



Chapter 1 - Introduction

In 2010, the Shasta County Air Quality Management District (District) initiated the regional climate action planning (RCAP) process. The primary objectives of the RCAP process are to contribute to the State's climate protection efforts and to provide California Environmental Quality Act (CEQA) review streamlining benefits for development projects within the region's four jurisdictions: the City of Anderson, the City of Redding, the City of Shasta Lake, and the unincorporated areas of Shasta County. To facilitate these objectives, the District worked with the four jurisdictions to prepare community-specific, independent climate action plans that contain greenhouse gas (GHG) emission inventories and forecasts, emission reduction measures, and implementation and monitoring programs. The climate action plans, located within chapters 2, 3, 4, and 5 of this document, provide a summary of jurisdictional Greenhouse Gas inventories and describe how each jurisdiction will achieve GHG reductions through local actions that contribute to the statewide GHG emissions reduction target defined in Assembly Bill (AB) 32, the California Global Warming Solutions Act of 2006, CEQA guidelines, and other State guidance. The RCAP document serves as a collection of the individual climate action plans and demonstrates the region's commitment to the State's GHG reduction efforts.

CALIFORNIA CLIMATE PROTECTION LEADERSHIP

California has adopted a variety of legislation aimed at reducing the state's GHG emissions. This section describes: a) legislation pertaining to California's emissions reduction targets, b) statewide actions that will help reduce emissions in the Shasta region, and c) the State's guidance to local jurisdictions related to GHG emissions.

STATE LEGISLATION PERTAINING TO CALIFORNIA'S GREENHOUSE GAS EMISSIONS REDUCTION TARGETS

Executive Order S-3-05 (EO-S-3-05) and AB 32 are the primary legislation that defines the State's GHG emission reduction targets. These policies identify both near-term and long-term reduction goals and have directed subsequent implementation legislation as described within the Climate Change Scoping Plan.

Executive Order S-3-05

EO-S-3-05 recognizes California’s vulnerability to reduced snowpack in the Sierra Nevada Mountains, exacerbation of air quality problems, and potential sea level rise due to a changing climate. To address these concerns, the executive order established targets to reduce GHG emissions to 2000 levels by 2010, to 1990 levels by 2020, and to 80% below 1990 levels by 2050.

Assembly Bill 32 (2006)

AB 32 requires California to reduce statewide GHG emissions to 1990 levels by 2020. AB 32 directs the California Air Resources Board (ARB) to develop and implement regulations that reduce statewide GHG emissions. AB 32 also requires ARB to adopt a quantified cap on GHG emissions that represents 1990 emissions levels, institute a schedule to meet the emissions cap, and develop tracking, reporting, and enforcement tools to assist the State to achieve the required GHG emission reductions.

Climate Change Scoping Plan

The Climate Change Scoping Plan was approved by ARB in December 2008 and outlines the State’s plan to achieve the GHG reductions required in AB 32. The Scoping Plan contains the primary strategies California will implement to achieve a reduction of 169 million metric tons (MMT) of carbon dioxide equivalent (CO₂e), or approximately 28% from the state’s projected 2020 emission level.

STATEWIDE ACTIONS WITH CONSIDERABLE EMISSIONS REDUCTION POTENTIAL IN SHASTA COUNTY

The State of California has initiated a wide variety of regulations and programs to reduce statewide GHG emissions. These include regulations and programs addressing emissions from passenger cars and trucks, regulations requiring increased amounts of electricity generated from renewable sources, and regulations requiring increased building energy efficiency. These actions will effectively reduce emissions within the Shasta region and assist the jurisdictions in achieving their reduction targets. Statewide actions relied upon in the jurisdictions’ CAPs are described below:

Assembly Bill 1493 (2002) – California Clean Car Standards

AB 1493, California Clean Car Standards, requires ARB to develop and adopt regulations to reduce GHG emissions from passenger vehicles, light-duty trucks, and other non-commercial vehicles for personal transportation. In 2004, ARB approved amendments to the California Code of Regulations adding GHG emissions standards to California’s existing standards for motor vehicle emissions.

Executive Order S-1-07 (2007) – Low Carbon Fuel Standard

EO-S-1-07 established a Low-Carbon Fuel Standard to reduce the carbon intensity of transportation fuels sold in California by a minimum of 10% by 2020.

Senate Bill 375 (2008) – Sustainable Communities and Climate Protection Act

Senate Bill (SB) 375, the Sustainable Communities and Climate Protection Act, aligns regional transportation planning efforts, regional GHG reduction targets, and affordable housing allocations. Metropolitan Planning Organizations (MPOs) are required to adopt a Sustainable Communities Strategy (SCS), which allocates land uses in the MPO’s Regional Transportation Plan. Qualified projects consistent with an approved SCS or Alternative Planning Strategy and categorized as “transit priority projects” receive incentives under new provisions of the California Environmental Quality Act (CEQA).

Medium/Heavy Duty Vehicle Efficiency Program

Medium- and heavy-duty vehicle efficiency reductions in the RCAP were calculated based on the Heavy-Duty Vehicle GHG Emission Reduction (aerodynamic efficiency) and the Medium- and Heavy-Duty Vehicle Hybridization regulations. The Heavy-Duty Vehicle GHG Emission Reduction regulations require existing trucks/trailers to be retrofitted with technologies that reduce GHG emissions and improve the fuel efficiency of trucks through reductions in aerodynamic drag and rolling resistance. The Medium- and Heavy-Duty Vehicle Hybridization regulations address the application of hybrid electric technology to reduce GHG emissions and fuel consumption related to stop-and-go driving, idling, and power take-off operations in their duty cycle.

Renewable Portfolio Standard

SB 1078, SB 107, EO-S-14-08, and SB X1-2 have established increasingly stringent Renewable Portfolio Standard (RPS) requirements for California utilities. RPS-eligible energy sources include wind, solar, geothermal, biomass, and small-scale hydro.

- SB 1078 required investor-owned utilities to provide at least 20% of their electricity from renewable resources by 2020.
- SB 107 accelerated the SB 1078 timeframe to take effect in 2010.
- EO-S-14-08 increased the RPS further to 33% by 2020.
- SB X1-2 codified the 33% RPS by 2020 requirement established by EO-S-14-08 and extended the scope of requirement to include both investor-owned and municipally-owned utilities.

STATE GUIDANCE TO LOCAL JURISDICTIONS RELATED TO GREENHOUSE GAS EMISSIONS

The State has provided direct guidance regarding how local jurisdictions are to address locally-generated GHG emissions. This guidance makes it clear that local governments are considered “essential partners” in achieving the State’s GHG reduction goals and have a responsibility to reduce emissions within existing and planned development within their communities. Key guidance is described below.

Climate Change Scoping Plan

EO-S-13-08 directs the Governor’s Office of Planning and Research (OPR), in cooperation with the California Resources Agency (CRA), to provide land use planning guidance related to sea level rise and other climate change effects.

Senate Bill 97 (2007)

SB 97 acknowledges that climate change is a prominent environmental issue that requires analysis under the California Environmental Quality Act (CEQA). Pursuant to SB 97, the State CEQA Guidelines were updated in 2010 to include provisions for mitigating GHG emissions and/or the effects of GHG emissions. The amended CEQA Guidelines (Section 15183.5) allow jurisdictions to analyze and mitigate the significant effects of GHGs at a programmatic level by adopting a plan for the reduction of GHG emissions. Later, as individual projects are proposed, project-specific environmental documents may tier from and/or incorporate by reference that existing programmatic review in their cumulative impacts analysis. If a plan is to be used for tiering or incorporation by reference purposes, it should contain enforceable reduction measures and demonstrate that it can reliably reduce the community’s GHG emissions to a degree that contributes its fair share to State emissions reduction efforts (see Attorney General’s guidance below).

Executive Order S-13-08 (2008)

EO-S-13-08 directs OPR, in cooperation with CRA, to provide land use planning guidance related to sea level rise and other climate change effects. The order also directed CRA to develop a State Climate Adaptation Strategy by June 30, 2009 and to convene an independent panel to complete the first California Sea Level Rise Assessment Report.

Attorney General's Guidance

The Office of the Attorney General, under Jerry Brown and Kamala Harris, has issued comment letters to local jurisdictions preparing GHG reduction strategies or related projects. These comment letters identify the State's *expectations* of local government's with regard to climate protection efforts, though there are not yet any definitive legal requirements that would give the Attorney General's guidance the force of law.

In March 2009, the State Attorney General's Office emphasized that communitywide targets should align with an emissions trajectory that reflects California's near-term (1990 levels by 2020) and long-term (80 percent below 1990 levels by 2050) GHG emissions limits set forth in AB 32 and Executive Order S-3-05. The Attorney General's August 2009 comment letter states that GHG projections associated with a General Plan update should estimate the emission levels through the full planning horizon not just in 2020. Though the letter only explicitly calls for planning horizon projections, it is assumed that an interim year emission reduction target is also recommended. An August, 2009 comment letter states that GHG reduction plans and related documents need to identify GHG reduction estimates for measures and provide the underlying and substantiated assumptions. A further May 2010 letter states that proposed measures relating to GHG reductions need to be specific and enforceable.

CEQA Guidelines (Section 15183.5)

In 2010, the State revised its CEQA Guidelines to incorporate updated guidance related to GHGs. Section 15183.5 allows a qualified GHG reduction strategy to provide streamlining benefits for a local jurisdiction given it meets certain requirements. The jurisdiction must prepare a comprehensive GHG emissions inventory and anticipated emissions projections over a specified time period based on current and planned project activity within the jurisdiction. An emissions reduction target must also be established, below which contributions to GHG emissions from activities covered by the plan would not be considered cumulatively significant. The jurisdiction must develop measures and performance standards that, when implemented as specific project requirements, collectively achieve the reduction target. The plan must also contain a monitoring mechanism to track implementation progress and require amendments if the plan is not achieving specified reduction levels. The Plan also must be adopted in a public process following environmental review (e.g., certification of an Environmental Impact Report or adoption of a negative declaration, mitigated negative declaration, or other environmental document).

California Climate Change Adaptation Policy Guide

In 2012, the California Emergency Management Agency and the California Natural Resources Agency released the *Draft California Climate Change Adaptation Policy Guide* (Guide) to assist local and regional governments in their preparations for climate change. The Guide is organized into 11 climate impact regions based on environmental and socioeconomic settings. Impacts are organized into seven climate impact sectors: equity, health, and socio-economics; ocean and coastal resources; water management – surface water; forestry and rangeland; biodiversity and habitat; agriculture; and infrastructure. Potential adaptation strategies and policies are also provided. The Guide identifies GHG reductions as a goal to be pursued in tandem with adaptation planning, and identifies the need to ensure that CAP measures do not conflict with adaptation planning efforts.

THE SHASTA APPROACH

The Shasta Regional CAP was prepared to achieve various local objectives and reflect the region's unique opportunities and challenges. As previously stated, there is no adopted legislation requiring local jurisdictions to establish emissions reduction targets. However, the jurisdictions preparing the RCAP are seeking CEQA project streamlining and have prepared this plan to comply with the CEQA guidelines (as described above).

This plan reflects the reality of Shasta County today. While the jurisdictions are serious about supporting statewide emissions reduction targets, local efforts need to be compatible with supporting a strong local economy and protecting the personal freedom of Shasta County residents and businesses. The plan's measures were also written to reflect the character of development in the county. Traditional climate action planning measures that have been developed for urban communities do not make sense in these jurisdictions, nor would ambitious programs that require expensive local funding commitments. The RCAP measures were written to rely heavily on voluntary, market-based programs that can be implemented economically and on existing utility- and jurisdictionally-sponsored programs.

The individual CAPs included in this plan provide guidance to achieve a 2020 emissions reduction target. The jurisdictions will update their plans as they see fit to include more robust reduction measures that contribute to the 2035 and 2050 reduction targets, but will again rely heavily upon statewide programs and activities to generate the majority of the required reductions.

RCAP PROCESS

Development of the RCAP parallels climate change planning processes followed by other California jurisdictions. This process includes:

- Completion of a baseline GHG emissions inventory and forecasting future emissions;
- Identification of a communitywide GHG reduction target;
- Identification and development of GHG reduction measures and actions to meet the reduction target and evaluation of their environmental impacts consistent with the California Environmental Quality Act; and
- Monitoring the effectiveness of reduction measures and adapting the plan to changing conditions.

BASELINE EMISSIONS INVENTORY AND FORECASTS

The purpose of a GHG emissions inventory is to gather information about sources of emissions in order to assist policy makers in effectively implementing cost-effective GHG reduction policies, actions, and control measures in policy areas over which they have operational and discretionary control. An accurate inventory is necessary to understand which sectors comprise the largest portion of the GHG inventory, have the most reduction potential, and can be effectively influenced by policies and actions implemented by the jurisdictions. The jurisdictions prepared baseline GHG emissions inventories for 2008 using data from a variety of information sources.

The baseline inventories are organized by emission sectors. A "sector" is a distinct subset of a market, society, industry, or economy, whose components share similar characteristics. An emission sector may also contain subsectors that provide more specificity about the source of emissions (e.g., natural gas or electricity can be a subsector of energy consumption). The total number of sectors included in each jurisdiction's inventory varies depending on local factors. However, each inventory developed for the RCAP contains basic emissions sectors, including energy, transportation, solid waste, water, and off-road

vehicles. Some inventories include additional applicable sectors, such as stationary sources, agriculture, and forestry.

The baseline inventories were used to forecast GHG emissions for three horizon years (i.e., 2020, 2035, and 2050) under a business-as-usual scenario. The business-as-usual scenario assumes that historical and current GHG-generating practices and trends for each sector will continue to each horizon year. The business-as-usual forecasts do not include GHG reductions associated with statewide GHG reduction programs or RCAP measures. The GHG reduction measures developed for the RCAP are applied to the 2020 emissions levels to determine if the jurisdictions will achieve their GHG reduction targets.

EMISSIONS REDUCTION TARGETS

The unincorporated portion of Shasta County, the City of Anderson, and the City of Shasta Lake have set three emissions reduction targets for years that align with State climate legislation and local planning efforts (i.e., 2020, 2035, and 2050). The City of Redding chose to focus on 2020 emissions reduction targets. The reduction targets were purposefully set at levels that are likely to provide CEQA streamlining benefits to new development projects in the community. Each jurisdiction calculated a target that would equate to emissions 15% below 2008 levels by 2020. Additionally the jurisdictions, with the exception of Redding, calculated targets that would equate to emissions 49% below 2008 levels by 2035; and 83% below 2008 levels by 2050.

REDUCTION MEASURE DEVELOPMENT

A combination of statewide actions and local emissions reduction efforts contribute to target achievement. As previously described, statewide emissions reduction programs have been developed to implement AB 32. These statewide actions provide the majority of reductions in each jurisdiction. Local reduction measures and actions are included to address the remaining gap between the reduction targets and statewide actions. These local actions are organized into reduction categories according to the source of emissions that they address. Reduction categories vary among the jurisdictions based on local opportunities and constraints, and include energy, solid waste, transportation, water, and carbon sequestration. The recommended local actions affect issues within the jurisdictions' direct influence.

Measures and actions are recommended that translate the vision of the CAP into on-the-ground action. Measures define the direction that the City and County will take to accomplish GHG reduction goals. Actions define the specific steps that the City and County will take over time. Measures were developed by (a) evaluating existing community conditions, (b) identifying emission reduction opportunities within the jurisdictions, (c) reviewing best practices from other jurisdictions and organizations, and (d) incorporating State and regional laws, guidelines, and recommendations. After considering a wide range of potential options, measures and actions were recommended based on the following criteria:

- Is it technically feasible to implement the measure?
- Does the measure create additional community benefits (e.g., lower utility bills, public health)?
- Would the community support the measure?

REDUCTION MEASURE IMPLEMENTATION

Ensuring that the measures translate from policy language into on-the-ground results is critical to the success of the CAP. To facilitate this, each measure contains a table that identifies the specific actions the jurisdictions will carry out and identifies the responsible departments.

The second section of each table provides progress indicators that enable local government staff and the public to track measure implementation and monitor the overall CAP progress. The tables provide

both interim and final progress indicators where possible. Interim progress indicators are especially important, as they provide mid-course checks to evaluate if a measure is on the right path to achieving its GHG reductions.

Upon adoption of the CAP, the identified departments and/or organizations will become responsible for implementing assigned actions. Key staff in each department will facilitate and oversee action implementation. In order to assess the status of local action efforts, CAP implementation meetings will occur on a regular basis. Some actions will require inter-departmental or inter-agency cooperation and appropriate partnerships will need to be established accordingly.

RCAP ORGANIZATION

The RCAP is organized into five chapters and supporting appendices. Chapter 1 provides an overarching introduction to the RCAP, describing its purpose, State leadership and regulations related to climate change, and how the plan acknowledges the unique context of Shasta County.

Chapters 2-5 contain CAPs for each participating jurisdiction. Each of these chapters was prepared to function as a stand-alone CAP that could be adopted by the individual jurisdictions. The chapters begin with a description of the purpose for preparing the CAP, and then present the GHG emissions inventory and forecasts; local GHG emissions reduction targets; GHG emissions reduction measures specific to that community; and an implementation and monitoring program for the CAP.

The three supporting appendices provide detailed information on the methodologies used to calculate the emissions inventories and forecasts, quantify the reduction measures, and establish the reduction targets. The following appendices are included at the end of this plan:

- Appendix A – GHG Emissions Inventory and Forecasts Methodology
- Appendix B – GHG Reductions Quantification Methodology
- Appendix C – Target Setting Methodology
- Appendix D – Economic Analysis

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