine, screech or hum, or is a repetitive noise such as hammering or riveting, or contains music or speech, the standard limits (see Table 3.11-5) shall be reduced by five dB, but not lower than forty-five.

Section 8.16.080 – Construction or Demolition

Section 8.16.080 of the Napa County Code identifies noise limits for construction activities, allowable in excess of the standard noise limits identified in Table 3.11-2. Specifically, Section 3.16.080 regulates noise generated by operation of any tools or equipment used in construction, drilling, repair, alteration or demolition work between the hours of 7 p.m. and 7 a.m., such that the sound therefrom creates a noise disturbance across a residential or commercial real property line, except for emergency work of public service utilities or by variance issued by the appropriate authority (Table 3.11-8).

Table 3.11-8 Noise Limits for Construction Activities

	Residential	Commercial	Industrial
Daily: 7 a.m. to 7 p.m.	75 dB L_{max}	80 dB L_{max}	85 dB L_{max}
Daily: 7 p.m. to 7 a.m.	60 dB L_{max}	65 dB L_{max}	70 dB L_{max}

Notes: dB = decibels; L_{max} = Maximum noise levels

Source: Napa County 2013

3.11.3 Environmental Impacts and Mitigation Measures

ANALYSIS METHODOLOGY

This analysis is based on a review of existing noise and vibration sources, sensitive land uses, and reference noise levels from FTA's Guide on Transit Noise and Vibration Impact Assessment methodology (FTA 2006). Reference levels are noise and vibration emissions for specific equipment or activity types that are well documented and the usage thereof common practice in the field of acoustics. 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.

PROPOSED CAP GHG REDUCTION MEASURES

Table 2.4 of the Draft EIR, provides a list of proposed GHG reduction, and adaptation measures that would be implemented by the CAP. None of the proposed measures indicate where specific improvements would be constructed, their size, or specific characteristics. As a program EIR, the Draft EIR does not, and cannot, speculate on the individual environmental impacts of specific future projects/improvements. However, implementation of all GHG reduction and adaptation measures were considered during preparation of the Draft EIR to the degree specific information about implementation is known. Consistent with the requirements of the California Environmental Quality Act (CEQA) Guidelines Section 15168, this Draft EIR provides a program-level discussion of the potential general impacts of implementing these measures, rather than project-level or site-specific physical impacts of such actions. Only those measures that have the potential to result in noise or vibration impacts are listed below. All other measures in Table 2.4 would have no effect regarding noise and vibration and are not discussed further.

- **Supporting Measure AG-5: Support the Bay Area Air Quality Management District (BAAQMD) in ending open burning of removed agricultural biomass and flood debris**. This measure would result in the promotion of alternatives to burning biomass materials, such as chipping, mastication, use of materials onsite, and/or hauling materials to off-site locations. Implementation of this measure could result in temporary noise associated with biomass disposition activities.

- **Primary Measure BE-5: Expand current renewable energy and green energy incentives and update local ordinances.** This measure would result in an expansion of incentives for renewable energy systems that would increase participation by individual property owners. This measure would result in the installation of new private renewable energy systems including new photovoltaic, small-scale wind turbines, solar water heating systems, geothermal ground source heat pump, and battery storage. Implementation of this measure could result in temporary and minor noise associated with construction activities.

- **Primary Measure BE-7: Support Waste-to-Energy Programs at Unincorporated Landfills.** This measure would result in gas that is captured through existing landfill gas capture systems being reused for energy, rather than being flared. This measure could result in new infrastructure on-site or off-site to process landfill gas so that it can be used for energy generation or other end-uses such as compressed natural gas (CNG) for fuel in vehicles. Implementation of this measure could result in temporary noise associated with construction activities.

- **Supporting Measure BE-11: Encourage Solar Panel Installations on Commercial Roof Spaces.** This measure would result in an expansion of incentives for renewable energy systems that would increase participation by individual property owners. This measure would result in the installation of new private renewable energy systems. Implementation of this measure could result in temporary and minor noise associated with construction activities.

- **Primary Measure LU-3: Repurpose or otherwise prevent burning of removed trees and other woody material from land use conversions of oak**. This effort would result in repurposing timber and woody materials that are collected during oak woodlands and forest conversion. This could include chipping, masticating, or removing vegetation. Implementation of this measure could result in temporary noise associated with biomass disposition activities.

- **Supporting Measure TR-8: Support Napa County's incorporated cities in developing transit-oriented development unique to the needs of the Napa Region.** This would result in collaboration among the County and incorporated cities to create a more robust visitor-friendly environment around the Soscol Gateway Transit Center (and future transit centers) to encourage additional users. Implementation of this measure could result in temporary noise associated with construction activities.

- **Supporting Measure TR-10: Work with Napa County's incorporated cities, the Napa Valley Transportation Authority, and neighboring regions to increase presence of park and ride facilities near residential centers.** This effort would result in new park and ride facilities which would encourage carpooling and reduce the number of vehicles on the road. Implementation of this measure could result in temporary noise associated with construction activities.

- **Supporting Measure TR-12: Increase the supply of electric vehicle charging stations.** This measure would result in the installation of new electric vehicle charging stations (EV charging stations) in priority areas including existing commercial areas, major visitor attractions, and multifamily complexes. Implementation of this measure could result in temporary and minor noise associated with construction activities.

- **Supporting Measure TR-14: Develop and implement active transportation projects.** This measure would result in the development and construction of new pedestrian, trail, and bicycle improvements. Implementation of this measure could result in temporary noise associated with construction activities.

- **Supporting Measure TR-15: Require new development projects to evaluate and reduce vehicle miles traveled (VMT).** This measure would implement roadway improvements to reduce VMT by calming traffic and improving the bicyclist and pedestrian infrastructure and would occur as part of resurfacing projects within existing paved areas. Implementation of this measure could result in temporary noise associated with construction activities.

- **Primary Measure SW-1: Encourage expansion of composting programs for both residential and commercial land uses.** This measure would result in the expansion of composting programs which would reduce GHG emissions by decreasing methane in landfills. Implementation of this measure could result in construction and operational noise, including additional haul truck traffic on existing routes or new haul truck traffic on new routes.

- **Primary Measure SW-2: Meet an 80 percent Waste Diversion Goal by 2020 and a 90 percent Waste Diversion Goal by 2030.** This measure could result in new/expanded waste processing and diversion facilities throughout the unincorporated County. Implementation of this measure could result in construction and operational noise, including additional haul truck traffic on existing routes or new haul truck traffic on new routes.

- **Adaptation Measure Fire-5: Collaborate on Programs to Reduce Fire Hazards**. This measure would result in increased collaboration to improve resiliency related to wildfire hazards. This could include thinning, removing, or chipping vegetation and prescribed burning. Implementation of this measure could result in temporary noise associated with biomass disposition activities.

- **Adaptation Measure Water-2: Water Supply and Quality.** This measure would result in the development and implementation of water supply resiliency strategies such as graywater systems, recycled water, and other water conservation strategies. Implementation of this measure could result in construction and operational noise related to new or updated infrastructure.

- **Adaptation Measure Water-5: Collaborate with Agencies to Identify Future Water Supplies and Explore Alternative Supply Sources.** This measure would result in increased collaboration to identify future water supply options, including expanded use of on-site graywater, recycled water, or other water conservation options. Implementation of this measure could result in construction and operational noise related to new or updated infrastructure.

- **Adaptation Measure Flood-3: Identify Potential Streamside Restoration Areas**. This measure would result in the identification and restoration of stream banks within the unincorporated county to buffer buildings, roads, and crops from increased flooding potential. Implementation of this measure could result in temporary and minor noise associated with construction of new or updated infrastructure.

- **Adaptation Measure Flood-4: Encourage Replanting Bare or Disturbed Areas**. This measure would result in the identification and restoration of areas that are subject to erosion within the unincorporated county to improve water quality and reduce stream sedimentation. Implementation of this measure could result in temporary and minor noise associated with construction of new or updated infrastructure.

- **Adaptation Measure Flood-7: Improve Capacity of Storm Water Infrastructure**. This measure would result in improved storm water infrastructure and improved resilience for high intensity rain events. Implementation of this measure could result in construction and operational noise related to new or updated infrastructure.

THRESHOLDS OF SIGNIFICANCE

Based on Appendix G of the State CEQA Guidelines, a noise impact is considered significant if implementation of the proposed project would:

- expose persons to or generate noise levels in excess of standards established in the local General Plan or noise ordinance, or applicable standards of other agencies;
- expose persons to or generate excessive 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;
- for a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, expose people residing or working in the project area to excessive noise levels; or
- for a project within the vicinity of a private airstrip, expose people residing or working in the project area to excessive noise levels.

ISSUES NOT DISCUSSED FURTHER

As described in Chapter 2, Project Description, implementation of the CAP and the targets and strategies identified therein necessitate changes to Policy CON-65 e) of the County's General Plan (2008 GP). The proposed changes would require that all discretionary development projects demonstrate consistency with the CAP by substantiating compliance through the CAP Consistency Checklist. As described in Section 2.4.2, Project Description, proposed changes to the adopted policy of the General Plan requires the County to implement a General Plan Amendment (GPA) as part of the administrative approval process.

The CAP EIR evaluates the GPA as part of the series of actions associated with implementation of the CAP. The changes reflected in the GPA support and are consistent with implementation of the CAP, its GHG targets, and GHG reduction measures. No additional activities or measures, other than those described in the CAP, would occur as a result of implementation of the GPA. Therefore, the GPA is not evaluated separately from the actions proposed by the CAP, but rather its implementation is within the scope of the overall impact analysis of the CAP. As described in Section 2.4.3, Project Description, to provide a mechanism by which projects can demonstrate consistency with the CAP, a CAP Consistency Checklist is included as Appendix D of the CAP. The CAP Consistency Checklist is a tool by which the County will track and determine a project's consistency with the CAP and how it delivers its appropriate GHG reductions. No physical projects or improvements other than those described in the CAP are included or would be approved with approval of the checklist. As such, like the GPA, the CAP Consistency Checklist is not evaluated separately from the actions proposed by the CAP.

In summary, the physical changes and associated environmental impacts of all GHG reduction and adaptation measures have been evaluated throughout the CAP EIR. The GPA and CAP Consistency Checklist which are included as part of the project, are not addressed as a separate impact discussion below. These administrative mechanisms on their own would not result in any physical impacts that would require separate evaluation below and are not discussed further.

Implementation of the CAP would not include development of sensitive land uses such as residential or commercial projects, result in changes in air traffic or existing airport noise levels, nor would the project have the potential to exacerbate these noise impacts. Therefore, no adverse impact would occur, and issues related to exposure to excessive airport noise levels are not discussed further.

IMPACT ANALYSIS

Impact 3.11-1: Short-Term Construction Noise Impacts

Implementation of the CAP would not generally result in substantial short-term noise impacts due to the scale and nature of future improvements which may occur, and which are generally small, localized, and would require little use of heavy-duty construction equipment. However, GHG reduction and adaptation measures that would result in vegetation management could expose rural residential receptors to temporary and intermittent noise from mechanical equipment and haul trucks. Projects would be required to be evaluated for project-specific impacts under CEQA at the time of application and project-specific mitigation would be required to minimize or avoid noise impacts to the extent feasible in compliance with CEQA Guidelines Section 15126.4. Implementation of General Plan policies that reduce noise impacts consistent with federal and State requirements, as well as all other County noise regulations would minimize impacts. Therefore, this impact would be **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; however, GHG reduction and adaptation measures that would be implemented with the CAP have the potential to result in short-term construction, which would use heavy equipment such as excavators, graders, scrapers, bulldozers, backhoes, pile drivers, jackhammers, and concrete mixing trucks, and could result in temporary vehicle trips that generate noise. Depending on the type and model of equipment used for construction, typical noise levels for these kinds of construction equipment would range from 80 to 95 dB maximum noise level (L_{max}) at 50 feet (FTA 2006). Actual exposure levels would depend on the intensity of the construction activity, the distance of sensitive receptors to the noise source, and any intervening structures or topography that might affect noise attenuation.

Infrastructure Efficiency and Replacement Measures

GHG reduction measures that could result in new infrastructure on- or off-site to process landfill gas (BE-7) would require the use of heavy mechanical equipment and worker trips during construction, resulting in the short-term noise. Per the County code of ordinances Section 8.58.150 – Disposal and composting sites – Setbacks, a setback distance of 1,000 feet is required between the operating perimeter of the landfill or composting facility and any legal dwelling unit, which is a sufficient distance for construction noise levels to attenuate to below the County's daytime construction noise threshold of 75 dB L_{max} at nearby residential receptors.

Transportation, Water, Stormwater, and Grid Utility Infrastructure Measures

GHG reduction measures that would result in the construction of new facilities and infrastructure such as visitor-friendly infrastructure; park and ride facilities; EV charging stations; pedestrian, trail, and bicycle improvements; and water, and stormwater facilities (TR-8, TR-10, TR-12, TR-14, TR-15, Water-2, Water-5, Flood-7) would require the use of heavy mechanical equipment and worker trips during construction, resulting in short-term noise. Because of the scale and nature of proposed improvements, which are generally small, localized, and would require little use of heavy-duty construction equipment, construction-related noise is not anticipated to be excessive and would be in compliance with the County's noise ordinance. The location of such construction activities would likely be within existing developed footprints, nearby to roadways or commercial areas, or in remote areas.

Vegetation Management Measures

GHG reduction and adaptation measures that would result in chipping, mastication, and hauling of biomass; replanting and restoration activities; and prescribed burns (AG-5, LU-3, Fire-5, Flood-3, Flood-4) would require the use of heavy mechanical equipment, haul truck trips to transport biomass, and worker trips during construction, resulting in short-term noise. Although these activities would generally be conducted in agricultural or open space areas, away from large numbers of sensitive receptors it is possible that rural residential receptors could be located nearby. It is also possible that this measure could result in temporary and intermittent haul truck traffic and associated noise on roads near sensitive receptors.

Waste Diversion and Compost Measures

GHG reduction measures that would result in the expansion of compost and waste diversion facilities (SW-1 and SW-2) would require the use of heavy mechanical equipment and worker trips during construction, resulting in short-term noise. As discussed above, a setback distance of 1,000 feet is required between the operating perimeter of the landfill or composting facility and any legal dwelling unit, which is a sufficient distance for construction noise levels to attenuate to below the County's daytime construction noise threshold of 75 dB L_{max} at nearby residential receptors.

Impact Summary

The project types listed above would be discretionary projects within the County's purview that would be required to be evaluated for project-specific impacts under CEQA at the time of application.

With the exception of GHG reduction and adaptation measures that could result in vegetation management, implementation of the CAP would not result in substantial short-term noise impacts due to the scale and nature of the construction activities, which are generally small, localized, and would require little use of heavy-duty construction equipment. Additionally, all projects would be required to comply with Section 8.16.080 – Construction or Demolition of the County's Noise Ordinance which sets sound level limits on construction equipment for certain hours. There is presently no basis to conclude that construction of these facilities would generate noise levels in excess of local standards or a substantial increase in ambient noise levels. Project-specific impacts would be addressed and mitigated at the time of permitting and environmental review. 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.

GHG reduction and adaptation measures that would result in vegetation management including chipping, mastication, and hauling of biomass; replanting and restoration activities; and prescribed burns (AG-5, LU-3, Fire-5, Flood-3, Flood-4) could expose rural residential receptors to temporary and intermittent noise from mechanical equipment and haul trucks. Although these activities would generally be conducted in agricultural or open space areas, away from large numbers of sensitive receptors it is possible that rural residential receptors could be located nearby.

Future projects would be required to be evaluated for project-specific impacts under CEQA at the time of application and project-specific mitigation would be required to minimize or avoid noise impacts to the extent feasible in compliance with CEQA Guidelines Section 15126.4. Implementation of General Plan policies that reduce noise impacts consistent with federal and State requirements, as well as all other County noise regulations would minimize impacts. Therefore, this impact would be **less-than-significant**.

Mitigation Measures

No mitigation is required.

Impact 3.11-2: Long-Term Operational Noise Impacts

GHG reduction and adaptation measures would not result in substantial operational noise due to required setback distances for siting of facilities, the minor nature of maintenance activities, and few new operational vehicle trips. This impact would be **less-than-significant**.

The CAP is a policy-level document that does not include any site-specific designs, or locations for future improvements. However, GHG reduction and adaptation measures that would be implemented with the CAP have the potential to result in long-term operational noise from the operation of new stationary equipment or additional vehicle traffic.

Infrastructure Efficiency and Replacement Measures

GHG reduction measures that could result in new infrastructure on- or off-site to process landfill gas (BE-7) would result in operational noise from stationary equipment. Noise-generating stationary equipment would be housed within existing buildings and facilities and would most likely not be a new source of excessive noise. Furthermore, per the County code of ordinances Section 8.58.150 – Disposal and composting sites – Setbacks, a setback distance of 1,000 feet is required between the operating perimeter of the landfill or composting facility and any legal dwelling unit, which is a sufficient distance for operational noise levels to attenuate to below the County's receptor thresholds.

Transportation, Water, Stormwater, and Grid Utility Infrastructure Measures

GHG reduction measures that would result in the construction of new infrastructure such as visitor-friendly infrastructure; park and ride facilities; EV charging stations; and pedestrian, trail, and bicycle improvements; would result in the reduction of traffic on local roadways and; consequently, reduce traffic-generated noise levels and associated exposure to nearby sensitive receptors. Also, park-and-ride facilities are not considered to be major noise generators and would be expected to be located near major noise-generating sources such as freeways and commercial areas; thus, not resulting in excessive noise levels over the existing condition.

Adaptation measures that could result in new water, and stormwater facilities (Water-2, Water-5, Flood-7,) would result in improvements to existing facilities, primarily related to the potential vulnerabilities incurred from the effects of climate change. These facilities are linear and do not result in operational noise. A small increase in the number of full-time employees may be required to maintain the facilities; however, these types of projects are not substantial employment generators such that significant traffic noise impacts would occur.

Vegetation Management Measures

GHG reduction and adaptation measures that would result in chipping, mastication, and hauling of biomass; replanting and restoration activities; and prescribed burns (AG-5, LU-3, Fire-5, Flood-3, Flood-4) would result in short-term construction noise only. No permanent noise would be generated.

Waste Diversion and Compost Measures

GHG reduction measures that would result in the expansion of compost and waste diversion facilities (SW-1 and SW-2) could result in operational noise from additional stationary equipment and haul truck trips.

The loudest equipment that would be in operation at a composting facility would be the grinder and front-end loader. Equipment would operate continuously and would be dependent on the volume of materials received and the need to move materials. In the case of the aerated static pile composting, large blowers would push and pull air through the piles. These blowers have the potential to operate 24 hours per day. Composting methods use electric motors to power pumps, impellers, or compressors, and when properly installed, operated, and maintained generally produce noise levels less than 54 dB at 30 feet (SWRCB 2015). As discussed above, a setback distance of 1,000 feet is required between the operating perimeter of the landfill or composting facility and any legal dwelling unit, which is a sufficient distance for operational noise levels to attenuate to below the County's receptor thresholds.

It is anticipated that the haul truck trips to new or expanded facilities would displace haul trucks trips that would be diverted from landfills, and no net increase in the number of haul truck trips and associated traffic-related noise within the county would occur.

Impact Summary

In general, future improvements that would result from implementation of the CAP would be required to undergo the County's discretionary review process which would include CEQA, and which would require project-specific mitigation to minimize or eliminate impacts related to operational noise in compliance with CEQA Guidelines Section 15126.4. A majority of GHG reduction and adaptation measures would not result in future

improvements that would produce substantial operational noise due to required setback distances for siting of facilities, the minor nature of maintenance activities, and few new operational vehicle trips.

Therefore, impacts would be **less than significant**.

Mitigation Measures

No mitigation is required.

Impact 3.11-3: Excessive Groundborne Vibration

Implementation of GHG reduction and adaptation measures that involve the operation of heavy-duty construction equipment could generate localized groundborne vibration in the vicinity of the construction activity. Given the required setback distances for siting of certain facilities, as well as the low likelihood that construction activities or haul truck trips would occur within 43 feet of receptors, it is unlikely that construction or operational vibration impacts would occur. Where there is the potential for these impacts, they are routinely addressed through project-level environmental review and permitting. Future discretionary projects would be required to evaluate project-specific impacts under CEQA at the time of application and project-specific mitigation would be required to minimize or avoid vibration impacts to the extent feasible in compliance with CEQA Guidelines Section 15126.4. Thus, impacts related to excessive groundborne vibration would be **less than significant**.

The CAP is a policy-level document that does not include any site-specific designs, or locations for future improvements. However, GHG reduction and adaptation measures that would be implemented with the CAP have the potential to result groundborne vibration from the use of heavy equipment such as bulldozers, loaded haul trucks, and jackhammers during project construction, and from haul trucks during the operational phase. These types of equipment could generate groundborne vibrations ranging from 0.035 to 0.089 in/sec PPV at 25 feet and 79 to 87 VdB at 25 feet (FTA 2006) and could expose sensitive receptors to elevated vibration levels. Vibration levels dissipate rapidly at increasing distance from the vibration source. Applying FTA's recommended procedure for determining vibration levels at various distances from the source, the predicted most-conservative ground vibration levels would exceed the threshold of 80 VdB for human disturbance for a large bulldozer at distances within 43 feet. With regard to structural damage, the threshold of 0.2 inch/second PPV would be exceeded for large bulldozers at distances within 15 feet. Actual exposure levels would depend on equipment types, haul truck routes, and proximity to and characteristics of sensitive receptors.

Infrastructure Efficiency and Replacement Measures

GHG reduction measures that could result in new infrastructure on- or off-site to process landfill gas (BE-7) would require the use of heavy mechanical equipment and haul trucks during construction, resulting in short-term vibration. Per the County code of ordinances Section 8.58.150 – Disposal and composting sites – Setbacks, a setback distance of 1,000 feet is required between the operating perimeter of the landfill or composting facility and any legal dwelling unit, which is more than sufficient distance for vibration to attenuate to imperceptible levels.

Transportation, Water, and Stormwater, and Grid Utility Infrastructure Measures

GHG reduction and adaptation measures that would result in the construction of new infrastructure such as visitor-friendly infrastructure; park and ride facilities; EV charging stations; pedestrian, trail, and bicycle improvements; and water, and stormwater facilities (TR-10, TR-12, TR-14, TR-15, Water-2, Water-5, Flood-7) would require the use of heavy mechanical equipment and haul trucks during construction, resulting in short-term vibration. The location of such construction activities would likely be within existing developed footprints, nearby to roadways or commercial areas, or in remote areas which means that it would be possible for these projects to result in excessive vibration to receptors.

Vegetation Management Measures

GHG reduction and adaptation measures that would result in chipping, mastication, and hauling of biomass; replanting and restoration activities; and prescribed burns (AG-5, LU-3, Fire-5, Flood-3, Flood-4) would require the use of heavy mechanical equipment and haul trucks during construction, resulting in short-term vibration. Although these activities would generally be conducted in agricultural or open space areas, away from large numbers of sensitive receptors it is possible that rural residential receptors could be located nearby. It is also possible that this measure could result in temporary and intermittent haul truck traffic on roads near sensitive receptors.

Waste Diversion and Compost Measures

GHG reduction measures that would result in the expansion of compost and waste diversion facilities (SW-1 and SW-2) would require the use of heavy mechanical equipment and haul trucks during construction, resulting in short-term vibration. Per the County code of ordinances Section 8.58.150 – Disposal and composting sites – Setbacks, a setback distance of 1,000 feet is required between the operating perimeter of the landfill or composting facility and any legal dwelling unit, which is more than sufficient distance for vibration to attenuate to imperceptible levels.

Impact Summary

Implementation of GHG reduction and adaptation measures that involve the operation of heavy-duty construction equipment and haul trucks could generate localized groundborne vibration in the vicinity of the activity. However, given the required setback distances for siting of certain facilities, as well as the low likelihood that construction activities or haul truck trips would occur within 43 feet of receptors, it is unlikely that construction or operational vibration impacts would occur. Furthermore, these activities would occur during daytime hours, when people are less sensitive to vibration. Where there is the potential for these impacts, they are routinely addressed through project-level environmental review and permitting. 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. Future discretionary projects would be required to evaluate project-specific impacts under CEQA at the time of application and project-specific mitigation would be required to minimize or avoid vibration impacts to the extent feasible in compliance with CEQA Guidelines Section 15126.4. Thus, impacts related to excessive groundborne vibration would be **less than significant**.

Mitigation Measures

No mitigation is required.

3.12 TRAFFIC AND TRANSPORTATION

This section describes the existing circulation patterns in Napa County and evaluates the potential for transportation impacts that may result from implementation of the CAP.

The County did not receive comments regarding traffic and transportation during the Notice of Preparation (NOP) scoping process. A copy of the NOP and comment letters received in response to the NOP are included in Appendix A of this Draft EIR.

3.12.1 Environmental Setting

This section describes the existing transportation and traffic systems within Napa County. The primary source of this information is the Napa County General Plan Draft Circulation Element (Napa County 2008) and Napa County General Plan Draft Environmental Impact Report (Napa County 2007) and the Napa Countywide Transportation Plan, *Vision 2040 – Moving Forward* (NVTA 2015).

Napa County's economy is largely dependent on the wine and tourism industry which accounts for 40% of the local labor force. The top five fastest growing job sectors in Napa County, which will account for 63% of the projected job growth, are low wage-earning job sectors. This is particularly significant because housing in Napa is expensive and projected housing production will not keep pace with job production. This will force the growing Napa County workforce to look for more affordable housing elsewhere. Conversely, residents that wish to live in Napa County are likely to seek higher paying jobs elsewhere. The housing/income mismatch will result in more vehicle miles traveled and increased congestion on Napa's roads. If projections are accurate, this could result in 30,000 workers commuting into Napa each day by 2040 – a 45% increase, and an additional 2,000 outbound-commuters or a total of 16,000 daily trips leaving the county for work over this same time period (NVTA 2015).

The American Communities Survey (2008-2012) indicates that 76 percent of Napa County's workers commute alone to work (including both local residents who drive to work and out-of-county in-commuters). This is significantly higher than the overall Bay Area percentage of drive-alone commuters of 67% (NVTA 2015). Residents are served by a variety of transportation systems, including local roads, public transit, airports, and bicycle and pedestrian facilities. These are discussed in more detail below.

EXISTING ROADWAY NETWORK

Napa County's roadway system reflects its agricultural character with a limited number of roadway types, many of which are primarily rural in nature. Interstate freeway (I-80) crosses the southeastern corner of the County, but direct access to the interstate roadway is via roadways located in adjoining Solano County. Roadways outside of the urban areas are primarily two lanes wide.

The roadway system in Napa County is focused on a primary route, State Route (SR) 29, which enters the County from the south (from Solano County at American Canyon) and leaves to the north (towards Lake County). The portion of SR 29 north of SR 121 is designated as a freeway, and the portion of SR 29 between SR 37 and SR 12/121 is considered part of the Federal Highway Administration's National Highway System, for which the state and federal governments have agreed-upon standards and principles.

The SR 29 primary route is enhanced by east-west roads, such as SR 12 (Jamieson Canyon Road and Sonoma-Napa Highway), SR 221 (Soscol Avenue), Silverado Trail and SR 121. Some of the major roadways serving the incorporated cities and town are four lanes wide, north of the city of Napa most roads remain two lanes wide, although they may sometimes accommodate higher traffic volumes than is typically associated with rural areas (Napa County 2018).

TRANSIT AND BICYCLE FACILITIES

Napa County cities are served by several different fixed-route transit systems, providing local bus transportation and connecting the cities within Napa and Solano Counties. There are also express bus service with connections to other areas in Sacramento and the San Francisco Bay Area. Napa County is also served by the San Francisco Bay Ferry from Vallejo to San Francisco and the Amtrak Capitol Corridor rail service from Suisun City to the Bay Area and Sacramento.

Dial-a-ride, also known as paratransit, or door-to-door service, is available for those who are unable to independently use the transit system due to a physical or mental disability. Vine Go paratransit is designed to serve the needs of individuals with disabilities within Napa and the greater Napa County area and provides curb-to-curb service for residents countywide who live within three-quarters of a mile of a bus route.

Bicycle facilities are classified as follows:

- Class I Bikeway (Bike Path). A completely separate facility designated for the exclusive use of bicycles and pedestrians, with vehicle and pedestrian cross-flow minimized.
- Class II Bikeway (Bike Lane). A striped lane designated for the use of bicycles on a street or highway. Vehicle parking and vehicle pedestrian/ cross-flow are permitted at designated locations.
- Class III Bikeway (Bike Route). A route designated by signs of pavement markings for bicyclists within the vehicular travel lane (i.e. shared use) of a roadway.
- The Napa Valley Vine Trail, a Class I trail, connects the Town of Yountville to Kennedy Park south of the City of Napa.
- Two to three bicycles can be carried on most VINE buses. Bike rack space is on a first come, first served basis. Additional bicycles are allowed on Vine buses at the discretion of the driver.

3.12.2 Regulatory Setting

FEDERAL

Americans with Disabilities Act

The Americans with Disabilities Act (ADA) (1990) is a wide-ranging civil rights law that prohibits, under certain circumstances, discrimination based on disability. Pedestrian facility design must comply with the accessibility standards identified in the ADA, which applies to all projects involving new or altered pedestrian facilities. The scoping and technical provisions for new construction and alterations identified in the ADA Accessibility Guidelines (Sections 4.3, 4.7 and 4.8) can be used to help design pedestrian facilities that are ADA compliant. For example, Title II-6.600 of the Technical Assistance Manual states, “When streets, roads, or highways are newly built or altered, they must have ramps or sloped areas whenever there are curbs or other barriers to entry from a sidewalk or path.” Certain facilities, such as historic buildings, may be exempt from ADA requirements.

Highway Capacity Model 2000 prepared by the federal Transportation Research Board

The Highway Capacity Manual (HCM) 2000 (NRC 2000), prepared by the federal Transportation Research Board (TRB), is the result of a collaborative multiagency effort between the TRB, FHWA, and American Association of State Highway and Transportation Officials (AASHTO). The HCM contains concepts, guidelines, and computational procedures for computing the capacity and quality of service of various highway facilities, including freeways, signalized and unsignalized intersections, rural highways, and the effects of transit, pedestrians, and bicycles on the performance of these systems.

Title 23, Code of Federal Regulations, Section 450.220 as revised on April 1, 2005

Title 23, Code of Federal Regulations Revised in April 1, 2005, Section 450.220 of Title 23 Highways in the Code of Federal Regulations requires each state to carry out a continuing, comprehensive, and intermodal statewide transportation planning process. This planning process must include the development of a statewide transportation plan and transportation improvement program that facilitates the efficient, economic movement of people and goods in all areas of the state.

Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users

On August 10, 2005 Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) was signed into law. SAFETEA-LU addresses the many challenges facing transportation systems and sets funding and programs to improve safety, reduce traffic congestion, improve efficiency in freight movement, increase intermodal connectivity, and protect the environment. SAFETEA-LU promotes more efficient and effective federal surface transportation programs by focusing on transportation issues of national significance, while giving state and local transportation decision makers more flexibility for solving transportation problems in their communities.

STATE

California Department of Transportation

The California Department of Transportation (Caltrans) is responsible for planning, designing, building, operating, and maintaining California's $300 billion, 50,000-lane-mile State road system. Caltrans sets standards, policies, and strategic plans that aim to do the following: 1) provide the safest transportation system in the nation for users and workers; 2) maximize transportation system performance and accessibility; 3) efficiently deliver quality transportation projects and services; 4) preserve and enhance California's resources and assets; and 5) promote quality service. Caltrans has the discretionary authority to issue special permits for the use of California State highways for other than normal transportation purposes. Caltrans also reviews all requests from utility companies, developers, volunteers, nonprofit organizations, and others desiring to conduct various activities within the California Highway right of way. The Caltrans Highway Design Manual, prepared by the Office of Geometric Design Standards (Caltrans 2008), establishes uniform policies and procedures to carry out the highway design functions of Caltrans. Caltrans has also prepared a Guide for the Preparation of Traffic Impact Studies (Caltrans 2002). Objectives for the preparation of this guide include providing consistency and uniformity in the identification of traffic impacts generated by local land use proposals.

The California 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 multi-year 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 CTP 2040 was adopted in 2016 and presents a long-term vision with a set of supporting goals, policies, and recommendations to help guide transportation-related decisions and investments to meet our future mobility needs and reduce greenhouse gas (GHG) emissions. The CTP 2040 takes a "whole system' approach of integrating long-range statewide and regional transportation planning documents and programs with the latest tools and technologies to evaluate transportation and land use scenarios and polices.

The following implementation highlights illustrate the vision and direction the CTP 2040:

- improve transit;
- reduce long-run repair and maintenance costs;
- improve highways and roads;

- improve freight efficiency and the economy;
- improve communities;
- reduce transportation-system deaths and injuries;
- expand the use and safety of bike and pedestrian facilities;
- make our vehicles and transportation fuels cleaner;
- improve public health and achieve climate and other environmental goals; and
- secure permanent, stable, and sufficient transportation revenue.

REGIONAL

Metropolitan Transportation Commission

The Metropolitan Transportation Commission (MTC) serves as the transportation planning, coordinating, and financing agency for the nine-county San Francisco Bay Area. The MTC created and maintains the Metropolitan Transportation System (MTS), a multimodal system of highways, major arterials, transit services, rail lines, seaports, airports, and transfer hubs that are critical to regional transportation between the nine Bay Area counties. MTS facilities within the study area include SR 29. The MTS is incorporated into MTC's 2001 Regional Transportation Plan (RTP) and is used as a guideline in prioritizing for planning and funding of facilities in the Bay Area. Facilities included in the MTS provide access to major Bay Area activity centers, supply convenient and efficient connections, and/or provide alternative routes or modes for congested areas or regions with limited facilities.

LOCAL

Napa County Transportation and Planning Agency

A Congestion Management Agency (CMA) develops and updates the legislatively required Congestion Management Program (CMP), a plan that describes the policies and strategies to address congestion problems in the county, and ultimately protects the environment with strategies to help reduce greenhouse gas emissions. Napa County Transportation and Planning Agency (NCTPA) is the Napa County CMA. NCTPA is responsible for developing long-range countywide transportation priorities through an integrated planning process. This *Countywide Transportation Plan, Vision 2040 – Moving Napa Forward*, adopted in 2015, includes a list of visionary transportation investments that will serve residents, workers and visitors alike for years to come. In a time where resources are limited, it is important to look critically at the investments that will be included in the Bay Area Regional Transportation Plan (RTP). The countywide transportation plan is what informs the Metropolitan Transportation Commission's (MTC) Regional Transportation Plan and the Sustainable Communities Strategy (RTP/SCS) which is updated every four years. NCTPA last updated the countywide transportation plan in 2009.

The Napa County Bicycle Plan, adopted in 2012, was developed as a component of the Napa Valley Transportation and Planning Agency's Countywide Bicycle Plan Update. The Plan is intended to guide and influence the development of bikeways, bicycle policies, bicycle programs and bicycle facility design standards to make bicycling throughout Napa County, more safe, comfortable, convenient and enjoyable for all bicyclists. The overarching goal of the Bicycle Plan is to increase the number of persons who bicycle throughout Napa County for transportation to work, school, utilitarian purposes, and recreation.

Airport Land Use Planning

Napa County has two public use airports, Napa County Airport and Parrett Field in Angwin. The Airport Industrial area, which includes the Napa County Airport, is located in the southern end of Napa County between the Cities of Napa and American Canyon along State Highway 29.

The Napa County Airport Land Use Compatibility Plan (Compatibility Plan), adopted April 22, 1991 and amended December 1999, provides guidance to the Airport Land Use Commission in reviewing the land use plans and zoning regulations of affected local jurisdictions to ensure future development adjacent to the

airports in the County is compatible with airport activities. The Compatibility Plan sets forth the type of actions subject to review; the review process; primary review policies related to land use actions, review of airport plans, plans for new airports and heliports; and supporting compatibility policies related to noise, safety, airspace protection, and overflight. The authority of the Airport Land Use Commission includes the review of general and specific plans for consistency with the adopted Compatibility Plan for determination of consistency.

Minimum standards for the maximum allowable height of objects around airports are set forth in Federal Aviation regulations Part 77, "Objects Affecting Navigable Airspace." The regulations require that the DAA by notified regarding the proposed establishment of any object that would exceed specified heights. An Airspace Plan with graphically illustrates the areas affected by height limitation in accordance with federal regulations (Part 77) is prepared for each airport and in included in the ACLUP.

Napa County General Plan

The following policies of the *Napa County General Plan* (Napa County 2019) are applicable to the project.

- **Policy CIR-2:** The County shall review this Circulation Element periodically to ensure that it embraces transportation policy best practices and future technological innovations to the extent that those innovations support the County's goals related to mobility, efficiency, equity, and environmental quality.

- **Policy CIR-3**: Consistent with urban-centered growth policies in the Agricultural Preservation and Land Use lement, new residential and commercial development shall be concentrated within existing cities and towns and urbanized areas, particularly within Priority Development Areas (PDAs), where higher population densities can have access to utilize transit services and pedestrian and bicycle facilities.

- **Policy CIR-4:** Consistent with the County's and region's greenhouse gas emission reduction goals, the County will seek to increase the supply of affordable multi-unit housing concentrated in proximity to employment centers, services, and transportation hubs to decrease private drive-alone automobile trips.

- **Policy CIR-5**: Consistent with the County's and region's greenhouse gas emission reduction goals, the County will seek to increase the supply of affordable multi-unit housing concentrated in proximity to employment centers, services, and transportation hubs to decrease private drive-alone automobile trips.

- **Policy CIR-7:** All applicants for development projects or modifications thereto shall be required to evaluate the vehicle miles traveled (VMT) associated with their projects, in order to determine the projects' environmental impacts pursuant to the California Environmental Quality Act. Applicants shall specify feasible measures to reduce a proposed project's VMT and shall provide an estimate of the VMT reduction that would result from each measure. Upon the effective date of the pertinent State CEQA Guidelines, projects for which the specified VMT reduction measures would not reduce unmitigated VMT by 15 or more percent shall be considered to have a significant environmental impact.

- **Policy CIR-8:** In support of state and regional goals to reduce greenhouse gas emissions and encourage active transportation modes, the County will implement programs to reduce the number of VMT on local roadways and regional routes in the County. In addition to those Transportation Demand Management strategies to reduce single-occupant vehicle use listed in Policy CIR-23, the County will support measures that eliminate or reduce the length of vehicle trips. Such measures could include:

  - Increased efforts toward construction of affordable and workforce housing units, and additional incentives for construction of farm labor housing in the County;

  - Coordination between local agencies, including local chambers of commerce, the County, cities and town, to facilitate business partnerships and interconnectivity using shared transportation facilities, such as shuttles; Increased parking reductions from that currently allowed in the zoning ordinance,

for any two or more developments that offer opportunities for bicycle or pedestrian activity between them, such as shared parking lots and privately-maintained multi-use paths;

- Transportation system impact fee incentives for discretionary and private development projects for which the County and project applicant agree that the applicant will construct planned pedestrian and bicycle transportation facilities, including but not limited to bicycle lanes and multi-use paths.

- **Policy CIR-10**: Facilities supporting multi-modal access, including but not limited to designated areas for pick-up/drop-off activities, shall be integrated into the site layout of development projects, frontage improvements, and public projects, wherever such facilities are appropriate and can be physically accommodated. The Countywide Bicycle Plan and Countywide Pedestrian Plan shall be referenced in determining appropriate bicycle and/or pedestrian treatments at specific locations. Amenities serving public and private transportation providers and multi-modal connections between private properties are encouraged, particularly in circumstances where such amenities and connections could provide an alternative to single-occupant vehicle travel on public roadways and where the amenity or connection would reduce VMT.

- **Policy CIR-11**: All developments along fixed transit routes shall provide appropriate amenities designed to support transit use, such as bus turnouts or other access points located in coordination with NVTA, bus shelters, and comfortable routes for transit users to walk or bicycle between the development and the nearest bus stop. The County shall require installation of relevant amenities as a condition of approval of discretionary permits.

- **Policy CIR-15**: As electrification of the vehicle fleet is an important step toward achieving necessary greenhouse gas emission reductions, the County will require the provision of electric vehicle charging stations as part of housing and employment development projects.

- **Policy CIR-26:** As a major employer, the County of Napa shall demonstrate leadership in the implementation of programs encouraging the use of transit, walking, and bicycling by its employees, as well as the use of alternative fuels. Example programs may include:

  - Preferential carpool parking and other ridesharing incentives;

  - Flexible working hours or telecommuting where consistent with job duties and customer service needs;

  - A purchasing program that favors hybrid, electric, or other non-fossil fuel vehicles;

  - Assisting in the development of demonstration projects for alternative fuel technologies such as ethanol, hydrogen, and electricity;

  - Secure bicycle parking; and

  - Transit incentives.

- **Policy CIR-27:** The County shall encourage the use of alternative transportation by tourists, visitors and commuters, and will work with wineries, the local hospitality industry, public and private employers, and the cities and town to develop incentives that encourage the use of these options and the development of private transit services.

- **Policy CIR-34:** Bicycle and pedestrian facilities consistent with the Countywide Bicycle and Pedestrian Plans shall be added to County roadways when repaving or upgrading of the roadway occurs. Where existing right-of-way is insufficient or the facility is off-street, the County shall require dedication of adequate right-of-way for and, if appropriate, installation of the facilities as conditions of discretionary permit approval. In certain locations where it would not conflict with the rural character of the area, the

County may require low-level or pedestrian-scale lighting as part of the installation of the facility. The County shall encourage Caltrans to follow these same guidelines on state highways in Napa County.

3.12.3 Environmental Impacts and Mitigation Measures

ANALYSIS METHODOLOGY

The project and cumulative impact analysis study area for transportation and traffic is the entire unincorporated county.

PROPOSED CAP GHG REDUCTION MEASURES

Table 2.4 of the Draft EIR provides a list of proposed GHG reduction measures and adaptation measures that would be implemented by the CAP. However, only those measures that are relevant to transportation and traffic conditions within the County are described and evaluated below. None of the proposed measures indicate where specific improvements would be constructed, their size, or specific characteristics. As a program EIR, the Draft EIR does not, and cannot, speculate on the individual environmental impacts of specific future projects/improvements. However, implementation of all GHG reduction and adaptation measures were considered during preparation of the Draft EIR to the degree specific information about implementation is known. Consistent with the requirements of CEQA Guidelines Section 15168, this Draft EIR provides a program-level discussion of the potential general impacts of implementing these measures, rather than project-level or site-specific physical impacts of such actions. Only those measures that have the potential to affect transportation and traffic are listed below. All other measures in Table 2.4 would have no effect on transportation and traffic and are not discussed further.

- **Primary Measure LU-3: Repurpose or otherwise prevent burning of removed trees and other woody material from land use conversions of oak woodlands and coniferous forests.** This effort would result in repurposing timber and woody materials that are collected during oak woodlands and forest conversion. This could result in chipping, mastication, and transportation of materials to off-site locations, however, these activities could result in fewer emissions than if the materials were burned. This could result in short-term traffic impacts and is evaluated for consistency with policies related to circulation.

- **Supporting Measure TR-10: Work with Napa County's incorporated cities, NVTA, and neighboring regions to increase presence of park and ride facilities near residential centers**. This effort would result in new park and ride facilities which would reduce GHG emissions by decreasing the number of vehicles on the road, but also could result in short-term increases in construction-related traffic.

- **Supporting Measure TR-14: Develop and implement active transportation projects.** This measure would result in the development and construction of new pedestrian, trail, and bicycle improvements. This could result in short-term construction-related traffic impacts and is evaluated for consistency with policies related to circulation. This could result in short-term construction-related traffic impacts and is evaluated for consistency with policies related to circulation.

- **Supporting Measure TR-15: Require new development projects to evaluate and reduce VMT**. This measure would implement roadway improvements to reduce VMTs by calming traffic and improving the bicyclist and pedestrian infrastructure and would occur as part of resurfacing projects within existing paved areas. This could result in short-term construction-related traffic impacts and is evaluated for consistency with policies related to circulation.

THRESHOLDS OF SIGNIFICANCE

Based on Appendix G of the State CEQA Guidelines, a project would have a significant impact on traffic and transportation if it would:

- 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, LOS 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 due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment);
- result in inadequate emergency access; or
- conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

ISSUES NOT DISCUSSED FURTHER

As described in Chapter 2, Project Description, implementation of the CAP and the targets and strategies identified therein necessitate changes to Policy CON-65 e) of the County's General Plan (2008 GP). The proposed changes would require that all discretionary development projects demonstrate consistency with the CAP by substantiating compliance through the CAP Consistency Checklist. As described in Section 2.4.2, Project Description, proposed changes to the adopted policy of the General Plan requires the County to implement a General Plan Amendment (GPA) as part of the administrative approval process.

The CAP EIR evaluates the GPA as part of the series of actions associated with implementation of the CAP. The changes reflected in the GPA support and are consistent with implementation of the CAP, its GHG targets, and GHG reduction measures. No additional activities or measures, other than those described in the CAP, would occur as a result of implementation of the GPA. Therefore, the GPA is not evaluated separately from the actions proposed by the CAP, but rather its implementation is within the scope of the overall impact analysis of the CAP. As described in Section 2.4.3, Project Description, to provide a mechanism by which projects can demonstrate consistency with the CAP, a CAP Consistency Checklist is included as Appendix D of the CAP. The CAP Consistency Checklist is a tool by which the County will track and determine a project's consistency with the CAP and how it delivers its appropriate GHG reductions. No physical projects or improvements other than those described in the CAP are included or would be approved with approval of the checklist. As such, like the GPA, the CAP Consistency Checklist is not evaluated separately from the actions proposed by the CAP.

In summary, the physical changes and associated environmental impacts of all GHG reduction and adaptation measures have been evaluated throughout the CAP EIR. The GPA and CAP Consistency Checklist which are included as part of the project, are not addressed as a separate impact discussion below. These administrative mechanisms on their own would not result in any physical impacts that would require separate evaluation below and are not discussed further.

IMPACT ANALYSIS

Impact 3.12-1: Conflict with an Applicable Plan, Ordinance or Policy Establishing Measures of Effectiveness for the Performance of the Circulation System, Taking into Account All Modes of Transportation Including Mass Transit and Non-Motorized Travel and Relevant Components of the Circulation System, Including but Not Limited to Intersections, Streets, Highways and Freeways, Pedestrian and Bicycle Paths, and Mass Transit

GHG reduction and adaptation measures promote a reduction in VMT and are generally consistent with general plan circulation element policies that encourage construction of infrastructure that promotes the use of transportation modes other than the private automobile (public transit, bicycling, walking). While these projects may result in a temporary increase in construction traffic, the projects would remain consistent with the goals, policies, and ordinances relevant to transportation and circulation systems. This impact would be **less than significant.**

The CAP is a policy-level document that does not include any site-specific designs or proposals, nor does it grant any entitlements for development; however, implementation of the GHG reduction and adaptation measures supported by the CAP has the potential to directly or indirectly affect transportation systems and traffic patterns.

Transportation, Water, and Stormwater, and Grid Utility Infrastructure Measures

GHG reduction measures that address transportation would result in an increase in the number of park and ride facilities, new active transportation facilities (bike lanes, sidewalks), and reduction of vehicle miles traveled (VMT) mitigation associated with development projects, which would result in the construction of bike lanes and sidewalks (TR-10, TR-14, TR-15) and which could have temporary impacts related to traffic and circulation during construction.

Vegetation Management Measures

GHG reduction measure LU-3 that would result in vegetation management activities including repurposing timber and woody materials could result in transporting materials which would could have temporary impacts related to traffic and circulation because of slow moving vehicles.

Projects described above and resulting from implementation of the CAP that would have the potential to interfere with plans or policies adopted for the purpose of creating effective circulation systems, would be subject to a discretionary review process by the County before development. During the review, projects would be evaluated under CEQA for physical impacts and would be required to implement mitigation. Additionally, projects would be evaluated for compliance with applicable local, State, and federal regulations related to traffic planning and design, and would be coordinated with interested agencies including the Napa County Transportation and Planning Agency (NCTPA) or the Metropolitan Transportation Commission (MTC) which would ensure that projects would not interfere with circulation plans.

Impact Summary

All future projects would be subject to project-specific evaluation under CEQA to determine consistency with County General Plan policies, NCTPA and MTC policies and County ordinances at the time of application. Project-specific mitigation would be required to minimize or avoid impacts related to traffic congestion and transportation infrastructure to the extent feasible in compliance with CEQA Guidelines Section 15126.4. As described in Section 3.12.1 “Regulatory Setting,” above, state, and local regulations and policies (e.g., Napa County General Plan policies listed above) are in place to improve transportation systems within the County. All future development projects would be required to follow County development requirements, including compliance with local policies, and ordinances related to transportation systems and infrastructure and traffic management. Therefore, this impact would be **less than significant**.

Mitigation Measures

No mitigation is required.

Impact 3.12-2: Conflict with an Applicable Congestion Management Program, Including, But Not Limited to, LOS Standards and Travel Demand Measures, or Other Standards Established By the County Congestion Management Agency for Designated Roads or Highways

GHG reduction measures (TR-10, TR-14, TR-15) that address transportation would support congestion management efforts by requiring an increase in the number of park and ride facilities and increasing active transportation facilities (bike lanes, sidewalks). Although construction of the improvements may temporarily increase congestion on area roadways by increasing the amount of heavy-duty construction vehicles sharing the roadways with normal vehicle traffic or by reducing travel lanes temporarily, all future development projects would be required to follow County regulations, including preparation of and implementation of construction period traffic planning. Ultimately, these facilities would improve overall congestion with the County and would result in beneficial impacts. Significant construction-related transportation impacts would be avoided with implementation of standard traffic control measures. Therefore, this impact would be **less than significant**.

NCTPA is the congestion management agency for Napa County and works in partnership with Napa County, cities and town partnership with the County, Cities, and Towns in planning and funding transportation programs and projects within the County.

Transportation, Water, and Stormwater, and Grid Utility Infrastructure Measures

GHG reduction measures that address transportation would result in an increase in the number of park and ride facilities, new active transportation facilities (bike lanes, sidewalks), and reduction of vehicle miles traveled (VMT) mitigation associated with development projects, which would result in the construction of bike lanes and sidewalks (TR-10, TR-14, TR-15) and which could have temporary impacts related to traffic and circulation during construction.

Vegetation Management Measures

GHG reduction measure LU-3 that would result in vegetation management activities including repurposing timber and woody materials could result in transporting materials which would could have temporary impacts related to traffic and circulation because of slow moving vehicles.

Projects described above and resulting from implementation of the CAP that would have the potential to interfere with congestion management plans or policies would be subject to a discretionary review process by the County before development. During the review, projects would be evaluated under CEQA for physical impacts and would be required to implement mitigation. Additionally, projects would be evaluated for compliance with applicable local, State, and federal regulations related to traffic planning and design, and would be coordinated with interested agencies including the Napa County Transportation and Planning Agency (NCTPA) or the Metropolitan Transportation Commission (MTC) which would ensure that projects would not interfere with congestion management plans.

Impact Summary

Although specific locations of future projects are unknown, construction of these infrastructure improvements and renewable energy systems 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. However, all future development projects would be required to follow County regulations, including preparation of and implementation of construction period traffic planning. Significant construction-related transportation impacts would be avoided with implementation of standard traffic control measures. Ultimately, these

facilities would improve overall congestion with the County and would result in beneficial impacts. Therefore, this impact would be **less than significant**.

Mitigation Measures

No mitigation is required.

Impact 3.12-3: Substantially Increase Hazards Due to a Design Feature (e.g., Sharp Curves or Dangerous Intersections) or Incompatible Uses (e.g., Farm Equipment)

Future projects that would occur as a result of CAP implementation would largely be constructed in developed areas, within or on existing buildings (e.g., rooftops, wastewater treatment plants), or along existing roadways and would not change the existing configuration of the roadways. Other measures that encourage a shift in transportation modes and reduction in travel demand would result in minor changes to the existing streetscape. 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. This impact would be **less than significant**.

The CAP is a policy-level document that does not include any site-specific designs or proposals, nor does it grant any entitlements for development; however, implementation of the GHG reduction measures supported by the CAP has the potential to directly or indirectly affect transportation systems and traffic patterns.

Transportation, Water, and Stormwater, and Grid Utility Infrastructure Measures

GHG reduction and adaptation measures (TR-10, TR-14, TR-15) would encourage a shift in transportation modes and reduction in travel demand. These GHG reduction and adaptation measures promote minor changes to the existing streetscape, such as adding transit, park and ride, pedestrian, and bicycle facilities to promote increased transit accessibility. In general, these roadways and transit improvements would decrease vehicle, bicyclists, and pedestrian conflicts.

Impact Summary

Although specific locations of future projects are unknown, construction of these infrastructure improvements and renewable energy systems would be required to undergo the County's discretionary review process before development. Consistency with established General Plan policies, federal, State, and local roadway design regulations would be required. Compliance with these regulations and design guidelines, would ensure that roadways and transit improvements promoted by the CAP would not substantially increase hazards due to design features or incompatible uses. This impact would be **less than significant**.

Mitigation Measures

No mitigation is required.

Impact 3.12-4: Result In Inadequate Emergency Access

Implementation of some of the GHG reduction and adaptation measures may temporarily disrupt traffic flows on area roadways increasing the amount of heavy-duty construction vehicles sharing the roadways with normal vehicle traffic, All future development projects would be required to follow County development and construction standards, including preparation of and implementation of construction period traffic control plan that would include provisions for emergency vehicle access. Therefore, this impact would be **less-than-significant**.

As described above under Impacts 3.12-1, 3.12-2, and 3.12-3, development of new or modification of existing infrastructure resulting from implementation of 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. However, all future development projects would be required to follow County development and construction standards, including preparation of and implementation of construction period traffic control plan that would reduce significant construction-related transportation impacts. Therefore, this impact would be **less than significant**.

Mitigation Measures

No mitigation is required.

Impact 3.12-5: Conflict With Adopted Policies, Plans, or Programs Regarding Public Transit, Bicycle, or Pedestrian Facilities, or Otherwise Decrease the Performance or Safety of Such Facilities

Implementation of GHG reduction and adaptation measures may temporarily disrupt traffic flows on area roadways by increasing the amount of heavy-duty construction vehicles sharing the roadways with normal vehicle traffic, All future development projects would be required to follow County development and construction standards, including preparation of and implementation of construction period traffic control plan that would reduce significant construction-related transportation impacts. Therefore, this impact would be **less than significant**.

As described under Impacts 3.12-1, 3.12-2, and 3.12-3 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. However, all future development projects would be required to follow County development and construction standards, including preparation of and implementation of construction period traffic control plan that would reduce significant construction-related transportation impacts. Therefore, this impact is considered **less-than-significant**.

Mitigation Measures

No mitigation is required.

3.13 UTILITIES

This section describes the provision of wastewater and solid waste services within the County, and the potential effects that implementation of the CAP may have on these services. Impacts associated with water supply and stormwater capacity are described in Section 3.9, "Hydrology and Water Quality."

The County received one comment regarding utilities which was associated with wastewater disposal out of County and no comments regarding solid waste services during the Notice of Preparation (NOP) scoping process. The wastewater comment is addressed in Section 3.7, "Greenhouse Gas Emissions," of this Draft EIR. A copy of the NOP and comment letters received in response to the NOP are included in Appendix A of this Draft EIR.

3.13.1 Environmental Setting

WATER TREATMENT, DISTRIBUTION, AND STORAGE FACILITIES

There are several wastewater service providers in Napa County serving various portions of the county including: the Napa Sanitation District (NSD), Lake Berryessa Resort Improvement District (LBRID), Napa Berryessa Resort Improvement District (NBRID), Napa River Reclamation District #2109 (NRRD), Spanish Flat Water District (SFWD), Circle Oaks County Water District (COCWD), and American Canyon Public Works Department.

The NSD serves 13 non-contiguous areas encompassing 12,448 acres and provides wastewater service to over 33,000 customers and serves the majority of the City of Napa and some southern portions of the county. The LBRID has a contiguous service area encompassing 2,030 acres and currently has between 150-160 connections. The NBRID service area consists of approximately 1,899 acres and includes the Steele Park Resort and provides service to 270 to 280 homes. The NRRD currently serves 138 connections, with the service area encompassing the western side of Edgerly Island near the San Pablo Bay and the area known as the Ingersoll tract, which includes 30 existing connections.

For a complete list of the County's sewer providers, service area, facilities, planned improvements, and capacity compared to existing demand, refer to the *Napa County General Plan Update Draft EIR* (2007: Table 4.13.4-1).

SOLID WASTE SERVICES

There are currently five solid waste providers and two joint powers agencies/authorities in Napa County. Solid waste providers include the Upper Valley Disposal Service (UVDS), Berryessa Garbage Service (BGS), Napa Recycling and Waste Services (NRWS), Napa County Recycling and Waste Services (NCRWS), and American Canyon Recycling and Disposal (ACRD). The joint power agencies/authorities in the county include the Upper Valley Waste Management Agency (UVWMA) and the Napa Vallejo Waste Management Authority (NVWMA). These joint power agencies do not provide solid waste collection or disposal services. The UVWMA was formed to provide the coordination of economic and regional waste management services to meet the requirements set forth in the California Integrated Waste Management Act. The UVWMA includes Yountville, St. Helena, Calistoga, and the northern unincorporated portions of the County. The NVWMA includes the cities of Napa, Vallejo, American Canyon and the southern portion of the unincorporated county. The NVWMA was formed to coordinate all solid waste and recycling services within its watershed. The NVWMA owns and operates the Devlin Road Recycling/Transfer Station and the Hazardous Waste Collection Facility and the American Canyon sanitary landfill and active transfer station. The Devlin Road Recycling and Transfer Facility receives an average of 560 tons of waste daily and has permitted capacity to handle up to 1,600 tons of solid waste per day.

The UVDS collects and disposes solid waste and recycling materials at the Clover Flat landfill, which is located, 4380 Silverado Trail, just south of Calistoga. The Clover Flat landfill is permitted to receive up to 600 tons of waste daily and has an ultimate permitted capacity of 5,100,000 cubic yards. This facility has a remaining capacity of 3,081,046 cubic yards and is permitted through 2021, which is the facility's anticipated closing date. BGS uses the Potrero Hills landfill which receives up to 4,330 tons of waste daily and had 13,800,000 cubic yards of remaining capacity as of 2001. The NRWS, NRWCS, and ACRD transport waste to Devlin Road Recycling and Transfer Facility, which is ultimately disposed of at the Keller Canyon landfill in Contra Costa County, which is permitted to receive 3,500 tons of waste per day. As of November 2004, the Keller Canyon Landfill had 64.8 million cubic yards of remaining capacity and has enough permitted capacity to receive solid waste though 2030, which is its anticipated closure date (CalRecycle 2019).

3.13.2 Regulatory Setting

FEDERAL

Clean Water Act

The Clean Water Act (CWA) is the primary federal statute governing the protection of water quality and was established to provide a comprehensive program to protect the nation's surface waters. The U.S. Environmental Protection Agency (EPA) is the federal agency with primary authority for implementing regulations adopted pursuant to the CWA. The basis of the CWA consists of the Federal Water Pollution Prevention and Control Act (Water Pollution Act) passed in 1948. The Water Pollution Act was substantially reorganized and expanded in subsequent amendments passed in 1972 and in 1977, when "Clean Water Act" became its common name. The Water Pollution Act required the EPA to establish nationwide effluent standards on an industry-by-industry basis. The 1972 amendment established the National Pollutant Discharge Elimination System (NPDES) program. As a result of the reauthorization of the CWA in 1987, Sections 402(p) through 405 were added. One of the results of the new sections was the creation of a framework for regulating discharges under the NPDES permit program, which is discussed later in this section.

Under federal law, EPA has published water quality regulations under Volume 40 of the Code of Federal Regulations (CFR). Section 303 of the CWA requires states to adopt water quality standards for all surface waters of the United States. As defined by the CWA, water quality standards consist of two elements: (1) designated beneficial uses of the water body in question, and (2) criteria that protect the designated uses. Section 304(a) requires EPA to publish advisory water quality criteria that accurately reflect the latest scientific knowledge on the kind and extent of all effects on health and welfare that may be expected from the presence of pollutants in water. Where multiple uses exist, water quality standards must protect the most sensitive use. EPA has designated the State Water Resources Control Board (SWRCB) and its nine RWQCBs with the authority to identify beneficial uses and adopt applicable water quality objectives. EPA has delegated to the State of California the authority to implement and oversee most of the programs authorized or adopted for CWA compliance through the Porter-Cologne Water Quality Control Act of 1969 (Porter-Cologne Act), described below.

Section 303(d) List of Impaired Water Bodies

Section 303(d) of the CWA requires states to identify water bodies that do not meet water quality objectives and are not supporting their beneficial uses. Each state must submit an updated list, called the 303(d) list, to EPA periodically. In addition to identifying the water bodies that are not supporting beneficial uses, the list also identifies the pollutant or stressor causing impairment, and establishes a priority for developing a control plan to address the impairment. On June 28, 2007, EPA gave final approval to California's 2006 Section 303(d) List of Water Quality Limited Segments. The 303(d) list includes the Napa River for nutrients, pathogens, and sedimentation/siltation.

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (RCRA) was enacted in 1976 to address the huge volumes of municipal and industrial solid waste generated nationwide. After several amendments, the Act as it stands today governs the management of solid and hazardous waste and underground storage tanks (USTs). RCRA, enacted in 1976, is an amendment to the Solid Waste Disposal Act of 1965. RCRA has been amended several times, with the most substantial changes made by the Hazardous and Solid Waste Amendments of 1984. RCRA is a combination of the first solid waste statutes and all subsequent amendments. RCRA authorizes EPA to regulate waste management activities. RCRA authorizes states to develop and enforce their own waste management programs, in lieu of the federal program, if a state's waste management program is substantially equivalent to, consistent with, and no less stringent than the federal program.

STATE

California Integrated Waste Management Act and CalRecycle

The Integrated Waste Management Act of 1989 is the result of two pieces of legislation, AB 939 and SB 1322, which created the California Integrated Waste Management Board (which has been renamed CalRecycle). The Integrated Waste Management Act mandated a goal of 25 percent diversion of each city's and county's waste from disposal by 1995 and 50 percent diversion in 2000, with a process to ensure environmentally safe disposal of waste that could not be diverted. CalRecycle plays a central role of promoting achievement of the waste diversion as mandated by the Act (CalRecycle 2009).

CalRecycle is the State agency designated to oversee, manage, and track California's 92 million tons of waste generated each year. They provide grants and loans to help California cities, counties, businesses and organizations meet the State's waste reduction, reuse and recycling goals. CalRecycle promotes a sustainable environment where these resources are not wasted, but can be reused or recycled. In addition to many programs and incentives, the Board promotes the use of new technologies for the practice of diverting California's resources away from landfills (CalRecycle 2009). The Board is responsible for ensuring that State waste management programs are primarily carried out through local enforcement agencies. The State Water Resources Control Board (SWRQCB) and the CVRWQCB also regulate waste disposal (the latter regulated solid waste before CalRecycle).

As reported in the CalRecycle 2008 Annual Report, California has exceeded the goals mandated by the Integrated Waste Management Act of 1989 by diverting 58 percent of its waste stream. This accomplishment is in part because of successful partnership between State government, local government, and the solid waste industry in California.

California Integrated Waste Management Board Model Ordinance

Subsequent to the Integrated Waste Management Act, additional legislation was passed to assist local jurisdictions in accomplishing the goals of AB 939. The California Solid Waste Re-use and Recycling Access Act of 1991 (Sections 42900-42911 of the Public Resources Code) directs the California Integrated Waste Management Board to draft a "model ordinance" (which Sacramento County has adopted) relating to adequate areas for collecting and loading recyclable materials in development projects.

The model ordinance is used by the County as the basis for imposing recycling conditions on new development projects and on existing projects that add 30 percent or more to their existing floor area. The model ordinance requires that any new development project, for which an application is submitted on or after September 1, 1994, include "adequate, accessible, and convenient areas for collecting and loading recyclable materials." For subdivisions of single-family detached homes, recycling areas are required to serve only the needs of the home within that subdivision.

LOCAL

Napa County Sanitation District

NSD is located in the Napa Valley and provides wastewater collection, treatment and disposal services to the residents and businesses in the City of Napa and surrounding unincorporated areas of Napa County. NSD has been serving the public since it was organized under the California Health and Safety Code in November 1945. As a Special District, NSD is an independent local agency governed by three elected officials from the City and County, as well as two public appointees. There are over 33,000 connections within NSD's Sphere of Influence of approximately 23 square miles of service area.

Napa County Code

Title 13 "Water, Sewers and Public Services" of the Napa County Code regulates individual, private and public sewage systems within the county. Title 13 includes connection requirements, permits and applicable fees, system location, design and operation requirements to ensure public safety and lessen environmental related impacts. The code specifically includes required site evaluations on soil conditions, percolation tests, depth to groundwater (sewage disposal areas must have a three-foot separation from the seasonal high groundwater levels, and distances from wells, creeks, slopes and reserve areas. In addition, the code includes required details regarding operation and maintenance of sewage facilities.

Napa County General Plan

The following policies of the *Napa County General Plan* (Napa County 2008) are applicable to the project.

- **Policy CON-11:** The County shall maintain and improve fisheries habitat through a variety of appropriate measures, including the following as well as best management practices developed over time (also see Water Resource Policies, below):

  a) Consider the feasibility of using reclaimed wastewater as a means of maintaining adequate water flow to support fish life and reduce pollution of the Napa River (text of policy abbreviated).

- **Policy CON-31**: The County shall maintain and improve marshland habitat in the southern part of the county through a variety of appropriate measures, including:

  a) Utilize reclaimed wastewater for salinity control and management of marshlands, meadows, and salt ponds (text of policy abbreviated).

- **Policy CON-32**: The County shall maintain and improve slough and tidal mudflats habitat with appropriate measures, including the following:

  b) Utilize reclaimed wastewater for salinity control of mudflats and sloughs where needed (text of policy abbreviated).

- **Policy CON-62**: As stated in Policy AG/LU-74, the County supports the extension of recycled water to the Coombsville area to reduce reliance on groundwater in the MST groundwater basin and exploration of other alternatives. Also, the County shall identify and support ways to utilize recycled water for irrigation and non-potable uses to offset dependency on groundwater and surface waters and ensure adequate wastewater treatment capacity through the following measures:

  a) Require (as part of continued implementation of County Code Title 13 Division 2 provisions associated with sewer systems) verification of adequate wastewater service for all development projects prior to their approvals. This requirement includes coordination with wastewater service purveyors to verify adequate capacity and infrastructure either exists or will be available prior to operation of the development project.

b) Use wastewater treatment and reuse facilities where feasible to reclaim, reuse, and deliver treated wastewater for irrigation and possible potable use depending on wastewater treatment standards.

c) Require proposals for non-residential construction in the Airport Industrial Area and lower Milliken-Sarco-Tulocay Creeks Area to incorporate dual plumbing to allow for the use of non-potable/recycled water when such water becomes available.

d) Encourage the use of non-potable/recycled water wherever recycled water is available and require the use of recycled water for golf courses where feasible.

- **Policy CON-74:** The County shall evaluate new technologies for energy generation and conservation and solid waste disposal as they become available, and shall pursue their implementation as appropriate in a manner consistent with the principle of adaptive management. This evaluation shall include review of promising technological advances which may be useful in decreasing County greenhouse gas (GHG) emissions, increase in renewable energy that is generated locally, and review of the County's success in meeting targets for GHG emission reductions. [Implemented by Action Item CON CPSP-4]

- **Policy CON-87:** The County shall promote solid waste source reduction, reuse, recycling, composting and environmentally-safe transformation of waste. The County shall seek to comply with the requirements of AB 939 with regard to meeting state-mandated targets for reductions in the amount of solid waste generated in Napa County.

- **Policy CON-90:** The County shall support efforts to provide solid waste resource recovery facilities and household hazardous waste collection facilities convenient to residences, businesses, and industries.

- **Policy CON-91:** Encourage the maximum protection of all environmental values at solid waste disposal sites by the adoption of standards of planning, design, construction, operation, and maintenance, including:

  a) Location away from residential areas.

  b) Screening from view.

  c) Good road access, not through residential areas.

  d) No inhabited areas downwind from the site because dust and odor problems can occur in even the most carefully conducted operations.

  e) Location to prevent flooding and pollution and contamination of surface and ground water.

  f) Haul distance standards.

3.13.3 Environmental Impacts and Mitigation Measures

ANALYSIS METHODOLOGY

Evaluation of potential impacts as to the provision of wastewater and solid waste services is based on a review of existing policies, documents and studies that address both services in the county. Information obtained from these sources was reviewed and summarized to describe existing conditions and to identify potential environmental effects, based on the standards of significance presented in this section. In determining the level of significance, the analysis assumes that implementation of the CAP and subsequent projects would comply with relevant federal, State, and local laws, ordinances, and regulations.

PROPOSED CAP GHG REDUCTION MEASURES

Table 2.4 of the Draft EIR, provides a list of proposed GHG reduction and adaptation measures that would be implemented with the CAP. However, only those measures that are relevant to the provision of wastewater and solid waste services and could potentially result in a significant impact are described and evaluated below. None of the proposed measures indicate where specific improvements would be constructed, their size, or specific characteristics. As a program EIR, the Draft EIR does not, and cannot, speculate on the individual environmental impacts of specific future projects/improvements. However, implementation of all GHG reduction and adaptation measures were considered during preparation of the Draft EIR to the degree specific information about implementation is known. Consistent with the requirements of CEQA Guidelines Section 15168, this Draft EIR provides a program-level discussion of the potential impacts of implementing these measures, rather than project-level or site-specific physical impacts of such actions. While many of the GHG reduction and adaptation measures would provide economic or efficiency benefits, only those measures that have the potential to have adverse effects related to hydrology, water quality, and water supply are listed below. All other measures in Table 2.4 would have no effect or beneficial effects related to wastewater and solid waste services and are not discussed further.

- **Primary Measure BE-7: Support Waste-to-Energy Programs at unincorporated landfills.** This measure will result in gas that is captured through existing landfill gas capture systems being reused for energy, rather than being flared. This measure could result in new infrastructure on-site or off-site to process landfill gas so that it can be used for energy generation or other end-uses such as CNG for fuel in vehicles. This measure has the potential to result in environmental impacts related to development of gas capture infrastructure resulting from construction, operation, and maintenance of infrastructure.

- **Primary Measure SW-1: Encourage expansion of composting program for both residential and commercial land uses**. This measure would result in the expansion of composting programs that would reduce GHG emissions by decreasing methane in landfills. This measure has the potential to result in environmental impacts related to construction, operation, and maintenance of infrastructure from the expansion of existing or new landfill space to accommodate the expanded composting program.

- **Primary Measure SW-2: Meet an 80 percent Waste Diversion Goal by 2020 and a 90 percent Waste Diversion Goal by 2030**. This measure could result in new/expanded waste processing and diversion facilities throughout the county and has the potential to result in environmental impacts from construction, operation, and maintenance of infrastructure.

- **Adaptation Measure Flood-7: Improve capacity of storm water infrastructure.** This measure would result in improved storm water infrastructure and improved resilience for high intensity rain events and could result in environmental impacts from construction activities and ground disturbance.

THRESHOLDS OF SIGNIFICANCE

Based on Appendix G of the State CEQA Guidelines and Appendix C of Napa County's Local Procedures for Implementing CEQA, impacts related to wastewater processing and solid waste diversion are considered significant if implementation of the project would do any of the following:

- project exceeds wastewater treatment requirement of the applicable Regional Water Quality Control Board;

- require or result in the construction of new water or wastewater treatment facilities or expansion or existing facilities, the construction of which could cause significant environmental effects;

- A determination by the wastewater treatment provider, which serves or may serve the project, that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments;

- production of quantities of solid waste that would exceed the capacity of the landfill(s) that will serve the project's solid waste disposal needs; or
- non-compliance with federal, state, and local statutes and regulations related to solid waste.

ISSUES NOT DISCUSSED FURTHER

As described in Chapter 2, Project Description, implementation of the CAP and the targets and strategies identified therein necessitate changes to Policy CON-65 e) of the County's General Plan (2008 GP). The proposed changes would require that all discretionary development projects demonstrate consistency with the CAP by substantiating compliance through the CAP Consistency Checklist. As described in Section 2.4.2, Project Description, proposed changes to the adopted policy of the General Plan requires the County to implement a General Plan Amendment (GPA) as part of the administrative approval process.

The CAP EIR evaluates the GPA as part of the series of actions associated with implementation of the CAP. The changes reflected in the GPA support and are consistent with implementation of the CAP, its GHG targets, and GHG reduction measures. No additional activities or measures, other than those described in the CAP, would occur as a result of implementation of the GPA. Therefore, the GPA is not evaluated separately from the actions proposed by the CAP, but rather its implementation is within the scope of the overall impact analysis of the CAP. As described in Section 2.4.3, Project Description, to provide a mechanism by which projects can demonstrate consistency with the CAP, a CAP Consistency Checklist is included as Appendix D of the CAP. The CAP Consistency Checklist is a tool by which the County will track and determine a project's consistency with the CAP and how it delivers its appropriate GHG reductions. No physical projects or improvements other than those described in the CAP are included or would be approved with approval of the checklist. As such, like the GPA, the CAP Consistency Checklist is not evaluated separately from the actions proposed by the CAP.

In summary, the physical changes and associated environmental impacts of all GHG reduction and adaptation measures have been evaluated throughout the CAP EIR. The GPA and CAP Consistency Checklist which are included as part of the project, are not addressed as a separate impact discussion below. These administrative mechanisms on their own would not result in any physical impacts that would require separate evaluation below and are not discussed further.

As discussed above, there are no hazardous materials sites listed on the Cortese List that is compiled pursuant to Government Code Section 65962.5 within the County (Cal/EPA 2018). Therefore, this issue is not evaluated further.

IMPACT ANALYSIS

Impact 3.13-1: Result in the Expansion of Wastewater Infrastructure, the Construction of Which Could Result In Environmental Impacts

Implementation of adaptation measure Flood-7 that would be implemented with the CAP has the potential to result in new or expanded wastewater infrastructure to improve the County's ability to respond to effects related to climate change (i.e., storm surge, flooding, and inundation) which could result in environmental impacts from construction. However, future projects would be required to evaluate project-specific impacts under CEQA at the time of application and project-specific mitigation would be required to minimize or eliminate impacts resulting from construction activities (i.e., biological resources, cultural resources, noise, air quality, etc.). In addition, compliance with local general plan policies and existing regulations, would ensure that impacts would be mitigated. Therefore, this impact would be **less than significant**.

As described above, wastewater is processed throughout the county by a number of individual service providers including service providers serving various portions of the county including: the NSD, LBRID, NBRID, NRRD, SFWD, COCWD, and American Canyon Public Works Department. The CAP does not propose specific projects or include locations where improvements may be needed, but measures described below may result in the need for new or upgraded wastewater infrastructure to improve the resiliency of existing infrastructure to respond to changing climate conditions.

Wastewater and Stormwater and Grid Utility Infrastructure Improvement Measures

Adaptation measure Flood-7 proposes that the County would evaluate existing wastewater and stormwater infrastructure for vulnerabilities related to climate change impacts (i.e., storm surge, flooding, inundation and capacity). If infrastructure is determined to be vulnerable or incorrectly sized, it would be upgraded or relocated to minimize vulnerabilities. These adaptation measures have the potential to result in environmental impacts related to expanding or relocating existing infrastructure, or installing new infrastructure. However, specific locations are unknown and impacts are speculative in this programmatic evaluation. This EIR assumes that the construction of new or expansion of existing wastewater infrastructure would require vegetation removal, ground disturbance, and use of heavy equipment resulting from construction activities. These ground disturbing activities could disturb existing biological habitat or cultural resources, and may result in the use of mechanical equipment that could produce air pollutants, greenhouse gas emissions, and result in noise. These activities could also increase erosion and allow pollution conveyed in stormwater runoff that would violate water quality standards or degrade water quality. Impacts to specific resources areas are evaluated within the resource areas of this Draft EIR.

Impact Summary

Future improvements to wastewater infrastructure would be evaluated by the County as discretionary projects and would be required to evaluate project-specific impacts under CEQA at the time of application. Projects would be evaluated under each applicable CEQA resource issue area and project-specific mitigation would be required to minimize or avoid impacts air quality, biological resources, cultural resources, greenhouse gas emissions, hydrology, and any other relevant issue area in compliance with CEQA Guidelines Section 15126.4. Additionally, the potential for impacts would be minimized through implementation of the County's adopted 2008 General Plan policies described above and in each relevant issue area of this EIR, as well as the application of the myriad of existing County regulations which would apply to individual projects. Typically, environmental impacts associated with ground disturbing activities can be mitigated through compliance with existing regulations including County development requirements, ordinances, and permitting procedures in addition to compliance with federal, state, and local regulations and policies that are described throughout this EIR, and are in place to protect existing environmental resources in the County. All infrastructure projects would be required to obtain a grading permit and to prepare and implement a stormwater management plan, which would contain construction and post-construction best management practices (BMPs), and low impact development (LIDs) strategies to control for erosion and flood control. Furthermore, implementation of the 2008 General Plan policies would further reduce impacts by implementing BMPs in a variety of issue areas that could be adversely affected from ground-disturbing construction activities. Therefore, compliance with existing federal, state, and local regulations that protect environmental resources would reduce potential impacts to a level below significance. Therefore, this impact would be **less than significant**.

Mitigation Measures

No mitigation is required.

Impact 3.13-2: Result in Expansion of Solid Waste Facilities, the Construction of Which Could Result in Environmental Impacts

Implementation of GHG reduction measures BE-7, SW-1, and SW-2 that would be implemented with CAP adoption have the potential to result in new or expanded solid waste and composting facilities to increase the County's ability to process increased compost, divert additional waste, and capture methane gas for fuel conversion. The new or expanded facilities have the potential to result in environmental impacts from construction, operation, and maintenance. However, future projects would be required to evaluate project-specific impacts under CEQA at the time of application and project-specific mitigation would be required to minimize or eliminate impacts resulting from construction activities (i.e., biological resources, cultural resources, noise, air quality, etc.). In addition, compliance with local general plan policies and existing regulations, would ensure that impacts would be mitigated. Therefore, this impact would be **less than significant.**

As described above, there are five solid waste providers and two joint powers agencies/authorities in Napa County. Solid waste providers include the UVDS, BGS, NRWS, NCRWS, and ACRD. The joint power agencies/authorities in the county include the UVWMA and the NVWMA. The CAP does not propose specific projects or include locations where improvements may be needed, but measures described below may result in the need for new, expanded, or retrofitted facilities to provide expanded solid waste and compost service needs, and to capture methane gas for fuel conversion.

Waste Diversion, Compost Expansion, and Methane Capture Measures

GHG reduction measures BE-7, SW-1, and SW-2 would result in increased waste diversion, compost program expansion, and retrofits for methane capture on landfills have the potential to result in environmental impacts related to the construction, operation, and maintenance of new or expanded facilities. These measures have the potential to result in environmental impacts related to expanding or relocating existing infrastructure, or installing new infrastructure. However, specific locations are unknown and impacts are speculative in this programmatic evaluation. This EIR assumes that the construction of new or expansion of existing waste diversion and compost facilities may require vegetation removal, ground disturbance, and use of heavy equipment resulting from construction activities. These ground disturbing activities could disturb existing biological habitat or cultural resources, and may result in the use of mechanical equipment that could produce air pollutants, greenhouse gas emissions, and result in noise. These activities could also increase erosion and allow pollution conveyed in stormwater runoff that would violate water quality standards or degrade water quality. Impacts to specific resources areas are evaluated within the resource areas of this Draft EIR.

Impact Summary

As described above, GHG reduction measures that would result in increased waste diversion, expansion of the composting program, and methane capture may result in the need for new, expanded, or retrofitted infrastructure which could result in environmental impacts from construction activities. However, future projects would be discretionary projects within the County's purview that would be required to be evaluated for project-specific impacts under CEQA at the time of application. Infrastructure expansion or development projects would be required to undergo the County's discretionary review process, and comply with County development requirements, ordinances, and permitting procedures in addition to compliance with federal, state, and local regulations and policies that are described throughout this EIR, and are in place to protect existing environmental resources in the County. All infrastructure projects would be required to obtain a grading permit and to prepare and implement a stormwater management plan, which would contain construction and post-construction BMPs, and LIDs strategies to control for erosion and flood control. Furthermore, implementation of the 2008 General Plan policies would further reduce impacts by implementing BMPs in a variety of issue areas that could be impacted from ground disturbing construction activities. Therefore, compliance with existing federal, state, and local regulations that protect environmental resources would reduce potential impacts to a level below significance. Therefore, this impact would be **less than significant**.

Mitigation Measures

No mitigation is required.

4 CUMULATIVE IMPACTS

4.1 CEQA REQUIREMENTS

Section 15130(a) of the State CEQA Guidelines requires a discussion of the cumulative impacts of a project when the project's incremental effect is cumulatively considerable. Cumulatively considerable, as defined in CEQA Guidelines Section 15065(a)(3), means that the "incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects." The State CEQA Guidelines Section 15355 defines a cumulative impact as two or more individual effects that, when considered together, are considerable or that compound or increase other environmental impacts. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.

4.2 GEOGRAPHIC SCOPE OF THE CUMULATIVE ANALYSIS AND RELATED PLANS AND PROJECTS

CEQA Guidelines Section 15130 identifies two basic methods for establishing the cumulative environment in which a project is considered: the use of a list of past, present, and probable future projects or the use of adopted projections from a general plan, other regional planning document, or a certified EIR for such a planning document. These other projects may be identified either through the provision of a list of cumulative projects, or via a summary of projections contained in an adopted General Plan or a certified EIR. This EIR uses a combination of the two methods, using projections contained in adopted General Plans and related planning documents, as well as known major reasonably foreseeable other projects.

4.2.1 Geographic Context

The geographic area that could be affected by implementation of the CAP varies depending on the type, scale, and location of future infrastructure improvements that may result from its implementation and is also dependent on the environmental resource being considered. When the effects of the project are considered in combination with those other past, present, and probable future projects to identify cumulative impacts, the other projects that are considered may also vary depending on the type of environmental effects being assessed.

4.2.2 List of Related Plans and Projects

The list of past, present, and probable future projects used for this cumulative analysis is restricted to those projects that have occurred or are planned to occur (i.e., pending applications at the time of the NOP release) within the County, or the use of adopted projections from a general plan, or other regional planning document or a certified EIR for such a planning document. This analysis uses a combination of list and planning document approach. Physical improvements resulting from implementation of the CAP have the potential to combine with the physical impacts of other past, present, or probable future projects in the County and could result in a cumulative impact based upon proximity and construction schedule. For the purposes of this discussion, the adopted plans under which build-out projects could result in a cumulative effect are described below in Table 4-1.

Significance criteria, unless otherwise specified, are the same for cumulative impacts as project impacts for each environmental topic area. When considered in relation to other reasonably foreseeable projects, cumulative impacts to some resources would be significant and more severe than those caused by the project alone.

Table 4-1 List of Related Plans in Napa County

Project/Owner Name	Location	Description	Project Status
Napa County General Plan	Entire unincorporated area of Napa County	Framework for planning development and land use in Napa County's unincorporated areas.	Adopted 2008
Napa County Airport Land Use Compatibility Plan	Covers airport jurisdictional areas of Calistoga Gliderport, Parrett Field, and Napa County Airport.	Provides policies and criteria which the Napa County Land Use Commission uses to evaluate land use plans and proposed development in the vicinity of public-use airports located in Napa County.	Adopted 1991; Revised 1999
Napa Valley Business Park Specific Plan and EIR	Located along SR 29 south of Napa city limits and approximately 2.75 miles north of the Solano County line and the City of Vallejo.	Provides land use guidance to approximately 2,945 acres including 162 recorded parcels to facilitate development of the designated Napa Valley Business Park.	Adopted 1986, as amended through 2013
Napa Pipe Specific Plan	The Napa Pipe site is located at 1025 Kaiser Road in unincorporated Napa County, about 3 miles south of downtown Napa, on the east side of the Napa River, and northwest of the intersection of State Routes 29 and 221.	A high-density residential neighborhood with open space, neighborhood-serving retail, restaurants and a hotel on the western portion of the site (about 63 acres), and a Costco on the eastern portion of the site. The property is 154-acres.	EIR and Land Use Adopted 2013
City of American Canyon General Plan	Covers the jurisdictional land use areas of the City of American Canyon, north of Vallejo, in the southern portion of Napa County.	Serves as the foundational document for development and land use within the city. Establishes a framework by which the physical, economic, and human resources of the City are managed and utilized over time.	Adopted 1994 as amended through 2018
City of Calistoga General Plan	Covers the jurisdictional land use areas of the City of Calistoga, in the northernmost portion of Napa County, which is framed by Howell and Mayacamas Mountain ridges.	Establishes the framework for development of the 2.5 square miles of the city.	Adopted 2003; Revised through 2015
City of Napa General Plan	Covers the jurisdictional land use areas within the City of Napa, located approximately four miles north of American Canyon and 20 miles north of Vallejo.	The General Plan formalizes a long-term vision for the physical evolution of Napa and outlines policies, standards, and programs to guide day-to-day decisions concerning Napa's development through the year 2020.	Adopted 1998; Amended 2015
City of St. Helena General Plan	Covers the jurisdictional land use areas within the City of St. Helena, at the heart of the upper Napa Valley region, and south of Calistoga.	Guides the development of the 3,594 acres of land within the Planning Area which includes the City limit, the Sphere of Influence, and three adjacent study areas.	Adopted 1975; Updated 1993; Draft 2040 General Plan released October 2018
Town of Yountville General Plan	Covers the 1.5 square miles within the Town's land use authority, and centered in the Napa Valley equidistant between Napa and St. Helena, along SR 29	Establishes community vision for land use and development within the Planning Area for the Town which includes the Sphere of Influence and a portion of the Domain Chandon property.	Adopted 1992; Updated 2001; Draft General Plan released October 2018

Source: Data compiled by Ascent Environmental in 2018

4.3 CUMULATIVE IMPACT ANALYSIS

For purposes of this EIR, the CAP would result in a significant cumulative effect if:

- the cumulative effects of related projects (past, current, and probable future projects) are not significant, and the incremental impact of implementing the CAP is substantial enough, when added to the cumulative effects of related projects, to result in a new cumulatively significant impact; or
- the cumulative effects of related projects (past, current, and probable future projects) are already significant, and implementation of the CAP makes a considerable contribution to the effect. The standards used herein to determine a considerable contribution are that either the impact must be substantial or must exceed an established threshold of significance.

The setting for this cumulative analysis is the same as that included for the County's General Plan EIR and includes existing, proposed, planned and approved projects as well as growth planned under general plans, community plans and specific plans in the cities contained within the County.

4.3.1 Aesthetics

CUMULATIVE SETTING

Napa County is situated within the California Coastal Range, and is largely comprised of rolling hills, forests and grasslands, and streams and creeks. It is generally picturesque, and retains a rural agricultural character, with urbanized development largely concentrated in the small cities scattered throughout the county. Much of the Napa Valley region is held in agriculture, with wine grapes being the dominant product. Many of the scenic views from the floor of the Napa Valley include distinctive buildings, some prominently feature stone masonry and historical design styles while others are intentionally created to reinforce the character of Napa's rural, agricultural landscape. As a result, the built landscape is an important component of the valley floor, yielding only to vineyards and other large agricultural lands, and woven into the visual fabric elsewhere. Stands of mature valley oak, and streams and their riparian surroundings – serve as natural landscape buffers between residences and agricultural uses in many locations. Therefore, there are numerous scenic resources, scenic corridors, viewsheds, and ridgelines throughout the county and from a variety of vantage points. Given the rural nature of most of the county, night time lighting is relatively low, and glare from structures is limited. The 2007 General Plan EIR does not identify any existing significant cumulative visual impacts.

CUMULATIVE IMPACTS EVALUATION

Implementation of the CAP would result in future projects such as new bicycle lanes and sidewalks, park and ride facilities, electric vehicle charging stations, expanded or relocated stormwater, water, and sewer infrastructure, new small-scale renewable energy infrastructure, and new large scale-renewable energy infrastructure including photovoltaic systems or wind turbines. As described throughout the Draft EIR, the CAP is a policy-level document that does not include any site-specific designs or proposals or grant any entitlements for development, and specific locations for future infrastructure improvements have not been proposed. Future projects would be small in scale, and would occur in developed and urbanized areas, or along existing right-of-way or utility easements. New infrastructure would not be substantially different than the type of development found in the existing condition. All future projects would be required to undergo the County's discretionary approval process which would require a project-level evaluation of individual impacts and would require additional CEQA analysis. Mitigation would be required to minimize impacts, which would ensure that future projects would not result in a considerable contribution such that a new significant cumulative impact related to scenic resources, scenic corridors, viewsheds, and ridgelines would occur. Therefore, cumulative impacts would be **less than significant.**

4.3.2 Air Quality

CUMULATIVE SETTING

The project is in Napa County, California, which is within the San Francisco Bay Area Air Basin (SFBAAB) and is managed by the Bay Area Air Quality Management District (BAAQMD). The SFBAAB also includes all of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, and Santa Clara Counties; and the western portion of Solano County and the southern portion of Sonoma County. The SFBAAB is designated as non-attainment status in the CAAQS and NAAQS for several types of air pollutants as described in Chapter 3.3 Air Quality. Therefore, there is an existing significant cumulative air quality impact which is identified in the 2007 General Plan EIR.

CUMULATIVE IMPACTS EVALUATION

Regarding a project' s cumulative impacts, past, present and future development projects in the BAAQMD region contribute to adverse air quality impacts on a cumulative basis. Air pollution is largely a cumulative impact, by its very nature. No single project is sufficient in its overall emissions, in isolation, to result in nonattainment of ambient air quality standards. A project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. The BAAQMD significance thresholds are intended to analyze whether a project's contribution to the cumulative impact is considerable. Therefore, if a project exceeds the identified significance thresholds, its emissions would also be considered cumulatively considerable, resulting in a significant adverse air quality impact to the region's existing air quality conditions and additional analysis to assess cumulative impacts is unnecessary (BAAQMD 2017). The CAP would result in the development of small-scale improvements such as installation of new EV charging stations. Projects developed as a result of implementation of GHG reduction measures would be required to undergo the County's discretionary review and project-specific CEQA evaluation, but it is unlikely that these types of activities would be of the size or intensity to exceed BAAQMD's thresholds. As described in Section 3.3.3, the proposed GHG reduction and adaptation measures would not result in the violation of any air quality standard, contribute substantially to an existing or projected air quality violation, or result in a cumulative air quality impact. the project would not result in a cumulatively considerable contribution to a significant cumulative impact. Cumulative impacts would be **less-than-significant**.

4.3.3 Biological Resources

CUMULATIVE SETTING

Napa County is located within the California Floristic Province, which is rich in endemic plant species. Comprising only 0.5 percent of land in California, the county has 1,102 native plant taxa, or 32 percent of the state's native flora (Thorne et al. 2004). Ninety-three special-status plant species occur, or are thought to occur, in the county. Most rare plant occurrences are concentrated in the central and northwestern portions of the county. Sixty-five special-status wildlife species are known to occur in the county or there is suitable habitat present for the species and the county is within their known or suspected range. The 2007 General Plan identifies the cumulative setting as the land use activities and development state-wide that are adversely affecting special-status plant and animal species beyond Napa County (e.g., potential impacts to special-status species associated with coniferous forest habitats, oak woodland habitats, grassland habitats, serpentine soil conditions and wetlands that occur in several areas of the state). It identifies existing significant cumulative impacts to loss of sensitive biotic communities and oak woodland anticipated by the year 2030 because of increased urban and vineyard conversion development.

CUMULATIVE IMPACTS EVALUATION

Project impacts would be cumulative in nature if in combination with effects of other projects, they would contribute to the local or regional loss of special-status species or their habitat. Most future projects that would result from implementation of the CAP would be small in nature and would occur within urbanized portions of the county. These project types would likely not contribute to the existing cumulative biological resources impacts. Therefore, the project would not result in a cumulatively considerable contribution to a significant cumulative impact. Cumulative impacts would be **less than significant**.

4.3.4 Cultural and Tribal Cultural Resources

CUMULATIVE SETTING

As described in Chapter 3.5 Cultural Resources, there are approximately 1,138 previously recorded archaeological sites and 1,635 architectural features in the county. Other historic architectural features (e.g., buildings and structures) are also present across the County and include 82 buildings or structures that are listed in the National Register of Historic Places (NRHP) and the California Register of Historical Resources (CRHR). In addition, there are 238 buildings or structures that are determined eligible for inclusion in the NRHP and/or the CRHR and it appears that additional historic architectural features would be eligible for inclusion in the NRHP and/or the CRHR if they were subjected to research to formally determine their historic significance. Eight locations where paleontological resources have been found are located in in Napa County, and include 52 specimens, which are primarily plants. The 2007 General Plan EIR identifies an existing significant cumulative impact to cultural, tribal, and paleontological resources because of the previous loss of resources, and subsequent potential for future losses due to General Plan buildout and other regional development.

CUMULATIVE IMPACTS EVALUATION

A significant impact would occur if in combination with other projects, the CAP would contribute to the loss of significant cultural, tribal, and paleontological resources. As described in Chapter 3.5, future projects that would result from the implementation of the CAP would generally be discrete, discretionary projects that would be required to comply with existing federal, State and local policies and ordinances related to the protection of cultural resources. Future projects that would result from the implementation of the GHG reduction measures would be required to undergo discretionary review by the County. The County is required to consult with appropriate Native American tribes for their knowledge of potential known resources and history of the areas affected by the project, in accordance with SB 18 and AB 52. Project-specific mitigation would minimize or eliminate impacts to tribal cultural resources. Therefore, the project would not result in a cumulatively considerable contribution to a significant cumulative impact. Cumulative impacts would be **less-than-significant**.

4.3.5 Energy

CUMULATIVE SETTING

As described in Chapter 3.6 Energy, energy is primarily used to heat and cool buildings, and by vehicles for travel and transportation. California relies on a regional power system comprised of a diverse mix of natural gas, renewable, hydroelectric, and nuclear generation resources. One-third of energy commodities consumed in California is natural gas. PG&E which is the primary electric utility in the county, was powered by 32.9 percent renewables, including biomass, geothermal, small hydroelectric, solar, and wind. MCE's estimated resource mix for 2018 was 41 percent wind, 22 percent conventional, 20 percent large hydroelectric, 11 percent solar, 2 percent small hydroelectric, 2 percent geothermal, and 2 percent biomass. On-road vehicles use about 90 percent of the petroleum consumed in California. Caltrans projected 81 million

gallons of gasoline and diesel would be consumed in Napa County in 2020, an increase of approximately 16 million gallons of fuel from 2010 levels. The 2007 General Plan EIR did not evaluate energy consumption. In general, regional energy suppliers expand resources and infrastructure to meet demand. No significant cumulative energy impacts are present.

CUMULATIVE IMPACTS EVALUATION

Impacts would be cumulative in nature if the project, in combination with cumulative development, would cause wasteful, inefficient, and unnecessary consumption of energy or require new or expanded facilities, the construction of which could result in significant environmental effects. While other cumulative development within the county could result in the consumption of energy resources, all development would be required to comply with current building code requirements including requirements for achieving appropriate energy efficiency standards (e.g., Title 24 standards or better), and would be required to comply with the 2008 General Plan policies related to energy. Further, the project would not result in any significant cumulative energy impacts because the project would decrease the region's reliance on fossil fuels and would reduce energy consumption in the county. Finally, many of the measures proposed in the CAP would apply new standards and requirements that would apply to all development projects to reduce GHG emissions related to community and County operations and overall energy demand. Therefore, with implementation of the project, cumulative development would become more energy efficient. This would be a benefit of the project. Overall, implementation of the project would not result in a considerable contribution such that a new significant energy impact would occur. Cumulative impacts would be **less than significant**.

4.3.6 Greenhouse Gas Emissions

CUMULATIVE SETTING

As described in Chapter 3.7 Greenhouse Gas Emissions, climate change is a global problem. GHGs are global pollutants, unlike criteria air pollutants and toxic air contaminants, which are pollutants of regional and local concern. The total GHG inventory for California in 2016 was 429 million metric tons of carbon dioxide equivalent ($MMTCO_2e$). The 2007 General Plan EIR identifies an existing significant cumulative climate change impact.

CUMULATIVE IMPACTS EVALUATION

The issue of global climate change is inherently a cumulative issue, as the GHG emissions of individual projects cannot be shown to have any material effect on global climate. Impacts would be cumulative in nature if they lead to a substantial increase in GHG emissions, when combined with other development allowed under the 2008 General Plan and subsequent adopted plans and projects described above in Table 4-2. The goal of the CAP is to reduce GHG emissions in the county consistent with state legislation. Emission forecasts in the CAP are based on growth projections in the adopted 2008 General Plan.

The discussions of GHG emissions generated by implementing the CAP and subsequent future projects, is also a cumulative impact discussion. GHG emissions from one project cannot, on their own, result in changes in climatic conditions; therefore, the emissions from one project must be considered in the context of their contribution to cumulative global emissions, which is a significant cumulative impact. GHG emissions resulting from the project would result in a net future reduction in GHG emissions compared with the existing condition and inherently consistent with the goals of the CAP which is a greenhouse gas reduction plan. Therefore, the project would not result in a considerable contribution to a significant cumulative GHG impact and would not conflict with *Napa County General Plan* Policy CON-65, which aims to reduce GHG emissions in the county. In fact, the project would facilitate the implementation of Policy CON-65. The project would not have a considerable contribution to a significant cumulative GHG impact.

Implementation of the GHG reduction and adaptation measures would be consistent with the County's overall goal to reduce GHG emissions consistent with statewide targets and would support a variety of other state and local plans, policies, and regulations. The proposed CAP would reduce emissions by 2020 and 2030, consistent with legislatively-adopted State targets.

Overall, the CAP is intended to reduce GHG emissions generated within the County by using alternatively fueled vehicles, reducing VMT, using renewable energy, reducing waste generation, and increasing water conservation. In addition, energy efficiency measures to reduce electricity use and renewable energy generation would reduce energy demand and associated GHG emissions at power plants generating electricity in the region. The effects associated with the reduction of GHG emissions in the County would be beneficial. Thus, implementation of the GHG reduction and adaptation measures would not generate GHG emissions, either directly or indirectly, that would make a considerable contribution to a significant cumulative impact. Cumulative impacts would be **less than significant**.

4.3.7 Hazards

CUMULATIVE SETTING

As described in Chapter 3.8 Hazards and Hazardous Materials, Geotracker lists 44 active, open sites, including eight leaking underground storage tank (LUST) cases, 23 cleanup program sites, and 13 California Department of Toxic Substances Control (DTSC) cleanup sites within the county. EnviroStor lists 25 sites in Napa County for which DTSC has primary oversight, including nine active sites in the Voluntary Cleanup Program, eight sites that are under evaluation, one school cleanup site, five school sites under evaluation, one active State response site, and one military site that is under evaluation. There are 46 documented underground storage tanks in the county and approximately 500 facilities permitted to generate hazardous waste. Napa County Department of Environmental Health (NCDEH) conducts regulatory oversight of approximately 1,250 facilities within the county. Lastly, most of the county has been classified as having moderate to very-high wildfire risk, with the very high fire risk areas concentrated in the northwest, west, and central portions of the county. The 2007 General Plan EIR identifies that cumulative impacts related to hazards would be less than significant.

CUMULATIVE IMPACTS EVALUATION

Project impacts would be cumulative in nature if the project in combination with effects of other projects would contribute to a regional increase in hazards to the public or the environment within the county. In general, future projects resulting from implementation of the CAP would be discrete, and small-scale, but would require discretionary approval prior to development. The discretionary review process would require compliance with federal, State, and local regulations that would minimize the potential for hazardous materials impacts. The project would not result in a considerable contribution such that a new significant cumulative impact may occur. Therefore, cumulative impacts would be **less-than-significant**.

4.3.8 Hydrology and Water Quality

CUMULATIVE SETTING

As described in Chapter 3.9 Hydrology and Water Quality, the Napa River and its tributaries have been listed under Section 303(d) as water quality impaired for nutrients, pathogens, and sedimentation/siltation. The Putah Creek Watershed/Lake Berryessa is listed as water quality impaired for mercury. San Pablo Bay, into which the Napa River drains, has been listed as impaired for chlordane, DDT, diazinon, dieldrin, dioxins and furans, exotic species, mercury, nickel, PCBs, and selenium. The 2007 General Plan EIR identifies that cumulative impacts related to water quality, stormwater and erosion, flooding and hydromodification would be less than significant.

The primary source of water for the cities within the County is surface water, while the primary source of water for the unincorporated area is groundwater. There are four major groundwater basins in Napa County. The Napa Valley Subbasin, located within the Napa-Sonoma Valley Basin, is ranked as medium priority under the California Statewide Groundwater Elevation Monitoring, and a groundwater sustainability plan has been prepared for this subbasin. The 2007 General Plan EIR identifies an existing significant cumulative impact related to water supply including groundwater by 2020 and 2050 because groundwater is the primary water supply in the County and its dependability is based upon a relationship with recharge which can vary by individual basin and drought. All development associated with the General Plan buildout would require additional consumption.

CUMULATIVE IMPACTS EVALUATION

Impacts would be cumulative in nature if in combination with effects of other projects, they would contribute to a local or regional increase in water quality violations or stormwater runoff flows that would exceed the capacity of stormwater drainage facilities or contribute to significant regional drawdowns of ground water in the county. Future projects that would result from implementation of the CAP would likely require the use of heavy equipment, paving, ground disturbance, and other typical construction activities that could adversely affect water quality where projects are located near waterways or discharges runoff to stormwater drainage systems. Projects could also result in the development of infrastructure that could change the hydrology of a project site, resulting in the need for new flood management improvements. Additionally, in some cases, projects may require the use of groundwater resources during construction activities to suppress dust. All projects would be discretionary and would require compliance with existing federal, State, and local policies and regulations regarding water quality and pollution prevention, flood management and groundwater resource management. The County would have discretionary authority to condition future projects such that water quality, flood management, and groundwater resource management are regulated during the construction and operation of projects. Therefore, the project would not have a considerable contribution such that a new significant cumulative impact related to water quality or flooding, or exacerbate an existing significant impact related to groundwater resources. Cumulative impacts would be **less than significant**.

4.3.9 Land Use

CUMULATIVE SETTING

Non-urban land uses comprise most of the land within Napa County, and cover approximately 506,000 acres. Approximately 479,000 acres (95 percent) of the County is within the unincorporated area. The remaining area is distributed among the five incorporated areas in the County: City of American Canyon, City of Calistoga, City of Napa, City of St. Helena, and the Town of Yountville. The 2007 General Plan EIR identified less than significant cumulative land use impacts including division of an established community, or conflicts with plans or policies adopted for the purpose of minimizing an environmental impact.

CUMULATIVE IMPACTS EVALUATION

Project impacts would be cumulative in nature if in combination with effects of other projects, they would result in facilities or infrastructure that resulted in the physical division of a community or would result in conflicts with plans or policies adopted for the purpose of minimizing an environmental impact. Cumulative impacts could also result when the physical improvements resulting from implementation of the CAP interact with development associated with build-out of the County's General Plan and potentially increase those impacts resulting in a cumulatively considerable effect. The CAP would result in a variety of small-scale infrastructure improvements that would lead toward GHG emissions throughout the county. These projects would be located near or within urban areas and would be an element of the overall urban fabric such that they would not have the potential to result in physical division or policy conflicts. Therefore, the project would not result in a cumulatively considerable contribution such that a new significant cumulative land use impact would occur. Cumulative impacts would be **less than significant**.

4.3.10 Noise

CUMULATIVE SETTING

Noise can be generated by several sources, including mobile sources such as automobiles, trucks, and airplanes and stationary sources such as activity at construction sites, machinery, and commercial and industrial operations. As sound travels through the atmosphere from the source to the receiver, noise levels attenuate (i.e., decrease) depending on ground absorption characteristics, atmospheric conditions, and the presence of physical barriers.

Transportation noise sources within the county include roadways, railroads, and airports. State Route (SR) 12, SR 29, SR 121, SR 128, and Silverado Trail are major sources of traffic noise. Some County roads, primarily those that serve as collectors and arterials, are also significant sources of traffic noise. Existing noise levels at 100 feet from these roads range from 54 dB day-night noise level (L_{dn}) to 76 dB L_{dn}. Non-transportation noise sources within the county include farming, wineries, quarries, and construction. Primary sources of noise related to farming activity in Napa County are tractors, harvesters, pesticide/herbicide application equipment, crushers, and frost protection equipment (wind turbines). Typical noise levels from tractors, as measured at a distance of 50 feet, range from approximately 75 dB to 95 dB, with an average of approximately 84 dB (Napa County 2007).

The 2007 General Plan EIR identified a significant cumulative impact related to increased traffic noise levels associated with buildout conditions in 2030. This increase in traffic noise would also be significant on roadways within and adjacent to the cities of American Canyon, St. Helena, Calistoga, Napa and the Town of Yountville as well as Yolo, Solano and Sonoma counties. Noise impacts related to ambient noise, vibration, non-transportation sources, construction noise, and aircraft noise were identified as less than significant.

CUMULATIVE IMPACTS EVALUATION

Impacts would be cumulative in nature if operational noise associated with cumulative regional land use projects combined with projects related to the CAP would have the potential to expose noise sensitive land uses to excessive noise levels, groundborne vibration, or temporarily or permanently increase ambient noise levels to a level of significance. As described in Chapter 3.11 Noise, the CAP would result in implementation of a variety of small-scale project types, including primarily small infrastructure replacement, infrastructure improvement and energy efficiency projects. Construction activities associated with the implementation of future projects have the potential to result in short-term construction activities, which would use heavy equipment such as excavators, graders, scrapers, bulldozers, backhoes, pile drivers, jackhammers, and concrete mixing trucks, and could result in temporary vehicle trips that generate noise. However, in general, future projects would not result in substantial short-term noise impacts due to the scale and nature of the construction activities, which are generally small, localized, and would require minimal use of heavy-duty construction equipment. Operational sources of noise associated with most future projects resulting from the CAP are considered minor (e.g., not increasing roadway- or railway-generated levels) and would be expected to occur within already urbanized environments, occurring nearby, or within, similar existing source types of noise (e.g., parking lots) or nearby to major sources (e.g., roadways, commercial areas). Thus, in general, projects resulting from CAP implementation would not result in the exposure of sensitive receptors to excessive noise levels over the existing environment. Future projects resulting from CAP implementation would require discretionary review and projects would be conditioned to mitigate excessive noise related to construction activities or operations, thereby resulting in consistency with the County's Noise Ordinance.

In the case of vegetation management projects, GHG reduction and adaptation measures that would result in vegetation management including chipping, mastication, and hauling of biomass; replanting and restoration activities; and prescribed burns (AG-5, LU-3, Fire-5, Flood-3, Flood-4) could expose rural residential receptors to temporary and intermittent noise from mechanical equipment and haul trucks. Although these activities would generally be conducted in agricultural or open space areas, away from large numbers of sensitive receptors it is possible that rural residential receptors could be located nearby,

however, it is unlikely that projects located in rural areas would be subjected to noise from multiple sources. Future projects would be required to be evaluated for project-specific impacts under CEQA at the time of application and project-specific mitigation would be required to minimize or avoid noise impacts to the extent feasible in compliance with CEQA Guidelines Section 15126.4. Implementation of General Plan policies that reduce noise impacts consistent with federal and State requirements, as well as all other County noise regulations would minimize impacts. Therefore, the project would not result in a substantial contribution such that a new significant cumulative noise impact would occur. Therefore, cumulative impacts would be **less than significant**.

4.3.11 Traffic and Transportation

CUMULATIVE SETTING

Napa County's roadway system reflects its agricultural character with a limited number of roadway types, many of which are primarily rural in nature. Interstate freeway (I-80) crosses the southeastern corner of the County, but direct access to the interstate roadway is via roadways located in adjoining Solano County. Roadways outside of the urban areas are primarily two lanes wide.

The roadway system in Napa County is focused on a primary route, State Route (SR) 29, which enters the County from the south (from Solano County at American Canyon) and leaves to the north (towards Lake County). The portion of SR 29 north of SR 121 is designated as a freeway, and the portion of SR 29 between SR 37 and SR 12/121 is considered part of the Federal Highway Administration's National Highway System, for which the state and federal governments have agreed-upon standards and principles.

The SR 29 primary route is enhanced by east-west roads, such as SR 12 (Jamieson Canyon Road and Sonoma-Napa Highway), SR 221 (Soscol Avenue), Silverado Trail and SR 121. Some of the major roadways serving the incorporated cities and town are four lanes wide, north of the city of Napa most roads remain two lanes wide, although they may sometimes accommodate higher traffic volumes than is typically associated with rural areas (Napa County 2018).

Napa County cities are served by several different fixed-route transit systems, providing local bus transportation and connecting the cities within Napa and Solano Counties. There is also express bus service with connections to other areas in Sacramento and the San Francisco Bay Area. Napa County is also served by the San Francisco Bay Ferry from Vallejo to San Francisco and the Amtrak Capitol Corridor rail service from Suisun City to the Bay Area and Sacramento. The 2007 General Plan EIR identified a significant impact to local roadways and state highways related to General Plan buildout. All other traffic-related impacts (conflicts with plans, polices; design hazards; air traffic hazards; circulation) were identified as less than significant.

CUMULATIVE IMPACTS EVALUATION

Impacts would be cumulative if construction or operational impacts associated with cumulative regional land use projects would conflict with plans, or policies that enable circulation including all modes of travel; conflict with congestion management-related mechanisms; or would result in design hazards, inadequate emergency management, or change air-traffic such that hazards would result. Physical improvements resulting from CAP implementation have the potential to combine with the physical impacts of past, present, or probable future projects in the County and could result in a cumulative impact based upon proximity and construction schedule. In general, projects resulting from the implementation of the CAP would be small, discrete active transportation projects that would have limited operational traffic-related impacts because they are not substantial employment generators and would not result in the construction of unplanned housing. It is possible that bicycle and pedestrian facilities could be temporarily closed during construction activities, but this would be short-term condition and would not result in significant impacts. Additionally, these project types would result in improved operations and the overall functionality of the transportation network. These project

types would also be required to comply with County General Plan policies and other regulations during construction that would minimize the potential for creating design hazards or interfering with emergency management planning. None would result in air traffic hazards because of their size and scale. Therefore, the project would not result in a contribution such that a new significant cumulative traffic impact would occur. Cumulative impacts would be **less than significant**.

4.3.12 Utilities

CUMULATIVE SETTING

As described in Chapter 3.13 Utilities, there are several wastewater service providers in Napa County serving various portions of the county including: the Napa Sanitation District (NSD), Lake Berryessa Resort Improvement District (LBRID), Napa Berryessa Resort Improvement District (NBRID), Napa River Reclamation District #2109 (NRRD), Spanish Flat Water District (SFWD), Circle Oaks County Water District (COCWD), and American Canyon Public Works Department.

There are currently five solid waste providers and two joint powers agencies/authorities in Napa County. Solid waste providers include the Upper Valley Disposal Service (UVDS), Berryessa Garbage Service (BGS), Napa Recycling and Waste Services (NRWS), Napa County Recycling and Waste Services (NCRWS), and American Canyon Recycling and Disposal (ACRD). The 2007 General Plan EIR identified that less-than-significant cumulative impacts related to solid waste and wastewater services.

CUMULATIVE IMPACTS EVALUATION

Impacts would be cumulative in nature if cumulative regional land use projects combined with projects related to the CAP would have the potential to exceed capacity of existing wastewater or solid waste infrastructure. Implementation of the CAP would result in projects that would improve existing wastewater and solid waste infrastructure. All improvements would be discretionary and would be conditioned to mitigate environmental impacts. None of the subsequent projects would result in increased demand (i.e., new residential development) for new solid waste or wastewater infrastructure that would not be satisfied. Increased solid waste diversion efforts associated with the CAP would be satisfied by increased infrastructure. Therefore, the project would not result in a considerable contribution such that a new significant cumulative impact would occur. Cumulative impacts would be **less than significant**.

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5 OTHER CEQA SECTIONS

5.1 SIGNIFICANT UNAVOIDABLE IMPACTS

Section 21100(b)(2)(A) of the State CEQA Guidelines provides that an EIR shall include a detailed statement setting forth "in a separate section: any significant effect on the environment that cannot be avoided if the project is implemented."

Sections 3.1 through 3.14 of this Draft EIR describe the potential environmental impacts of the project and recommend various mitigation measures to reduce impacts. Chapter 4, "Cumulative Impacts," determines whether the incremental effects of this project are significant when viewed in connection with the effects of past projects, other current projects, and probable future projects. No significant and unavoidable impacts were identified in the Draft EIR.

5.2 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES

The State CEQA Guidelines (Section 15126) require a discussion of the significant irreversible environmental changes that would be involved in a project should it be implemented. The irreversible and irretrievable commitment of resources is the permanent loss of resources for future or alternative purposes. Irreversible and irretrievable resources are those that cannot be recovered or recycled or those that are consumed or reduced to unrecoverable forms.

The Draft EIR includes a comprehensive evaluation of energy use related to the project in Section 3.7, "Energy." The primary focus of the project is to reduce community and County operations GHG emissions to meet the County's GHG reduction targets for 2020 and 2030, and provide a mechanism for the County to meet the projected 2050 goal identified in the CAP. The measures encourage improvements to alternative transportation infrastructure, energy efficiency and water conservation, and waste processing, and some of the measures may indirectly result in the construction of some improvements which would require the use of fuel and building materials during construction; however, the result of the improvements would be a long-term reduction in energy consumption and a reduction in the use of nonrenewable energy sources. Continued operation and maintenance of some of the facilities may require the use of additional fuel and water consumption; however, such use would be insignificant compared to the overall reduction in use of these resources that would result from CAP implementation. Therefore, no significant irreversible environmental changes would occur.

5.3 GROWTH-INDUCING IMPACTS

5.3.1 CEQA Requirements

CEQA specifies that growth-inducing impacts of a project must be addressed in an EIR (CCR Section 21100[b][5]). Specifically, Section 15126.2(d) of the State CEQA Guidelines states that the EIR shall:

> Discuss 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. Included in this are projects which would remove obstacles to population growth (a major expansion of a wastewater treatment plant might, for example, allow for more construction in service areas). Increases in the population may tax existing community service facilities, requiring construction of

> new facilities that could cause significant environmental effects. Also, discuss the characteristics of some projects which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment.

Direct growth inducement would result if a project involved construction of new housing, which would facilitate new population to an area. Indirect growth inducement would result, for instance, if implementing a project resulted in any of the following:

- substantial new permanent employment opportunities (e.g., commercial, industrial, or governmental enterprises);
- substantial short-term employment opportunities (e.g., construction employment) that indirectly stimulates the need for additional housing and services to support the new temporary employment demand; and/or
- removal of an obstacle to additional growth and development, such as removing a constraint on a required public utility or service (e.g., construction of a major sewer line with excess capacity through an undeveloped area).

The State CEQA Guidelines do not distinguish between planned and unplanned growth for purposes of considering whether a project would foster additional growth. Therefore, for purposes of this EIR, to reach the conclusion that a project is growth inducing as defined by CEQA, the EIR must find that it would foster (i.e., promote, encourage, allow) additional growth in economic activity, population, or housing, regardless of whether the growth is already approved by and consistent with local plans. The conclusion does not determine that induced growth is beneficial or detrimental, consistent with Section 15126.2(d) of the State CEQA Guidelines.

If the analysis conducted for the EIR results in a determination that a project is growth-inducing, the next question is whether that growth may cause adverse effects on the environment. Environmental effects resulting from induced growth (i.e., growth-induced effects) fit the CEQA definition of "indirect" effects in Section 15358(a)(2) of the State CEQA Guidelines. These indirect or secondary effects of growth may result in significant environmental impacts. CEQA does not require that the EIR speculate unduly about the precise location and site-specific characteristics of significant, indirect effects caused by induced growth, but a good-faith effort is required to disclose what is feasible to assess. Potential secondary effects of growth could include consequences – such as conversion of open space to developed uses, increased demand on community and public services and infrastructure, increased traffic and noise, degradation of air and water quality, or degradation or loss of plant and wildlife habitat – that are the result of growth fostered by the project.

The decision to allow/approve projects that result from induced growth (e.g., new commercial areas, new housing) is the subject of separate discretionary processes by individual lead agency(ies) responsible for considering such projects, in this case, the Napa County Planning Commission or, on appeal, the Board of Supervisors. Projects resulting from induced growth would themselves be discretionary and subject to CEQA. Therefore, the following discussion is intended to disclose the potential for environmental effects that could occur more generally because of the project rather than the site-specific impacts of induced growth. Its purpose is to inform the County decision-making body that additional environmental effects may be a possibility if growth-inducing projects are approved. However, the decision of whether projects are approved, and the impacts associated with them still rests with the County decision-making body at such times as complete applications for development are submitted.

5.3.2 Growth-Inducing Impacts of the Project

The CAP is not by itself directly growth inducing because it does not increase densities or modify intensities of allowable land uses. Approval and implementation of the project may result in improvements to alternative modes of transportation, including bicycle and pedestrian infrastructure but would not increase access to any areas within the County such as constructing new roadways. Similarly, the project would not result in the expansion of a wastewater treatment plant or eliminate any other constraint to development. Therefore, implementation of the CAP, GHG reduction and adaptation measures would not remove any obstacles to growth which could result in growth inducement.

As described above, the CAP is a plan to reduce GHG emissions consistent with state legislation and does not directly result in the construction of any improvements. However, several of the GHG reduction measures that are included in the CAP may result in improvements related to the provision of energy. These measures would not expand the level of service within the county to users that are not currently on the grid, and as such would not be considered an expansion of the service.

Implementation of the project would likely result in some capital improvements on behalf of the County and may result in incentivization of energy efficiency and renewable energy improvements, expansion of alternatively fueled vehicles, water conservation improvements, and expansion of waste collection services. These actions would result in a small number of new jobs, specifically related to construction services, but is not expected to result in a substantial increase in the demand for additional housing or services. These jobs would likely be filled from the existing labor pool within the County, and are, therefore, not expected to be growth inducing.

The project would result in the adoption and implementation of strategies and measures that would need to be undertaken to reduce GHG emissions consistent with state legislative requirements. The project would not result in growth inducing impacts associated with removing obstacles to growth, such as the extension of a roadway, or expansion of water and sewer services. Similarly, the project would not result in the expansion of public services.

Therefore, the project would not result in direct growth inducement related to land use changes. Finally, although the project may result in a small increase in jobs related to the expansion of alternative transportation, energy, and waste infrastructure, it is not expected to be growth inducing because the locally available labor pool is anticipated to be able to fill any resultant positions.

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6 ALTERNATIVES

6.1 INTRODUCTION TO ALTERNATIVES

The California Code of Regulations (CCR) Section 15126.6(a) (State CEQA Guidelines) requires EIRs to 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. An EIR need not consider every conceivable alternative to a project. Rather, it must consider a range of potentially feasible alternatives that will avoid or substantially lessen the significant adverse impacts of a project, and foster informed decision making and public participation. An EIR is not required to consider alternatives that are infeasible. The lead agency is responsible for selecting a range of project alternatives for examination and must publicly disclose its reasoning for selecting those alternatives. There is no ironclad rule governing the nature or scope of the alternatives to be discussed other than the "rule of reason." This section of the State CEQA Guidelines also provides guidance regarding what the alternatives analysis should consider. Subsection (b) further states the purpose of the alternatives analysis is as follows:

> Because an EIR must identify ways to mitigate or avoid the significant effects that a project may have on the environment (Public Resources Code [PRC] Section 21002.1), the discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly.

The State CEQA Guidelines require that the EIR include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the project. If an alternative would cause one or more significant effects in addition to those that would be caused by the project as proposed, the significant effects of the alternative must be discussed, but in less detail than the significant effects of the project as proposed (CCR Section 15126.6[d]).

The State CEQA Guidelines further require that the "no project" alternative be considered (CCR Section 15126.6[e]). The purpose of describing and analyzing a no project alternative is to allow decision makers to compare the impacts of approving a project with the impacts of not approving the project. If the no project alternative is the environmentally superior alternative, CEQA requires that the EIR "…shall also identify an environmentally superior alternative among the other alternatives." (CCR Section 15126[e][2]).

In defining "feasibility" (e.g., "… feasibly attain most of the basic objectives of the project …"), CCR Section 15126.6(f) (1) states, in part:

> Among the factors that may be taken into account when addressing the feasibility of alternatives are 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). No one of these factors establishes a fixed limit on the scope of reasonable alternatives.

In determining what alternatives should be considered in the EIR, it is important to consider the objectives of the project, the project's significant effects, and unique project considerations. These factors are crucial to the development of alternatives that meet the criteria specified in Section 15126.6(a). Although, as noted above, EIRs must contain a discussion of "potentially feasible" alternatives, the ultimate determination as to whether an alternative is feasible or infeasible is made by the lead agency's decision-making body, here the Napa County Board of Supervisors. (See PRC Sections 21081.5, 21081[a] [3].)

6.2 CONSIDERATIONS FOR SELECTION OF ALTERNATIVES

6.2.1 Attainment of Project Objectives

The fundamental purpose of the CAP is to provide a comprehensive roadmap to address the challenges of climate change in unincorporated Napa County. Acting on climate change means both reducing GHG emissions from local sources in the unincorporated County and helping the community to adapt to climate change and improve its resilience over the long term.

The County has developed the following objectives for the project:

- implement the County's 2008 GP Action item CON CPSP-2 and satisfy the requirements of 2008 GP PEIR Mitigation Measure 4.8.7a;
- prepare a baseline GHG emissions inventory which updates the previous baseline inventory year of 2005 including community-wide sources of emissions in the unincorporated area of the county, and analyzes the potential growth of these emissions over time;
- identify GHG reduction strategies and measures that reduce GHG emissions from activities in the unincorporated county, along with climate adaptation measures that address the challenges of a changing climate and improve resilience in the county over the long term;
- reduce community-wide GHG emissions to meet the County's GHG reduction targets for 2020 and 2030, and provide a mechanism to make progress towards meeting the County's long-term 2050 goal; and
- provide a CAP Consistency Checklist that provides guidance for development to achieve consistency with the CAP and use CEQA streamlining tools for analysis of GHG emissions pursuant to the requirements of CEQA Guidelines Section 15183.5(b)(2).

6.2.2 Summary of Project Impacts

Sections 3.2 through 3.14 of this Draft EIR address the environmental impacts of implementation of the CAP. Potentially feasible alternatives were developed with consideration of avoiding or lessening the magnitude of larger-scale construction impacts associated with proposed GHG reduction measures. There were no significant, potentially significant, or significant and unavoidable environmental impacts identified in the Draft EIR.

6.3 ALTERNATIVES CONSIDERED BUT REJECTED FOR DETAILED ANALYSIS

Consistent with CEQA Guidelines Section 15126.6(c), a brief discussion of those alternatives considered but rejected as infeasible follows

6.3.1 No Growth/Moratorium Alternative

A moratorium is an emergency measure adopted without notice to the public or public hearings, designed to preserve the status quo. A moratorium suspends the right of property owners to submit development applications and obtain development approvals while the local legislative body considers, drafts, and adopts land use comprehensive plans and/or development regulations (or amendments thereto), to respond to new or changing circumstances not addressed in current laws.

Commenters on the NOP suggested that the County consider an alternative that would implement a moratorium on new wineries and vineyard expansions. Emergency moratoriums are allowed under government code Section 65858, "Interim ordinance as urgency measure," with four-fifths of the legislative body approving such a measure. Typically, moratoriums are short-term (18-24 months) and allow a planning body to address specific issues are that are being raised regarding a specific planning issue. In the case of this alternative, commenters suggest that the County should halt progress on implementation of the CAP until such time that it can conduct a study and define the trans-regional emissions generated by wine distribution and tourism. It is opined that study of these emissions would be appropriate in the context of local County GHG emission estimates and ultimate reductions to be achieved as part of the CAP.

The issue of trans-regional emissions is not new and has been appropriately considered by the County in the context of scoping the CAP. As part of that process, the County's consultant submitted a memo to the Governor's Office of Planning and Research (OPR) on October 1, 2019 that discussed the appropriateness of evaluating a worldwide setting in local climate planning efforts to account for global vehicle miles traveled (VMT) and transportation activities associated with land use decisions made by the County. In that memo, it was discussed that it would be inappropriate for local agencies to set, evaluate, and plan for emissions generated in a worldwide setting because it would be too remote and speculative to do so. The County engaged in discussions with OPR staff to discuss the contents of the memo and ultimately received confirmation of understanding from OPR. Ultimately, the reasons supporting why a trans-regional analysis is not appropriate include; 1) the County has local discretion to choose the methodology of its analysis as part of its administrative duties under CEQA, and 2) the CEQA Guidelines provide guidance that a lead agency should inventory and mitigate GHG emission "within a defined geographical area" which is typically the "city or unincorporated county over which they have land use authority."

Because this alternative would temporarily halt new wineries and tourism expansion and the State and the County are on track to meeting 2020 GHG reduction targets, it is likely that the County would remain on track to meet its 2020 GHG emissions target. However, without implementation of emissions reduction strategies and measures identified in the CAP that would apply to existing development, it is highly unlikely that County could continue to feasibly reduce GHG emissions beyond those reductions that would come from legislative requirements for existing development. A moratorium would only further delay the progress the county has made towards implementing a plan that sets a path towards meeting 2020 and 2030 State legislative requirements. This delay could jeopardize the ability of the County to meet these targets and could result in conflicts with State and local air quality plans and policies. Further, without implementation of a CAP, the County would be in direct conflict with Policy CON-65 (as proposed to be amended) that would require all discretionary projects to comply and be consistent with a countywide CAP. Finally, the County has adopted policies through its General Plan that provide for the orderly growth and planned development of unincorporated areas. To implement a development moratorium would conflict with existing adopted plans and policies that plan for growth. Further, limiting new development would also limit the economic funding sources that allow for funding of necessary County services.

Finally, growth controls such as those suggested by the commenters would be in direct conflict with several goals and policies of the General Plan that are seeking to balance the jobs/housing ratios and provide more affordable housing consistent with the County's Regional Housing Needs Assessment (RHNA) obligations. In consideration of this, the County has determined this alternative is infeasible and has rejected it from further evaluation in this Draft EIR.

6.3.2 Alternative Location

The County's CAP is a programmatic approach to reduce GHG emissions within the County's jurisdiction in accordance with State GHG emissions reduction targets. The CAP accomplishes this by adopting strategies and measures that reduce GHG emissions. These strategies and measures would apply to all land within the County's jurisdiction and would not be limited to one area or property. Therefore, an alternative site where the project could be implemented would not be feasible or appropriate because the County only has

jurisdiction over lands within its legal boundaries. As such, consideration of an alternative location has been eliminated from further analysis in this Draft EIR.

6.3.3 Other Variations/Combinations of GHG Reduction Measures

The CAP includes 24 primary GHG reduction measures, 25 supporting GHG reduction measures, and 40 adaptation measures which would result in total mass GHG emissions reductions of 290,570 $MTCO_2e$ by 2030 and 111,385 $MTCO_2e$ by 2050. The two sectors of GHG reductions where most significant impacts would result are the Energy Sector (measures associated with producing renewable energy and reducing building energy use) and the Transportation Sector (measures associated with reducing on-road vehicle use).

The County could consider varying degrees of implementation of each GHG reduction measure, to the degree implementation would be feasible to reach its ultimate 2030 target and make progress toward the 2050 goal. However, the CAP that is proposed and evaluated throughout this Draft EIR has recommended the full spectrum of feasible GHG reduction measures at the levels that reductions can be feasibly attained, estimated, and substantiated. This Draft EIR has programmatically evaluated the potential environmental impacts of implementation of the suite of reduction measures based on the best available information regarding the technical and economic feasibility of those measures. These measures would be implemented in an adaptive management format, where implementation of the measures would be monitored on a yearly basis and adjustments to the CAP would be made as needed to ensure that consistent and demonstrated progress toward achieving reduction targets would occur. Therefore, this Draft EIR appropriately evaluates the landscape of environmental impacts that could potentially occur with all reduction measures considered.

The purpose of an alternatives analysis is to identify alternatives that reduce or avoid the significant impacts of the project. As summarized above and evaluated throughout the Draft EIR, while none were identified as significant, environmental impacts were primarily associated with construction effects from implementation of many of the measures across all. Because construction-related impacts would occur across all sectors, an alternative that would reduce the construction-related impacts in one sector, would require implementation of additional projects in another sector such that the overall magnitude and type of construction-related impacts would not change substantially. Within the context of CEQA, this would not offer an alternative that would reduce the impacts of the project.

While commenters may suggest that certain GHG reduction measures be pursued, funded, or supported to a greater degree than others, as described above, the County has proposed a CAP that based on its assessment of local conditions, regulatory requirements, and feasibility, provides a full spectrum of feasible GHG reduction measures at levels that can be feasibly achieved and estimated based upon the information and technology available today. As described in CEQA Guidelines Section 15126.6(a),

> "An EIR need not consider every conceivable alternative to a project. Rather it must consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation. An EIR is not required to consider alternatives which are infeasible. The lead agency is responsible for selecting a range of project alternatives for examination and must publicly disclose its reasoning for selecting those alternatives."

The Draft EIR provides a reasonable range of alternatives for consideration by decisionmakers. The County has considered and evaluated the categories of alternatives that reduce or avoid the significant impacts of the project. As such, evaluation of additional combinations or levels of implementation of the GHG reduction measures is not required nor would it be meaningful to the analysis.

6.4 ALTERNATIVES SELECTED FOR DETAILED ANALYSIS

As indicated by the objectives listed above, the project is designed to achieve consistency with State law regarding GHG emissions reduction targets. The CAP is intended to reduce GHGs by improving multimodal transportation and ridesharing options, promoting the use of alternative fuels, conserving woodlands and forestlands, increasing building energy efficiency, increasing renewable energy use and access, increasing waste diversion, increasing water conservation, reducing the use of high-GWP gases, and reducing emissions from agriculture.

A total of two representative alternatives, including the CEQA required No Project Alternative, are evaluated in this Draft EIR. For each alternative, a brief discussion of its principal characteristics is followed by an analysis of anticipated environmental impacts. The emphasis of the analysis is on the alternative's relative adverse effects compared to the project and a determination of whether the alternative would reduce, eliminate, or create new or greater significant impacts. The analysis also considers each alternative's potential achievement of project objectives. The alternatives are described below.

6.4.1 No Project Alternative

Section 15126.6(e) of the CEQA Guidelines requires that an EIR evaluate and analyze the environmental impacts of the No Project Alternative, to examine and compare the potential environmental consequences associated with not approving the CAP.

This alternative assumes that development would occur under the existing 2008 Napa County General Plan Updated (2008 GP) as adopted, but without a qualified CAP as a mechanism to mitigate the GHG emissions that are resultant from the build-out of the 2008 General Plan.

DESCRIPTION AND SETTING

The No Project Alternative assumes that the CAP would not be adopted or implemented. As a result, the County would not adopt strategies, measures, and supporting efforts to reduce GHG emissions in accordance with State-legislated reduction targets. Existing conditions for each environmental issue as described in Chapter 3.0 of this Draft EIR would be unchanged.

Under the No Project Alternative, most of the GHG reduction measures set forth by this CAP would not be implemented to reduce GHG emissions from existing development or new development assumed under buildout of the 2008 General Plan. While new development in the County would continue to be reviewed for project consistency with screening levels established by the guidance provided by California Air Pollution Control Officers Association (CAPCOA) CEQA and Climate Change White Paper (2008), GHG reductions associated with the specific GHG reduction measures at the levels anticipated under the CAP would likely not be implemented without the CAP requiring them. While individual projects would need to demonstrate compliance with applicable regulations, a mechanism by which the County could enforce reductions (i.e., ordinance and policy adoption, CAP Consistency Checklist) and ensure communitywide targets could be met, would not be in place. The County also would not have a tracking and monitoring system in place to monitor its progress towards achieving State reduction targets. Without a CAP, individual projects subject to environmental review would be responsible for demonstrating GHG reductions on a project-by-project basis through a variety of mechanisms (e.g., design features, offsets, incentives).

COMPARISON OF THE EFFECTS OF THE NO PROJECT ALTERNATIVE TO THE EFFECTS ASSOCIATED WITH THE CAP

As stated in Section 2.4.1 in Chapter 2, the County is already meeting it's 2020 GHG emissions target as established in the CAP. Under the No Project Alternative, the County would not have a program in place to meet its 2030 target or the long-term 2050 goal. In addition, without a CAP in place, the No Project Alternative would not achieve any of the EIR's project objectives and would not provide a streamlining mechanism for future development projects to evaluate their GHG impacts. Further, this alternative would be inconsistent with 2008 GP Policy CON-65, Action Item CON CPSP-2, and GP PEIR Mitigation Measure 4.8.7a.

Under the No Project Alternative, compliance with legislative requirements under CEQA would be achieved through individual project-level analysis for all development projects subject to discretionary review. As a result, many of the physical environmental impacts identified in the Draft EIR could still occur.

The No Project Alternative would not satisfy the County's obligation under Mitigation Measure 4.8.7a of the 2008 GP PEIR, which requires the preparation of a CAP to achieve reduction targets. Although the 2008 GP concluded that even with implementation of this mitigation measure significant GHG impacts associated with 2008 GP buildout would be significant and unavoidable, this alternative eliminates the mechanism by which the County could effectively reduce GHG emissions and meet legislative requirements for 2030.

While GHG impacts would be assessed on a project-by-project basis, without the project in place, it may be more difficult for the County to achieve compliance and could result in inconsistencies with legislative requirements. Therefore, this alternative could result in greater GHG impacts. As stated above, this alternative would support achievement of 2020 reduction targets because the County is already meeting those targets; however, this alternative would not advance any of the other project objectives. Further, this alternative would not provide a streamlining mechanism for future development projects to evaluate their GHG impacts. This alternative would result in the same suite of less-than-significant environmental impacts as the project but could potentially result in greater GHG impacts because a consistent mechanism by which GHG reduction measures are implemented on a project-by-project basis would not be provided.

6.4.2 Roof-Top Solar for Commercial Properties Alternative

While no significant environmental impacts would occur with implementation of the CAP, many of the GHG reduction measures would result in construction- and operational-related environmental impacts as described throughout this DEIR. To reduce or eliminate the impacts associated with larger construction projects, this alternative would modify GHG Reduction Measure BE-11 to require that solar systems be installed on all new or modified commercial rooftops throughout the County as part of the discretionary approval process. Commercial solar systems are small-scale power generation and storage systems that are located close to the source and are typically 1kW to 10,000 kW in size. Often these systems are located on rooftops and or consist of small ground-mounted systems.

This alternative would instead require the construction of solar systems on new commercial construction or modifications to commercial properties throughout the County. This alternative would increase GHG reductions through increased installations of distributed generation systems that are not currently assumed in the CAP and would offset the need to construct other GHG reduction measures that would have larger-scale construction impacts. Distributed generation systems are typically small in scale and located in urban areas. As such, construction-related environmental impacts would be minimal. In addition, because of their small size, no routine management or maintenance of the systems are required and, therefore, would not have any associated operational impacts. As a result, incentivizing and relying on distributed generation systems for additional GHG emissions reductions could reduce construction and operational impacts compared to the current suite of GHG reduction measures in the CAP.

Upon approval, new development in the County would be reviewed for consistency with the CAP and may be eligible for a streamlined environmental review under CEQA Guidelines Section 15183.5. All energy efficiency or renewable energy measures would be implemented as described under the CAP, which would result in a reduction of energy consumption and the production of associated GHG emissions. Under this alternative, the County would reduce community-wide and County operations GHG emissions in compliance with State-legislative targets, would meet the 2020 and 2030 reduction targets of the CAP, and would achieve the same level of GHG reductions compared to the project. Therefore, the Roof-Top Solar for Commercial Properties Alternative would achieve all project objectives and would reduce GHG emissions in the County consistent with State legislative requirements.

COMPARISON OF THE EFFECTS OF THE DISTRIBUTED GENERATION ALTERNATIVE TO THE EFFECTS ASSOCIATED WITH THE CAP

Aesthetics: This alternative would result in an increase in the number of commercial roof-top solar projects that would occur throughout the County. As described for the project, rooftop solar projects would have less-than-significant scenic vista, scenic resource, and nighttime lighting and glare impacts because infrastructure improvements would occur within developed facilities or in areas designated for such uses. Further, all development proposals would be required to undergo review by the County and would be required to comply with adopted County policies that would minimize visual resources impacts. Under this alternative, less construction would be required compared to other GHG reduction measures (e.g., solid waste facilities, transportation improvements, etc.), because less reliance on these measures would be needed to meet 2020 and 2030 reduction targets. Further no operational impacts would occur. The types of visual impacts that would occur under this alternative would be similar to the project because the same suite of remaining GHG reduction measures would be implemented; however, it is likely that number projects producing visual impacts from either construction or operational activities would be less. The alternative would have less-than-significant scenic vista, scenic resource, and nighttime lighting and glare impacts and would not have a considerable contribution to significant cumulative impacts, similar to the project. Overall, visual resources impacts would be less under this alternative.

Air Quality: This alternative would result in an increase in the number of roof-top solar projects that would occur on commercial facilities throughout the County. As described for the project, rooftop solar projects would have less-than-significant air quality impacts because infrastructure would be limited in size, would not generate emissions, would have limited construction requirements, and would occur within developed facilities. Minimal land disturbance would be required. Under this alternative, less construction would be required compared to other GHG reduction measures (e.g., solid waste facilities, transportation improvements, etc.), because less reliance on these measures would be needed to meet 2020 and 2030 reduction targets. As such, fewer projects that could result in construction and operational-related air quality impacts would occur. The types of air quality impacts that would occur under this alternative would be similar to the project because the same suite of remaining GHG reduction measures would be implemented; however, it is likely that number projects producing significant air quality impacts from either construction or operational activities would be less. This alternative would have less-than-significant air quality impacts and would not have a considerable contribution to significant cumulative impacts, similar to the project. Overall, air quality impacts would be less under this alternative.

Biological Resources: This alternative would result in an increase in the number of roof-top solar projects that would occur on commercial facilities throughout the County. As described for the project, rooftop solar projects would have less-than-significant biological impacts because infrastructure would be limited in size and would occur within developed facilities. Minimal land disturbance would be required. Under this alternative, less construction would be required compared to other GHG reduction measures (e.g., solid waste facilities, transportation improvements, etc.), because less reliance on these measures would be needed to meet 2020 and 2030 reduction targets. As such, fewer projects that could result in construction and operational-related biological impacts would occur. The types of biological impacts that would occur under this alternative would be similar to the project because the same suite of remaining GHG reduction measures would be implemented; however, it is likely that number projects producing significant biological

impacts from either construction or operational activities would be less. This alternative would have less-than-significant biological impacts and would not have a considerable contribution to significant cumulative impacts, similar to the project. Overall, biological impacts would be less under this alternative.

Cultural Resources: This alternative would result in an increase in the number of roof-top solar projects that would occur on commercial facilities throughout the County. As described for the project, rooftop solar projects would have less-than-significant cultural resources impacts because infrastructure would be limited in size and would occur within developed facilities. Minimal land disturbance would be required. Under this alternative, less construction would be required compared to other GHG reduction measures (e.g., solid waste facilities, transportation improvements, etc.), because less reliance on these measures would be needed to meet 2020 and 2030 reduction targets. As such, fewer projects that could result in significant construction-related cultural resources impacts would occur. The types of cultural resources impacts that would occur under this alternative would be similar to the project because the same suite of remaining GHG reduction measures would be implemented; however, it is likely that number projects producing cultural resources impacts from either construction or operational activities would be less. This alternative would have less-than-significant cultural resources impacts and would not have a considerable contribution to significant cumulative impacts, similar to the project. Overall, cultural resources impacts would be less under this alternative.

Energy: This alternative would result in an increase in the number of roof-top solar projects that would occur on commercial facilities throughout the County. As described for the project, rooftop solar projects would have less-than-significant energy impacts because they would use renewable resources to power commercial facilities and they would support strategies related to renewable energy, the supply and reliability of electricity, and achieving climate targets. The project also would result in the efficient use of energy resources to achieve climate targets. This alternative would result in similar energy impacts compared to the project.

Greenhouse Gas Emissions: This alternative would result in an increase in the number of roof-top solar projects that would occur on commercial facilities throughout the County. As described for the project, rooftop solar projects would have less-than-significant GHG impacts because infrastructure would be limited in size and would require minimal construction activities. As described for the project, no significant GHG impacts would occur related to 2020 and 2030 targets because while individual measures may have GHG emissions associated with construction or operation, the overall purpose of the measures would be to reduce the amount of GHG emissions countywide, and achieve the GHG emission reduction targets identified in the CAP. Therefore, this alternative would result in similar GHG impacts compared to the project. Nonetheless, a significant and unavoidable impact regarding the 2050 GHG reduction goal would remain because the total GHG reductions under this alternative would not be enough to reach the County's 2050 goal.

Hazards and Hazardous Materials: This alternative would result in an increase in the number of roof-top solar projects that would occur on commercial facilities throughout the County. As described for the project, rooftop solar projects would have less-than-significant hazard and hazardous materials impacts including wildfire because infrastructure would be limited in size and would occur within existing developed facilities. Minimal land disturbance would be required. Under this alternative, less construction would be required compared to other GHG reduction measures (e.g., solid waste facilities, transportation improvements, etc.), because less reliance on these measures would be needed to meet 2020 and 2030 reduction targets. As such, fewer projects that could result in significant construction-related hazard impacts would occur. The types of hazard impacts that would occur under this alternative would be similar to the project because the same suite of remaining GHG reduction measures would be implemented; however, it is likely that number projects producing hazard impacts from either construction or operational activities would be less. This alternative would have less-than-significant hazard impacts and would not have a considerable contribution such that a new significant cumulative hazard impact would occur, similar to the project. Overall, hazard impacts would be less under this alternative.

Hydrology and Water Quality: This alternative would result in an increase in the number of roof-top solar projects that would occur on commercial facilities throughout the County. As described for the project, rooftop solar projects would have less-than-significant cultural resources impacts because infrastructure would be limited in size and would occur within existing developed facilities. Minimal land disturbance would be required. Under this alternative, less construction would be required compared to other GHG reduction measures (e.g., solid waste facilities, transportation improvements, etc.), because less reliance on these measures would be needed to meet 2020 and 2030 reduction targets. As such, fewer projects that could result in significant construction-related hydrology impacts would occur. The types of hydrology impacts that would occur under this alternative would be similar to the project because the same suite of remaining GHG reduction measures would be implemented; however, it is likely that number projects producing hydrology impacts from either construction or operational activities would be less. This generation alternative would have less-than-significant hydrology impacts and would not have a considerable contribution such that a new significant cumulative hydrology impact would occur, similar to the project. Overall, hydrology impacts would be less under this alternative.

Land Use: This alternative would result in an increase in the number of roof-top solar projects that would occur on commercial facilities throughout the County. As described for the project, rooftop solar projects would have less-than-significant land use impacts because infrastructure would be limited in size and would occur within existing developed facilities. Minimal land disturbance would be required. While less reliance on other GHG measures would occur, no significant land use impacts were identified for the project. Further, all other land use impacts would be similar to the project because the same suite of remaining GHG reduction measures would be implemented. This alternative would have less-than-significant land use impacts and would not have a considerable contribution to significant cumulative impacts. Overall, land use impacts would be similar under this alternative.

Noise: This alternative would result in an increase in the number of roof-top solar projects that would occur on commercial facilities throughout the County. As described for the project, rooftop solar projects would have less-than-significant noise impacts because infrastructure would be limited in size and would occur within existing developed facilities. Minimal construction would be required and would be conducted in compliance with the County's noise ordinance. No operational noise impacts would occur Under this alternative, less construction would be required compared to other GHG reduction measures (e.g., solid waste facilities, transportation improvements, etc.), because less reliance on these measures would be needed to meet 2020 and 2030 reduction targets. As such, fewer projects that could result in significant construction-related noise impacts would occur. The types of noise impacts that would occur under this alternative would be similar to the project because the same suite of remaining GHG reduction measures would be implemented; however, it is likely that number projects producing noise impacts from either construction or operational activities would be less. This alternative would have less-than-significant noise impacts and would not have a considerable contribution such that a new significant cumulative noise impact would occur, similar to the project. Overall, noise impacts would be less under this alternative.

Transportation: This alternative would result in an increase in the number of roof-top solar projects that would occur on commercial facilities throughout the County. As described for the project, rooftop solar projects would have less-than-significant transportation impacts because infrastructure would be limited in size and would occur within existing developed facilities. Minimal land disturbance would be required and no operational impacts would occur. Under this alternative, less construction would be required compared to other GHG reduction measures (e.g., solid waste facilities, transportation improvements, etc.), because less reliance on these measures would be needed to meet 2020 and 2030 reduction targets. As such, fewer projects that could result in significant construction-related traffic impacts would occur. The types of traffic impacts that would occur under this alternative would be similar to the project because the same suite of remaining GHG reduction measures would be implemented; however, it is likely that number projects producing traffic impacts from either construction or operational activities would be less. This alternative would have less-than-significant traffic impacts and would not have a considerable contribution to significant cumulative traffic impacts, similar to the project. Overall, traffic impacts would be less under this alternative.

Utilities: This alternative would result in an increase in the number of roof-top solar projects that would occur on residential, commercial, and industrial facilities throughout the County. As described for the project, rooftop solar projects would have less-than-significant utilities impacts because infrastructure would be limited in size and would occur within existing developed facilities. Minimal land disturbance would be required. While less reliance on other GHG measures would occur, no significant utilities impacts were identified for the project. Further, all other utilities impacts would be similar to the project because the same suite of remaining GHG reduction measures would be implemented. This alternative would have less-than-significant utilities impacts and would not have a considerable contribution such that a new significant cumulative impact would occur. Overall utilities impacts would be similar under this alternative.

6.4.3 "No Streamlining" CAP Project

Under this alternative, the County would develop and implement a CAP; however, the County would specifically prohibit the associated environmental document (this EIR) from being used as a CEQA streamlining mechanism for future projects as it relates to evaluation of individual project-specific GHG impacts. Instead, individual projects would be required to prepare their own project-specific GHG analysis and recommend mitigation that would reduce GHG impacts. The County would review and evaluate GHG impacts and mitigation measures on a project-by-project basis.

Under this alternative, a CAP would be prepared and would be consistent with 2008 GP Policy CON-65, Action Item CON CPSP-2, and GP PEIR Mitigation Measure 4.8.7a. The CAP would require a general plan amendment and would include a CAP consistency checklist, similar to the project. With the CAP consistency checklist, the County would have a mechanism by which to ensure that a consistent program of GHG reduction measures would be implemented in a coordinated fashion for all discretionary actions. All other elements of the CAP would be similar to the project including implementing a suite of GHG reduction measures that would achieve 2020 and 2030 GHG emissions reduction targets.

COMPARISON OF THE EFFECTS OF THE "NO STREAMLINING" CAP PROJECT ALTERNATIVE TO THE EFFECTS ASSOCIATED WITH THE CAP

Aesthetics: This alternative would result in the same suite of GHG reduction measures as the project. As described for the project, implementation of this alternative would have less-than-significant scenic vista, scenic resource, and nighttime lighting and glare impacts because infrastructure improvements would be required to comply with existing State, and local regulations that protect scenic resources, especially County Zoning Code Section 18.106, and would be required to complete subsequent project-level planning and environmental review that would reduce potential impacts to these resources. This alternative would not have a considerable contribution to significant cumulative impacts, similar to the project. Overall, visual resources impacts would be similar under this alternative.

Air Quality: This alternative would result in the same suite of GHG reduction measures as the project. As described for the project, implementation of this alternative would have less-than-significant air quality impacts because none of the proposed measures would result in substantial construction or operational VMT, TAC emissions, or odors and would be required to undergo project-specific evaluation of environmental impacts that would require compliance with applicable air quality regulations. This alternative would not have a considerable contribution to significant cumulative impacts, similar to the project. Overall, air quality impacts would be similar under this alternative.

Biological Resources: This alternative would result in the same suite of GHG reduction measures as the project. As described for the project, implementation of this alternative would have less-than-significant biological impacts because the alternative would be required to comply with existing federal, State, and local regulations that protect sensitive resources, and completion of subsequent project-level planning and environmental review would reduce potential impacts. This alternative would not have a considerable

contribution to significant cumulative impacts, similar to the project. Overall, biological impacts would be similar under this alternative.

Cultural Resources: This alternative would result in the same suite of GHG reduction measures as the project. As described for the project, implementation of this alternative would have less-than-significant cultural resources impacts because the alternative would be required to comply with existing federal, State, and local regulations that protect sensitive resources, and completion of subsequent project-level planning and environmental review would reduce potential impacts. This alternative would not have a considerable contribution to significant cumulative impacts, similar to the project. Overall, cultural resources impacts would be similar under this alternative.

Energy: This alternative would result in the same suite of GHG reduction measures as the project. As described for the project, implementation of this alternative would have less-than-significant energy impacts because under the CAP renewable resources would be used to power commercial facilities and the CAP would support strategies related to renewable energy, the supply and reliability of electricity, and achieving climate targets. This alternative also would result in the efficient use of energy resources to achieve climate targets, similar to the project. This alternative would result in similar energy impacts compared to the project.

Greenhouse Gas Emissions: This alternative would result in the same suite of GHG reduction measures as the project. As described for the project, implementation of this alternative would have less-than-significant GHG impacts because the CAP is intended to reduce GHG emissions generated within the County by using alternatively fueled vehicles, reducing VMT, using renewable energy, reducing waste generation, and increasing water conservation. Thus, the effects associated with the reduction of GHG emissions in the County would be beneficial. While individual measures may have GHG emissions associated with construction or operation, the overall purpose of the measures would be to reduce the amount of GHG emissions countywide, and achieve the GHG emission reduction targets identified in the CAP. Therefore, this alternative would result in similar GHG impacts compared to the project.

Hazards and Hazardous Materials: This alternative would result in the same suite of GHG reduction measures as the project. As described for the project, implementation of this alternative would have less-than-significant hazard and hazardous materials impacts including wildfire because infrastructure improvements would be required to comply with existing federal, State, and local regulations that protect people and the environment from exposure to hazardous materials. Further, completion of subsequent project-specific evaluation and environmental review would reduce potential impacts. This alternative would not have a considerable contribution such that a new significant cumulative hazard impact would occur, similar to the project. Overall, hazard impacts would be similar under this alternative.

Hydrology and Water Quality: This alternative would result in the same suite of GHG reduction measures as the project. As described for the project, implementation of this alternative would have less-than-significant hydrology and water quality impacts because future projects would be required to evaluate project-specific impacts under CEQA at the time of application and project-specific mitigation would be required to minimize or eliminate impacts to water quality and stormwater runoff and provide adequate flood protection. This alternative would not have a considerable contribution such that a new significant cumulative hydrology impact would occur. Overall, hydrology impacts would be similar under this alternative.

Land Use: This alternative would result in the same suite of GHG reduction measures as the project. As described for the project, implementation of this alternative would have less-than-significant land use impacts because any such projects that could result in conflicts with applicable land use plans, policies or regulations that have been adopted for the purpose of avoiding or mitigating environmental impacts would be required to obtain a Use Permit, complete project-level planning, conduct environmental review of potential impacts, and comply with all applicable federal, State and local regulations. Projects would be required to mitigate environmental impacts through the discretionary review process. This alternative would not have a considerable contribution to significant cumulative impacts. Overall, land use impacts would be similar under this alternative.

Noise: This alternative would result in the same suite of GHG reduction measures as the project. As described for the project, implementation of this alternative would have less-than-significant noise impacts because projects would either be minor in nature and would not result in operational or groundborne vibration impacts or would be required to be evaluated for project-specific impacts under CEQA at the time of application and project-specific mitigation would be required to minimize or avoid noise impacts to the extent feasible in compliance with CEQA Guidelines Section 15126.4. Implementation of General Plan policies that reduce noise impacts consistent with federal and State requirements, as well as all other County noise regulations would minimize impacts. This alternative would not have a considerable contribution such that a new significant cumulative noise impact would occur, similar to the project. Overall, noise impacts would be similar under this alternative.

Transportation: This alternative would result in the same suite of GHG reduction measures as the project. As described for the project, implementation of this alternative would have less-than-significant transportation impacts because the projects would result in improvements to the overall transportation or circulation system and projects would be required to follow County development and construction standards, including preparation of and implementation of construction period traffic control plan that would reduce significant construction-related transportation impacts. This alternative would not have a considerable contribution to significant cumulative traffic impacts, similar to the project. Overall, traffic impacts would be similar under this alternative.

Utilities: This alternative would result in the same suite of GHG reduction measures as the project. As described for the project, implementation of this alternative would have less-than-significant utilities impacts because future projects would be required to evaluate project-specific impacts under CEQA at the time of application and project-specific mitigation would be required to minimize or eliminate impacts to utilities. In addition, compliance with local general plan policies and existing regulations, would ensure that impacts would be mitigated. This alternative would not have a considerable contribution such that a new significant cumulative impact would occur. Overall utilities would be similar under this alternative.

6.4.4 Net Zero by 2030 Alternative

The County's CAP is designed to reduce local GHG emissions in the unincorporated County by setting local GHG reduction targets and implementing local GHG reduction measures that are aligned with and complement State targets and actions, as established by AB 32 and SB 32 and the 2017 Scoping Plan. As described in Chapter 2, Project Description, Executive Order S-3-05 recommends a longer-term 2050 statewide goal of reducing GHG emissions to 80 percent below 1990 levels, and the County's long-term 2050 goal is also consistent with the State's goal. While the project would meet 2020 and 2030 emissions targets consistent with the State's targets, and some of the GHG reductions required to achieve the 2050 goal could be realized beyond 2030, additional reductions would be required to achieve 2050 GHG reduction goals, the feasibility of which at this time is unknown.

This alternative has been designed to accelerate achievement of additional GHG reductions that are likely to be required to meet the State's 2050 reduction goal, while also accelerating the timeframe for achieving such reductions in combination with a framework for offsetting emissions by 2030.

The CAP includes provisions to regularly monitor and adjust the CAP to ensure that the 2030 target would be met, but also to ensure the County makes substantial and ongoing progress towards achieving the 2050 goal over time. The State has also established its intent to continue to make progress towards reducing statewide GHG reductions beyond 2030, and that future legislative actions will be required to do so; however, the 2017 Scoping Plan does not currently identify a feasible pathway to achieve any post-2030 statewide target.

With the exception of the State's action to mandate zero-net carbon electricity generation by 2045 per SB 100 (2018), no other legislative actions are currently known that can be credited in a local CAP that would result in "net zero" emission levels in all sectors by 2030; thus, a CAP that achieves a" net zero" GHG

emissions target by 2030 without known legislative actions would have to rely exclusively on known legislative actions in place, combined with aggressive local actions within a 10-year period, some of which may not be within the realm of technological feasibility or local jurisdictional authority.

Nevertheless, the County contemplated additional actions that would be needed on a local level to achieve net zero emissions by 2030. The Net Zero by 2030 Alternative contemplates the acceleration of actions and activities the County could implement, either alone or in partnership with others, to achieve sufficient reductions needed to either (a) eliminate all GHG emissions by 2030 or (b) result in a combination of locally-based GHG reductions and GHG offsets sufficient to achieve a "net zero" GHG emission level by 2030.

While the CAP already includes a substantial menu of reduction measures in a variety of sectors designed to achieve a 2030 target and longer-term 2050 goal that are aligned with SB 32 and the 2017 Scoping Plan, in general this alternative would require the County to expand many of the current GHG reduction measures or include additional measures that would achieve further reductions such that "net zero" would be achieved. Specifically, the following measures could be included as part of such an alternative.

<u>On-Road Transportation and Off-Road Equipment Sectors</u>

- Expand measures that support, encourage, incentivize, or require alternative modes of transportation, primarily in the form of transit or other similar shared-mobility options in the unincorporated/rural context, to further reduce trips and VMT beyond what is already assumed in the existing transportation GHG measures. The County does not operate transit systems, but the County could develop partnerships or operating agreements with local, regional, or State agencies such as the Napa Valley Transportation Authority (NVTA), the Metropolitan Transportation Commission (MTC), Caltrans, or other local or regional transportation authorities that maintain jurisdictional control over local or regional roadways or railways. The County would need to work with one or more of these agencies to secure funding and implement expanded transit or other types of systems that exceed the planned investments in the Plan Bay Area RTP/SCS. The CAP already includes a measure to explore operating transit services on existing railroad rights-of-way, for example. Under a Net Zero by 2030 Alternative, however, major transit service expansions or new transit services would need to be identified, funded, constructed (if applicable), and be operating at planned capacity by 2030.

- The County could explore the feasibility of increasing VMT reductions associated with development projects subject to CEQA review beyond the 15 percent VMT reduction identified in the recently-updated General Plan Circulation Element under Policy CIR-7 and as stated under GHG Measure TR-15 in the CAP. It is currently unknown how an overall 15 percent VMT reduction would be achieved on a project-by-project basis during CEQA review within the unincorporated County because the County has not yet implemented Circulation Element Policy CIR-9, which requires the County to update its Transportation Impact Study (TIS) guidelines; and, the County has yet to develop project-level VMT screening criteria identified in Circulation Element Action Item CIR-7.1.

- The County does not have jurisdictional control over on-road vehicle emissions standards; only the State and federal governments have the authority to regulate vehicle emissions standards. Thus, any local acceleration of a transition to zero- or low-emission vehicles by the year 2030 must be incentive-based. The County could include new measures that further incentivize the conversion to cleaner vehicles, such as a local incentive program, or a regional incentive program coordinated with the local air district, that would encourage citizens to upgrade or exchange fossil fuel powered vehicles with zero-emission vehicles such as battery electric or fuel cell vehicles.

  The State already provides similar incentives through programs such as the Clean Vehicle Rebate Program (CVRP), and a locally-or regionally-based incentive could be paired with CVRP incentives and federal tax credits to leverage increased participation beyond what would only be achieved through State rebates and federal tax credits or assumed fleet turnover under existing regulations. Any specific subsidy or incentive program would need to be developed through more detailed study and coordination with local and regional agencies and privately-owned automobile dealers.

While such a local or regional incentive program could result in some additional GHG reductions, it's unlikely that the scale of reductions achieved in the transportation sector by 2030 would be sufficient to achieve net zero emissions by 2030, without future legislative actions by the State to mandate more stringent emissions standards in new vehicles manufactured after 2025.

- Similar to on-road vehicles, the County does not have jurisdictional control over emissions standards for off-road vehicles and equipment. The County could develop incentive-based measures to encourage the conversion of off-road vehicles from fossil-fuel to battery electric or fuel-cell vehicles, beyond what is already included in the CAP for agricultural equipment and construction and mining equipment. Any specific subsidy or incentive program would need to be developed through more detailed study and coordination with local and regional agencies and privately-owned off-road vehicle or equipment dealers.

Energy Sector

- The CAP already includes a measure that requires electric water heaters in new residential construction or in replacement of existing natural gas units, as an initial step towards "decarbonizing" the building stock. An additional measure could be added to the CAP to incentivize all-electric homes or buildings in all new development. The County does not have jurisdictional authority to mandate all-electric new construction or mandate the conversion of existing homes or buildings to all electric appliances or space heating because of federal and State preemption regarding energy sources in buildings. Local incentive-based programs could still be applied, however, and by doing so, the County would be able to achieve further GHG reductions tied to natural gas usage reductions in new and existing buildings, beyond what is achieved in the CAP.

  While some measurable GHG reductions could be attributed to an incentive-based program, the County's limited jurisdictional authority to reduce or eliminate natural gas in new and existing buildings would still present a formidable barrier to achieving the scale of energy-sector GHG reductions required to achieve net zero GHG by 2030.

Solid Waste Sector

- Increase countywide waste diversion goals to 100 percent by 2030 for all waste types. Organic waste will soon be the subject of regulations that would require diversion pursuant to SB 1383; however, SB 1383 does not require 100 percent organic waste diversion by 2030. Because the County's waste stream is not directly within the County's jurisdictional control, it would be speculative to assume that an aggressive 2030 goal that exceeds SB 1383 targets would be feasible, without further study and coordination with existing waste management agencies.

Water and Wastewater Sector

- Include measures that would phase out "hold and haul" wastewater treatment operations, in which wastewater from wineries or other commercial or industrial systems are hauled to offsite treatment plants. The County would take action to require that such wastewater sources install onsite package treatment facilities or connect to nearby local or regional wastewater treatment systems.

- Include measures that incentivize the conversion of traditional septic systems to low-GHG "blackwater" onsite recycling and treatment systems, or "composting toilets." Such systems often pose considerable challenges in permitting and construction in many situations because of health and safety concerns. The County would need to conduct a more detailed study to determine whether the measure is feasible and whether realistic reductions by the year 2030 could be achieved.

Land Use

- Include measures that require all feasible onsite preservation of trees; and, develop and require more stringent tree mitigation ratios that exceed current minimum mitigation requirements, in cases where onsite preservation of trees is not feasible. The CAP currently contains similar measures under LU-1 and LU-2, so modification of these measures would be required.

- Develop and implement measures that would require all development projects that disturb undeveloped/natural and working lands to result in zero-net landscape carbon losses and, if feasible, demonstrate a net increase (benefit) in carbon sequestration or storage over the long-term.

Multi-Sector

- The County could further develop and implement a GHG offset program, as described under Measures BE-10 and MS-4 such that (a) any remaining unmitigated GHG emissions in all new development projects through 2030 would be required to be offset down to a "net zero" level through the purchase of locally-based credits by new development projects, and (b) offset credits generated in the program could be sourced through local projects designed to reduce emissions in existing buildings or other existing sources in the county, consistent with an appropriate GHG offset protocol. For such an offset program to achieve an overall net zero emissions level by 2030 for the entire unincorporated area of the county, further study and effort would be required to determine the level of reductions from the expanded list of GHG measures designed to reduce emissions, and whether the remaining GHG emissions required to be offset could feasibly be reduced in a 10-year period or less (measured from the date of program implementation).

The Net-Zero by 2030 Alternative would include implementation of all GHG reduction measures included in the CAP plus the additional new or modified measures identified above. The following provides an evaluation of the comparative environmental effects of this alternative.

COMPARISON OF THE EFFECTS OF THE NET ZERO BY 2030 ALTERNATIVE TO THE EFFECTS ASSOCIATED WITH THE CAP

Aesthetics: This alternative would implement the same suite of GHG reduction measures as the project and would either expand their implementation and/or implement additional measures to achieve additional GHG reductions by 2030. In general, a greater level of activity and/or greater number projects would be required to be implemented in the 10-year planning horizon. Some of the larger physical actions that could occur include new or expanded transit facilities, solid waste facilities, onsite septic conversion projects, and offset projects. While a greater number of facilities and actions would be required, as described for the project, implementation of this alternative would have less-than-significant scenic vista, scenic resource, and nighttime lighting and glare impacts because infrastructure improvements would be required to comply with existing State, and local regulations that protect scenic resources, especially County Zoning Code Section 18.106, and would be required to complete subsequent project-level planning and environmental review that would reduce potential impacts to these resources. This alternative would not have a considerable contribution to significant cumulative impacts, similar to the project. Overall, visual resources impacts would be similar under this alternative.

Air Quality: As described above under "aesthetics," this alternative would increase the number of projects that would be required to achieve net zero GHG emissions by 2030. While some projects would be minor or would be retrofits to existing buildings and facilities, others would be larger in scale and would result in construction-related emissions. The mix and total number projects required to meet net zero requirements is not known at this time but would greater than those anticipated under the project and would likely result in an increase in construction-related and operational emissions that would occur over the 10-year planning horizon. While individual projects would be required to undergo project-specific evaluation of environmental impacts that would require compliance with applicable air quality regulations, it is unknown whether the cumulative effects of all emissions could be reduced to less-than-significant levels. Overall air quality impacts would be greater under this alternative because of the increased development activity that would occur.

Biological Resources: This alternative would increase the number of projects that would be required to achieve net zero GHG emissions by 2030. While some projects would be minor or would be retrofits to existing buildings and facilities, others would be larger in scale (e.g., transit facilities, offsets) and would result in the conversion or development of natural landscapes or undeveloped areas. The mix and total number projects required to meet net zero requirements is not known at this time but would greater than those anticipated under the project and would likely result in the development and/or conversion of larger

land areas compared to the project. While individual projects would be required to undergo project-specific evaluation of environmental impacts that would require compliance with applicable federal, State, and local resource protection regulations, it is unknown whether the cumulative effects of all activities could be reduced to less-than-significant levels. Overall biological impacts would be greater under this alternative because of the increased development that would occur.

Cultural Resources: This alternative would increase the number of projects that would be required to achieve net zero GHG emissions by 2030. While some projects would be minor or would be retrofits to existing buildings and facilities, others would be larger in scale (e.g., transit facilities, offsets) and would result in the conversion or development of undeveloped areas. The mix and total number projects required to meet net zero requirements is not known at this time but would greater than those anticipated under the project and would likely result in the development and/or conversion of larger land areas where resources could be present compared to the project. As described for the project, implementation of this alternative would have less-than-significant cultural resources impacts because the alternative would be required to comply with existing federal, State, and local regulations that protect sensitive resources, and completion of subsequent project-level planning and environmental review would reduce potential impacts consistent with CEQA requirements. This alternative would not have a considerable contribution to significant cumulative impacts, similar to the project. Overall, cultural resources impacts would be similar under this alternative.

Energy: While this alternative would result in a larger suite of GHG reduction measures compared to the project, implementation of this alternative, like the project, would have less-than-significant energy impacts because under this alternative renewable resources would be used to power commercial facilities, this alternative would support strategies related to renewable energy, would increase the supply and reliability of electricity, and would achieve climate targets. This alternative also would result in the efficient use of energy resources to achieve climate targets, similar to the project. Overall, a larger portfolio of renewable resources and electrification strategies would occur under this alternative. Nonetheless, energy impacts for the project were less than significant and would be less than significant under this alternative. This alternative would result in similar energy impacts compared to the project.

Greenhouse Gas Emissions: This alternative would result in a larger suite of GHG reduction measures compared to the project and would result in net zero emissions by 2030. As described for the project, no significant GHG impacts would occur because the CAP is intended to reduce GHG emissions generated within the County by using alternatively fueled vehicles, reducing VMT, using renewable energy, reducing waste generation, and increasing water conservation. Thus, the effects associated with the reduction of GHG emissions in the County would be beneficial. While individual measures may have GHG emissions associated with construction or operation, the overall purpose of the measures would be to reduce the amount of GHG emissions countywide, and achieve the GHG emission reduction targets identified in the CAP. Under this alternative, a greater amount of GHG reductions would occur, and, therefore, a greater beneficial impact would occur. Overall, this alternative would result in less GHG impacts compared to the project.

Hazards and Hazardous Materials: This alternative would increase the number of projects that would be required to achieve net zero GHG emissions by 2030. While some projects would be minor or would be retrofits to existing buildings and facilities, others would be larger in scale (e.g., transit facilities, offsets) and would result in greater potential for hazard-related impacts. As described for the project, implementation of this alternative would have less-than-significant hazardous materials impacts because the alternative would be required to comply with existing federal, State, and local regulations that pertaining to hazardous material, and completion of subsequent project-level planning and environmental review would reduce potential impacts consistent with federal, State, and local requirements. This alternative would not have a considerable contribution to significant cumulative impacts, similar to the project. Overall, hazardous materials impacts would be similar under this alternative.

Hydrology and Water Quality: This alternative would increase the number of projects that would be required to achieve net zero GHG emissions by 2030. While some projects would be minor or would be retrofits to existing buildings and facilities, others would be larger in scale (e.g., transit facilities, offsets) and would result in the conversion or development of undeveloped areas. The mix and total number projects required

to meet net zero requirements is not known at this time but would greater than those anticipated under the project and would likely result in the development and/or conversion of larger land areas that could result in water quality, stormwater, or flooding impacts. As described for the project, implementation of this alternative would have less-than-significant hydrology and water quality impacts because the alternative would be required to comply with existing federal, State, and local regulations that protect water resources and communities from flooding, and completion of subsequent project-level planning and environmental review would reduce potential impacts. This alternative would not have a considerable contribution to significant cumulative impacts, similar to the project. Overall, hydrology and water quality impacts would be similar under this alternative.

Land Use: This alternative would increase the number of projects that would be required to achieve net zero GHG emissions by 2030. While some projects would be minor or would be retrofits to existing buildings and facilities, others would be larger in scale (e.g., transit facilities, offsets) and would result in the conversion or development of undeveloped areas. Any such projects that could result in conflicts with applicable land use plans, policies or regulations that have been adopted for the purpose of avoiding or mitigating environmental impacts would be required to obtain a Use Permit, complete project-level planning, conduct environmental review of potential impacts, and comply with all applicable federal, State and local regulations. Projects would be required to mitigate environmental impacts through the discretionary review process. This alternative would not have a considerable contribution to significant cumulative impacts. Overall, land use impacts would be similar under this alternative.

Noise: This alternative would increase the number of projects that would be required to achieve net zero GHG emissions by 2030. While some projects would be minor or would be retrofits to existing buildings and facilities, others would be larger in scale (e.g., transit facilities, offsets) and would result in new development activities that could generate construction-related noise. As described for the project, implementation of this alternative would have less-than-significant noise impacts because projects would either be minor in nature and would not result in operational or groundborne vibration impacts or would be required to be evaluated for project-specific impacts under CEQA at the time of application and project-specific mitigation would be required to minimize or avoid noise impacts to the extent feasible in compliance with CEQA Guidelines Section 15126.4 and in accordance with the County's noise ordinance. Implementation of General Plan policies that reduce noise impacts consistent with federal and State requirements, as well as all other County noise regulations would minimize impacts. This alternative would not have a considerable contribution such that a new significant cumulative noise impact would occur, similar to the project. Overall, noise impacts would be similar under this alternative.

Transportation: This alternative would increase the number of projects that would be required to achieve net zero GHG emissions by 2030. While some projects would be minor or would be retrofits to existing buildings and facilities, others would be larger in scale (e.g., transit facilities, offsets) and would result in new development activities that could result in construction or operational traffic. However, many of the projects would result in improvements to the overall transportation or circulation system and projects would be required to follow County development and construction standards, including preparation of and implementation of construction period traffic control plan that would reduce significant construction-related transportation impacts. Therefore, this would not result in significant transportation impacts and would not have a considerable contribution to significant cumulative traffic impacts, similar to the project. Overall, traffic impacts would be similar under this alternative.

Utilities: This alternative would increase the number of projects that would be required to achieve net zero GHG emissions by 2030. While some projects would be minor or would be retrofits to existing buildings and facilities, others would be larger in scale (e.g., transit facilities, offsets) and would result in new development activities that could that could have demand for utility services. As described for the project, implementation of this alternative would have less-than-significant utilities impacts because future projects would be required to evaluate project-specific impacts under CEQA at the time of application and project-specific mitigation would be required to minimize or eliminate impacts to utilities. In addition, compliance with local general plan policies and existing regulations, would ensure that impacts would be mitigated. This alternative would

not have a considerable contribution such that a new significant cumulative impact would occur. Overall utilities would be similar under this alternative.

6.5 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

CEQA Guidelines Section 15126.6(e)(2) requires that if an EIR determines that the No Project Alternative is environmentally superior to the project, the EIR must identify an environmentally superior alternative among the other alternatives considered. Table 6-1 provides a summary comparison of the impacts of the project and alternatives. As described above, the No Project Alternative would not be environmentally superior to the project because it would not meet SB 32 reduction targets and would not reduce any of the project's impacts. Therefore, this alternative would result in a new significant GHG impact that was not previously identified for the project.

Based on review of the other alternatives considered, the County has determined that the Roof-Top Solar for Commercial Properties Alternative would be environmentally superior to the project because it would reduce impacts related to construction and operation of larger-scale GHG reduction measures while still achieving both the primary objective of GHG emissions reductions consistent with SB 32 and all other supporting project objectives.

Table 6-1 CAP Alternatives Comparison of Impacts

Issue Areas of Significance	CAP	1	2	3	4
		No Project	Roof-Top Solar for Commercial Properties Alternative	'No Streamlining" CAP Alternative	Net Zero by 2030 Alternative
Aesthetics	SU	▼	▼	—	—
Air Quality	SU	▼	▼	—	▲
Biological Resources	SU	▼	▼	—	▲
Cultural Resources	LTS	▼	▼	—	—
Energy	LTS	▲	—	—	—
Greenhouse Gas Emissions	SU	▲	—	—	▼
Hazards and Hazardous Materials	SU	▼	▼	—	—
Hydrology and Water Quality	LTS	▼	▼	—	—
Land Use	LTS	▼	—	—	—
Noise	SU	▼	▼	—	—
Transportation	LTS	▼	▼	—	—
Utilities	LTS	▼	—	—	—

▲ Alternative is likely to result in greater impacts to issue when compared to project.

— Alternative is likely to result in similar impacts to issue when compared to project.

▼ Alternative is likely to result in reduced impacts to issue when compared to project.

LTS Less than Significant with mitigation measures

SU Potentially significant and unavoidable impact

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8 REFERENCES

Executive Summary
No references cited in this chapter.

Chapter 1 Introduction
No references cited in this chapter.

Chapter 2 Project Description
CARB. *See* California Air Resources Board.

California Air Resources Board. 2016. (May). *Ambient Air Quality Standard*s. Available: https://www.arb.ca.gov/research/aaqs/aaqs2.pdf. Accessed October 13, 2016.

———. 2017 (November). *California's 2017 Climate Change Scoping Plan: The Strategy for Achieving California's 2030 Greenhouse Gas Target*. Available: https://www.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf. Accessed August 23, 2018.

California Natural Resources Agency. 2012a (July). *California Adaptation Planning Guide: Planning for Adaptive Communities.* Available: http://resources.ca.gov/ docs/climate/01APG_Planning_for_Adaptive_Communities.pdf. Accessed April 14, 2016.

DOF. *See* Department of Finance.

California Department of Finance. 2014 (May). (December). *Report P-2. State and County Population Projections by Race/Ethnicity and Age (5-year groups). 2010 through 2060 (as of July 1).* Prepared by Walter Schwarm, Demographic Research Unit. Available: http://www.dof.ca.gov/Forecasting/Demographics/ projections/. Accessed November 29, 2016.

IPCC. *See* International Plan on Climate Change.

Intergovernmental Panel on Climate Change. 2007. Frequently Asked Questions: What is the Greenhouse Effect. Available: https://www.ipcc.ch/publications_and_data/ar4/wg1/en/faq13.Html. Accessed May 28, 2016.

Section 3.1 Approach to the Environmental Analysis
No references cited in this section.

Section 3.2 Aesthetics
California Department of Transportation. 2011 (September). California Scenic Highway Mapping System, Napa County. Last Updated September 7, 2011. Available: http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/. Accessed February 20, 2018.

EESI. *See Environmental and Energy Study Institute.*

Environmental and Energy Study Institute. 2009 (June). *Biogas Capture and Utilization: An Effective, Affordable Way to Reduce Greenhouse Gas Emissions and Meet Local Energy Needs.* Available: https://www.eesi.org/files/biogas_issuebrief_061609.pdf. Accessed: September 18, 2018.

Napa County. 2005 (November). *Napa County Baseline Data Report*: Chapter 12, Visual and Aesthetic Resources.

———. 2007 (February). *Napa County General Plan Update Draft Environmental Impact Report*. Available: http://www.countyofnapa.org/Pages/DepartmentDocuments.aspx?id=4294967660. Accessed May 2015. State Clearinghouse No. 2005102088. Prepared by PMC. Napa, CA.

———. 2008. *Napa County General Plan*. Adopted June 3, 2008; reflects amendments through June 4, 2013. Napa, CA. Available: http://www.countyofnapa.org/GeneralPlan/.

U.S. DOE. *See* U.S. Department of Energy.

U.S. Department of Energy. 2014 (June). Solar and Glare Fact Sheet. Available at: http://solaroutreach.org/wp-content/uploads/2014/06/Solar-PV-and-Glare- _Final.pdf Prepared by Meister Consultants Group Inc. Boston, MA.

Section 3.3 Air Quality

BAAQMD. *See* Bay Area Air Quality Management District.

Bay Area Air Quality Management District. 2014 (August). *Air Quality Standards and Attainment Status*. Available: http://www.baaqmd.gov/research-and-data/air-quality-standards-and-attainment-status. Accessed August 30, 2018.

———. 2017a (April). *Final 2017 Clean Air Plan*. Adopted April 19, 2017. Available: http://www.baaqmd.gov/~/media/files/planning-and-research/plans/2017-clean-air-plan/attachment-a_-proposed-final-cap-vol-1-pdf.pdf?la=en. Accessed August 30, 2018.

———. 2017b. *Draft 2017 Clean Air Plan-Spare the Air, Cool the Climate: A Blueprint for Clean Air and Climate Protection in the Bay Area.* Available: http://www.baaqmd.gov/~/media/files/planning-and-research/plans/2017-clean-air-plan/baaqmd_2017_cap_draft_122816-pdf.pdf?la=en. Accessed August 30, 2018.

California Air Pollution Control Officers Association. 2009 (July). *Health Risk Assessments for Proposed Land Use Projects*. Available: http://www.capcoa.org/wp-content/uploads/2012/03/CAPCOA_HRA_LU_Guidelines_8-6-09.pdf. Accessed October 25, 2016.

California Air Resources Board. 2000 (October). *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles.* Available: https://www.arb.ca.gov/diesel/documents/rrpFinal.pdf. Accessed April 24, 2017.

———. 2009. *The California Almanac of Emissions and Air Quality, 2009 Edition*. Available: http://www.arb.ca.gov/aqd/almanac/almanac09/almanac2009all.pdf. Accessed June 25, 2015.

———. 2016a. *2016 SIP Emission Projection Data, 2012 Estimated Annual Average Emissions, Napa County*. Available: https://www.arb.ca.gov/app/emsinv/2017/emssumcat_query.php?F_DIV. Accessed August 9, 2018.

———. 2016b (May). *Ambient Air Quality Standards*. Available: https://www.arb.ca.gov/research/aaqs/aaqs2.pdf. Accessed October 13, 2016.

———. 2018. *iAdam Top 4 Summary.* Available: https://www.arb.ca.gov/adam/topfour/topfourdisplay.php. Accessed May 7, 2018.

California Geological Survey. 2002. *Guidelines for Geologic Investigations of Naturally Occurring Asbestos in California*. Special Publication 124.

CAPCOA. *See* California Air Pollution Control Officers Association.

CARB. *See* California Air Resources Board.

CGS. *See* California Geological Survey.

Churchill, R.K. and R.L. Hill. 2000. *A General Location Guide for Ultramafic Rocks in California – Areas More Likely to Contain Naturally Occurring Asbestos*. Department of Conservation.

EPA. *See* U.S. Environmental Protection Agency.

Napa County. 2007 (February). *Napa County General Plan Update Draft Environmental Impact Report*. Available: http://www.countyofnapa.org/Pages/DepartmentDocuments.aspx?id=4294967660. Accessed May 2015. State Clearinghouse No. 2005102088. Prepared by PMC. Napa, CA.

———. 2008. *Napa County General Plan*. Adopted June 3, 2008. As amended through June 4, 2013. Napa, CA. Available: http://www.countyofnapa.org/GeneralPlan/. Accessed May 2015.

National Wildfire Coordinating Group. 2001. *Smoke Management Guide for Prescribed and Wildland Fire, 2001 Edition*. Boise: National Wildfire Coordinating Group Fire Use Working Team.

NWCG. *See* National Wildfire Coordinating Group.

OEHHA. *See* Office of Environmental Health Hazard Assessment.

Office of Environmental Health Hazard Assessment. 2015. *Air Toxics Hot Spots Program - Guidance Manual for Preparation of Health Risk Assessments, Risk Assessment Guidelines*.

U.S. Environmental Protection Agency. 1995. *AP 42, Fifth Edition, Volume I Chapter 13: Miscellaneous Sources*. Available: https://www3.epa.gov/ttn/chief/ap42/ch13/index.html. Accessed: September 19, 2017.

———. 2015 (October). *Environments and Contaminants: Criteria Air Pollutants.* Available: https://www.epa.gov/sites/production/files/2015-10/documents/ace3_criteria_air_pollutants.pdf. Accessed: May 1, 2017.

Western Regional Climate Center. n.d. *Prevailing Wind Direction.*

Zhu, Y., W.C. Hinds, S. Kim, and S. Shen. 2002. *Study of Ultrafine Particles Near a Major Highway with Heavy-duty Diesel Traffic*. In Atmospheric Environment 36:4323–4335.

Section 3.4 Biological Resources

Napa County. 2007 (February). *Napa County General Plan Update Draft Environmental Impact Report*. Available: http://www.countyofnapa.org/Pages/DepartmentDocuments.aspx?id=4294967660. Accessed May 2015. State Clearinghouse No. 2005102088. Prepared by PMC. Napa, CA.

———. 2008. *Napa County General Plan*. Adopted June 3, 2008. Napa, CA. Available: http://www.Countyofnapa.org/GeneralPlan/. Updated June 4, 2013. Accessed December 2015.

Spencer W.D., P. Beier, K. Penrod, K. Winters, C Paulman, H. Rustigian-Romsos, J. Strittholt, M. Parisi, and A. Pettler. 2010. California *Essential Habitat Connectivity Project: A Strategy for Conserving a Connected California*. Prepared for California Department of Transportation, California Department of Fish and Game, and Federal Highways Administration.

Thorne, J.H., J.A Kennedy, J.F. Quinn, M. Mccoy, T. Keeler-Wolf, and J. Menke. 2004. A Vegetation Map Of Napa County Using The Manual of California Vegetation Classification and its Comparison to Other Digital Vegetation Maps. Madroño 51:4, 343-363.

Section 3.5 Cultural Resources

Napa County. 2007 (February). *Napa County General Plan Update Draft Environmental Impact Report*. Available: http://www.countyofnapa.org/Pages/DepartmentDocuments.aspx?id=4294967660. Accessed May 2015. State Clearinghouse No. 2005102088. Prepared by PMC. Napa, CA.

———. 2008. *Napa County General Plan*. Adopted June 3, 2008. Napa, CA. Available: http://www.Countyofnapa.org/GeneralPlan/. Updated June 4, 2013. Accessed December 2015.

_____. 2016 (February 12). *Cultural and Paleontological Resources Inventory for the Palmaz Private Helipad and Hangar Project, Napa County, California.* Prepared by Natural Investigations Company.

———. 2017 (February 18). *Oak Knoll Hotel Project: Historic Resources Survey and Evaluation Report.* Prepared by Ascent Environmental.

Section 3.6 Energy

AFDC. *See* Alternative Fuels Data Center.

Alternative Fuels Data Center. 2018. Alternative Fueling Station Counts by State. Available: https://www.afdc.energy.gov/states/ca. Accessed September 7, 2018.

California Air Resources Board. 2014 (May). *First Update to the Climate Change Scoping Plan.* Available: https://www.arb.ca.gov/cc/scopingplan/2013_update/first_update_climate_change_scoping_plan.pdf. Accessed January 3, 2017.

———. 2016. *California's Advanced Clean Cars Program.* Available: https://www.arb.ca.gov/msprog/acc/acc.htm and http://www.arb.ca.gov/newsrel/newsrelease.php?id=282. Accessed January 3, 2017.

California Department of Transportation. 2008. 2007 California Motor Vehicle Stock, Travel and Fuel Forecast.

California Energy Commission. 2018a (June 21). 2017 Total System Electric Generation in Gigawatt Hours. Available: http://www.energy.ca.gov/almanac/electricity_data/total_system_power.html. Accessed July 23, 2018.

———. 2018b (March). 2019 Building Energy Efficiency Standards Frequently Asked Questions. Available: http://www.energy.ca.gov/title24/2019standards/documents/2018_Title_24_2019_Building_Standards_FAQ.pdf. Accessed August 20, 2018.

California Energy Commission and California Air Resources Board. 2003 (August). *Reducing California's Petroleum Dependence*. Available: https://www.arb.ca.gov/fuels/carefinery/ab2076final.pdf. Accessed July 25, 2017.

———. 2008. *2008 Update Energy Action Plan.*

California Public Utilities Commission. 2017. *Renewables Portfolio Standard.*

Caltrans. *See* California Department of Transportation.

CARB. *See* California Air Resources Board.

CEC. *See* California Energy Commission.

CEC and CARB. *See* California Energy Commission and California Air Resources Board.

CEC and CPUC. *See* California Energy Commission and California Public Utilities Commission.

CPUC. *See* California Public Utilities Commission.

EIA. *See* U.S. Energy Information Administration.

EPA. *See* U.S. Environmental Protection Agency.

Marin Clean Energy. 2017. *2018 Integrated Resource Plan.* Available: https://www.mcecleanenergy.org/energy-procurement/. Accessed October 10, 2018.

MCE. *See* Marin Clean Energy.

Napa County. 2007 (February). *Napa County General Plan Update Draft Environmental Impact Report*. Available: http://www.countyofnapa.org/Pages/DepartmentDocuments.aspx?id=4294967660. Accessed May 2015. State Clearinghouse No. 2005102088. Prepared by PMC. Napa, CA.

———. 2008. *Napa County General Plan*. Adopted June 3, 2008. As amended through June 4, 2013. Napa, CA. Available: http://www.countyofnapa.org/GeneralPlan/. Accessed May 2018.

U.S. Department of Energy. 2012 (June). Annual Energy Outlook 2012 with Projections to 2035. Available: https://www.eia.gov/outlooks/aeo/pdf/0383(2012).pdf. Accessed April 24, 2017.

U.S. Energy Information Administration. 2012. *Annual Energy Outlook 2012 with Projections to 2035.*

———. 2014. *California Energy Highlight*. 2014 EIA reports and publications. Available: https://www.eia.gov/state/state_one_pager/California.pdf. Accessed April 13, 2017.

U.S. Environmental Protection Agency. 2018. *eGRID2016 Data File.* Available: https://www.epa.gov/energy/emissions-generation-resource-integrated-database-egrid. Accessed October 16, 2018.

Section 3.7 Greenhouse Gas Emissions

California Air Resources Board. 2016a (October). *2016 ZEV Action Plan.* Available: https://www.gov.ca.gov/wp-content/uploads/2017/09/2016_ZEV_Action_Plan.pdf. Accessed August 23, 2018.

———. 2016b. *Facts about the Advanced Clean Cars Program.* Available: https://www.arb.ca.gov/msprog/zevprog/factsheets/advanced_clean_cars_eng.pdf. Accessed August 23, 2018.

———. 2017 (November). *California's 2017 Climate Change Scoping Plan: The Strategy for Achieving California's 2030 Greenhouse Gas Target*. Available: https://www.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf. Accessed August 23, 2018.

———. 2018a. *SB 375 Regional Greenhouse Gas Emissions Reduction Targets*. Approved by the California Air Resources Board March 22, 2018. Available: https://www.arb.ca.gov/cc/sb375/finaltargets2018.pdf. Accessed August 23, 2018.

———. 2018b (July 11). California Greenhouse Gas Emission Inventory. 2018 Edition. Available: https://www.arb.ca.gov/cc/inventory/data/data.htm?utm_medium=email&utm_source=govdelivery. Accessed August 23, 2018.

———. 2018c (July 11). *California Greenhouse Gas Emissions for 2000 to 2016: Trends of Emissions and Other Indicators*. Available:

https://www.arb.ca.gov/cc/inventory/pubs/reports/2000_2016/ghg_inventory_trends_00-16.pdf. Accessed August 23, 2018.

California Energy Commission. 2012. *Our Changing Climate 2012: Vulnerability & Adaptation to the Increasing Risks from Climate Change in California*. Available: http://www.energy.ca.gov/2012publications/CEC-500-2012-007/CEC-500-2012-007.pdf. Accessed August 23, 2018.

———. 2018a *Cal-Adapt Annual Averages Tool*. Available: http://cal-adapt.org/tools/annual-averages/. Accessed December 4, 2018.

———. 2018b. (March). *2019 Building Energy Efficiency Standards: Frequently Asked Questions*. Available: http://www.energy.ca.gov/title24/2019standards/documents/2018_Title_24_2019_Building_Standards_FAQ.pdf. Accessed August 23, 2018.

California Natural Resources Agency. 2017 (May). *Draft Report: Safeguarding California Plan: 2017 Update.* Available: http://resources.ca.gov/wp-content/uploads/2017/05/DRAFT-Safeguarding-California-Plan-2017-Update.pdf. Accessed August 23, 2018.

———. 2018 (January). *Safeguarding California Plan: 2018 Update.* Available: http://resources.ca.gov/docs/climate/safeguarding/update2018/safeguarding-california-plan-2018-update.pdf. Accessed August 23, 2018.

CARB. *See* California Air Resources Board.

CEC. *See* California Energy Commission.

CNRA. *See* California Natural Resources Agency.

Governor's Office of Planning and Research. 2017a (November). *Proposed Updates to the CEQA Guidelines*. Available: http://opr.ca.gov/docs/20171127_Comprehensive_CEQA_Guidelines_Package_Nov_2017.pdf. Accessed August 23, 2018.

———. 2017b (November). *Technical Advisory on Evaluating Transportation Impacts in CEQA*. Available: http://www.opr.ca.gov/docs/20171127_Transportation_Analysis_TA_Nov_2017.pdf. Accessed August 23, 2018.

Intergovernmental Panel on Climate Change. 2013. Chapter 6, Carbon and Other Biogeochemical Cycles. Pages 465–570 in *Climate Change 2013: The Physical Science Basis*. Working Group I Contribution to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change. Available: http://www.climatechange2013.org/images/report/WG1AR5_ALL_FINAL.pdf. Accessed August 23, 2018.

———. 2014. *Climate Change 2014 Synthesis Report: Summary for Policymakers*. Available: https://www.ipcc.ch/pdf/assessment-report/ar5/syr/AR5_SYR_FINAL_SPM.pdf. Accessed August 23, 2018.

IPCC. *See* Intergovernmental Panel on Climate Change.

Napa County. 2013. *Napa County General Plan*. Adopted June 3, 2008. As amended through June 4, 2013. Napa, CA. Available: http://www.countyofnapa.org/GeneralPlan/. Accessed May 2015.

National Highway Traffic Safety Administration. 2018. *Corporate Average Fuel Economy.* Available: https://www.nhtsa.gov/laws-regulations/corporate-average-fuel-economy. Accessed September 15, 2018.

NHTSA. *See* National Highway Traffic Safety Administration.

OPR. *See* Governor's Office of Planning and Research.

State of California. 2018. California Climate Change Legislation. Available: http://www.climatechange.ca.gov/state/legislation.html. Accessed November 1, 2018.

United Nations. 2015. Paris Agreement. Available: https://unfccc.int/sites/default/files/english_paris_agreement.pdf. Accessed September 24, 2018.

Wade, Samuel. Branch Chief. Transportation Fuels Branch, Industrial Strategies Division, California Air Resources Board, Sacramento, CA. June 30, 2017—e-mail to Austin Kerr of Ascent Environmental regarding whether the Low Carbon Fuel Standard applies to fuels used by off-road construction equipment.

Section 3.8 Hazards and Hazardous Materials

California Department of Forestry and Fire Protection. 2007. Fire Hazard Severity Zones in SRA, Napa County. Available: http://frap.fire.ca.gov/webdata/maps/napa/fhszs_map.28.pdf. Accessed July 30, 2018.

California Department of Toxic Substances Control. 2018. EnviroStor. Available: https://www.envirostor.dtsc.ca.gov/public/. Accessed August 27, 2018.

California Environmental Protection Agency. 2018. Cortese List Database. Available: http://www.calepa.ca.gov/sitecleanup/corteselist/. Accessed September 6, 2018.

Calistoga Joint Unified School District. 2018. Schools. Available: https://www.calistogaschools.org/about_us/about_the_district/. Accessed August 27, 2018.

Howell Mountain Elementary School District. 2018. Welcome. Available: https://www.hmesd.org/. Accessed August 27, 2018.

Napa County. 2008. *Napa County General Plan*. Adopted June 3, 2008. As amended through June 4, 2013. Napa, CA. Available: http://www.countyofnapa.org/GeneralPlan/. Accessed August 2018.

———. 2013 *Napa Operational Area Hazard Mitigation Plan.* Available: https://www.countyofnapa.org/DocumentCenter/View/779/Napa-Operational-Area-Hazard-Mitigation-Plan-2013-PDF?bidId=. July 26, 2018.

Napa County Airport Land Use Commission. 1999. *Airport Land Use Compatibility Plan.* Available: https://www.countyofnapa.org/DocumentCenter/View/1980/Airport-Land-Use-Compatibility-Plan-PDF. Accessed August 22, 2018.

Napa County Department of Environmental Health. 2018. CUPA/Pollution Prevention. Available: https://www.countyofnapa.org/1919/Pollution-Prevention. Accessed August 22, 2018.

Napa Valley Unified School District. 2018. Finding a School. Available: http://www.nvusd.org/findingaschool#schoolmap. Accessed August 27, 2018.

Pope Valley Union Elementary School District. 2018. Our District. Available: http://www.pvk8.org/Our-District. Accessed August 27, 2018.

State Water Resources Control Board. 2018. GeoTracker Database. Available: https://geotracker.waterboards.ca.gov/map/?CMD=runreport&myaddress=napa+county. Accessed August 27, 2018.

St. Helena Unified School District. 2018. About the District. Available: https://www.sthelena.k12.ca.us/apps/pages/index.jsp?uREC_ID=283778&type=d. Accessed August 27, 2018.

Section 3.9 Hydrology and Water Quality

City of Napa. 2017 (September 5). *Urban Water Management Plan 2015 Update.* Available: https://www.cityofnapa.org/DocumentCenter/View/1376/Urban-Water-Management-Program-2015-Update-PDF?bidId=. Accessed October 4, 2018.

DOE. *See* U.S. Department of Energy.

Napa County. 2007 (February 16). *Napa County General Plan Draft Environmental Impact Report*. State Clearinghouse No. 2005102088. Napa, CA. Prepared by PMC, Sacramento, CA.

———. 2008. *Napa County General Plan*. Adopted June 3, 2008. Napa, CA. Available: http://www.Countyofnapa.org/GeneralPlan/. Updated June 4, 2013. Accessed September 5, 2018.

———. 2013a (January). *Napa County Groundwater Monitoring Plan 2013*. Prepared by Luhdorff & Scalmanini. Available: https://www.napawatersheds.org/managed_files/Document/7097/FINAL_Napa%20County%20GW%20Monitoring%20Plan%202013-with%20appendices_reduced.pdf. Accessed September 5, 2018.

———. 2013b *Napa Operational Area Hazard Mitigation Plan.* Available: https://www.countyofnapa.org/DocumentCenter/View/779/Napa-Operational-Area-Hazard-Mitigation-Plan-2013-PDF?bidId=. July 26, 2018.

———. 2017 (March). *Napa County Comprehensive Groundwater Monitoring Program 2016 Annual Report and CASGEM Update*. Prepared by Luhdorff & Scalmanini. Available: https://www.napawatersheds.org/managed_files/Document/8485/2016%20Napa%20Annual%20GW%20Report_20170404_FINAL_with_Figs_sm.pdf. Accessed September 5, 2018.

———. 2018a Groundwater Sustainability Planning. Available: https://www.countyofnapa.org/1238/Groundwater-Sustainability-Planning. Accessed September 5, 2018.

San Francisco Bay Regional Water Quality Control Board. 2017. *San Francisco Bay (Region 2) Water Quality Control Plan (Basin Plan)*. Oakland, CA. Available: http://www.waterboards.ca.gov/rwqcb2/basin_planning.shtml. Accessed September 5, 2018.

State Water Resources Control Board. 2010. 2010 Integrated Report Clean Water Act 303(d) List/305(b) Report. Available: https://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2010.shtml. Accessed October 4, 2018.

U.S. Department of Energy. 2006. *Energy Demands on Water Resources: Report to Congress on the Interdependency of Energy and Water*. Available at: http://www.circleofblue.org/wp-content/uploads/2010/09/121-RptToCongressEWwEIAcomments-FINAL2.pdf.

Watershed Information & Conservation Council. 2018. Sediment in the Napa River. Available: https://www.napawatersheds.org/sediment-napa-river. Accessed October 3, 2018.

Section 3.10 Land Use

Napa County. 2007 (February). *Napa County General Plan Update Draft Environmental Impact Report*. Available: http://www.countyofnapa.org/Pages/DepartmentDocuments.aspx?id=4294967660. Accessed May 2015. State Clearinghouse No. 2005102088. Prepared by PMC. Napa, CA.

———. 2008. *Napa County General Plan*. Adopted June 3, 2008. As amended through June 4, 2013. Napa, CA. Available: http://www.countyofnapa.org/GeneralPlan/. Accessed May 2015.

Section 3.11 Noise

Alberts, Daniel J. 2006. Addressing Wind Turbine Noise. Lawrence Technological University. October 2006.

California Department of Transportation. 2013a (September). *Technical Noise Supplement. Division of Environmental Analysis*. Sacramento, CA. Prepared by ICF International.

———. 2013b (September). *Transportation and Construction Vibration Guidance Manual*. Division of Environmental Analysis. Sacramento, CA. Prepared by ICF International.

Caltrans. *See* California Department of Transportation.

Federal Transit Administration. 2006. *Transit Noise and Vibration Impact Assessment*. Washington, D.C. Available: https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/FTA_Noise_and_Vibration_Manual.pdf. Accessed April 10, 2018.

FTA. *See* Federal Transit Administration.

GE Renewable Energy. 2017. *1.7-100/103 Wind Turbine*. Available at: https://www.gerenewableenergy.com/wind-energy/turbines/1-7-100-103.html.

IFC. *See* International Finance Corporation.

International Finance Corporation. 2012. *Utility Scale Solar Power Plants: A Guide for Developers and Investors.* Available at: http://www.ifc.org/wps/wcm/connect/04b38b804a178f13b377ffdd29332b51/SOLAR%2BGUIDE%2BBOOK.pdf?MOD=AJPERES.

Napa County. 2007 (February). *Napa County General Plan Update Draft Environmental Impact Report*. Available: http://www.countyofnapa.org/Pages/DepartmentDocuments.aspx?id=4294967660. Accessed May 2015.

———. 2008. *Napa County General Plan*. Adopted June 3, 2008. As amended through June 4, 2013. Napa, CA. Available: http://www.countyofnapa.org/GeneralPlan/. Accessed August 2018.

———. 2013. *Napa County General Plan*. Adopted June 3, 2008. As amended through June 4, 2013. Napa, CA. Available: http://www.countyofnapa.org/GeneralPlan/. Accessed May 2018.

OPR. *See* Governor's Office of Planning and Research.

Siemens. 2015. *Siemens Wind Power SWT 2.3-120 Extending the Reach of the G2 Product Platform.* Available at: http://mvdpanel.net/adjuntosTextos/cz47hroew7iqkp/673/Monica-Castillo-siemens.pdf.

State Water Resources Control Board. 2015. *General Waste Discharge Requirements for Composting Operations.* Available at: http://www.swrcb.ca.gov/water_issues/programs/compost/docs/compost_eir.pdf.

SWRCB. *See* State Water Resources Control Board.

Section 3.12 Transportation and Circulation

California Department of Transportation. 2002. Guide for the Preparation of Traffic Impact Studies. December 2002.

———. 2008. Highway Design Manual. July 1, 2008. Online URL: www.dot.ca.gov/hq/oppd/hdm/pdf/fwd.pdf

Caltrans. *See* California Department of Transportation.

Napa County. 2007 (February). *Napa County General Plan Update Draft Environmental Impact Report*. Available: http://www.countyofnapa.org/Pages/DepartmentDocuments.aspx?id=4294967660. Accessed May 2015.

———. 2008. *Napa County General Plan*. Adopted June 3, 2008. As amended through June 4, 2013. Napa, CA. Available: http://www.countyofnapa.org/GeneralPlan/. Accessed: August 2018.

———. 2019. *Napa County General Plan, Circulation Element*. Adopted February 5, 2019. Napa Valley Transportation Authority. 2015. *Vision 2040 – Moving Forward.* Available: http://www.nvta.ca.gov/countywide-plan-vision-2040. Accessed: August 2018.

National Research Council. 2000. *Highway Capacity Manual.* Available: https://sjnavarro.files.wordpress.com/2008/08/highway_capacital_manual.pdf. Accessed: August 2018.

NVTA. *See* Napa Valley Transportation Authority.

Section 3.13 Utilities and Service Systems

California Department of Environmental Protection. 2018. *Hazardous Waste and Substances Site List (Cortese).* Available: https://www.envirostor.dtsc.ca.gov/public/search?cmd=search&reporttype=CORTESE&site_type=CSITES,OPEN,FUDS,CLOSE&status=ACT,BKLG,COM,COLUR&reporttitle=HAZARDOUS+WASTE+AND+SUBSTANCES+SITE+LIST+(CORTESE). Accessed September 2018.

Cal/EPA. *See* California Department of Environmental Protection.

CalRecycle. 2009. *2008 Annual Report Integrated Waste Management Board "A Year of Progress".* Available: file:///C:/Users/kelly.bray/Downloads/2009020.pdf. Accessed: September 2018.

———. 2019. *SWIS Facility Detail- Keller Canyon Landfill (07-AA-0032).* Available: https://www2.calrecycle.ca.gov/SWFacilities/Directory/07-AA-0032/Detail/. Accessed January 27, 2019.

Napa County. 2007 (February 16). *Napa County General Plan Draft Environmental Impact Report*. State Clearinghouse No. 2005102088. Napa, CA. Prepared by PMC, Sacramento, CA.

———. 2008. *Napa County General Plan*. Adopted June 3, 2008. Napa, CA. Available: http://www.Countyofnapa.org/GeneralPlan/. Updated June 4, 2013. Accessed September 5, 2018.

Chapter 4 Cumulative Impacts

Bay Area Air Quality Management District. 2017. *Draft 2017 Clean Air Plan-Spare the Air, Cool the Climate: A Blueprint for Clean Air and Climate Protection in the Bay Area.* Available: http://www.baaqmd.gov/~/media/files/planning-and-research/plans/2017-clean-air-plan/baaqmd_2017_cap_draft_122816-pdf.pdf?la=en. Accessed August 30, 2018.

Napa County. 2007 (February 16). *Napa County General Plan Draft Environmental Impact Report*. State Clearinghouse No. 2005102088. Napa, CA. Prepared by PMC, Sacramento, CA.

Thorne, J.H., J.A Kennedy, J.F. Quinn, M. Mccoy, T. Keeler-Wolf, and J. Menke. 2004. A Vegetation Map Of Napa County Using The Manual of California Vegetation Classification and its Comparison to Other Digital Vegetation Maps. Madroño 51:4, 343-363.

Chapter 5 Other Sections Required by Statute

No references cited in this chapter.

Chapter 6 Alternatives

No references cited in this chapter.

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