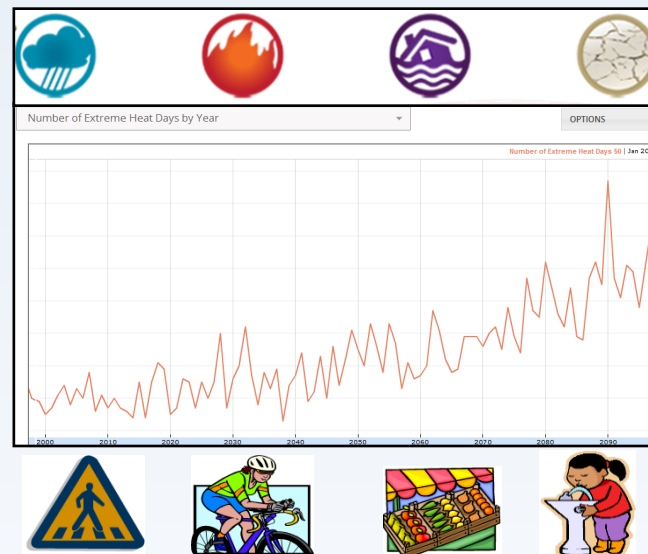


Climate Change, Adaptation, and Public Health

Local Government Commission
Webinar
April 18, 2013



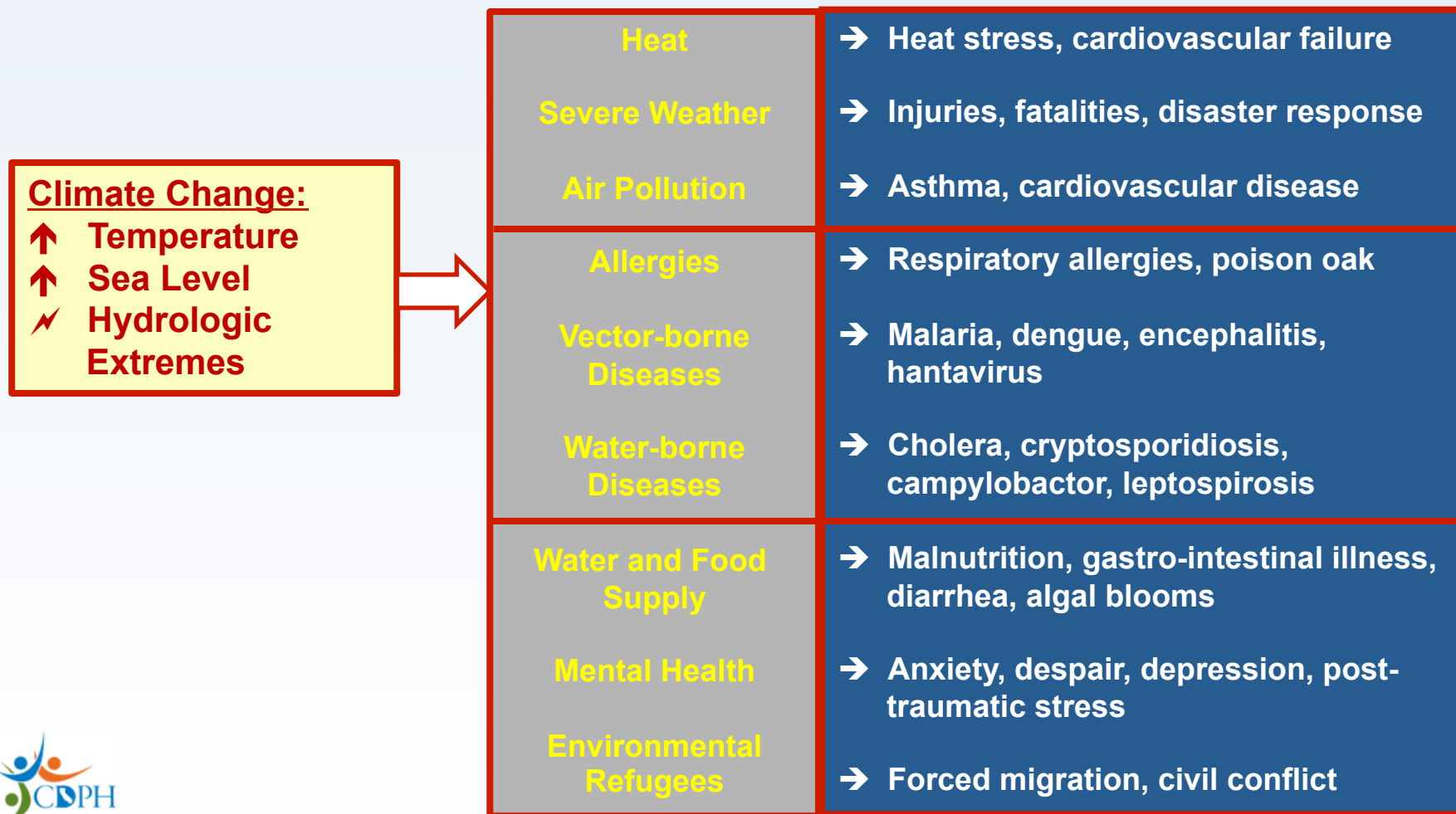
Neil Maizlish, PhD
Office of Health Equity
California Department of Public Health

Outline

- What is climate change and its public health impacts?
- What is the State of California's response?
- What are CDPH's prevention and response strategies?
- What are key current activities

What is Climate Change and its Public Health Impacts?

- Rising of the earth's temperature due to increased release of greenhouse gases (GHG) produced by burning of fossil fuels and deforestation
 - Population growth and fossil fuel-intensive economy are key drivers



Public Health Impacts



- Catastrophic Impacts/Existential Threat

“Climate change is one of the most serious public health threats facing our nation. Yet few Americans are aware of the very real consequences of climate change on the health of our communities, our families, and our children.” – Georges Benjamin, Exec. Dir., APHA

- Governor’s priority

“It’s time for courage, it’s time for creativity and it’s time for boldness to tackle climate change . . . The risk is real, the cost is huge and growing, and therefore taking a sequence of realistic steps just makes sense, and that’s what we’re going to do in California” – Jerry Brown, Governor of California

How is California Responding to the Threat of Global Warming?

- GHG Reduction (Primary Prevention/Reduction)
 - 2006 State goals overall and by sector (AB32 & EO S-3-05)
 -  State agency coordination in Climate Action Team
 - 2007 Coordinated regional planning in housing and transportation sectors to accommodate population growth (SB375)
 -  Strategic Growth Council support of state, regional, and local land use planning to promote sustainable communities (SB732/HiAP)
 - Scores of local communities and nonprofit organizations have created climate (↓GHG) action and sustainability plans (“Mantra: Environment, Economy, Equity”)

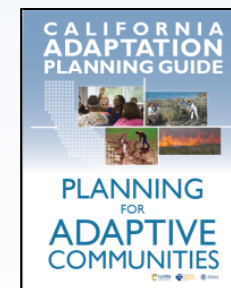


= public health mentioned in legislation and/or has active role

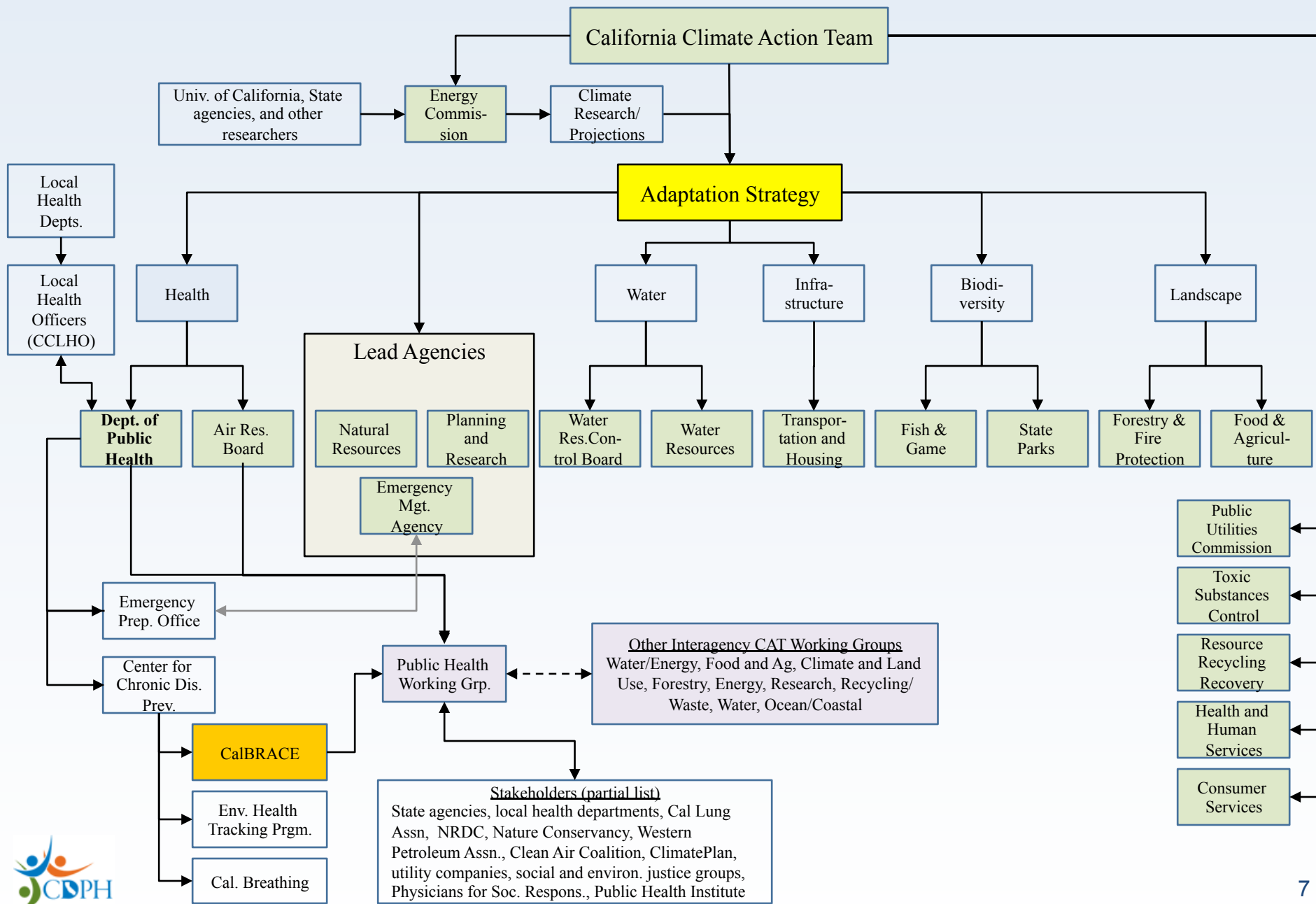


How is California Responding to the Threat of Global Warming?

- Adaptation to Global Warming (Readiness)
 - 2008 Executive Order S-13-08 (public health adaptation strategy as part of overall strategy)
 - 2009 Adaptation Strategy public health chapter
 - 2010 Sea Level Rise Interim Guidance by Ocean Protection Council
 - 2011 Cal Adapt (web-based mapping of local climate effects)
 - 2011 Governor's Conference on Extreme Weather Events
 - 2012 Extreme Heat Interim guidance by the Public Health Workgroup
 - 2012 Local Climate Adaptation Planning Guide
 - 2013 Update to Climate Adaptation Strategy



California Climate Change Adaptation Organizational Chart



Regional Adaptation Initiatives

- Regional adaptation collaborative planning efforts are underway
 - LA Regional Collaborative for Climate Action (UCLA)
 - San Diego Climate Action Coalition, convened by San Diego Foundation
 - Bay Area Regional Energy and Climate Resilience, convened by Joint Policy Committee (MTC/ABAG)
 - Sacramento-area (several collaborating groups)

Co-Benefits: Reduce Greenhouse Gas Emissions and Improve Public Health

Less Sustainable	More Sustainable	Public Health Co-benefits
Fossil fuel dependent transportation	Walking, bicycling, public transit	<ul style="list-style-type: none"> ↑ Increase physical activity ↑ Air quality ↓ Major chronic disease and obesity
Energy-intensive food systems	Local food systems purveying healthy food options	<ul style="list-style-type: none"> ↑ Fruits and vegetables ↓ Cardiovascular disease from low animal protein/fat diet ↑ Educational outcomes/resilience
Urban sprawl, destruction of wetlands, habitat, and ag. lands	Compact development, open and green space, tree canopy	<ul style="list-style-type: none"> ↑ Access to physical activity and other health-promoting resources ↑ Water quality ↓ Urban heat island, noise, violence

CDPH ITHIM model :
 ↑ daily active travel from 4.4 min to 22 min
 ↓ 15% cardio-vascular and diabetes burden
 ↓ 15% decrease in car-related GHG emissions

CDPH “Climate Action for Health”: Engaging and educating local health departments and urban planners on how to put a public health dimension into local GHG reduction plans.



Impacts are being seen now, and existing, accumulated greenhouse gas emissions will have health impacts

- Public Health Adaptation Strategies
 - Maintain surveillance capabilities
 - Increase community resilience
 - Educational outreach and community partnership
 - Improve preparedness and response
 - Identify/promote strategies with health co-benefits
 - Conduct research
 - Promote policy changes

2009 CALIFORNIA CLIMATE ADAPTATION STRATEGY

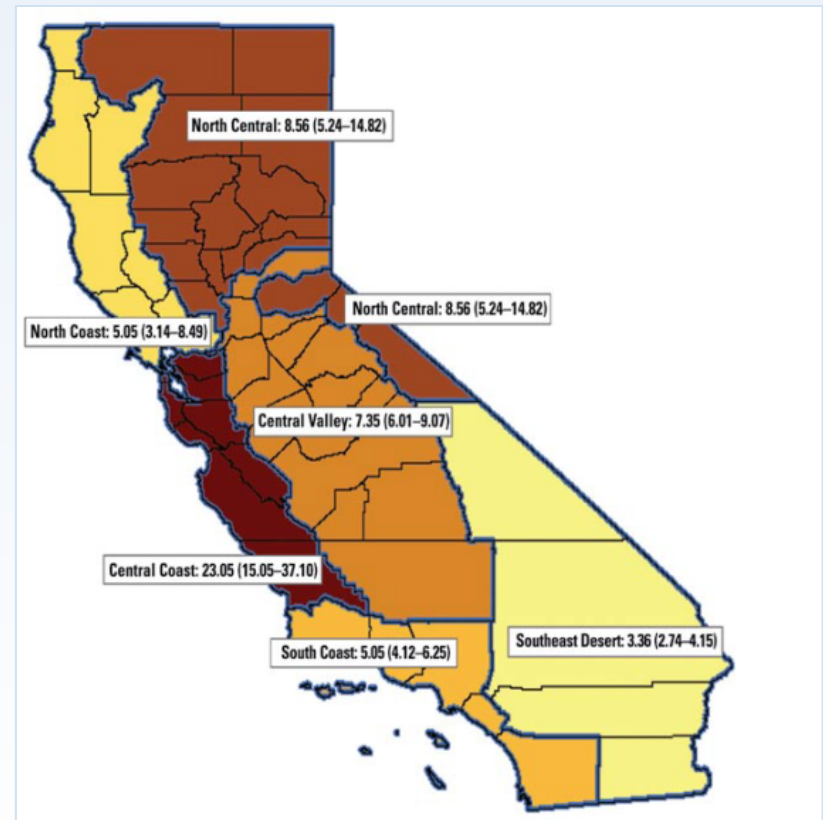
A Report to the Governor of the State of California
in Response to Executive Order S-13-2008

Public Health Surveillance and Assessment: Example Heat Waves

- Europe, 2003: nine day heat wave with > 70,000 deaths

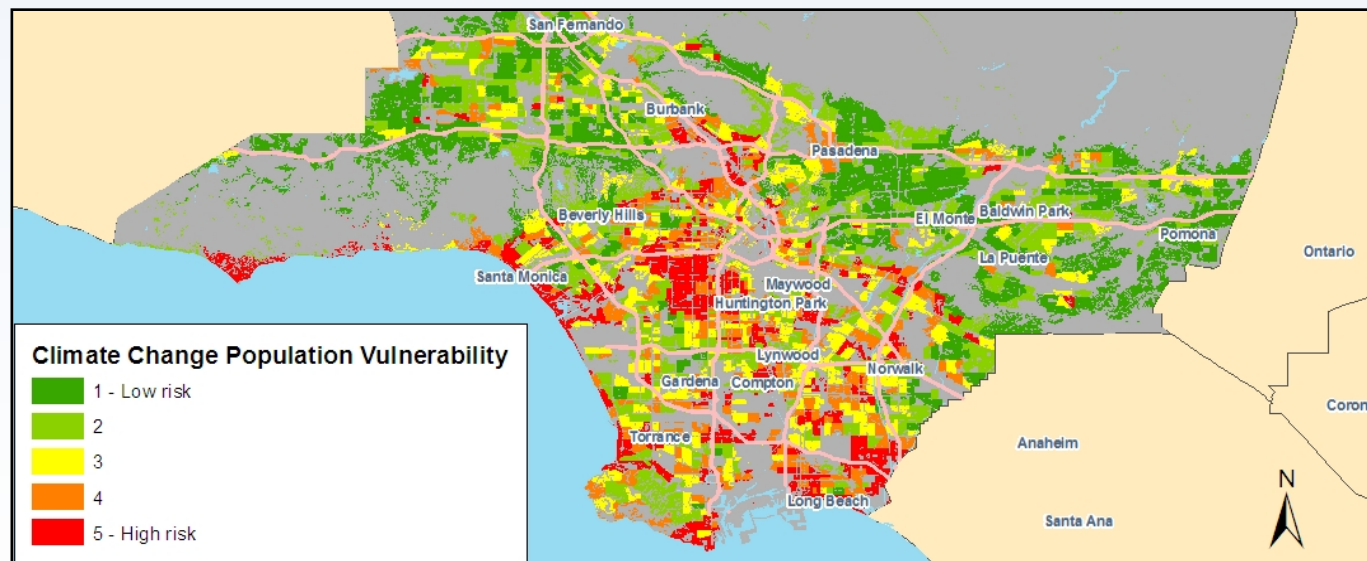
Could it happen here?

- California, 2006
 - 655 excess deaths
 - 16,166 excess emergency room visits and 1,182 excess hospitalizations
 - \$133 million in health-care related costs
 - CA electrical grid/transmission lines threatened by wildfire risk; catastrophic during heat wave



Climate change will impact all Californians but the most vulnerable will suffer the most

- Climate change will magnify existing health inequities rooted in social determinants of health; adaptation draws on many of the same resources
- In LA County, more African-Americans and Latinos live in high risk areas compared to whites and average incomes are about 40% lower



Educational outreach and community partnership

- Climate change communication: messaging to the public and public health professionals
 - Climate change is a threat to human health (not just about polar bears and melting glaciers)
 - It's already upon us and accelerating
 - Our health will suffer if we don't take action
 - Our health will benefit by using available, smart solutions
- Capacity Building
 - CDPH, local health departments, and other stakeholders



Current activities at CDPH

- Research/technical assistance on estimating health co-benefits of active transport
- Governor's Climate Action Team (CAT) and CAT Public Health Workgroup
- Public Health adaptation chapter for CA's Adaptation Strategy
- Vulnerability assessments
- Interagency Heat Adaptation Group
- Outreach activities (e.g. PH and climate webinar series)
- Surveillance of heat-related deaths, ER visits, and hospitalizations

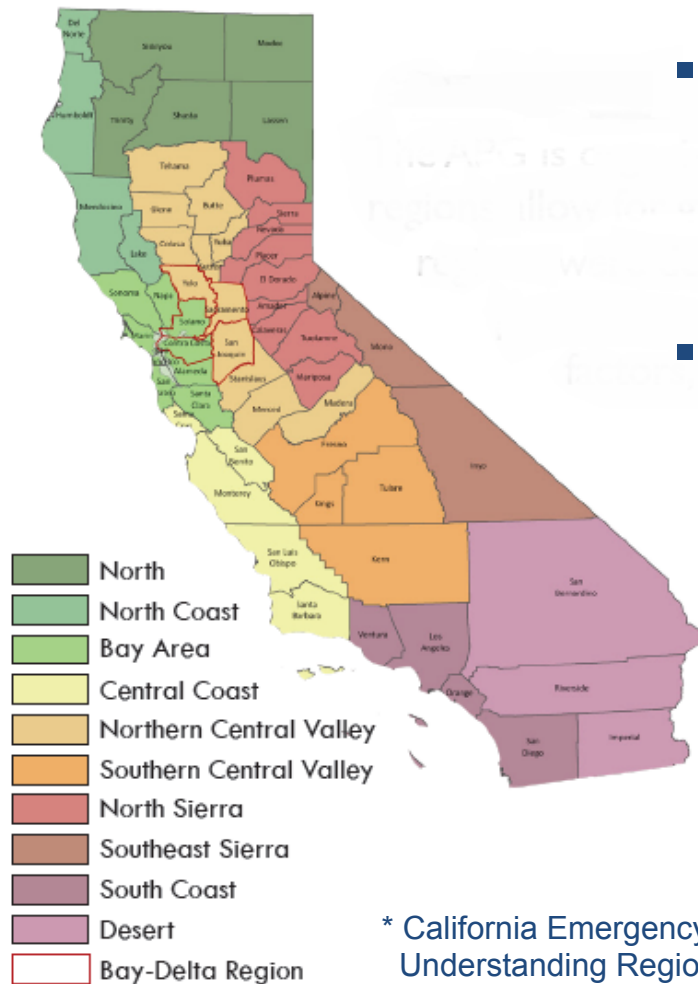
CDC' s BRACE Framework

Climate change has global drivers, but impacts will be felt locally

- CalBRACE Model:
 1. Forecast climate change exposures and population vulnerabilities at a local/regional level
 2. Conduct a health risk assessment
 3. Assess the interventions to adapt/build community resilience to climate
 4. Make/refine adaptation plans and their implementation
 5. Evaluate BRACE process and outcomes/impacts
- 4-year CDC grant with additional resources for 2 staff and some local support to local health departments via mini-grants
- Specific goals are to build capacity at state and local levels and build on existing processes
- Not a research project

California Climate Zones for Adaptation Planning*

10 California climate regions comprised of 3- to 10-county clusters



- CalBRACE will focus on 1 county in each of 10 climate regions to forecast climate changes, vulnerabilities, and health risks
- Diversity (rural/urban, demographics, types of climate impacts anticipated)

* California Emergency Management Agency, California Natural Resources Agency. Understanding Regional Characteristics: California Adaptation Planning Guide. July 2012.

Highlights of CalBRACE

- Builds on existing adaptation work and processes:
 - Engagement with local health departments and fit with existing public health programs
 - CAT Public Health Workgroup and other stakeholders
 - Cal-Adapt (down-scaled climate projections)
 - Vulnerability assessments (ASTHO pilot project in Fresno/LA)
 - Health risks assessment

Highlights of CalBRACE

- Consult and coordinate with CCLHO and local health departments before, during, and after each BRACE step
- Deliverables:
 - Localized vulnerability maps/methods/data
 - Localized health risk assessments
 - Inventory of interventions (“best practices”) for specific local risks
 - Templates for adaptation planning, including content, communications, education, and technical assistance
 - Build capacity for local health department staff engage and participate in local/regional adaptation efforts

Where can climate adaptation fit in local health department programs?

- Not limited to a single program area
 - PH preparedness
 - Built environment/healthy planning
 - Health equity/vulnerable populations
 - Environmental health
 - Epidemiology/health policy
 - Health Promotion/chronic disease
 - Nutrition, local food security, urban ag., farmer's markets
 - Health education, community education/engagement
 - Infectious disease/vector borne disease
 - PH Nursing
 - Others?

Contact Information

Neil Maizlish (Neil.Maizlish@cdph.ca.gov)

Kathy Dervin (Kathy.Dervin@cdph.ca.gov)

Office of Health Equity

