

**Solano County Climate Adaptation/Resilience Snapshot**  
**Compiled by the Bay Area Climate & Energy Resilience Project (BACERP)**  
**March 2014**

This summary memo is based on input from Solano County climate stakeholders. The information was gathered via phone, email, web search, and an in-person group meeting co-hosted by the Solano County Transportation Authority in December 2013. The information is presented in four sections:

- County-Level “Spotlight” Adaptation & Resilience Initiatives
- Climate Planning Activities
- Current Structure for Coordination Among Cities
- Resources and Assistance To Accelerate Action

### **I. County-Level “Spotlight” Adaptation & Resilience Initiatives**

Across the Bay Area, government, non-profit and private sector stakeholders are developing and implementing programs that address climate impacts (e.g., sea level rise, extreme storms, fire, heat,) and build community resilience. Some are called “climate adaptation” projects, while others focus on health, transportation, or land conservation, but provide substantial climate adaptation or resilience co-benefits.

Whatever they are called, these efforts are increasingly mainstreaming climate issues into community planning and making our cities more prepared for the physical, economic, and social impacts of climate change. Importantly, a number of these programs can provide a wonderful double-benefit, by building local resilience AND reducing greenhouse gas emissions.

For example, in Solano County:

- Solano Napa Commuter Information (SCNI) runs one of the largest ridesharing programs in the region and provides other services to reduce residents’ transportation emissions.
- Solano County cities work with the regional BayREN program to increase energy efficiency that will help insulate residents and businesses from energy price shocks and shortages.
- The Solano County Water Agency conducts conservation programs for its urban and agricultural customers to address drought and other water supply issues.
- Dixon amended its parking code to require at least 40% parking shading to deal with heat impacts and wrote the code so solar panels could be used to meet the requirement.
- Suisun City has developed a networked system of bike paths and provided other active transportation infrastructure to reduce car-related GHGs.

At the same time, there are a growing number of region-wide, climate-related initiatives such as [Plan Bay Area](#), the [Bay Area Ecosystems Climate Change Consortium](#), PG&E's [infrastructure protection](#) work, the [Integrated Regional Water Management Plan](#), TBC3's fine-scale hydrology [mapping](#) for land managers, the Bay Area Council's [extreme storm study](#), Bay Localize's [Community Resilience Toolkit 2.0](#), [BayREN](#) (energy efficiency), [Cal-BRACE](#) (health), and the [Baylands Ecosystem Habitat Goals Project](#). (These regional efforts are outside the focus of this county-level report.)

Within this broad and growing climate context, we have selected 5 Solano climate adaptation and resilience initiatives to "spotlight" as notable examples of *county-level innovation* and *leadership*. These are described below with the hope that they will inspire and inform stakeholders in counties across the region. (Note: For accuracy, we have used language from project web sites where possible.)

*Web links are provided for each spotlight initiative. To learn more, including project contact info, email the BACERP staff — [Bruce@bayareaajpc.net](mailto:Bruce@bayareaajpc.net) or [Aleka@bayareaajpec.net](mailto:Aleka@bayareaajpec.net).*

### **Solano County Sea Level Rise Strategic Program**

*An initial sea level rise analysis tied to the Solano General Plan*

The 2008 Solano County General Plan recognized the threat of climate change and called on the County to develop a Climate Action Plan (CAP) to address GHG emissions and a Sea Level Rise Strategic Program (SLRSP). General Plan Program HS.I-1 required the development and adoption of the SLRSP for Solano County and defines three primary objectives: (1) investigate the potential effects of SLR on Solano County, (2) identify properties and resources susceptible to SLR in order to prioritize management strategies, and (3) develop protection and adaptation strategies to meet the County's and region's goals.

The 71-page sea level rise study was completed in 2010 and contains extensive material on climate science, the effects of sea level rise in Solano, vulnerable assets, and potential strategies to protect Solano's bayside areas.

### **Benicia Climate Action Plan/Community Sustainability Commission**

*Full-time Coordinator, Climate Action Plan and Sea Level Rise Assessment*

Benicia's Climate Action Plan (CAP) was completed in 2009 and contains an extensive set of strategies to reduce GHG's, with a particular focus on the commercial and industrial sectors. The plan guides the implementation of actions to meet the goal of reducing GHG emissions to 10 percent below 2000 levels by 2020. Benicia's program is managed by a full-time climate and sustainability coordinator funded through a city settlement with the Valero Refinery.

The 11-member Community Sustainability Commission (CSC) was established in 2009 to evaluate and prioritize Benicia's strategies to reduce greenhouse gas

emissions and make key recommendations for the City's Climate Action Plan. The CSC is also charged with implementing the CAP's measures and monitoring its effectiveness. This broad mandate includes recommendations for allocations of Good Neighbor Steering Committee Settlement Agreement funds for projects that meet certain criteria set out in the Agreement.

Benicia was recently awarded a Climate Ready grant from the California Coastal Conservancy to develop a scientific risk assessment for the area along the Carquinez Strait. Sea level rise is the main focus of the study but it will also include other climate impacts. The city will turn this assessment into an adaptation plan. As preparation for this effort, Benicia recently worked with students at UC Berkeley to develop an initial risk assessment list (focused on sea level rise) for the industrial park and proposed adaptive measures. Staff vetted the list and presented it to the Economic Development Board for review and feedback. Finally, UC Berkeley students worked with a local hotel manager to assess site-specific risks and develop adaptive strategies to mitigate those risks. The findings will help inform the Conservancy grant work in 2014-15.

### **Solano Transportation Authority Leadership: Climate Action Plans**

*County leadership, support and funding for countywide climate planning*

As follow-up to the general plan, Solano County secured grant funding in 2011 from the California Strategic Growth Council for the development of a multi-agency climate action plan and an implementation strategy managed by the Solano Transportation Authority (STA). STA also secured PG&E funds to assist in the development of a CAP focused on energy production and use (Energy Efficiency CAP). Subsequently, the STA Board and the Solano City County Coordinating Council directed the STA to work with the cities of Dixon, Fairfield, Rio Vista, Suisun City and Vacaville to develop GHG inventories.

STA is now working with AECOM and PG&E on the EECAP, the multi-agency CAP and the individual CAPs. Benicia and Vallejo and the County of Solano have all independently developed Climate Action Plans but have participated in group meetings on regional coordination and CAP implementation. Integration of CAPS will be done when they are all completed. While this collaborative set-up has to-date focused on GHG reduction, many of the strategies also build community resilience. Finally, this framework could also be used in the future to address direct climate impacts at the city or county level.

### **Solano County Wind and Solar Energy: Leadership and Planning**

*Large-scale wind and solar for Bay Area power generation*

Solano is home to three large wind energy projects in the Montezuma Hills, operated by private companies and the Sacramento Municipal Utility District (SMUD), and feeding power to PG&E, Palo Alto, the SMUD grid, and other customers. Private companies want to build more wind and solar projects in Solano so the county is working pro-actively to address issues sometimes associated with utility scale

projects. For example, the county has designated permissible areas for wind projects to reduce conflicts with existing residential, agricultural and military uses. (Travis Air Force Base is the largest employer in the county.)

While wind energy projects have generally been able to co-exist with rangeland users, large-scale solar projects in Solano that offer an even larger potential for energy generation present a different set of problems. Solar projects can take away valuable agricultural land that is a mainstay of Solano's economy. At the same time, expansion of large wind facilities may have impacts on Travis Air Force Base. For these reasons, the county has placed a moratorium on both utility scale solar and wind development to allow public and private stakeholders to conduct a more in-depth assessment of problems and opportunities.

### **Suisun Marsh Restoration Project**

*Balancing fresh and saline waters for the benefit of humans, plants, fish and wildlife*

The Suisun Marsh is the largest contiguous brackish water wetland in the western United States and an important wetland on the Pacific Flyway, providing food and habitat for migratory birds. The lands and waters of this unique ecosystem also are home to a wide variety of plants, fish and wildlife that depend upon a careful balancing of fresh and saline waters for their survival. Sea level rise and reduced water flows through the Delta could impact this critical area and affect water quality for all.

Agency managers with primary responsibility for actions in Suisun Marsh formed a Charter Group to develop an implementation plan that would protect and enhance Pacific Flyway and existing wildlife values, endangered species, and water-project supply quality. The group includes U.S. Fish and Wildlife Service, National Marine Fisheries Service, U.S. Bureau of Reclamation, California Department of Fish and Wildlife, California Department of Water Resources, and California Bay-Delta Authority. Because the Marsh includes private lands, the Suisun Resource Conservation District (SRCDD) also serves on the Charter Group to represent private landowners. The Charter Group has also consulted with other participating agencies, including the San Francisco Bay Conservation and Development Commission (BCDC) and U.S. Army Corps of Engineers (COE), in developing the Plan.

## **II. Climate Planning Activities**

### **A. Climate Action Plans**

Climate Action Plans (CAP's), completed by more than 40 Bay Area cities, set goals and strategies for greenhouse gas (GHG) emissions reduction. Recently, some cities have also begun to include climate adaptation strategies in their CAP's that address heat, sea level rise, extreme storms, higher fire risk, and other climate impacts. The chart below provides key information on Solano County climate action plans.

## Climate Action Planning Activity

City	Adopted CAP	GHG Reduction Goal	Adaptation Section in CAP
Benicia	Yes	Reduce GHG emissions to 10 percent below 2000 levels by 2020	Adaptation is referenced in the Climate Action Science and Policy section and at the beginning of each chapter <sup>1</sup>
Dixon	In Progress	-	-
Fairfield	In Progress	-	-
Rio Vista	In Progress	-	-
Suisun City	In Progress	-	-
Vacaville	In Progress	-	-
Vallejo	Yes	15% below 2008 emission levels by 2020	-
County (unincorporated areas)	Yes <sup>2</sup>	Reduce communitywide GHG emission by 20% below 2005 baseline levels by 2020	-

### B. Other Climate Planning

Climate change is substantially discussed (including an extensive bibliography) in the final EIR for the county's 2008 General Plan. The General Plan includes Health Safety Goal #7 "Prepare for and adapt to the effects of climate change." The Public Health and Safety element of the general plan includes discussion of flooding, fires and other climate-related impacts. The General Plan calls for the creation of a comprehensive climate action plan including reduction in GHGs and adaptation strategies.

Additionally, the City of Vacaville added an Energy and Conservation Action Strategy Plan to its current General Plan update that lists goals for energy and water conservation and improved air quality.<sup>3</sup>

<sup>1</sup> <http://sustainablebenicia.org/cap/indicators>

<sup>2</sup> Goal to reduce GHGs by 20% below 2005 levels by 2020. No adaptation chapters in CAP but does mention plan to develop accompanying Sea Level Rise Strategic Program.

<sup>3</sup> <http://www.vacavillegen>

### III. Current Structure for Coordination Among Cities

The Solano Transportation Authority plays a critical role in the county, providing coordination, technical assistance, and funding for cities to produce climate action plans (see Section I). In addition, the County has established processes for intergovernmental cooperation and communication that address climate-related issues. These processes include the City-County-Coordinating Committee and joint powers authorities such as the Fairfield-Suisun Sewer District.

### IV. Resources and Assistance to Accelerate Action

BACERP staff asked Solano stakeholders to identify and discuss what services or products would be most helpful to advancing their climate work. This could include assistance and resources provided by a proposed regional climate adaptation “hub.” Solano stakeholder input is summarized below (grouped but unranked).

*Note: The bold headings describe common themes from the stakeholder discussions. The bulleted items are opinions expressed by individuals.*

#### ***Provide technical Assistance to help us be more efficient***

- Provide templates and assistance to help us do the right things in a much more efficient way.
- Provide factual information in a format usable by residents and local governments that help us understand “what the problem is”. This might include on-line summaries, handouts, and white papers suitable for a general audience.
- Provide a summary of potential programs, solutions, and policies that local governments can adopt which encourage building owners to improve climate resilience.

#### ***Create outreach and engagement activities to build support***

- Our challenge is to highlight the parts of our CAP that benefit people – the Hub could help us with this messaging/communication. There is a relatively small but vocal faction in the County that doesn’t believe that climate change is happening or is a problem. However, there is also a belief among those trying to do this work that if you show how climate change will impact citizens directly then we can get broader support.
- Outreach efforts should focus on other benefits resulting from climate change planning and public and private investment, such as lower energy costs,

water efficiency, and improved livability associated with walk-able communities.

- Communication efforts need to highlight the potential costs to homeowners and commercial property owners from climate impacts as well as how this work will benefit cities, residents, and businesses above and beyond GHG mitigation.
- Communication efforts should also focus on direct and indirect benefits from investments made to address climate change.
- The most important need is for additional political support. Solutions must be “Solano grown” with a big emphasis on local needs and benefits. Most people in Solano County do not consider themselves a real part of the Bay Area so the messaging here needs to reflect this.
- Solano County is different from the core Bay Area so we should be treated differently to reflect this. Lots of people are against the regional planning process – we need a local approach.

### ***Provide Information***

- We need to make land use decisions that reflect our climate-related vulnerabilities. To do that effectively, we need more quality research and data on impacts.
- It would be helpful for the Hub to create a pre-qualified consultant list for cities that could reduce the amount time spent in outreach and hiring processes for climate related work.

### ***Help Solano identify and secure planning Resources***

- We have four cities all working on developing Climate Action Plans – perhaps we could hire a regional coordinator to implement CAP actions? This is the type of resource the Hub could help us secure or provide.
- Benicia is currently working on a CAP policy analysis similar to the City of Berkeley, where we looked at the gap between current GHG emission rates and our reduction goals and then outline strategies that could meet the goals. Additional funding will be needed to implement strategies between now and 2020.
- Benicia is in a unique position; the City is a party to a settlement agreement that designates funds for a CAP Coordinator through June 2015. However,

developing ways to integrate CAP work into city departments can be difficult with limited staffing and funding for sustainability-related projects.

- Solano County is located under two air districts' jurisdiction. Solano County should advocate that these agencies, including BAAQMD, SAQMD, and the San Joaquin Valley Air District, develop joint programs and funding to better address areas like Solano County.

### ***More Coordination***

- Programs such as BAYREN, PACE and HERO (form of PACE) all have similar objectives – the Hub could help citizens and local officials understand these programs better. Having so many similar programs creates confusion as no one really understands the difference between them – we need to simplify this, perhaps with a matrix people can understand.

### ***Examine the potential for Mandates as opposed to voluntary actions***

- One of the big issues that will come up is whether climate-planning decisions should be voluntary or mandatory. For example, we are using voluntary approaches (i.e. green building ordinances that recommend specific actions) but most people aren't making these upgrades/investments voluntarily.

## **V. Participants**

We thank the following Solano County stakeholders who provided their valuable time and smart thinking:

- John Degele, Planning Manager, City of Rio Vista
- Dave Dowswell, Interim Community Development Director, City of Dixon
- John Kerns, Associate Planner, Suisun City
- Robert Macaulay, Director of Planning, Solano Transportation Authority
- Michelle McIntyre, Analyst, Solano LAFCo
- Brian Miller, Associate Planner, City of Fairfield
- Amy Million, Principal Planner, City of Benicia
- Elliot Mulberg, Executive Officer, LAFCo
- Alex Porteshawver, Consulting Climate Action Plan Coordinator, City of Benicia
- Sophia Recalde, Associate Planner, Solano Transportation Authority
- Matthew Walsh, Principal Planner, Solano County