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# INTRODUCTION

## PLAN FOUNDATIONS

Yolo County has adopted a strong commitment to the reduction of greenhouse gas (GHG) emissions. The County was an early advocate of responsible planning with its long-time commitment to growth management and its adoption in 1982 of a countywide Energy Plan.

Concepts of smart growth, and climate change conscious policies and actions, are prominent in the newly adopted 2030 Yolo County General Plan. The County's policy commitment to the goals of protecting both agricultural land and open space, and directing the majority of future growth to existing cities and communities discourages sprawl and encourages density, infill, compact community design, and development along movement corridors. It also allows for local food production and alternative transportation opportunities. Climate change policies and actions (more than 350 of them in total) appear in every element of the General Plan. In addition, the Conservation and Open Space Element contains individual sections addressing climate change and energy conservation.

The Yolo County Climate Action Plan (CAP) is an implementation action of the 2030 General Plan. Of particular importance in the General Plan are the following two actions:

**Action CO-A117:** *Develop a GHG Emissions Reduction Plan and/or Climate Action Plan (CAP) for the County, to control and reduce net GHG emissions, and to address economic and social adaptation to the effects of climate change. Development of this plan(s) shall include the following steps:*

1. *Conduct a baseline analysis (GHG emissions inventory) for 1990, or most appropriate baseline year;*
2. *Adopt an emissions reduction target;*
3. *Develop strategies and actions for reducing emissions including direct offsets and fees to purchase offsets;*
4. *Develop strategies and actions for adaptation to climate change;*
5. *Implement strategies and actions; and*
6. *Monitor emissions and verify results a minimum of every five years starting in 2010.*

*Utilize the 1982 Energy Plan as a starting point for this effort. Encourage collaboration*

*with the cities to include the incorporated areas in the plan(s). Amend the General Plan to include the plan(s) after adoption. Require County operations and actions, as well as land use approvals to be consistent with this plan(s). This plan must be in place prior to adoption of any specific plan. (Policy CO-8.1)*

**Action CO-A118:** *In the interim until the GHG Emissions Reduction Plan/CAP is in effect, the following significance thresholds shall be used for project analysis:*

- *Projects consistent with the General Plan and otherwise exempt under CEQA – Assumed to be de minimus.*
- *Projects consistent with the General Plan and subject to CEQA – Net zero threshold to be achieved by the applicant as follows:*
  - *Apply practical and reasonable design components and operational protocols to reduce project emissions to the lowest feasible levels;*



- *Use verifiable offsets to achieve remaining GHG reductions. To the greatest feasible extent, offsets shall be: locally based, project relevant, and consistent with other long term goals of the County (Policy CO-8.9).*

## CALL TO ACTION—STATE AND LOCAL LEADERSHIP

The world’s leading climate change experts have identified three critical factors related to the Earth’s changing climate:

- Atmospheric concentrations of carbon dioxide, methane, nitrous oxide and other GHGs have increased dramatically since 1750 and now far exceed pre-industrial values,
- Global average temperatures have increased markedly over the last 100 years due to the increased GHG concentrations, and
- Human-caused GHG emissions are the primary driver behind the global warming process (IPCC, 2001).

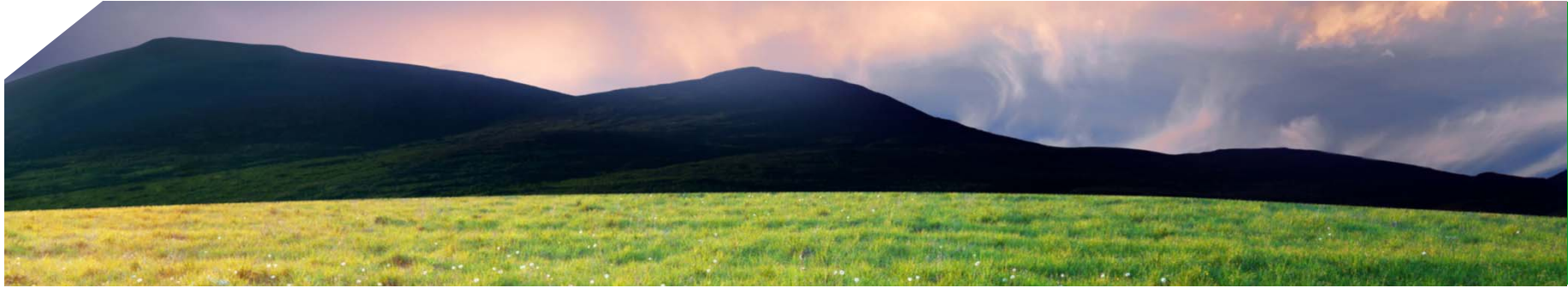
While some level of GHGs are essential to life on earth, emissions from burning fossil fuels, deforestation, methane-producing activities, and other causes have increased the concentration of GHGs. Most climate scientists agree that in order to avoid dangerous climate change, atmospheric GHG concentrations need to be stabilized at 350–400 parts per million (ppm). Global atmospheric carbon dioxide concentrations have already passed the 350 ppm and are fast approaching 400 ppm. Actions in the next decade will determine to how far we exceed these recommended levels.

### Potential Effects of Climate Change in Yolo County

The State has extensively analyzed the potential effects of climate change. This research identifies a strong likelihood that considerable warming will occur within the next the century. Certain effects may already be occurring.

Some anticipated consequences of climate change in Yolo County include:

- Rising temperatures, leading to increased electricity use for cooling, especially in the summer. By 2020, this could result in a 1% to 3% increase in electricity demand (CEC, 2007).
- Warm-season horticultural crops (e.g., tomatoes, cucumbers, sweet corn, and peppers) could be less viable by 2050. This may prompt a shift to hot-season crops such as melon and sweet potato.
- Climate change could worsen air quality by increasing emissions, accelerating chemical processes, and raising inversion temperatures during summer periods of air stagnation.
- Sea level is expected to rise above present levels by 55 inches or more during the next 100 years. This would exacerbate flooding in already vulnerable regions of Yolo County. Combined with increased potential for winter flooding, this could threaten the structural integrity of levee and flood control systems, which would place more people and property at risk from flooding.



**State Leadership**

California is a leader in global climate protection efforts. The State has adopted a wide variety of regulations aimed at reducing statewide GHG emissions. While these actions alone cannot stop climate change, implementation of the following legislation will play a critical role.

**Assembly Bill 32**

Assembly Bill (AB) 32, the California Global Warming Solutions Act of 2006, 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, institute a schedule to meet the emissions target, and develop tracking, reporting, and enforcement tools to ensure that California achieves the required emission reductions.

**Climate Change Scoping Plan**

The Climate Change Scoping Plan (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 MMT CO<sub>2</sub>e, or approximately 28% from the State’s projected 2020 emission levels.

**Executive Order S-3-05**

Executive Order S-3-05 (EO-S-3-05) states that California is vulnerable to the effects of climate change, including reduced snowpack in the Sierra Nevada Mountains, exacerbation of California’s existing air quality problems, and sea level rise. To address these concerns, the executive order established statewide targets to reduce GHG emissions to 2000 levels by 2010, to 1990 levels by 2020, and to 80% below 1990 levels by 2050.

**Senate Bill 375 (2008)**

Senate Bill (SB) 375 aligns regional transportation planning efforts, regional GHG reduction targets, and land use and housing allocations to reduce vehicle emissions. The State has assigned passenger vehicle per capita GHG reduction targets to each Metropolitan Planning Organization (MPO). Within the

**Yolo County’s Commitment to Energy Conservation**

**1982:** Energy Plan adopted to support energy conservation, promote renewable energy, and protect the County from volatile energy prices.

**1985:** Landfill gas-to-energy facility completed at the Yolo County landfill, generating 20,000 kWh per year and eliminating more than 90% of methane emissions.

**2009:** Joined California FIRST’s Property Assessed Clean Energy (PACE) program to provide low-interest financing for energy efficiency and renewable energy improvements.

**2010:** One-megawatt solar farm installed at the Yolo County Justice Center.

**2010:** Established Energy Watch partnership, an outreach program to reduce countywide building energy use.

Yolo County has a well-earned reputation for climate protection leadership. The County is a leading advocate of responsible growth and agricultural preservation. In addition, the County has taken numerous steps to reduce emissions associated with County government operations.

Sacramento Area Council of Governments (SACOG) region, these targets are a 7% reduction by 2020 and a 16% reduction by 2030 compared to 2005 baseline levels of 23.0 lbs of CO<sub>2</sub> per capita per weekday.

#### **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. This CAP has been developed specifically for this purpose.

#### **Yolo County Leadership**

Yolo County has a well-earned reputation for climate protection leadership. The County is a leading advocate of growth management, coupled with a strong commitment to agricultural preservation. The 1982 Energy Plan demonstrated the County's historic and long-term commitment to energy conservation. In addition, Yolo County has taken numerous steps to reduce emissions associated with County operations.

Recently, the County's efforts have included joining the Cool Counties Climate Stabilization Declaration, leading the Yolo County Climate Change Compact, and completing a General Plan update that fully integrates policies and programs into every element that reduce GHG emissions (see appendix D for a list of these General Plan policies).

#### **Cool Counties**

In September 2007, the Board of Supervisors unanimously approved a resolution declaring that Yolo County was joining with 13 other counties in the United

States to participate in the Cool Counties Climate Stabilization Declaration. Yolo County was one of the charter members in this initiative, and voluntarily committed to seek to reduce GHG emissions by 80% by 2050.

#### **Yolo County Climate Change Compact**

Recognizing that coordinated climate protection efforts would increase the effectiveness of each jurisdiction's efforts, Yolo County organized the countywide Climate Change Compact. Compact members include the unincorporated county, cities, school districts, University of California, and other special districts. Since 2007, the working group has met multiple times per year and exchanged ideas on best practices related to preparing inventories and reducing GHG emissions.

#### **Yolo County General Plan**

The Yolo County General Plan, rewritten in 2009, contains over 350 policies and programs aimed at reducing GHG emissions in the unincorporated County and responding to the potential effects of climate change. The General Plan



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continues land use patterns that strongly encourage mixed use development, compact communities, and alternative transportation for new growth planned through 2030 in Yolo County. General Plan policies also provide direction regarding agricultural preservation, habitat conservation, open space protection, sustainable building design standards, complete streets, and other smart growth concepts.

General Plan Action CO-A117 requires the County to prepare and adopt a CAP. This CAP builds on the foundation provided in the 2030 General Plan and defines specific actions necessary to achieve GHG reduction and climate adaptation goals.

**County Achievements to Date**

Yolo County has already implemented a variety of successful actions that reduce GHG emissions. Notable examples include the following:

**Energy Efficiency** - Yolo County has implemented a wide array of energy efficiency improvements in County buildings, including replacing incandescent





lights with compact fluorescent bulbs, retrofitting equipment, installing computerized climate controls, installing cogeneration capacity at the Monroe Detention Facility, and developing a building closure program to retire less energy-efficient buildings. The County has also established an appliance replacement program for Energy Star appliances in County buildings and facilities. The County has established a goal of 10% annual reduction in energy use for government operations through 2013.

- **Landfill Gas to Energy Facility** - The County recovers methane from the Central Landfill to generate electricity and reduce the global warming potential of its landfill gas emissions.
- **Green County Buildings** - The County has adopted Leadership in Energy and Environmental Design (LEED) standards for all new County buildings.

- **Recycling** - All County buildings have recycling programs. The County also has also adopted a Construction and Demolition Recycling Ordinance that requires 50% of all construction and demolition debris to be diverted or recycled.
- **Agricultural Marketing** - The Agriculture Commissioner has initiated an agricultural marketing program to reduce “food miles,” and associated emissions.
- **Transportation and Fleet Vehicles** - The County has installed charging stations for electric vehicles and uses electric vehicles for commuting between County facilities.
- **Tree Planting** - The County operates a small nursery providing tree planting for County facilities.

## COMMUNITY INPUT

The County has undertaken considerable public outreach as a part of preparing the CAP. The following summarizes various efforts in this regard:

### Agricultural/Rural/Open Space Stakeholders

The agricultural sector in Yolo County generates more GHG emissions within the unincorporated area than any other sector. This contrasts with the state as a whole and with most communities where the transportation sector is the largest emitter. As such it was recognized early in the process that this sector would have an important role in assisting with the development of the CAP and accomplishing necessary reductions. In light of this, the County created a stakeholder group to provide input to the process.

The County invited the stakeholder group to participate in workshops to discuss development of the CAP. Stakeholders offered initial reduction ideas, and the agricultural research community offered valuable technical support and assistance to the County’s efforts to quantify agricultural emissions and reductions.

The stakeholder group met twice while the CAP was being prepared. Climate action





ideas within each agricultural subsector (i.e., livestock emissions, fuel and off-road equipment, nitrogen emissions, rice, and irrigation) were discussed at the first meeting in April 2010. Comments received at this meeting were incorporated into the development of preliminary measures. Emissions inventory results and preliminary CAP measures were presented and discussed at the second workshop in July 2010. The preliminary measures were refined and actions were developed based on the feedback received.

#### **Yolo County Climate Compact Meetings**

The County also discussed the CAP at three meetings of the Yolo County Climate Compact in April, June, and August 2010. The purpose of these meetings was to both ensure awareness of the County's efforts, and to ensure coordination on key assumptions. Compact members provided valuable feedback on these items which was incorporated in the CAP.

#### **Dunnigan Specific Plan Developer Group**

The Dunnigan Specific Plan (DSP) is the largest growth area in the 2030 General

Plan and the County has received a preliminary application for the Dunnigan Specific Plan (DSP) from the Dunnigan Landowner Group (applicants). As part of the overall project, the applicants have funded a portion of the consultant costs for preparation of the CAP. The CAP is required to be in place prior to adoption of the DSP, and the DSP is required to include consistent climate action efforts. It is anticipated that the DSP will be responsible for the bulk of the CAP action items related to new growth.

Staff met with the DSP representative in July 2010 to coordinate regarding appropriate growth assumptions for the DSP area, and also in September 2010 to provide an update on the CAP efforts and direction to ensure incorporation of appropriate CAP strategies into the Draft DSP.

#### **Planning Commission Workshop**

In August 2010, the CAP process, preliminary measures, and stakeholder feedback were presented to the Yolo County Planning Commission in a public

meeting. Commissioners listened to public comments and provided input regarding the inventory, projections, and preliminary reduction measures. This input was utilized in the development of the CAP.

## **AGENCY CONSULTATION**

To ensure compliance with various state, regional, and local requirements, as well as to collaborate on strategies to achieve mutual goals, the County has worked closely with a variety of government organizations in preparing the CAP. These efforts are summarized as follows.

#### **Attorney General's Office**

The State Attorney General has played a significant role in increasing awareness of climate change issues and the relationship of those issues to local land use control. Representatives of the Attorney General's office were briefed during the County's General Plan Update process regarding the GHG analysis in the EIR and the subsequent preparation of the CAP. In July 2010, staff and representatives of the Office met again to review the development of the CAP, including the proposed

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methodology and reduction targets. A third meeting was held in December 2010 to discuss the draft reduction strategy. To date, the Attorney General's Office has been supportive of the County's efforts, methodologies, and approach.

**Sacramento Area Council of Governments**

The majority of the CAP development costs were funded through a grant from the Sacramento Area Council of Governments (SACOG). County staff updated SACOG regularly regarding progress on the CAP as a requirement of the grant program. In addition, meetings with SACOG staff were held in June 2010 to discuss the CAP effort, including efforts needed to ensure local CAP inventories are consistent with the SACOG regional inventory, and the implementation of both AB 32 and SB 375. There was also discussion regarding efforts to utilize the Yolo County methodology for the agricultural sector as a model for the rest of the SACOG region.





Successful implementation of the CAP will require cooperation among the County, other jurisdictions, agencies, local businesses, residents, and private organizations.

#### **Yolo Solano Air Quality Management District**

The Yolo-Solano Air Quality Management District (YSAQMD) implements State and federal air quality regulations for the region through authority delegated from the ARB. County staff met with YSAQMD staff prior to commencing the CAP and met again in August 2010 to update YSAQMD regarding the County's progress.

#### **Yolo County Departments**

Staff and the consultant team have worked directly with the following County departments and divisions to coordinate regarding the CAP and related efforts: County Administrator's Office, County Counsel, Public Works, Integrated Waste Management, Natural Resources, Economic Development, General Services, and Agricultural Commissioner.

### **WORKING TOGETHER – COORDINATION WITH OTHER YOLO COUNTY PARTNERS**

Achieving the County's ambitious reduction targets will require extensive cooperation

among the County, other jurisdictions, agencies, and local businesses, residents, and private organizations. Building upon existing collaborative relationships and developing new partnerships will be critical to the successful implementation of the CAP.

Implementation of many of the agriculture reduction mechanisms and actions will depend upon involvement from farmers, university extensions and researchers, the Natural Resource Conservation Service (NRCS), the Yolo County Resource Conservation District (RCD), the Farm Bureau, the Agricultural Futures Alliance, and other organizations.

Communication and partnership with SACOG, Caltrans, Yolo County Transit District, and the Yocha Dehe Wintun Nation will be necessary to effectively implement many of the transportation reduction actions.

Energy efficiency and renewable energy programs work best when implemented at appropriate scales. Partnering with the

cities of Davis, West Sacramento, Winters, and Woodland and utilities and service providers could reduce cost and improve feasibility of these programs. Inter-jurisdictional cooperation will be especially important if the County implements the proposed community choice aggregation (CCA) program. Partnering with cities and neighboring counties could provide economies of scale for many of these programs.

Partnering with researchers at the University of California and other State agencies will provide state-of-the-art information related to the carbon mitigation potential of agriculture, inventory methodology and mitigation, and climate change adaptation.



## Other Climate Protection Efforts in Yolo County

### **City of Davis:**

In 1999, Davis joined a small group of cities calling for local action and a national policy on climate change. In 2010, Davis adopted a CAP that seeks to reduce communitywide emissions to 1990 by 2010, to 28% below 1990 levels by 2020, and to reach carbon neutrality by 2050.

### **City of West Sacramento:**

West Sacramento was one of the first cities to join the US Mayor's Climate Change Initiative. The City has developed an inventory of its current energy use and has already begun to implement various GHG reduction strategies and is preparing a CAP. The City has also partnered with the Port of West Sacramento to reduce emissions and install renewable energy production systems.

### **City of Winters:**

Winters has implemented a wide variety of transportation, energy, and solid waste programs to reduce GHG emissions.

### **City of Woodland:**

Woodland has prepared a baseline emissions inventory of energy use and resulting GHG emissions. The Environmental Services department is in the process of developing the City's first energy conservation and climate action plan and associated programs.

### **University of California, Davis:**

UC Davis has prepared a Climate Action Plan that outlines strategies to reduce campus emissions to 10.5% below 2008 levels by 2014 and 39.4% below 2008 levels by 2020.