

Santa Clara County Climate Snapshot
Compiled by the Bay Area Climate & Energy Resilience Project (BACERP)
March 2014

This summary memo is based on input from Santa Clara County climate stakeholders. The information was gathered via phone, email, web search, and an in-person group meeting co-hosted by the Santa Clara County Office of Sustainability 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 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 Santa Clara County:

- Santa Clara County’s Public Health Department is working with other departments on a stand-alone strategic plan for climate change.
- Palo Alto was the first city in California to be certified as a Green Power Community by the US EPA and their green power program has the highest customer participation rate in the country.
- Santa Clara Valley Transportation Authority is planning to implement new Bus Rapid Transit service for 8.5 miles of Stevens Creek Boulevard, a major traffic artery in the county.
- Cupertino developed and manages *GreenBiz Cupertino*, a program that builds on the Bay Area Green Business Program to offer free sustainability support to small and medium sized businesses, schools and nonprofits.
- Health Officials and the Office of Emergency Services have the ability to activate a “reverse” 911 system (which they did in 2013) to contact half a million homes with advice on how to stay cool in extreme heat. The County also operates cooling centers and posts the locations on their website.

- The nonprofit Sustainable Silicon Valley, in conjunction with private and public sector partners, has developed *EcoCloud*, a virtual collaborative platform for business leaders, industry experts, policy makers and other climate stakeholders to engage on specific sustainability issues.

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 8 Santa Clara 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 or Aleka@bayareaajpec.net

Silicon Valley 2.0

County leadership in cross agency planning and adaptation strategy development

Through Silicon Valley 2.0 (SV 2.0), the County of Santa Clara is working with local and regional agencies, private sector partners and nonprofit organizations to develop a countywide climate adaptation plan and a decision making tool that will facilitate in-county coordination. The project engages stakeholders to create a framework of adaptation strategies and measures for sustaining the region's "livability/desirability index".

Funded through a grant from the Strategic Growth Council, SV 2.0 takes a risk management approach to climate change impacts on four principal infrastructures (transportation, energy, water, and "human capital") and uses this framework to:

- Evaluate the exposure of community assets (i.e., infrastructure, populations, and landscapes) to likely climate impacts,
- Examine the potential consequences to the economy, society, and environment of this exposure, and
- Develop preemptive adaptation strategies that improve community resiliency.

SV 2.0 also includes an Economic Resiliency Element to provide strategies for local economies (principally innovation technology and agriculture). The second phase of

SV 2.0 Project (which the County is currently seeking funding for) will establish a roadmap towards an ambitious emissions reduction goal for 2050. The roadmap effort will identify potential pathways, technologies, strategies, and policy mechanisms needed to both reduce emissions and increase resiliency in Santa Clara County.

Santa Clara Valley Water District Projects

Leadership in water conservation and adaptation planning efforts

The Santa Clara Valley Water District (SCVWD) is very active in adaptation activities including flood control, South Bay salt pond restoration, maintaining stream/creek habitat, expanding water re-use and conservation programs, adjusting to changes in local precipitation, and long-term water supply planning. SCVWD also maintains the Climate Change Portal, a searchable database compiling reports and other technical literature on climate change. Current projects/programs include:

- Vulnerability assessment of water and wastewater sectors assets
- Saltwater intrusion prevention program
- Multiple rebate and efficiency and conservation programs for residential, commercial and agricultural areas
- Planning efforts to increase the consumption and production capacity of recycled water
- Management of a network of conduits, reservoirs and percolation ponds fed by imported water to recharge groundwater aquifers

San Jose Green Vision

A model for comprehensive citywide sustainability planning and action

In 2007, the City of San Jose adopted the “Green Vision”, a 15-year plan for economic growth and environmental sustainability. The plan outlines 10 ambitious goals to achieve by 2022:

- Create 25,000 clean tech jobs
- Reduce per capita energy use by 50%
- Receive 100% of the city’s energy load from renewable power
- Build or retrofit 50 million square feet of green buildings
- Divert 100% of waste from landfill and convert waste to energy
- Recycle or beneficially reuse 100% of the city’s wastewater
- Adopt a general plan with measurable standards for sustainable development
- Ensure that 100% of public fleet vehicles run on alternative fuels
- Plant 100,000 new trees and replace 100% of city streetlights with smart, zero emission lighting
- Create 100 miles of trails connecting with 400 miles of on-street bikeways

Progress on each of these goals is tracked through detailed metrics that are posted on the Green Vision website.

SF Baylands Restoration and Flood Protection Project

Public private partnership to address storms and sea level rise

This project is an innovative public private partnership to protect the South Bay from sea level rise and extreme storms. Partners include the Moore Foundation, Silicon Valley Leadership Group (SVLG), Santa Clara Valley Water District, City of San Jose, Save the Bay, California Coastal Conservancy and other stakeholders. The partnership has a goal of raising substantial funding over the next 10 years from sources including state bonds, federal funding, local tax measures, and contributions from affected business property owners.

San Franciscquito Creek Joint Powers Authority/Flood Control 2.0

Five public entities turning a liability into a shared asset with multiple benefits

Following years of effort to address environmental issues, and a 45-year flood in 1998 that damaged approximately 1,700 properties, five local agencies from two counties—the cities of Palo Alto, Menlo Park, and East Palo Alto, the County of San Mateo, and the Santa Clara Valley Water District—joined together to create a new government agency, the San Franciscquito Creek Joint Powers Authority (SFCJPA). Elected officials represent these jurisdictions on the SFCJPA Board. The JPA employs an executive director and two professional staff, with much of its project work being done by consultants.

The SFCJPA project aims to reduce flood risks in East Palo Alto and Palo Alto along a flood-prone section of the creek from Highway 101 to San Francisco Bay. Project strategies include:

- Widening the creek to convey a 100-year storm flow, coupled with a 100-year tide and 26 inches of sea level rise.
- Excavating sediment built up over several decades and replace it with a marsh plain with higher value vegetation that is naturally more self-sustaining.
- Selectively reducing the height of an abandoned levee to allow high creek flows into the Palo Alto Bay lands north of the Creek, thus reinstating a natural connection to the Bay for the first time in over 75 years.
- In the area confined by homes and businesses, constructing floodwalls aligned to Caltrans' Highway 101 bridge over the creek.

The project will also provide the capacity needed for upstream flood protection projects, enhance the habitat of three endangered species in the area, and improve Bay trails and outdoor education opportunities. San Franciscquito Creek is also part of the three-creek project, Flood Control 2.0, with additional partners Bay Conservation and Development Commission (BCDC) and the San Francisco Estuary Partnership (SFEP).

South Bay Climate Adaptation Projects

National models for natural capital restoration

The **South Bay Salt Pond Restoration Project** began in 2009 and is the largest tidal wetland restoration project on the West Coast. When complete, the project will restore 15,100 acres of industrial salt ponds to a rich mosaic of tidal wetlands and other habitats. Goals of the project include:

- Restore and enhance a mix of wetland habitats
- Provide wildlife-oriented public access and recreation
- Provide for flood management in the South Bay

Phase II of the project is currently being planned with extensive public input and multi-agency participation. The Project Management Team is comprised of the California State Coastal Conservancy (SCC), the California Department of Fish and Wildlife (DFW), the U.S. Fish and Wildlife Service (FWS), Santa Clara Valley Water District (SCVWD), Alameda County Flood Control and Water Conservation District (ACFCWCD), and the U.S. Army Corps of Engineers (USACE).

The **South San Francisco Bay Shoreline Study** is coordinated with the Salt Pond Restoration project and will identify and recommend flood risk management and ecosystem restoration projects for Federal funding. The Shoreline Study is looking at the feasibility of options for managing flood risk as well as undertaking ecosystem restoration and expanding public access.

The goal of the Shoreline Study is to protect sections of Santa Clara County's shoreline with the highest potential damages and threats to human health and safety from flooding, using a combination of levees and wetlands. Using natural infrastructure will provide increased flood protection and restored Bay habitats, as well as a flood protection system that can evolve in the future.

Joint Venture Silicon Valley Public Sector Climate Task Force

Cross sector collaboration for cost effective climate solutions

Formed in May 2007, the Joint Venture Public Sector Climate Task Force develops collaborative solutions for the reduction of greenhouse gas emissions from public agency operations. It also provides a neutral forum for cities, counties, and special districts to learn from each other.

The Task Force recently completed Phase 1 of a multi-agency procurement of solar power for local agencies using Power Purchase Agreement financing. The project will generate more than 14 megawatts of power at peak capacity – in total, these sites will more than double the entire solar installed capacity for nonresidential systems in Santa Clara county. The Task Force includes representatives from each city, town and county in Silicon Valley, plus several special districts and other public agencies. The group also includes advisory members from local organizations working on sustainability and energy conservation and several affiliate members from for-profit companies in relevant sectors.

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 Santa Clara County climate action plans.

Climate Action Planning Activity

City	Adopted CAP	GHG Reduction Goal	Adaptation Section in CAP
Campbell	No	-	-
Cupertino	No	-	-
Gilroy	No	-	-
Los Altos	Pending	15% below 2005 levels by 2020	-
Los Altos Hills	No	-	-
Los Gatos	Pending	15% below 2008 levels by 2020	-
Milpitas	Yes	15-20% below 2005 levels by 2020	-
Monte Sereno	No	-	-
Morgan Hill	No	-	-
Mountain View	In progress	15-20% efficiency improvement over 2005 levels by 2020 ¹	-
Palo Alto	Yes	15% below 2005 levels by 2020	-
San José	No ²	-	-
Santa Clara	No	-	-
Saratoga	No	-	-
Sunnyvale	Pending	23% below 2008 levels by 2020	Outlines local impacts, existing efforts and recommends specific adaptation strategies ³
County (municipal)	Yes	Decrease emissions 10% every 5 years 2010-2050	-

¹ GHG efficiency improvement goal is outlined in Mountain View's Greenhouse Gas Reduction Program: <https://www.mountainview.gov/civica/filebank/blobdload.asp?BlobID=10700>

² The City of San José has adopted a Greenhouse Gas (GHG) Reduction Strategy in conjunction with the recently adopted the Envision San José 2040 General Plan Update: <https://www.sanjoseca.gov/index.aspx?NID=2740>

³ http://www.pmcworld.com/client/sunnyvale/documents/cap/Sunnyvale-CAP_draft-11-2011.pdf

B. Other Climate Planning

Envision 2040 is the City of San Jose’s general plan. Adopted in November 2011, the plan includes sustainable development goals and recommendations for both mitigation and adaptation. *Envision 2040* was preceded by the City Council’s action in 2007, when they adopted the “Green Vision,” ten sustainability goals that included the development of a general plan with measurable standards for sustainable development (see Section I).

The Santa Clara Office of Emergency Services led a collaborative effort to draft the Local Hazard Mitigation Plan in 2011. The Plan identifies climate change as an “amplifier” of existing hazards including coastal flooding, heat waves and other extreme weather events.

The Department of Public Health’s Strategic Plan includes a goal to “establish a departmental focus on environmental health issues related to climate change and sustainability”⁴ and lists four objectives to help achieve this goal.

III. Current Structure for Coordination Among Cities

Silicon Valley 2.0 provides a multi-agency structure for countywide adaptation planning (see Section I).

The Joint Venture Public Sector Climate Task Force provides a forum for cities, nonprofit partners and other regional stakeholders to share best practices and coordinate projects and partnerships (see Section I).

IV. Resources and Assistance to Accelerate Action

Stakeholders were asked 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.” Santa Clara stakeholder answers are summarized below (grouped but unranked).

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

⁴ http://www.sccgov.org/sites/sccphd/en-us/AboutUs/Documents/SCCPHD_StrategicPlan.pdf

Provide Us With a Central Information Point for Climate Science and Policy to Support and Leverage Existing Staff Capacity

- Legislative and regulatory processes are demanding and overlapping. Throughout the Bay Area, there is an enormous amount of time spent by many different individuals and organizations just keeping up with this information– the Hub could help us on these issues by participating at the state and federal level for the Bay Area and then reporting back.
- The Hub should also be coordinating with state agencies to ensure we are aware of climate studies being conducted by the CEC under the EPIC program (formerly PIER).
- It would be helpful for the Hub to develop jurisdictional maps to illustrate geographic boundaries (and overlap) of specific projects.
- It's very encouraging and helpful just to know that the Hub will be available to help with this work. Just knowing that there will be someone to call on is helpful.
- What has helped VTA's efforts so far are all of the organization and local partnerships that already exist – the Hub will need to ensure that efforts are not duplicating what is already out there.
- It would be useful for the Hub to highlight positive examples of climate projects that other jurisdictions can emulate.
- The Hub could help us stay up to date on climate and adaptation efforts and partnerships without the city of Mountain View having to directly participate in all these efforts. The City doesn't have the staff capacity or resources to keep up on all of this – currently, our elected officials will ask us for specific information and we have to take time out to do research which is very time consuming.
- It would be helpful to be able to use the Hub as a resource for information and best practice sharing. If the Hub provided this information, we could choose more easily what to take on.
- The Hub could develop and regularly release a climate/adaptation policy summary to help local officials both filter information and stay updated on key legislative initiatives.
- Specifically, one of our biggest challenges is getting quality data and then translating that information for use at the local level – the Hub could help with this.

Help Us Strategically Tap into Existing, Local Technical and Financial Resources

- In Santa Clara County, we have a wealth of resources and expertise that we are currently not tapping into as much as we should. Part of the strength of this region is the wealth of knowledge and great thinkers that work and live here. These people/businesses need to be identified as champions and stewards of this knowledge.
- We need to rely on expertise and resources at the local level because this is where the best information and data exists. For example, we should leverage Google and USGS as local resources.
- We need to identify and understand what climate “core competencies” should be at the local level.
- We should capitalize on the knowledge and technological resources that exist in this county to identify (and develop where necessary) the best climate science and data.
- While there are various political bodies currently lobbying for funding for adaptation work, it won’t be enough – we are going to need money from everywhere to actually make an impact.
- We also need to create a focused effort to go after a significant amount of private sector resources – these companies have a lot at stake.
- Funding and staffing are huge issues. However, the sustainability of both is a bigger issue. Any solutions must be ongoing.

Provide Us With Support and Technical Expertise to Tackle Specific Issues

- There is a big need for access to technical experts. The Hub doesn’t have to hold all the expertise, but it should provide a portal or link to them.
- Cal-Adapt is a good start but we need someone to help translate and interpret the information.
- Need data on extreme wind; need to get data on likelihood and extent of extreme wind events due to changes in hydrological cycle.
- The Hub could help to create/maintain/manage a project library that includes local, national and international project examples. Quick clean summaries, not just web links. This library could include some type of filtered local version and some type of scorecard that ranks/evaluates the projects.

- It would be helpful to have a scenario analysis of potential extremes and likelihood of temperatures, sea level, etc. so that planners can consider different potential impacts in an uncertain but changing future.
- Mountain View is wrestling with issues like riverine flooding – this is a good example of an issue that the Hub could help us better understand how to address through information sharing, data and best practice sharing.

Develop a Common and Powerful Advocacy Message and Vision for the Bay Area Region.

- The Bay Area needs a more coordinated approach and more guidance on both short and long term climate planning – we need to be able to accurately answer the question of where to build certain things.
- There is a need to build more support for adaptation planning at the agency leader level.
- We should ask the question “what does *good* climate planning look like?” and “what are the key components of climate resiliency?”
- A Bay Area message should show how our sectors are linked when it comes to climate and adaptation planning – we need to address these as linked sectors, not each area in isolation.
- We need to develop and communicate a positive vision of what resiliency looks like for the Bay Area.
- We need to “normalize” and mainstream climate planning.
- We need a cohesive message in both Washington D.C. and in Sacramento to communicate our needs.

V. Participants

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

- Gina Blus, Sustainable Communities Supervisor, PG&E
- Claire Bonham-Carter, Project Co-Director, AECOM
- Sapna Dixit, Community Energy Manager, PG&E
- Jeff Goldman, Project Director, AECOM

- Kara Gross, Co-Director, Public Sector Climate Initiatives, Joint Venture Silicon Valley
- Marianna Grossman, Executive Director, Sustainable Silicon Valley
- Joe LaClair, Chief Planner, BCDC
- Lani Lee Ho, Environmental Planner, Valley Transit Authority
- Demetra McBride, Director, Office of Sustainability, County of Santa Clara
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- Susan Stuart, Health Program Specialist, Public Health Dept., County of Santa Clara
- Culley Thomas, Project Manager, AECOM
- Randy Tsuda, Community Development Director, City of Mountain View
- Sarah Young, Senior Project Manager, Santa Clara Valley Water District