

California Climate and Health Case Stories: The Local Public Health Department Response



This series of *California Climate and Health Case Stories* highlights how public health departments are responding to climate change as an emerging public health issue.

Climate Change and Health in California Local Health Departments

Public health departments have important roles to help reduce greenhouse gas (GHG) emissions and to adapt to the impacts of climate change. These stories were prepared by the Office of Health Equity's CalBRACE program, which is part of the California Department of Public Health (CDPH), funded by the Centers for Disease Control and Prevention (CDC) Climate Ready States and Cities Initiative (CRSCI) through Cooperative Agreement 5UE1EH001052. The CDC-CRSCI funds states and cities to use the Building Resilience Against Climate Effects (BRACE) framework to identify climate impacts in their communities, potential health effects associated with these impacts, and their most at-risk populations and locations.

BRACE helps states and cities to develop and implement health adaptation plans that impact health, and address gaps in critical public health functions and services. CalBRACE wanted to share these inspiring stories about how, with few resources, local public health departments are mobilizing. From Maternal Child Health to Emergency Preparedness programs, and planning efforts with multi-sector county partners, local health departments are linking and connecting to prepare to meet this complex public health threat. Inclusion, health equity and the social determinants of health, as well as sustainability and resilience, and Health in All Policies approaches are some of the lenses that practitioners are applying to their planning and programmatic work.

Many of the strategies initiated by California's local public health agencies are linked with health and the built environment. These range from promoting active transportation and food security, to forestry management. Others are focused on communication and campaigns to stimulate individual and community actions to reduce GHGs and make personal changes to increase resilience to climate change. The series is not a complete picture of how public health agencies address climate change, but rather a highlight that we hope encourages you to visit other counties' websites to explore their important work as well.

Case Stories:

[Los Angeles County Public Health Agency](#)

[Mariposa County Public Health Department](#)

[San Diego County Public Health Services](#)

[San Luis Obispo County Public Health Department](#)

[Santa Clara County Public Health Department](#)

Additional Departments:

[San Francisco Public Health Department](#)

<https://sfclimatehealth.org/>

[Contra Costa Health Care Services](#)

<http://cchealth.org/built/>

[CalBRACE Project - California Department of Public Health, Office of Health Equity](#)

<https://www.cdph.ca.gov/Programs/OHE/Pages/CalBRACE.aspx>

[Climate and Health Initiative - Centers for Disease Control and Prevention](#)

<http://www.cdc.gov/climateandhealth/brace.htm>

Mobilizing the Workforce to Address Climate Change: Los Angeles County Public Health Department Case Story



This is one in a series of Climate and Health Case Stories that highlight how public health departments across California are responding to climate change as an emerging public health issue.

Climate Change and Health in Los Angeles County

Los Angeles County is located in the South Coast Region. With nearly 10 million residents it is the most populous county in California and the United States. In Los Angeles County, climate change is projected to increase the risk of heat waves, air pollution, wildfires, water insecurity, severe storms, and flooding from sea level rise and storm surges. These effects

“This isn’t a hopeless situation. Things can be done to mitigate the effects of climate change.”

*Angelo Bellomo,
Director of Environmental
Health, Los Angeles County
Department of Public Health*

will have a significant impact on public health, with disproportionate impacts to the area’s most vulnerable populations, including children, elders, people with chronic diseases, outdoor workers, people living in poverty, and some communities of color.

Positioning Public Health to Address Climate Change

Under the leadership of Dr. Jonathan Fielding, former Director of Public Health and Health Officer, the Los Angeles County Department of Public Health (LACDPH) took steps to position itself

to address the serious public health challenges that climate change will bring. Seeking a strategic and organized approach, an intradepartmental workgroup was convened to provide input into the development of a department-wide plan. The resulting *Five-Point Plan to Reduce the Health Impacts of Climate Change* featured five strategic priority areas related to education, fostering climate change mitigation and adaptation strategies in the wider community, internal capacity building, and internal best practices to reduce greenhouse gas emissions. The *Five-Point Plan* focuses on integrating climate change into current activities using existing resources in order to leverage the entire LACDPH workforce to undertake climate change work.



Educating and Mobilizing the Workforce

A cornerstone of the *Five-Point Plan* is building the capacity of the public health workforce to tackle climate change. To address professional development needs for staff, the department partnered with University of California, Los Angeles (UCLA), Fielding School of Public Health.

Through this partnership, the department leveraged UCLA's public health and climate change expertise to create a series of scientifically rigorous, yet accessible curriculum for climate and health workshops.

Workshop 1 - Brainstorming Adaptation and Mitigation Strategies

Approach:

- Brainstorm actions that could be used to either mitigate climate change or provide resiliency to the health impacts of climate change.
- Categorize the activities according to whether they would be performed at the individual, local, state, national or international level.

Beyond raising awareness, the sessions were designed to encourage staff to contribute to the department's climate action plan, and engage in future collaboration to integrate climate change considerations across the department's programs and services.

Workshop Design

The 16-session Climate & Health Workshop Series was focused on promoting staff engagement with the material. Workshops featured a 20-25 minute lecture on a specific topic area taught by UCLA faculty or doctoral students, followed by an interactive 45-minute brainstorming session, during which staff broke into

groups to grapple with the issues presented in the lecture. These breakout groups engaged staff to talk through and develop creative yet feasible strategies that could be used in climate action planning documents. The group discussions also allowed staff to envision how a climate and health perspective could be incorporated into their own work.

For example, staff reviewed the county's heat response plan during a brainstorming session and identified complementary strategies to integrate climate change into the current plan.

Core Topics: Workshops 1-6

- Introduction to how climate change is projected to impact health globally and locally
- Identifying populations that are vulnerable to climate change
- How to apply adaptive management in the context of climate action planning
- Ten things every public health professional should know about climate change
- How to communicate climate change related risks to critical stakeholders
- What experts predict the climate will be like in Los Angeles County in 2050 and 2100

Workshop 1 Learning Objectives

- Pathways by which climate change impacts human health
- Ways individuals can mitigate the impacts of climate change
- Ways local agencies can help build resiliency towards climate change

The brainstorming sessions also provided the opportunity for using power versus interest mapping to identify potential stakeholders for specific issues.

There were six introductory core topics in the first series of workshops that provided an overview of climate change and its relevance to the South Coast Region and public health. With this baseline level of knowledge established, workshops then delved into specific topic areas such as air quality, water security, and vector-borne diseases. Employees from Veterinary

Public Health, Environmental Health, and Public Health Nursing attended the inaugural series.

Five-Point Plan	
INFORM	Inform and engage the general public about the nature of climate change and the health co-benefits associated with taking action to reduce carbon emissions.
PROMOTE	Promote local planning, land use, transportation, water, and energy policies that reduce carbon emissions and support the design of healthy and sustainable communities.
PROVIDE	Provide guidance on climate preparedness to local government and community partners to reduce health risks and create more resilient communities.
BUILD	Build the capacity of Departmental staff and programs to monitor health impacts, integrate climate preparedness, and improve climate response.
ADOPT	Adopt best management practices to reduce carbon emissions associated with Departmental facilities and internal operations.

To incentivize staff to attend workshops, nurses received continuing education credits, and division directors supported staff to prioritize the time needed for their participation.

Moving Forward

Evaluation forms completed by participants indicated that staff knowledge in key areas increased following workshops. For instance, staff reported that they were better able to explain climate change and describe the role of LACDPH in mitigation and adaptation. They reported that they were also able to describe vulnerable populations most impacted by climate change in Los Angeles County, and they felt they could implement climate change knowledge into their work and/or daily activities.

The considerable interest in the workshop series led to requests that the workshops be open to all staff. Consequently, in September of 2014, the department re-launched the workshop series, now open to all LACDPH staff. To allow for the sustainability of the series, lectures by UCLA faculty and doctoral students were recorded for use in the series re-launch. Brainstorming sessions led by LACDPH staff complemented the lectures. To facilitate staff attendance across the many department facilities spread across Los Angeles County's 4,300 square miles, the workshops were being held in four different locations.

In August 2014, LACDPH released two reports in its Climate and Health series that are a call to action by individuals and families, and by the public health field and its partners. The first report, *Your Health and Climate Change in Los Angeles County*, presents information about what increasing temperatures, extreme weather, and rising sea levels mean for individual and family health — and what people can do to lessen these impacts.

The second report, *Framework for Addressing Climate Change in Los Angeles County*, was developed for use by other local government agencies in Los Angeles County as well as for other local health departments and their collaborating agencies around the country. It begins by outlining how climate change relates to the mission of different local agencies, and continues with guidance on how to develop an agency plan for addressing climate change. It is intended for agencies that are preparing to develop their own climate action plan and features the *Five-Point Plan* adopted by LACDPH, with examples of adaption and mitigation strategies for multiple government sectors.

Lessons Learned

- Interactive staff education can increase staff awareness and feelings of professional agency regarding climate change.
- Local-level climate projections are crucial to climate change education. Local data and information are easier to accept and create the desire for local action. Global examples and data are hard to personalize.
- When collaborating, ensure the partnership is reciprocal. UCLA was amenable to designing a curriculum that was desired by the health department, which benefited both parties and created a strong learning collaboration.
- Workshops that were geared towards specific impact areas ensured that staff would find at least one workshop that spoke to their specific area of professional interest. Climate science presented to public health staff has to be accessible and relevant to their work.
- Brainstorming sessions were critical to allowing staff to engage with the material and prevent feelings of fatalism by providing a venue for discussing solutions.

Resources

Climate Change and Public Health in Los Angeles
<http://publichealth.lacounty.gov/eh/climatechange/>

Los Angeles County Department of Public Health Emergency Preparedness and Response Unit
<http://www.lapublichealth.org/eh/AreasofInterest/emergunit.htm>

Climate and Health Series - Report 1: Your Health and Climate Change in Los Angeles County
<http://publichealth.lacounty.gov/docs/climatechange1.pdf>

Climate and Health Series - Report 2: Framework for Addressing Climate Change in Los Angeles County
<http://publichealth.lacounty.gov/docs/climatechange2.pdf>

10 Things You Can Do to Reduce Climate Change (English & Spanish)
<http://publichealth.lacounty.gov/hea/library/topics/climatechange/>

Los Angeles Regional Collaborative for Climate Action and Sustainability
<http://www.laregionalcollaborative.com>

CalBRACE Project - California Department of Public Health, Office of Health Equity
<http://www.cdph.ca.gov/Programs/OHE/Pages/CalBRACE.aspx>

Climate and Health Initiative - Centers for Disease Control and Prevention
<http://www.cdc.gov/climateandhealth/brace.htm>

Photograph: Climate and Health Series - Report 1: Your Health and Climate Change in Los Angeles County, 2014. Courtesy of Los Angeles Public Health Department used with permission.

This publication was supported by the California Department of Public Health, Office of Health Equity – CalBRACE Project through Cooperative Agreement 5UE1EH001052, funded by the Centers for Disease Control and Prevention. Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the Centers for Disease Control and Prevention or the Department of Health and Human Services. (1/2018) Calbrace@cdph.ca.gov

Preparing for Wildfire and Wildfire Smoke: Mariposa County Health Department Case Story



This is one in a series of Climate and Health Case Stories that highlight how public health departments in California are responding to climate change as an emerging public health issue.

Climate Change and Health in Mariposa County

Mariposa County is a rural area located in the central Sierra Nevada mountain range with a sparse population of fewer than 20,000 people. Like many of the county's in the North Sierra Region, the county's primary economic activity is tourism. With landmarks such as Yosemite National Park, visitors from around the world swell the local population during the peak tourism season, which also coincides with wildfire season. Wildfires present a heightened concern due to recent wildfires such as the 2013 Rim Fire which burned 257,314 acres in and around Yosemite National Park. Again in September 2014, the Bridge and Meadow fires caused evacuations and further destruction of National Park and US Forest Service Lands.

"Air pollution is a public health problem and climate change is an air pollution problem."

*Dr. Charles Mosher,
Mariposa County Public Health
Officer and Air Quality Control
Director*

Fire suppression activities, fires and wildfire smoke are projected to increase due to climate change. The area is projected to also experience the risks of heat waves, increased air pollution, and reduced rainfall and snowpack. These significant impacts will disproportionately affect the area's most vulnerable populations, including children, elders, people with chronic diseases, outdoor and tourism workers, people living in poverty, and some communities of color.

Promoting Awareness and Adaptation through Existing Programs

The Mariposa Public Health Department (MPHD) is in early stages of planning and adapting for climate change. A high priority is establishing baseline information to compare with future data to measure effects of climate change on local health. For example, disease surveillance efforts are starting to capture data on secondary effects of climate change like the spread of insect borne diseases. Work has been done with the county planning department to incorporate a stronger public health lens in a variety of emergency preparedness planning efforts, such as excessive heat, cold, power, water shortage, and wildfire emergency plans.



Mariposa County is unique with the Air Quality District located in the health department. This co-location fosters a strong relationship between the public health and air quality staff, helping to more effectively plan for smoke events from wildfires. In June 2014, the MPH and Air Quality District jointly revised the county's Air-Borne Emergency Response Procedures document.

Preparing for Longer Wildfires

Wildfires are a serious public health challenge to Mariposa County. Historic forest management practices and wilderness development have created prime conditions for catastrophic forest fires. Wildfires have the potential to provide many ecological benefits necessary to sustain a healthy forest, including clearing out understory vegetation. However, over the past century, wildfires have been suppressed and forests are now denser than in the past, providing more fuel for wildfires.

Climate change impacts intensify these dense forest conditions. The fire season is starting earlier in the year and lasts longer due to changes in snowpack levels. Drought conditions associated with long-term climate change trends have dried forests and made them more susceptible to fire. Drought conditions are a barrier to firefighters trying to locate water to fight fires, since many previous sources of surface water no longer exist.

The MPH plays an important role in communicating wildfire dangers to the public. Communication has become more important due to the compounding nature of climate change on both water sources and longer wildfire seasons. The staff have collected and synthesized data related to smoke and fires, and presented it in easy to understand messages to the public. They have crafted messages about wildfire safety highlighting the health risks of smoke and other related dangers.

To communicate dangers and ways for the public to take precautions, the MPH public information officer leverages multiple communication channels, including press releases, dedicated public call-in phone lines, social media, and electronic bulletin boards.

How do Wildfires Impact Health?

Wildfires have an immediate and long-lasting effect on our health.

- Burns and smoke inhalation

Residents in the fire's path, as well as first responders and emergency workers, often experience injuries from burns and smoke inhalation, some of which can be severe or fatal.

- Eye and respiratory illness

Large fires, like the series of devastating wildfires in Los Angeles in 2009, increase air pollution in the immediate vicinity of the fires and in surrounding areas. Fire-related air pollution increases the risk for eye and respiratory illness, and this risk may continue even after the exposure to air pollution subsides.

- Mental health

Wildfires have a significant impact on our health even after the fires are put out. A fire has a lasting impact on mental health from the traumatic stress of experiencing the loss of a community, home, or loved ones during a wildfire.

Source: California Environmental Health Tracking Program (CEHTP), a program within the California Department of Public Health (http://cehtp.org/faq/climate_change/wildfires_and_climate_change). 2018

The department has also advocated for new, preventative approaches for forest management that mitigate wildfire impacts. These adaptation strategies include forest thinning, which also has the potential co-benefit of producing biomass for green energy generation and employment supporting the local economy.

Moving Forward

To support its wildfire and climate change efforts, the department is currently searching for partnerships with outside organizations. By participating with the California Department of Public Health's (CDPH) Building Resilience against Climate Effects program (CalBRACE) supported by the Centers for Disease Control and Prevention, the department is increasing its capability, and preparing to respond to future wildfire and air pollution threats. The CalBRACE program is providing technical assistance and modest funding to support capacity building efforts and planning to address climate adaptation and health issues, including those related to wildfires, heat and air pollution.

Lessons Learned

- Changing points of view regarding forest management strategies and any other instructional practices requires patience and persistence.
- Communicating to the public can involve multiple different framing strategies across varying mediums. Messages are often more effective if they are compelling and entertaining.
- Partnering with organizations outside of the county can increase the legitimacy of the health department. For example by partnering with the state or a university, stakeholders believe there is more value in the work the health department is conducting.
- Interfacing with people face-to-face instead of over the computer is important for effective communication, especially when discussing complex issues.

Resources

[Medical and Health Challenges in Weather Related Emergencies in Mariposa County](http://ca-mariposacounty.civicplus.com/index.aspx?NID=239) (video)

<http://ca-mariposacounty.civicplus.com/index.aspx?NID=239>

[Community Assessment for Public Health Emergency Response \(CASPER\) addressing the California drought – Mariposa County, California, November 2015](#) and [Final Report: January 2017](#).

[Wildfires and Climate Change](#)

http://cehtp.org/faq/climate_change/wildfires_and_climate_change

[July 22, 2014 Climate Action Team - Public Health Work Group on Wildfire](#)

<http://www.arb.ca.gov/cc/ab32publichealth/meetings/meetings.htm>

[CalBRACE Project - California Department of Public Health, Office of Health Equity](#)

<https://www.cdph.ca.gov/Programs/OHE/Pages/CalBRACE.aspx>

[Climate and Health Initiative - Centers for Disease Control and Prevention](#)

<http://www.cdc.gov/climateandhealth/brace.htm>

Photograph: 2008 Telegraph Fire. Courtesy of the Mariposa County Health Department.

This publication was supported by the California Department of Public Health, Office of Health Equity – CalBRACE Project through Cooperative Agreement 5UE1EH001052, funded by the Centers for Disease Control and Prevention. Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the Centers for Disease Control and Prevention or the Department of Health and Human Services. (1/2018) Calbrace@cdph.ca.gov

Built Environment and Transportation Connections to Climate Change: San Diego County Public Health Services Case Story



This is one in a series of Climate and Health Case Stories that highlight how public health departments in California are responding to climate change as an emerging public health issue.

Climate Change and Health in San Diego County

San Diego County with more than 3 million people is the most heavily urbanized region in the state. For this county that is located on the border with Mexico in the South Coast Region, it is

“We know that climate change will affect people’s health in our region. That’s why the county is working with the National Weather Service to better understand our local weather conditions and how to proactively respond to weather extremes to protect the health and well-being of all San Diegans”

*-Wilma J. Wooten, MD, MPH
County of San Diego
Public Health Officer*

projected that climate change will increase the risk of heat waves, air pollution, wildfires, drought, vector borne diseases, and flooding and storm surges from sea level rise and flash flooding. These effects will have a significant impact on public health and disproportionately affect the area’s most vulnerable populations, including children, the elderly, people with chronic diseases, outdoor workers, people living in poverty, and some communities of color.

Wildfire risk has increased in the area evidenced by the 2007 San Diego County Firestorm, which lasted from October 21 to November 9, 2007, and consumed approximately 369,000 acres or about 13% of the county’s total land mass.

Additionally, the fires destroyed an estimated 1,600 homes. This event resulted in evacuation of approximately 515,000 people including over 2,200 medical patients representing the largest evacuation in California history. The San Diego Health and Human Services Agency mobilized 1,490 staff to assist with response efforts.



Leveraging Existing Structures and Resources

In San Diego County, governments collaborate with universities, philanthropic institutions, nonprofits, and businesses to develop policies, plans, and programs that address climate change. San Diego County Public Health Services (SDCPHS), a division of the Health and Human Services Agency, began working to identify strategies to address climate change and started to raise awareness through its existing planning and activities for chronic disease prevention, health equity and emergency preparedness. These activities were implemented through the work of staff in the division’s Chronic Disease and Health Equity (CDHE) Unit.

Transportation and Land Use Planning

The Health and Human Services Agency and San Diego Association of Governments (SANDAG) have embedded public health into planning and implementation activities for transportation and land use.

By working on active transportation issues, the health department has been able to engage with and raise awareness around the health and environmental impacts of the built environment.

In its initial approach to climate change planning, SDCPHS leveraged existing relationships with organizations and collaboratives already participating in climate change work. Through engagement in ongoing healthy transportation and food systems initiatives, CDHE's work was supported by the Centers for Disease Control and Prevention's (CDC) Community Transformation (CTG) and the Communities Putting Prevention to Work grants. These grants built capacity and partnerships for a policy, systems, and environmental approach that emphasized high-impact projects with significant co-benefits, reducing greenhouse gas (GHG) emissions and increasing physical activity. Co-benefits were promoted through education, policies, system change, and planning work.

The SDCPHS relationship with the San Diego Association

of Governments (SANDAG), the metropolitan planning organization (MPO), provided the opportunity to bring a strong public health equity perspective to regional transportation and land-use planning. SANDAG started considering and integrating a health conscious approach around a decade ago and is one of four MPOs chosen by the US Department of Transportation for its white paper, *Metropolitan Area Transportation Planning for Healthy Communities*. This white paper identifies integrated and flexible approaches to how MPOs and their partners can successfully consider aspects of health during the transportation planning process.

In SANDAG's healthy communities planning, SDCPHS brought expertise and knowledge on health benefits and policy. The focus was associated with active transportation and other built environment strategies to promote chronic disease prevention and health equity. The strategies are outlined in SANDAG's first *Public Health White Paper*, which integrates public health policy issues and performance measures in the *San Diego Forward: The Regional Plan*, to help achieve its goal of "Healthy Communities and Environment" (See Resources section). Through this relationship, the department is bringing a health perspective to GHG emissions reduction strategies.

SDCPHS is participating in work on the *2015 San Diego County Multi-Jurisdictional Hazard Mitigation Plan*. The department is also coordinating climate change, and climate and health-related efforts with the San Diego Foundation's Climate Initiative and the San Diego Regional Climate Collaborative.

Key Questions

- What is the public health role in planning for climate change and mobilization?
- How can public health meaningfully address this emerging issue with limited resources?
- How can public health effectively integrate climate change into current and future health programs and planning?
- How will staff be trained to address climate change in their work?

A 2014 report, *San Diego, 2050 is Calling. HOW WILL WE ANSWER?*, is part of an effort by the Climate Education Partners (CEP) to develop and implement a climate change education plan for the San Diego region. Having a wealth of organizations that work with local expert scientists, educators and a wide range of community leaders helps the department's staff learn about, prepare for, and respond to the impacts of a changing climate.

Moving Forward

More recently, CTG's Safe Routes to Schools efforts decreased the risk of chronic disease, built community resilience, and reduced vehicular GHG emissions by promoting active transportation like biking, walking, and public transit. In addition, CTG promoted more integration of food systems planning in local general plans, to increase access to healthy food and benefits to the environment.



In 2014, CDHE leadership and staff formed a climate change learning group to coordinate the department's efforts to build its capacity and respond to climate change. Through the group, members have attended statewide climate events and participated in a 10-week climate change course provided by the University of California, San Diego. These activities helped the group build a strong foundation of knowledge, allowing the staff to more effectively engage in local climate change efforts. SDCPHS is also participating in California Department of Public Health's Building Resilience against Climate Effects (CalBRACE) program funded by the CDC. With representation by CDHE staff, this program is receiving technical assistance and funding to initiate adaptation planning and build capacity to address health issues related to climate change.

The nascent climate and health group is expanding its activities. As part of its participation in the CalBRACE project, staff developed a capacity building framework and work plan to continue to address climate change and adaption planning. Strategies include:

Strategy 1: Build CDHE and SDCPHS organizational capacity to support/guide development and implementation of SDCPHS Climate Action Plan and future climate action.

Strategy 2: Coordinate, develop and provide SDPHS general and division-specific, climate change training to increase knowledge, expertise and resources to address the health impacts of climate change.

Strategy 3: Promote local planning, land-use, transportation, water, food and energy policies that reduce carbon emissions, and support the design of healthy and sustainable communities.

Strategy 4: Establish, improve and maintain mechanisms for robust rapid surveillance of environmental conditions, climate-related illness, vulnerabilities, protective factors and adaptive capacities.

Strategy 5: Inform the general public about the nature of climate change, potential health effects, and the health-related benefits of reducing carbon emissions.

Lessons Learned

- Many current public health partnerships and activities provide ample opportunity to address and raise awareness around climate change.
- It is fruitful to use a co-benefit framing to strengthen support for climate and related health efforts.
- Without dedicated staffing resources, climate change work can only go so far.
- Climate and health work cannot exist in a silo and is suited to public health's inter-sector philosophy. It is therefore important to establish and/or strengthen partnerships with other county departments and sectors outside of public health whose decisions may impact or benefit climate change *and* health outcomes.
- The public health sector must be persistent and committed to long-term engagement in the regional planning process, and keep in mind that the process is complicated, involving many partners, and many different priorities and interests.

Resources

San Diego Association of Governments (SANDAG) [Public Health White Paper](http://www.sdforward.com/sites/sandag/files/Public%20Health%20White%20Paper.pdf)
www.sdforward.com/sites/sandag/files/Public Health White Paper.pdf

[San Diego, 2050 Is Calling. HOW WILL WE ANSWER?](http://www.sandiego.edu/2050/)
<http://www.sandiego.edu/2050/>

[San Diego Public Health Department- Chronic Disease and Health Equity \(CDHE\) Unit - CalBRACE](http://www.sandiegocounty.gov/content/sdc/hhsa/programs/phs/chronic_disease_health_disparities/CalBRACE.html)
http://www.sandiegocounty.gov/content/sdc/hhsa/programs/phs/chronic_disease_health_disparities/CalBRACE.html

[San Diego Climate Collaborative](http://sdclimatecollaborative.org/)
<http://sdclimatecollaborative.org/>

[CalBRACE Project - California Department of Public Health, Office of Health Equity](https://www.cdph.ca.gov/Programs/OHE/Pages/CalBRACE.aspx)
<https://www.cdph.ca.gov/Programs/OHE/Pages/CalBRACE.aspx>

[Climate and Health Initiative - Centers for Disease Control and Prevention](http://www.cdc.gov/climateandhealth/brace.htm)
<http://www.cdc.gov/climateandhealth/brace.htm>

[Metropolitan Area Transportation Planning for Healthy Communities](http://www.nationalresourcenetwork.org/en/Document/305767)
<http://www.nationalresourcenetwork.org/en/Document/305767>

[US Department of Transportation – Health in Transportation](http://www.fhwa.dot.gov/planning/health_in_transportation/)
http://www.fhwa.dot.gov/planning/health_in_transportation/

Photos: 2007 San Diego County Firestorm. Courtesy of San Diego County Public Health Services. Firestorm information provided by SDCPHS Public Health Officer Wilma J. Wooten, 7/22/14; and the *County of San Diego 2007 Firestorms After Action Report*.

Raising Community Awareness on Climate Change and Health: San Luis Obispo County Public Health Department Case Story



This is one in a series of Climate and Health Case Stories that highlight how public health departments in California are responding to climate change as an emerging public health issue.

Climate Change and Health in San Luis Obispo County

San Luis Obispo County (SLO) is in the Central Coast Region with just under 300,000 residents.

Climate change is projected to increase the risk of heat waves, air pollution, wildfires, water insecurity, economic pressure from damage to agriculture industry, severe storms, and flooding from sea level rise and storm surges. These effects will have a significant impact on public health and disproportionately affect the area's most vulnerable populations, including children, elders, people with chronic diseases, outdoor workers including the county's farmworker population, people living in poverty and some communities of color.

"I take climate change and health personally because I want a hopeful future for my children. My daughter loves riding her scooter to school. We go to SLO's farmer's markets to get the ripest produce as often as possible."

*Dr. Penny Borenstein,
SLO Resident and
County Health Officer*

Improving Strategies to Reduce Greenhouse Gas Emissions

The county emerged as a state leader on climate change through its early efforts to develop climate action plans and

reduce GHG emissions. SLO Public Health Department (SLO-PHD) actively brings a public health perspective into these planning processes.

Many of the department's initiatives to promote healthy communities and obesity prevention are aligned with local climate mitigation and adaptation efforts. For example, the department developed and promoted SLO's "Buy Local" food ordinance that requires county agencies to prioritize purchasing locally produced agriculture products. The ordinance improves access to nutritious foods, builds economic resilience by supporting local producers, and lowers the food supply chain's carbon impact by reducing transportation miles.

Promoting Climate Change Awareness in the Community

Climate change activities in public health departments are often located in Emergency Management or Environmental Health divisions. At SLO-PHD, the Health Promotion Division leads the climate and health efforts with a strong health education approach.

OUTSIDE IN SLO
WE TAKE HEALTH AND CLIMATE CHANGE PERSONALLY

Campaign Goal

People in San Luis Obispo County view climate change as an important health issue that impacts their life and take actions that can both help reduce the risks of climate change and improve health.

Overall, the division promotes healthy behaviors and encourages community-wide improvements to benefit public health. There are a number of ready connections that are being made between the emerging climate change work and existing healthy community efforts.

An important facet of California's response to climate change is raising public awareness of this complex issue. The Health Promotion Division supports this mission by providing presentations on the relationship between climate change and public health to university students, community groups, and staff from various county departments. This demonstrated interest in climate and health issues led the department, with the support of the County Public Health Officer, to partner with California Department of Public Health's (CDPH) Climate and Health Team to conduct a climate change communications pilot project and become involved in the CDC funded CDPH CalBRACE Project.



The “*OutsideIn SLO: We Take Health and Climate Change Personally*” project was launched in August 2014, to pilot this comprehensive climate and health awareness and education campaign's strategies.

Climate and Health Communications Project

To raise awareness that climate change is an important health issue, the campaign frames climate change as both a personal and community health issue. The campaign audience includes SLO-PHD staff, members of a local chronic disease prevention coalition and the general public.

Research demonstrates that messages focused on the local community where residents live can be effective at spurring action on climate change.

The campaign messages promote action to reduce the risks of climate change and improve people's health. Outreach materials highlight localized climate impacts that directly affect the lives of SLO residents. The key messages are complemented with a call to action. A central campaign theme is that residents can engage in win-win activities to both reduce their carbon impact and improve their health.

Moving Forward

Staff and partner organizations prepared for the campaign with climate and health trainings. CDPH Climate and Health Team and SLO-PHD staff presentations featured climate science, plans to mitigate and adapt to climate change, and how-to respond to common, yet difficult, questions.

Key Communication Tips

- Know your audience and use messages and messengers that work for them.
- Respect and consider what underlying values are important.
- Make climate change local, now and personal (“We take health and climate change personally” is SLO’s tagline).
- Focus on solutions and find win-wins.
- Use stories with a human dimension of climate change more than facts.
- Remind audiences that the people impacted far into the future are our children.

The campaign was implemented in both English and Spanish and leverages multiple media channels, including print, social media, radio, and events like farmer's markets. In one particularly innovative effort, the educational messages were integrated into activities of the Special Supplemental Nutrition Program for Women, Infants and Children (WIC) and the Supplemental Nutrition Assistance Education Program (SNAP-Ed).

The health department provides free nutrition education classes to community members with low incomes through these programs. Staff provides information about how climate change affects health and carbon emission reduction strategies like purchasing low-carbon impact foods and using active modes of transportation such as biking and walking instead of driving. As the campaign rolls out, more local organizations and programs will promote the “*OutsideIn SLO: We Take Health and Climate Change Personally*” message.



Lessons Learned

- Education campaigns need to take a community organizing approach to develop strong personal relationships with community members. Involving community and local partners early in the campaign planning creates a shared mission to promote climate and health awareness, and activities.
- Local public health departments need to have both internal and external relationships to effectively address emerging issues like climate change. With limited funding, climate and health activities can leverage existing resources and enhance existing public health programs.

Resources

[OutsideIn SLO: We Take Health and Climate Change Personally Campaign](http://www.healslo.com/outsidein-slo/)

<http://www.healslo.com/outsidein-slo/>

[Webinar Series 2017: Communicating Climate Change as a Public Health Issue](http://www.healslo.com/webinar/)

<http://www.healslo.com/webinar/>

[Developing Adaptation Strategies for San Luis Obispo County: Preliminary Climate Change Vulnerability Assessment for Social Systems](http://www.slocounty.ca.gov/Departments/Planning-Building/Forms-Documents/Informational/Energy-Climate-Informational-Documents/Climate-Change-Vulnerability-Assessment.aspx)

<http://www.slocounty.ca.gov/Departments/Planning-Building/Forms-Documents/Informational/Energy-Climate-Informational-Documents/Climate-Change-Vulnerability-Assessment.aspx>

[CalBRACE Project - California Department of Public Health, Office of Health Equity](https://www.cdph.ca.gov/Programs/OHE/Pages/CalBRACE.aspx)

<https://www.cdph.ca.gov/Programs/OHE/Pages/CalBRACE.aspx>

[Climate and Health Initiative - Centers for Disease Control and Prevention](http://www.cdc.gov/climateandhealth/brace.htm)

<http://www.cdc.gov/climateandhealth/brace.htm>

Photograph: “*OutsideIn SLO*” campaign pilot launch/kick-off event in August 2014. From left, Janice Fong Wolf of the Community Foundation San Luis Obispo County and Linda McClure, WIC Program, SLO Public Health Department.

This publication was supported by the California Department of Public Health, Office of Health Equity – CalBRACE Project through Cooperative Agreement 5UE1EH001052, funded by the Centers for Disease Control and Prevention. Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the Centers for Disease Control and Prevention or the Department of Health and Human Services. (1/2018) Calbrace@cdph.ca.gov

Planning for Climate Change and Public Health: Santa Clara County Public Health Department's Case Story



This is one in a series of Climate and Health Case Stories that highlight how public health departments in California are responding to climate change as an emerging public health issue.

Climate Change and Health in Santa Clara County

Santa Clara County with over 1.8 million residents is the most populated county in the Bay Area Region. According to scientific projections, climate change will bring more frequent extreme heat events, worse air pollution and sea level rise, which will cause residential and commercial displacement, and more coastal and riverine flooding from extreme storms. These effects will have a significant impact on public health and affect the area's most vulnerable populations disproportionately, including children, elders, people with chronic diseases, outdoor workers, people living in poverty, and some communities of color.

"The effects of climate change are at our front door. Like all health threats, these effects are experiencedin our cities and neighborhoods. And, like any threat to our community's health, local public health departments must play an active role in understanding the nature and course of climate change and take action to mitigate and adapt to its consequences in order to protect the health of its community."

*-Dr. Sara Cody,
Santa Clara County
Public Health Officer*

Bringing Public Health into Climate Change

Santa Clara County Public Health Department (SCCPHD) has a multi-pronged approach to climate change that emerged from its Center for Chronic Disease and Injury Prevention. Initially, department staff were exposed to climate issues through programs, organizations, and collaboratives that focus on the upstream determinants of health. Early work included strategies to increase active transportation and food access, which have co-benefits for improving community health and reducing greenhouse gas (GHG).

Chronic Disease and Injury Prevention staff participated in the county's Climate Action Team, which created a

plan focused on reducing GHG. One of the department's most important engagement outcomes emerged from its Health in All Policies (HiAP) efforts, which included creating a health element for the county's *General Plan* with specific language addressing climate

change. The health element is instrumental in framing other aspects of the *General Plan*, which will inform the county's overall operations and land use planning for the next 10 to 20 years.



2012-2015 Public Health Strategic Plan

Goal 3: Establish a departmental focus on environmental issues related to climate change and sustainability.

Objective 1. Increase community awareness and preparedness for the public health effects of climate change/global warming.

Objective 2. Engage in county and city efforts to improve the environment, including sustainability, transportation, and development initiatives.

Objective 3. Promote the inclusion of health in all policies in county and cities general plans and encourage land policies that support and promote health.

Objective 4. Conduct health impact assessments to determine the positive and negative health impacts of policies related to the physical environment.

Through engagement with external partners the department has been able to provide education about the relationship between public health and climate change, as well as advocate for a stronger public health focus in the county's planning efforts.

Climate Change Mitigation and Adaptation Activities

The Santa Clara County Department of Public Health participates in the following activities:

- Silicon Valley 2.0: Santa Clara County Office of Sustainability manages this regional climate planning initiative to minimize climate change impacts and to reduce local GHG generation.
- Santa Clara Climate Change Action Team: An interdepartmental team that developed the county's *Climate Action Plan*. The team is led by the county's climate change and sustainability manager.
- Santa Clara Food Systems Alliance: A county-wide collaborative of food system leaders
- Safe Routes to Schools Program: A program to make walking and biking to school fun, healthy, safer, and accessible to all who chose to walk and bike to school.
- Bay Area Regional Health Inequities Initiatives-Built Environment Committee: A regional group of local health departments collaborating to eliminate health inequities.
- Grand Boulevard Initiative: A regional collaboration to revitalize the El Camino Real corridor.

Bringing Climate Change into Public Health

The department's leadership team recognized climate change as an emerging issue in the public health field and wanted to prioritize its inclusion in strategic planning efforts. In the *2012-2015 Public Health Strategic Plan*, a specific climate change goal and attendant objectives were included. This both codified the department's existing climate and health efforts, and provided tangible steps to bring climate change perspectives into its programs and planning.

Building on the strategic plan, the department began a process to create a comprehensive climate action plan (CAP) to guide its approach to climate change from a public health perspective. Instead of addressing the issue in a disjointed fashion, the plan creates a roadmap to fully integrate the challenges presented by climate change into programming and operations. The drafting of the CAP was spurred on by leadership's desire to follow through with its 2012-2015 Public Health Strategic Plan goal. Throughout the entire process, the content was shared with the department's executive leadership to ensure the CAP was in alignment with organizational priorities. While drafting its Climate Action Plan, Santa Clara Public Health communicated with the California Department of Public Health (CDPH), and the San Francisco and Los Angeles public health departments to see how this work was being done by others. The CAP process developed a well-rounded set of viewpoints from key internal and external stakeholders and occurred in three phases.

Phase 1: The department leadership formed a working group to create a hub for its climate and health activities and planning. The group pulled together staff from across the department, from the public health officer and other executive management, and others from the Nursing, Emergency Preparedness, and Chronic Disease and Prevention divisions, and epidemiologists. Members also came from the Department of Environmental Health (DEH), which is an independent department. Representatives from the consulting agency providing a health perspective to the Silicon 2.0 initiative also joined the work group.

To orient the public health working group members, experts in the climate and health field were invited to present climate change science, its health impacts, and the current state, regional, and county climate planning efforts. The group discussed the many ways climate change will affect their work and how health programs can prepare for the present and projected changes. An effort to clarify the language of climate change and health, and create a standard vocabulary for talking and writing on the issue, provided common ground.

Phase 2: Once a baseline level of knowledge was established, the working group began an iterative process to develop a comprehensive climate action plan. A consulting agency facilitated a half-day session to develop the vision and direction for the CAP. After broad range goals and objectives were drafted, they were pared down to align with agency resources. Staff members were assigned to each objective to identify activities and prepare a draft work plan. The working group met quarterly to check in with the staff's assigned planning efforts.

Phase 3: Once the draft CAP was written, the logistical details were developed honing in on timelines, necessary staffing, and other key resources.

Moving Forward

The draft Climate CAP will guide future climate and health efforts. Without dedicated funding, staff members are integrating climate change activities into their existing work, and beginning to move forward on the CAP elements. New e-learning modules for climate change and health education are being developed for required staff training. In the Emergency Preparedness Division, a plan is being developed for heat events which are becoming stronger and more frequent. Epidemiologists are developing new criteria for identifying populations most vulnerable to the projected health effects from climate change. This information is being overlaid with the locations in the county where wildfires, extreme heat, and air quality are most likely to impact. Finally, in an effort to hone its focus and clarify its priorities to move climate and health work forward, the department is refining its *Public Health Strategic Plan* to include more specific goals and objectives. Creating more specificity will help leadership advocate for increased resources to carry out the goals and objectives in the CAP.

Public Health Climate Action Plan

The draft *Climate Action Plan* has an 18-month timeline.

The goals include:

- Raising awareness both within and outside the health department;
- Establishing tracking processes to monitor the health impacts from climate change;
- Increasing partnerships with local jurisdictions and agencies working on climate issues;
- Integrating climate change strategies into current and future public health plans; and
- Decreasing the department's GHG emissions.

There are still many unanswered questions, such as what tables does the public health department need to have a seat at if it is going to be the lead on climate and health issues, and how will emerging climate justice and health equity issues, including the need to build community capacity for adapting to climate change, be addressed? Climate change is projected to affect individuals and communities with the least resources more deeply. How can health equity continue to be an important priority for health departments and what new strategies can be taken to address them?

The department has plans to leverage existing relationships and create new ones, like connecting more deeply with local universities. These relationships provide climate change expertise to help implement the work required by the department's *Climate Action Plan*.

Lessons Learned

- Do what you can with what you have and don't wait for dedicated resources to do the work.
- Staff participation in existing regional climate change efforts is a helpful starting point.
- Provide essential agency leadership to support and empower staff to identify and prioritize climate and health strategies.
- Put climate change in public health strategic plans, even if a deliverable is broad and non-specific, to create momentum to include climate change in diverse health programs and planning efforts.
- Learn and share with other organizations addressing climate change and public health, as the field is still new and emerging, and there are few content experts.
- Fill the huge gap between where health departments need to be to effectively address climate change and where they are now.
- Develop the expertise to grapple with climate and health issues, and prepare for the next wave of public health leaders and practitioners who will bring a more interdisciplinary approach with environmental health sciences, city planning, and public policy.
- Create new partnerships to effectively address climate and health threats; the work cannot be limited to only the public health department.

Resources

[2015-2018 Santa Clara County Public Health Department Strategic Plan](#)

[Santa Clara Public Health Department County Climate Action Plan](#)

[CalBRACE Project - California Department of Public Health, Office of Health Equity](#)

[Climate and Health Initiative - Centers for Disease Control and Prevention](#)

[Santa Clara County Climate Action Plan for Operations and Facilities](#)

[Santa Clara County Climate Adaptation and Resiliency – Silicon Valley 2.0 Project](#)

[Health Element of Santa Clara County General Plan](#)

Photo: Courtesy of Santa Clara County Public Health Department. SCCPHD Staff - Bike to Work Day.