

Climate Action for Health, Equity & Community Resilience



Linda Helland, MPH, CPH | Chief
Dan Woo, MPH, MS | Team Lead
Climate Change & Health Equity Section
Office of Health Equity
California Department of Public Health

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California Department of Public Health



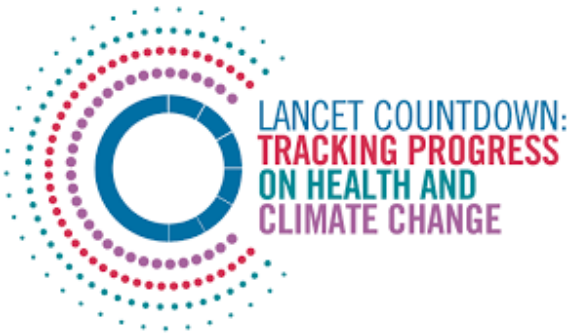
Climate Change Is The Greatest Threat To Public Health, Top Medical Journals Warn

September 7, 2021 · 5:01 AM ET

The Washington Post October 20, 2021 | Updated October 21, 2021 at 11:25 a.m. EDT

Inaction on climate change imperils millions of lives, doctors say

Top medical journal warns that rising temperatures will worsen heat and respiratory illness and spread infectious disease



The 2021 report of the *Lancet* Countdown on health and climate change: code red for a healthy future

<https://www.lancetcountdown.org/2021-report/>



“Where climate threats collide with forward leaning health practices and policies that visibly turn the tide toward community resilience.”



THE CALIFORNIA BLUEPRINT

CALIFORNIA'S EXISTENTIAL THREATS

1. Fighting COVID with Science
2. Combating the Climate Crisis
3. Confronting Homelessness
4. Tackling the Cost of Living
5. Keeping our Streets Safe

Air Pollution & Increasing Allergens

Asthma, allergies, cardiovascular and respiratory diseases

Extreme Heat

Heat-related illness and death, cardiovascular failure

Drought

Water supply impacts, dust storms, Valley Fever

Environmental Degradation

Forced migration, civil conflict, loss of jobs and income

Wildfires & Wildfire Smoke

Injuries, fatalities, loss of homes, cardiovascular and respiratory diseases

Degraded Living Conditions & Social Inequities

Exacerbation of racial and health inequities and vulnerabilities, loss of employment

Changes In Vector Ecology

Lyme disease, West Nile Virus, hantavirus, malaria, encephalitis

Food System Impacts

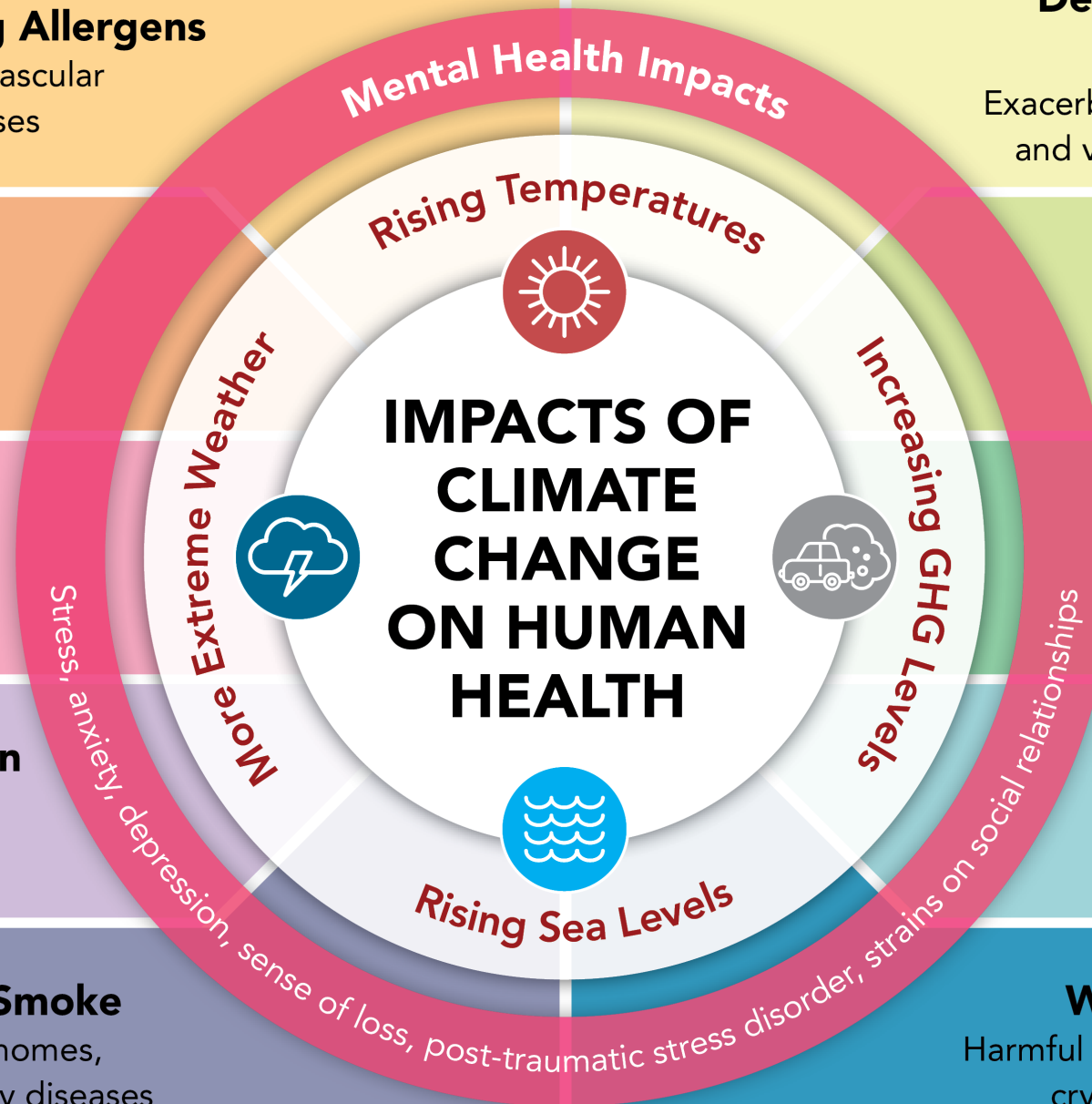
Malnutrition, food insecurity, higher food prices, foodborne illness

Severe Weather & Floods

Injuries, fatalities, loss of homes, indoor fungi and mold

Water Quality Impacts

Harmful algal blooms, campylobacteriosis, cryptosporidiosis, leptospirosis



Confluence of Climate Change Impacts

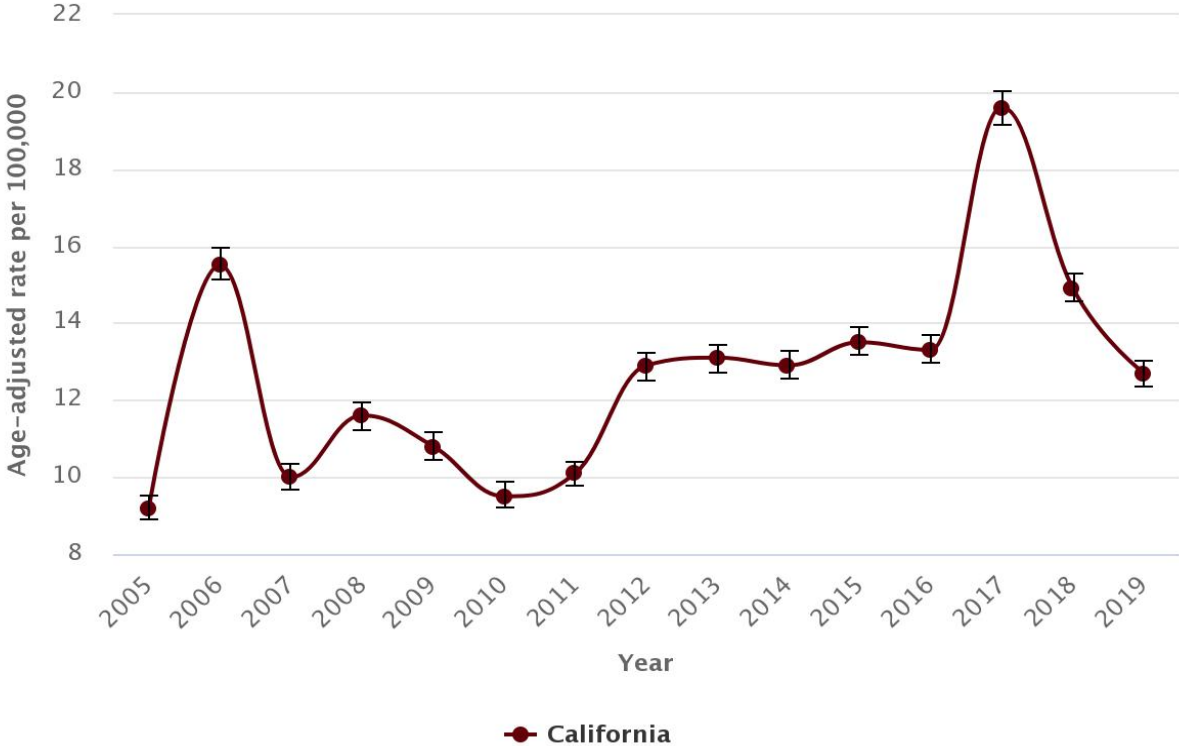


(AP Photo/Noah Berger)

(Source: CBS News)

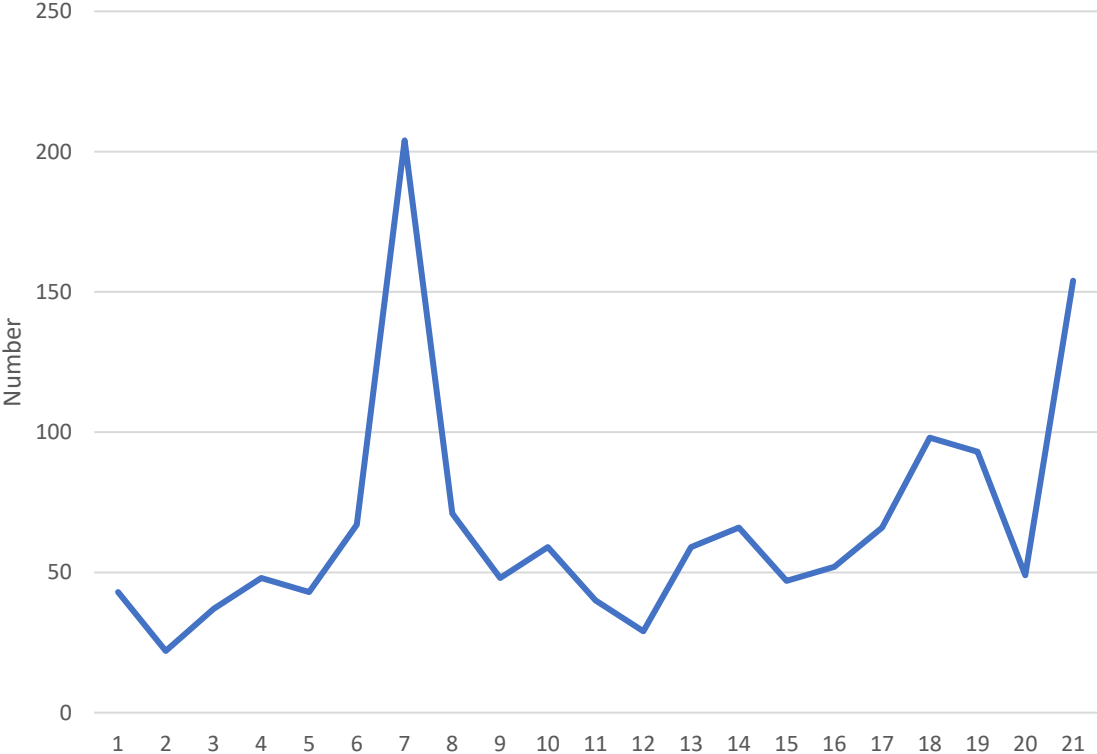
California Climate & Health Impacts: **EXTREME HEAT**

Emergency department visits due to heat, California, Age-adjusted rate per 100,000, 2005-2019



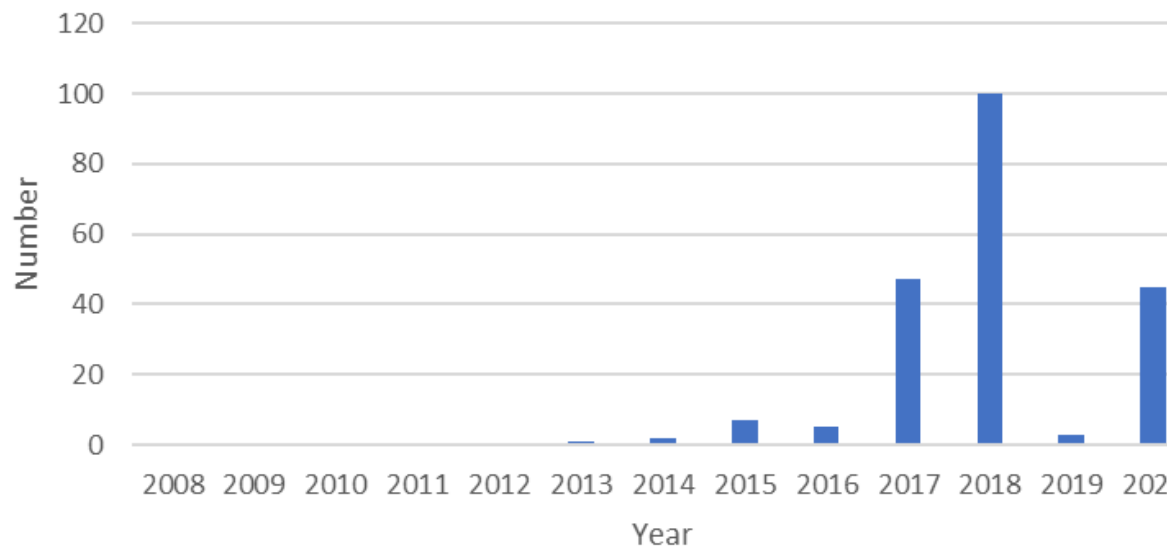
TrackingCalifornia.org

Number of Heat-Related Deaths, 2005-2019, California



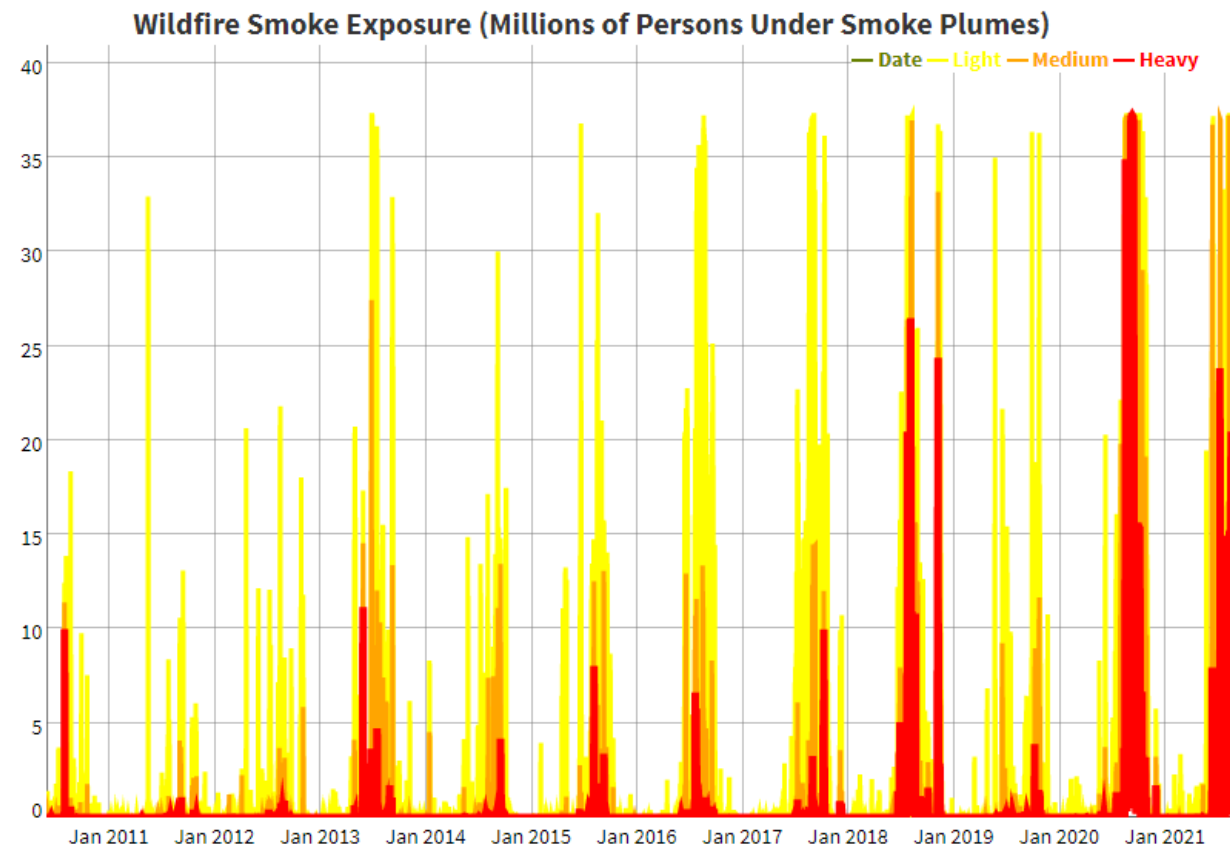
California Climate & Health Impacts: WILDFIRES & SMOKE

Wildfire Fatalities, California, 2008-2020



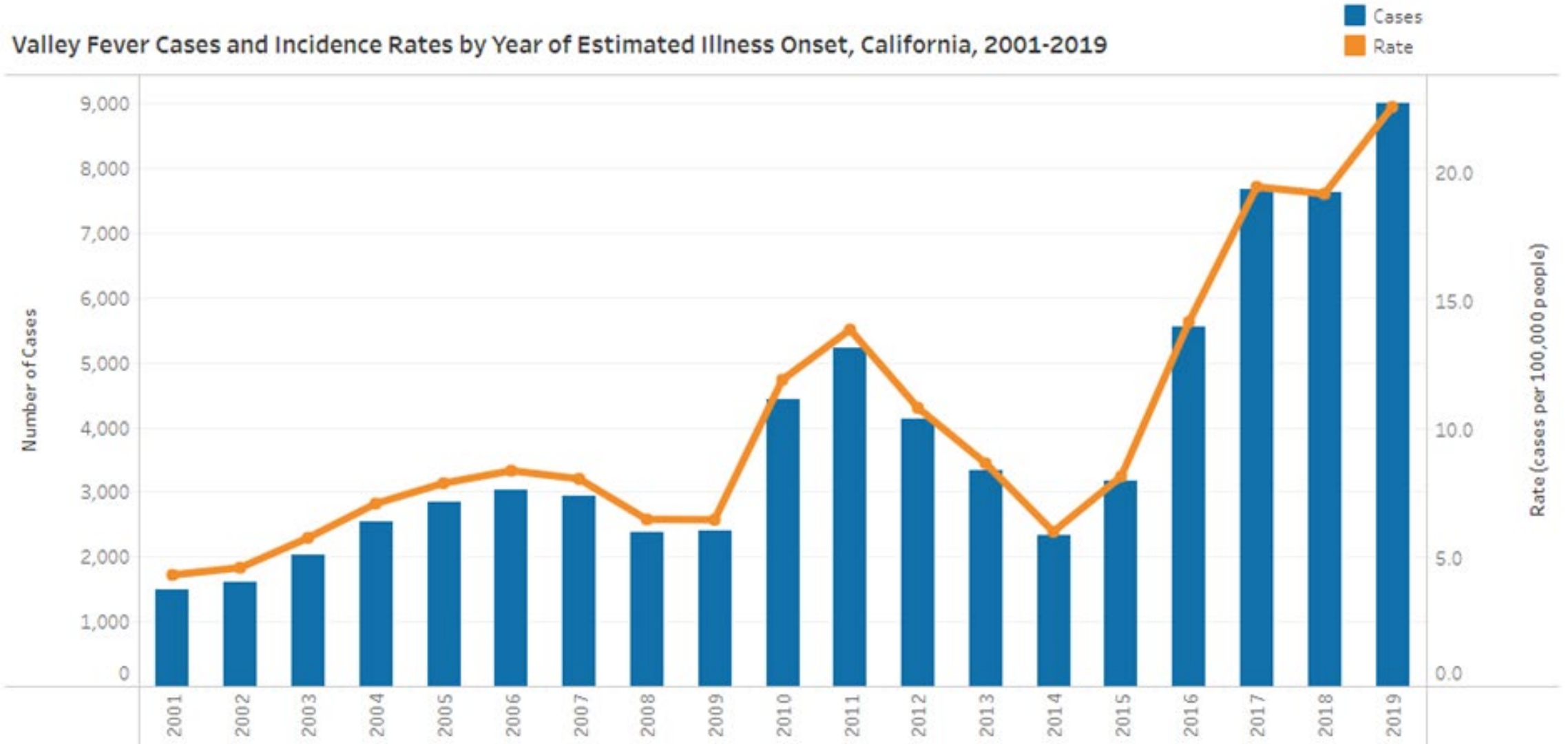
Source: CalFIRE

Heavy, Medium, and Light Wildfire Smoke Exposures in California | June 01 2010 - September 12 2021



Source: Vargo 2020, <https://doi.org/10.3389/fpubh.2020.00126>

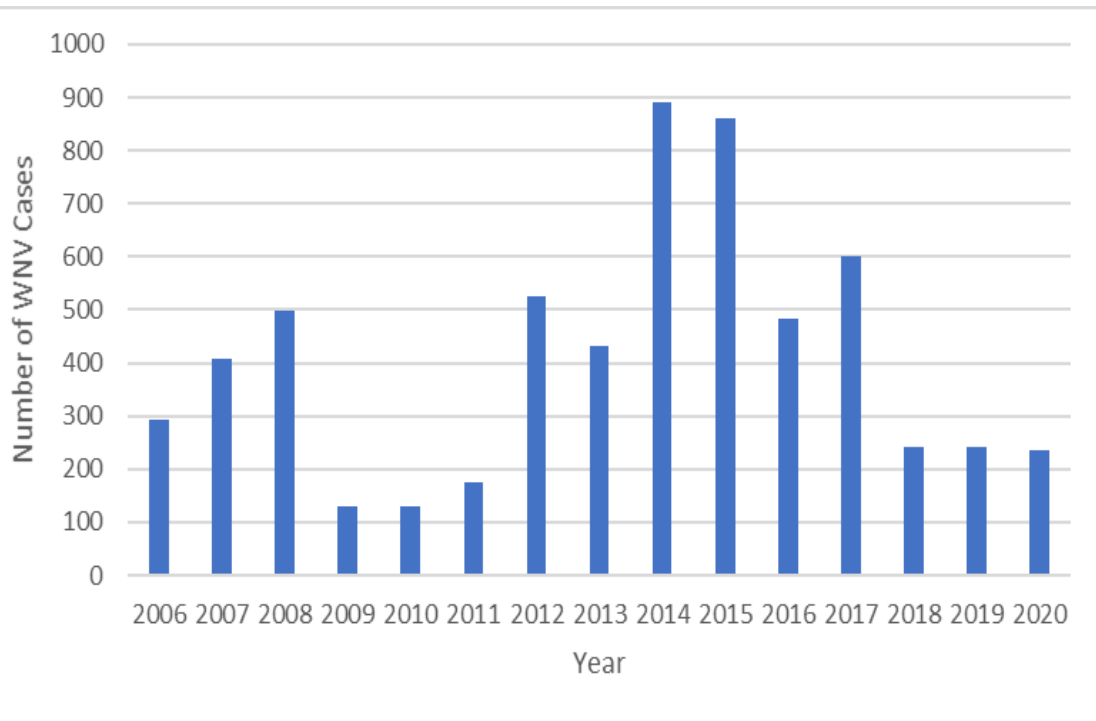
California Climate & Health Impacts: **INFECTIOUS DISEASES**



Source: 2019 Valley Fever Epidemiologic Summary Dashboard (ca.gov)

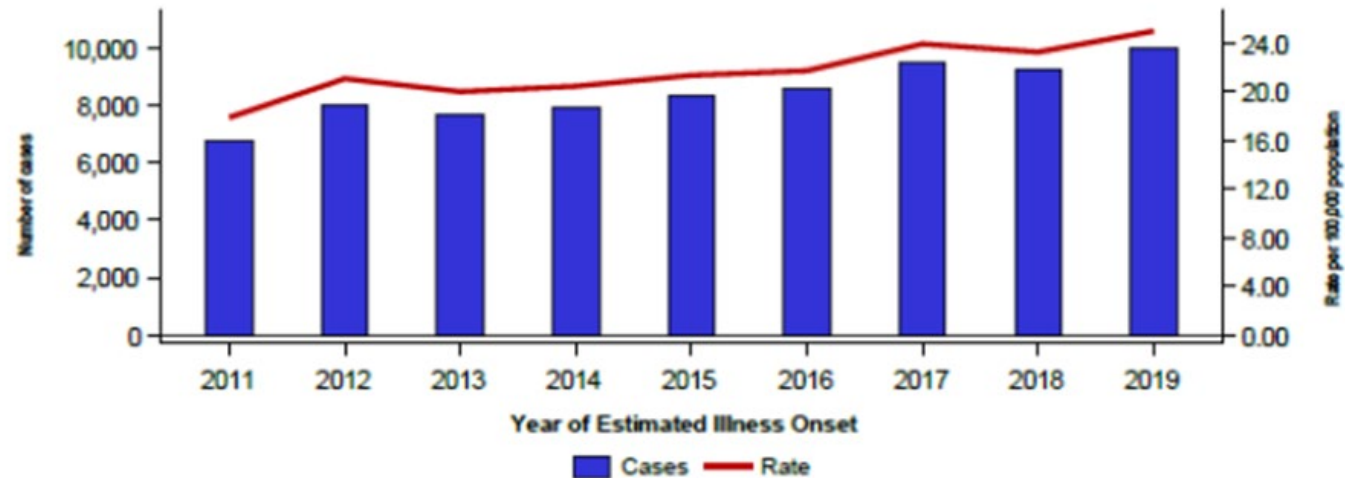
California Climate & Health Impacts: **INFECTIOUS DISEASES**

Reported West Nile virus human cases, California, 2010-2020



Source: Westnile.ca.gov | California West Nile Virus Website

Campylobacteriosis Cases and Incidence Rates by Year of Estimated Illness Onset, California, 2011-2019



Source: [CDPH IDB Yearly Summaries of Selected Communicable Diseases in California, 2011 to 2019](#)

**CLIMATE CHANGE IS
ALREADY HARMING
HUMAN HEALTH.**

**PEOPLE FACING
INEQUITIES HURT
FIRST AND WORST.**

Image: Public News Service



Image: NY Times

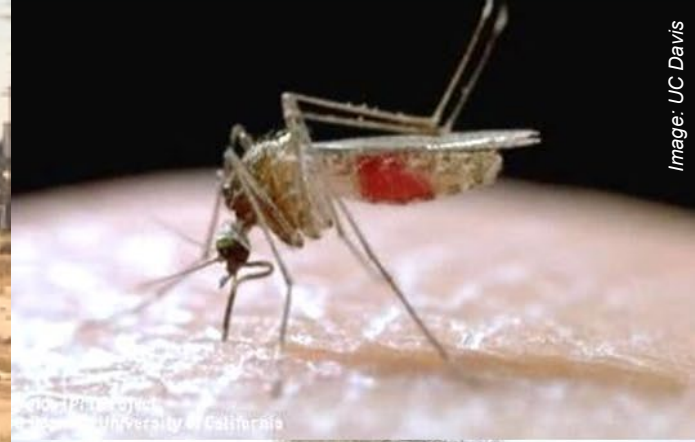


Image: University of California

Image: UC Davis



Image: CBS SF/Local



Image: US News



Image: Depositphotos.com/zenpi

Doctors put a price tag on the annual health impacts of climate change. It's \$820 billion.

And that's an underestimate.

CAL MATTERS

Climate change is going to cost California, and the bill will be staggering

AUGUST 30, 2018 UPDATED JUNE 23, 2020

"[K]iller heat waves could add more than 11,000 heat-related deaths a year by 2050 in California, and carry an estimated **\$50 billion annual price tag.**"

How Climate-Related Health Costs Add Up:

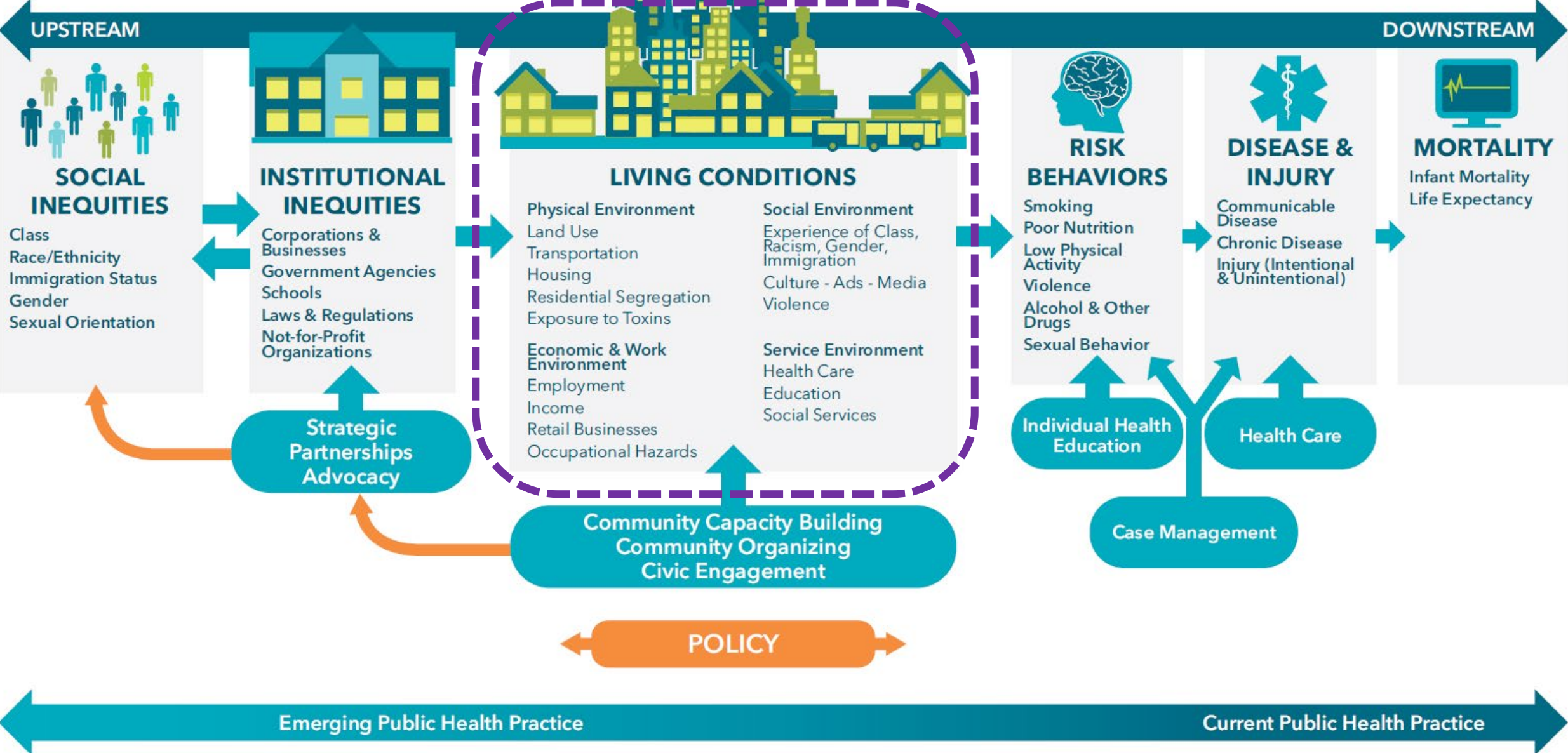
- **Premature deaths** (e.g., from heat waves, wildfires, smoke, etc.)
- **Medical care** for treatment of physical and mental health conditions (e.g., injuries, PTSD after a disaster)
- **Rehabilitation** and **home health care**
- Prescription **medications**
- **Lost wages** and **worker productivity**
- **Downstream health costs** (e.g., delayed care, homelessness)



(Source: NRDC; Photo: Jonathan Bachman / Reuters)

Climate action can result in significant health cost savings.

A PUBLIC HEALTH FRAMEWORK FOR REDUCING HEALTH INEQUITIES
 BAY AREA REGIONAL HEALTH INEQUITIES INITIATIVE



California For All: Racial Equity Lens and Equity Frame

Equity mechanisms:

- Prioritized financial incentives, investments, or resources
- Higher levels of service
- Facilities
- Capacity building or training
- Jobs
- Decision-making power



“Cash, capacity, control”

A Low-Carbon, Climate-Resilient Community is...

Healthy, energy efficient, & affordable housing!



Clean air, green spaces for recreation!



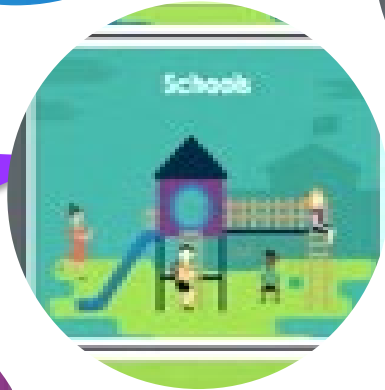
Urban and community greening to keep cities cool.



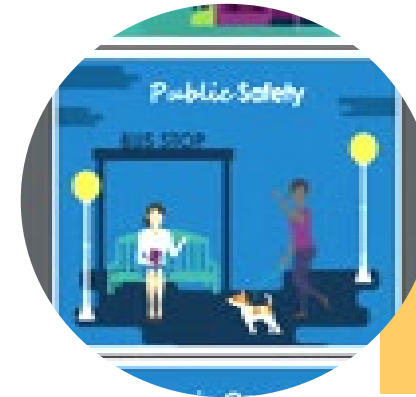
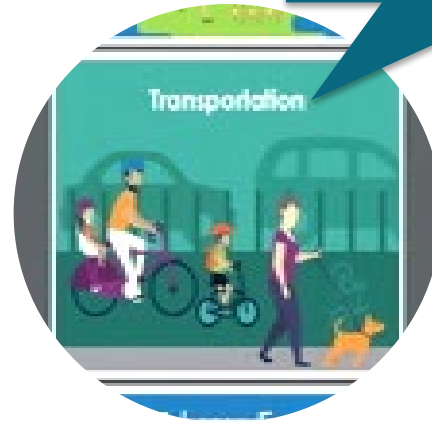
Where there are good jobs, and safe neighborhoods.



Kids have safe places to play and learn.



Healthy built environment including walkable & bikeable communities!



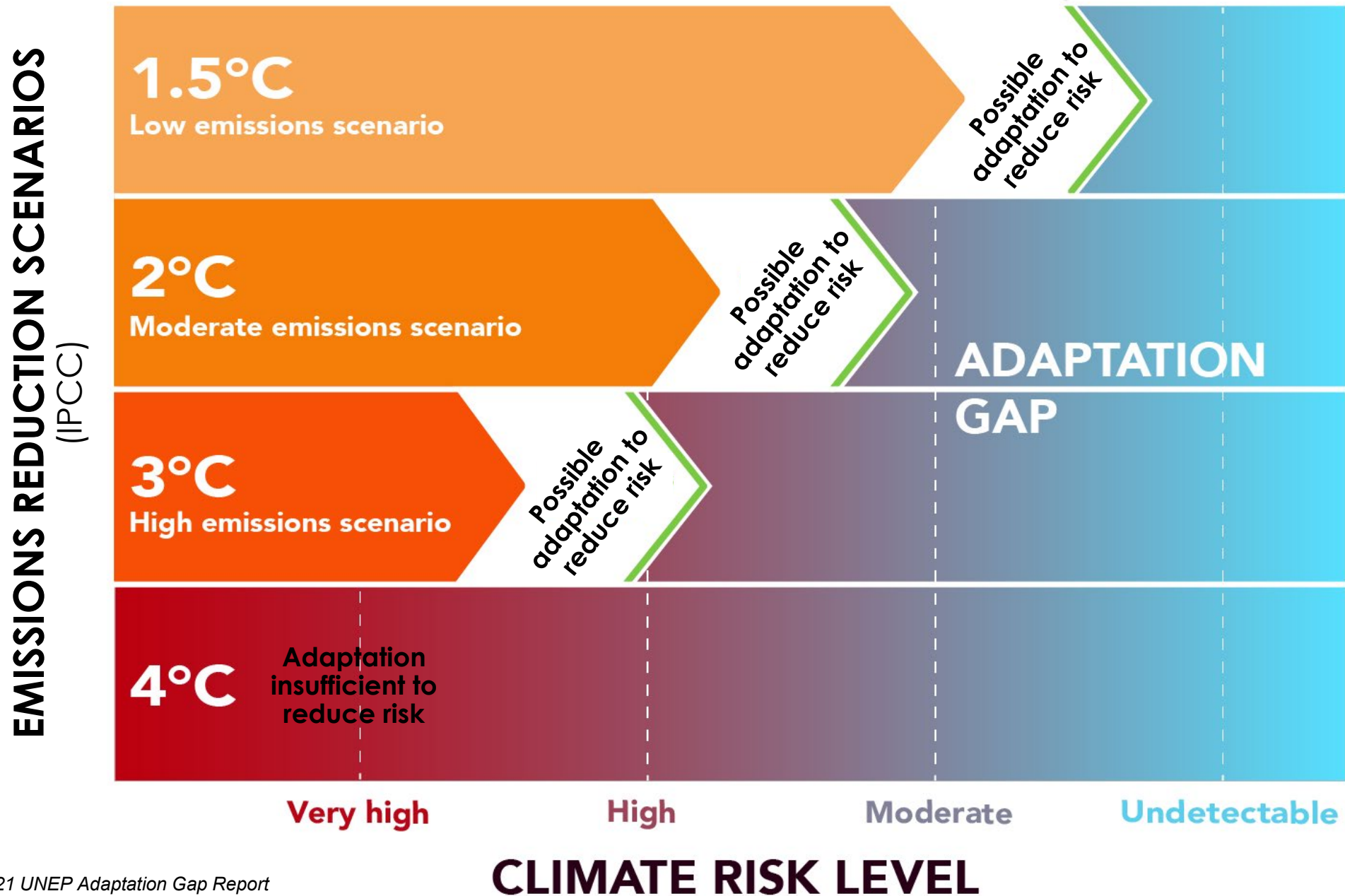
Where people know and care for one another.



Access to affordable, healthy foods.

A Healthy, Equitable Community

Linking Emissions Reduction & Climate Adaptation



Public Health: Trusted Messengers & Ready to Address Climate Change

- **Protecting health is the top reason** Americans select for supporting climate solutions (EcoAmerica):
 - 76% motivated by health
 - 71% motivated by good paying jobs
- **68% of Americans trust health professionals** for information on climate change
- Local health departments and other public health partners are **eager to participate in climate change planning** to simultaneously reduce emissions and increase health and equity

Actions & Tools to Address Climate Change & Health Equity

Climate Impact Regions



Sources: CA Natural Res Agency

Created by: C. Scholdt

1201315 Climate Impact Regions - no ocean.mxd

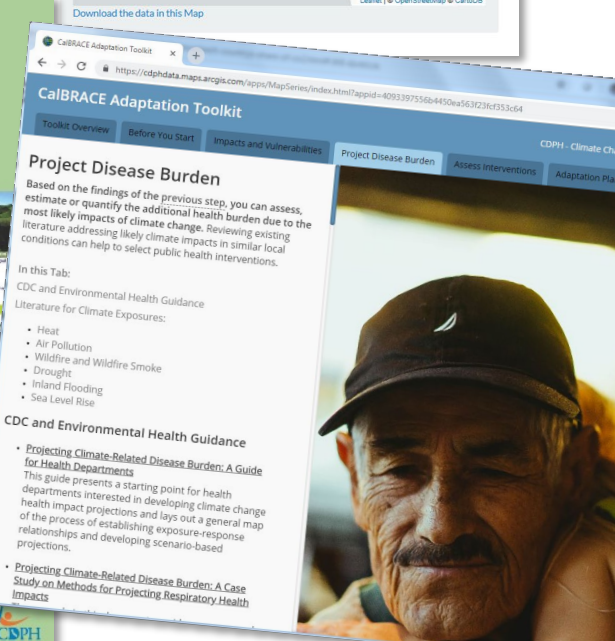
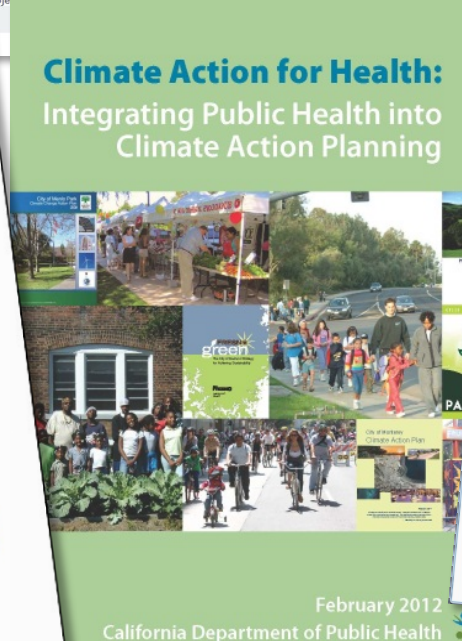
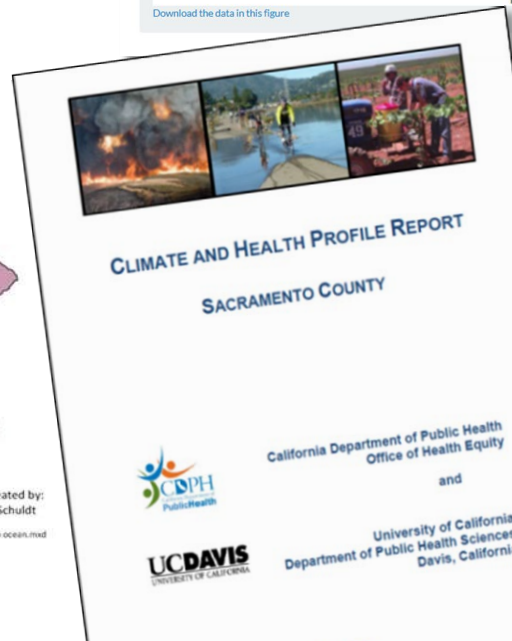
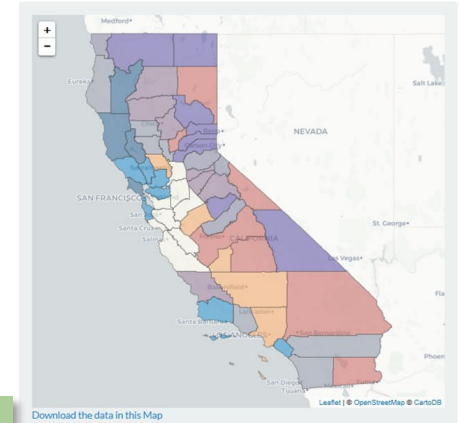
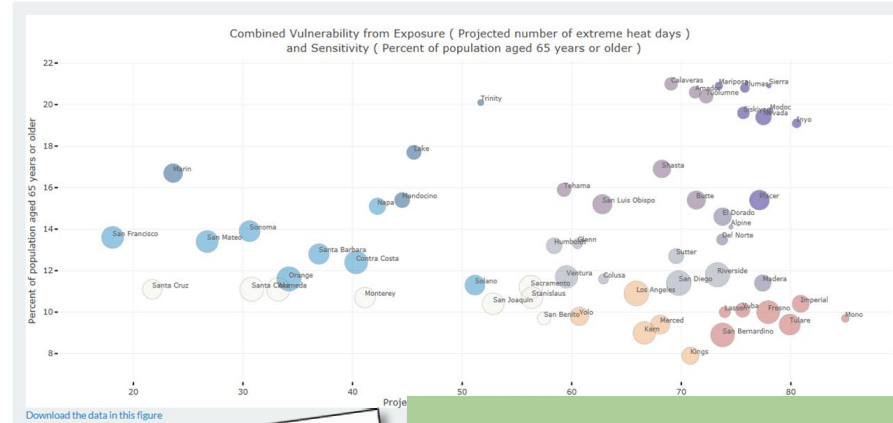
Vulnerability

Visualize California Counties based on levels of both an exposure variable and a population sensitivity variable.

The plot illustrates the intersection of hazard (from an aspect of climate change) and sensitivity (from circumstances of the population or place that tend to increase susceptibility to the hazards of climate change). Counties are assigned to the bottom (least), middle, or top (most) third for both exposure and sensitivity. The most vulnerable counties appear in top and right-most portions of the figure. Points are sized according to the population living in that county. Hover over points for the county name, population, and indicator values.

Some examples of important combinations to consider are

- Heat + elderly / outdoor workers / health insurance / air conditioning / tree canopy / impervious surfaces
- Ozone + children
- PM2.5 + children
- Wildfire + elderly / disability



Quantifying the Health Benefits of Active Transportation

Healthy Mobility Options Tool / ITHIM CA: <https://skylab.cdph.ca.gov/HealthyMobilityOptionTool-ITHIM>

Meeting 2017 Scoping Plan's 2030 Scenario: 4x Walking & Transit; 9x Cycling:



Typical CA resident replaces short car trips by increasing current levels of weekly walking and cycling from **41** to **181** minutes.



Annual increase of **790** fatal injuries to pedestrians and cyclists – underscoring continued need for active travel safety measures



11,307 fewer chronic disease deaths and **157,958** “disability-adjusted” years of life gained annually



Projected annual health benefits valued between **\$8 billion** and **\$108 billion**



Less car driving would improve air quality and prevent **19** additional deaths annually



Replacing short car trips with walking, cycling, and transit would also decrease annual car carbon emissions by **10 MMT**

California Healthy Places Index <http://healthyplacesindex.org/>

The California Healthy Places Index (HPI)[®]
public health alliance of southern california A Partnership for Healthy Places

[Click here for our COVID-19 map](#)

Enter a location...



- Details
- View Indicators
- Rank
- Pool
- Create Custom Score
- Data Upload
- Report/Export
- About

Sacramento

HPI Score: 7.3 Percentile



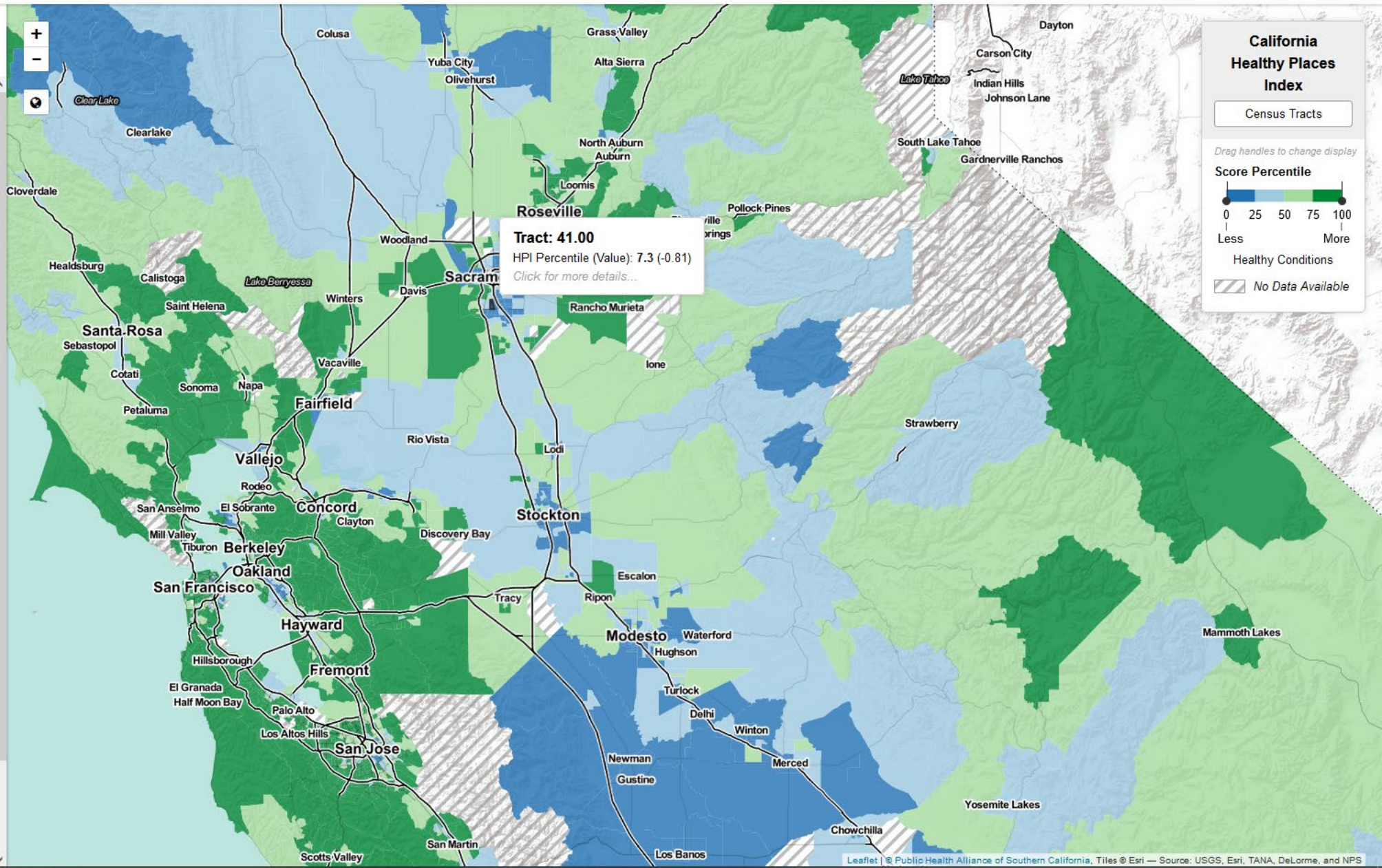
This tract has healthier community conditions than just 7.3% of other California census tracts.

Tract information

Zip Code: 95822
Census Tract FIPS: 06067004100
Population: 5,015

Policy Action Areas are ordered by their contribution to the overall HPI Score:

- Economic
- Education
- Transportation
- Social
- Neighborhood
- Healthcare Access
- Housing
- Clean Environment



California Healthy Places Index

Census Tracts

Drag handles to change display

Score Percentile



0 25 50 75 100

Less More

Healthy Conditions

No Data Available

Climate Actions to Improve Public Health, Equity, and Community Resilience

<i>Emissions Reduction Strategy</i>	<i>Health Determinants Potentially Affected</i>	<i>Health Conditions Potentially Improved</i>
Parks & Greening	Physical activity, heat, noise, air pollution, social cohesion	Cardiovascular, respiratory, heat-related illness, mental health, hearing
Housing & Buildings <i>(affordable housing, residential stabilization, weatherization, green buildings)</i>	Housing availability, quality, 'heat or eat dilemma', exposure to pests, hazards, and toxins, commute times & modes	Mental health, cardiovascular, respiratory, injuries, poisonings, cancer, infections, headaches, heat-related illness
Land Use & Transportation	Physical activity, access to healthy foods, commute times & modes, safety, air quality	Cardiovascular, cancer, osteoporosis, respiratory, mental health, injuries, birth outcomes
Green Jobs & Economic Development	Employment, working conditions, stress, economic security, wealth inequality	Occupational illnesses/injuries, mental health, life expectancy, overall health
Reducing Co-Pollutants of GHGs	Air quality	Cardiovascular, respiratory, heat-related illness, birth outcomes, cancer
Community Engagement	Social cohesion, power, self-efficacy, policy/economic changes, living conditions	Mental health, overall health, health inequities

Key Take-Aways

- Health is determined primarily by **social determinants of health**:
 - Living conditions – physical, social, economic environments; access to services and resources (structural racism, income/jobs, housing, transportation, decision-making power)
- Climate change **disproportionately harms those facing inequities**
- Carbon neutrality is necessary to **avoid the worst health impacts of climate change**
- Climate change policies affect social determinants of health, and **represent a significant opportunity to advance public health, equity, and community resilience**

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Linda.Helland@cdph.ca.gov

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Thank You!



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