

Utilizing a Climate, Health, & Equity Approach in California



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California Department of Public Health

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August 1, 2023*



Climate Change & Health Equity Section
California Department of Public Health

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

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

Image: Public News Service



Image: UC Davis



Image: CBS SF/Local



Image: US News



©Depositphotos.com/zenpi

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

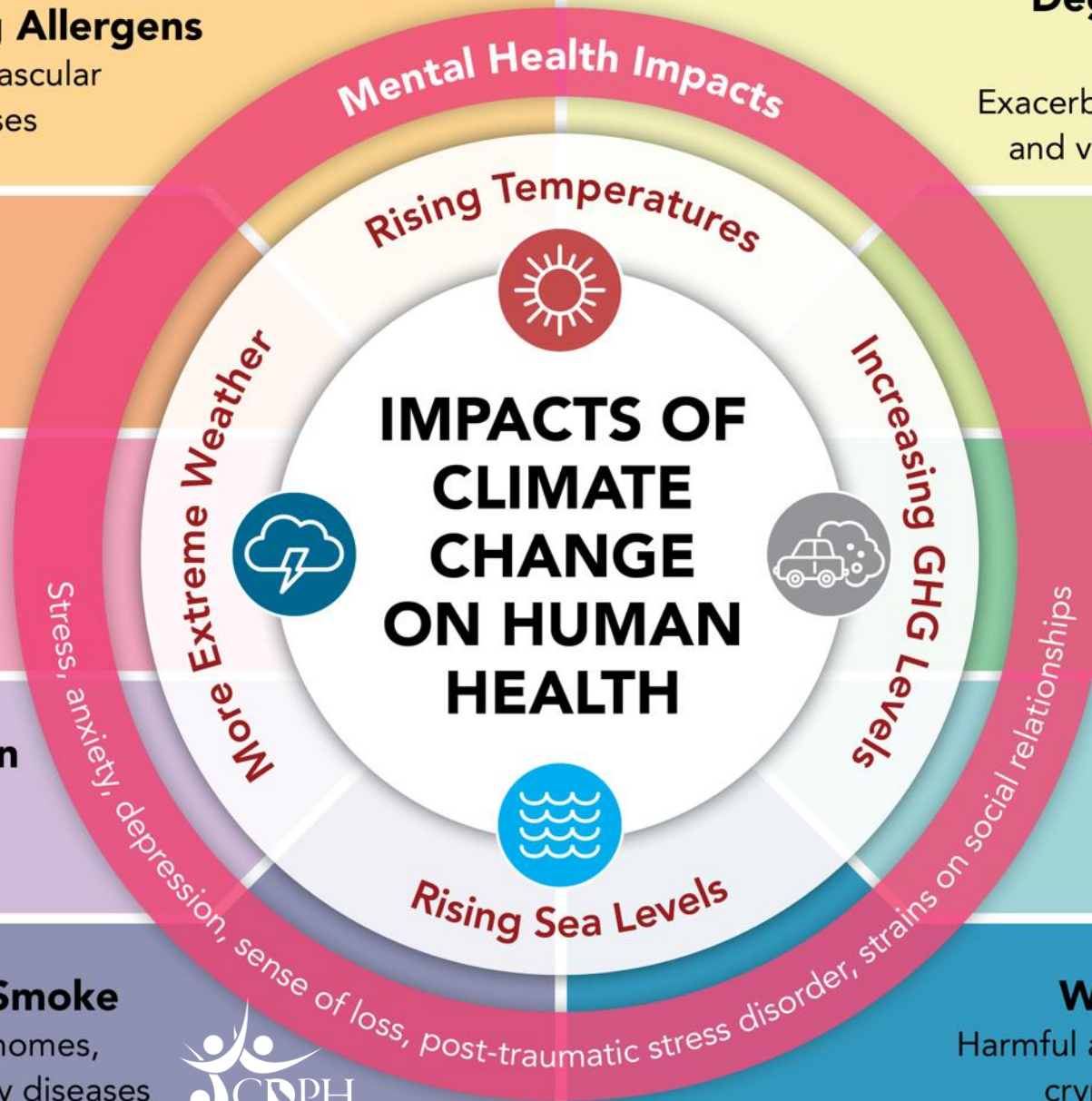
Malnutrition, food insecurity, higher food prices, foodborne illness

Severe Weather & Floods

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

Water Quality Impacts

Harmful algal blooms, campylobacteriosis, cryptosporidiosis, leptospirosis



Climate, Health, & Equity in All Policies

Embedding health and racial equity in California climate action

Mission: Assure that **California's actions to prevent and prepare for climate change improve health and racial equity.**

CCHES helps to implement California's climate change policies, contributing health and racial equity guidance, research approaches, and tools, to **improve living conditions and health outcomes with and for people facing inequities.**

<http://bit.ly/cchep>

Strategies:

- **Embed health and racial equity into climate change programs and policies** so that implementation improves living conditions for communities facing inequities.
- **Guide State investment and resource distribution** to prioritize health and racial equity.
- **Provide data, research, and tools** to reduce and prepare for the health effects of climate change and maximize the health equity benefits of climate action.
- **Increase the capacity of public health departments and tribes** to work on climate change and health equity through consultation and technical assistance.
- **Engage with climate justice and racial health equity stakeholders** to increase their decision-making power.

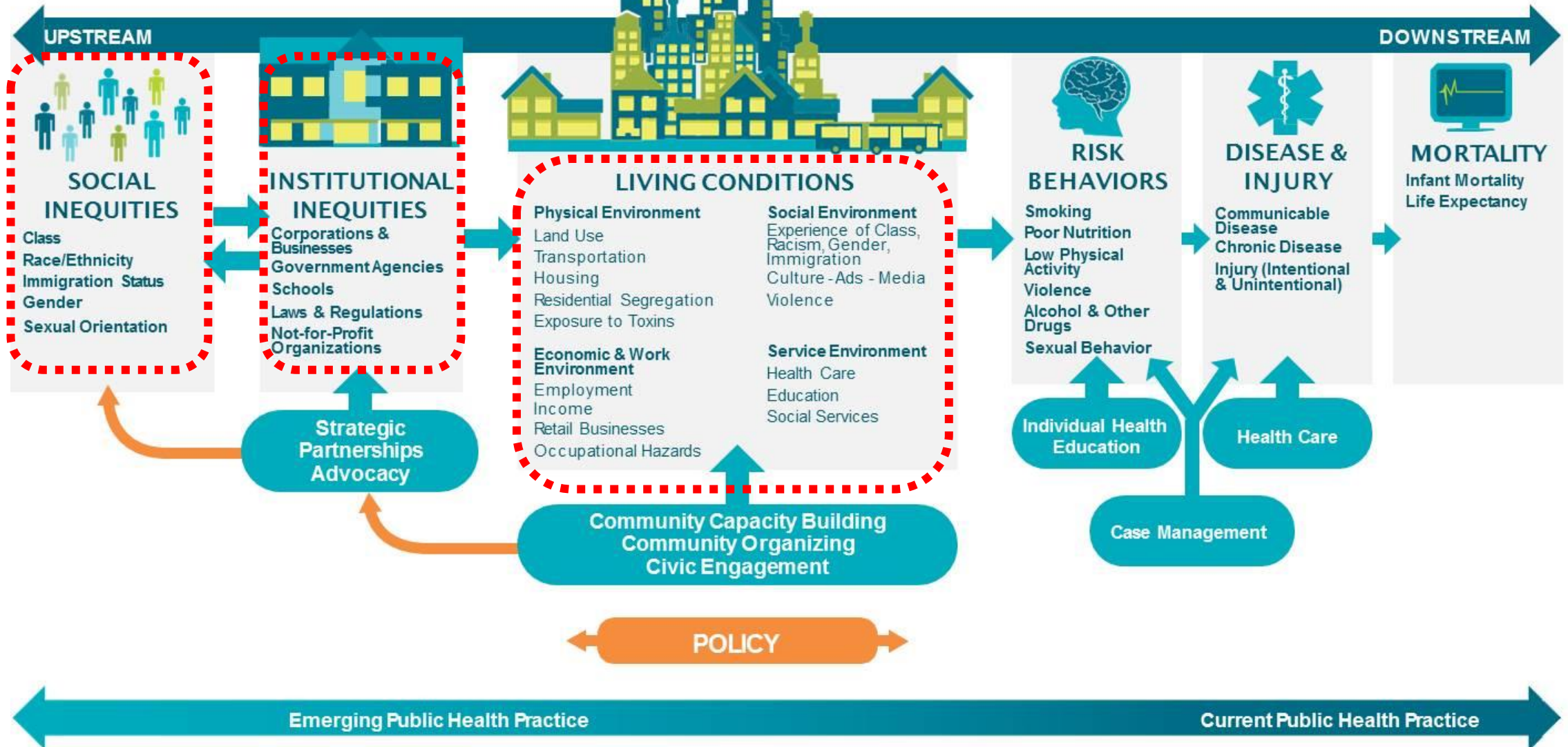
California Department of Public Health



Climate Change & Health Equity Section

Addressing the Causes of the Causes

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



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

Climate Action is Health Action

<i>Climate Action 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

California For All: Racial Equity Lens, Operationalizing Equity

Equity mechanisms:

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

Photo: Istock JuanMonino



“Cash, capacity, control”

Guide State Investment & Resource Distribution to Prioritize Health Equity



Provide Health Equity Input to State Grants to CA Communities

- Affordable Housing & Sustainable Communities Program (SGC)
- Transformative Climate Communities Program (SGC)
- Community Resilience Centers Program (SGC)
- Sustainable Transportation Equity Project (STEP) Grant Program (CARB)
- Urban Greening Grant Program (CNRA)
- Active Transportation Program (Caltrans)
- Sustainable Transportation & Adaptation Planning Grants (Caltrans)
- Adaptation Planning Grant Program (OPR)
- Extreme Heat and Community Resilience Program (OPR)
- Regional Resilience Planning & Implementation Grant Program (OPR)
- And more...

Features Incorporated:

- Equity framework
- Prioritizing based on HPI, CCHVIs
- Community engagement & capacity building
- Reducing VMT & facilitating active transport
- Local hiring, jobs creation & training
- Preventing displacement
- Partnering with health departments

Process Measures

COMMUNITY-CENTERED DEVELOPMENT

- CCD-1. Consult Pre-existing Community Knowledge/Priorities
- CCD-2. Conduct a Stakeholder Analysis and Develop a Community-Centered Outreach Plan
- CCD-3. Conduct a Community Needs Assessment
- CCD-4. Conduct Community Asset Mapping
- CCD-5. Establish a Community Benefits Agreement

INCLUSIVE ENGAGEMENT

- IE-1. Prioritize Outreach to Communities of Color and Underserved Groups
- IE-2. Establish or Join a Community Project Steering Committee
- IE-3. Elevate Voices of Underrepresented Groups in Project Direction and Outreach
- IE-4. Inclusive Community Meetings
- IE-5. Provide Education on Essential Topics Related to Project
- IE-6. Conduct an Equity Assessment with Community Project Steering Committee

ACCOUNTABILITY

- A-1. Use Participatory Budgeting
- A-2. Establish Incentive and Penalty Provisions for Community Priorities
- A-3. Evaluate Project Performance with Community Project Steering Committee/Community Based-Organizations
- A-4. Establish Clear Points of Contact
- A-5. Public Disclosure of Project Commitments

Outcome Measures

CONSTRUCTION EQUITY

- CE-1. Create a Construction Plan with Community Input
- CE-2. Ensure Active Modes Access During Construction
- CE-3. Post a Clear, Visible Enforcement and Complaint Sign
- CE-4. Portable Indoor Air Filtration for Nearby Residents During Construction
- CE-5. Air Quality Monitoring and Response Plan
- CE-6. Provide Funds to Businesses Impacted by Construction Activities

PUBLIC HEALTH AND AIR QUALITY

- PH-1. Establish Vegetative Barriers to Reduce Pollution Exposure
- PH-2. Increase Urban Tree Canopy and Green Spaces
- PH-3. Highly Rated Air Filtration
- PH-4. Create Healthful, Sustainable Indoor Spaces
- PH-5. Provide Equitable Food Access and Food Justice

INCLUSIVE ECONOMICS & PROSPERITY

- IEP-1. Local Labor and Apprenticeships (Construction)
- IEP-2. Local Labor and Apprenticeships (Operations)
- IEP-3. Contract with Diverse Suppliers
- IEP-4. Use of Locally/Regionally Manufactured Products and Materials
- IEP-5. Higher Wage and Working Condition Standards

INCLUSIVE COMMUNITIES

- IC-1. Invests in Local Arts and Culture to Affirm Community Identity
- IC-2. Adopt Design Standards
- IC-3. Promotes Accessibility

- IC-4. Enhanced Open and Green Spaces
- IC-5. Designated Space for Community-Based Organizations, Disadvantaged Businesses, and Community Assets
- IC-6. Create Non-Standard Commercial or Retail Spaces
- IC-7. Equal Access to Building Amenities
- IC-8. Enhanced Access to Community Resources

ANTI-DISPLACEMENT AND HOUSING

- AH-1. Support Community Land Trusts
- AH-2. Promote Affordable Housing in Transit-Rich Areas
- AH-3. Protection for Existing Tenants of Redevelopment Projects
- AH-4. Incorporates Permanent Supportive Housing
- AH-5. Make Housing Units Permanently Affordable
- AH-6. Support the Formation of Collective Ownership Models. Limited-Equity Housing Cooperatives or Mutual Housing Associations
- AH-7. No Net Loss of Affordable Housing Units/One-For-One Affordable Housing Policies

CLIMATE RESILIENCE

- CR-1. Adapt and Re-use Vacant Lots for Green Infrastructure
- CR-2. Support the Development and Operations of Community Resilience Centers
- CR-3. Passive Survivability

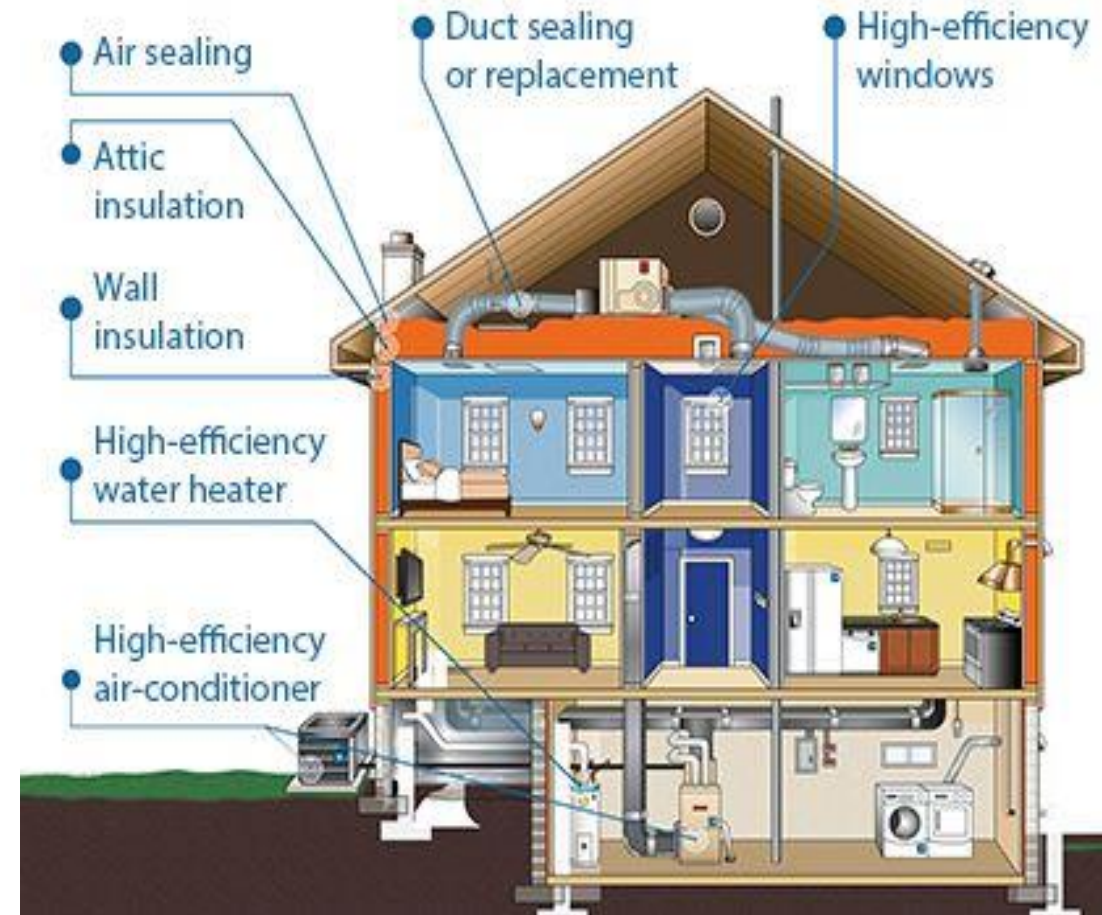
Home Weatherization & Energy-Efficiency Services

Weatherization Benefits:

- Improve health, safety, and quality of life of residents
- Reduce energy costs & burden for low-income families
- Improve housing stability, affordability, and quality
- Improvements in thermal comfort
- Reduce health care costs and utilization
- Reduce mortality rates associated with asthma and thermal stress
- Reduce energy use → reduce air pollution, GHGs

Tulare County Pilot Project: CHWs, Healthy Homes, & Healthy Families:

Connect farmworkers and low-income Tulare residents with energy-efficiency and weatherization services to reduce health risks and improve resilience to heat, wildfire smoke, and air pollution.



Bay Area Regional Energy Network (BayREN)

Utilizing a Climate, Health, & Equity Approach in California



Thank You!

Contact Us:

climatechange@cdph.ca.gov

<http://bit.ly/cchep>



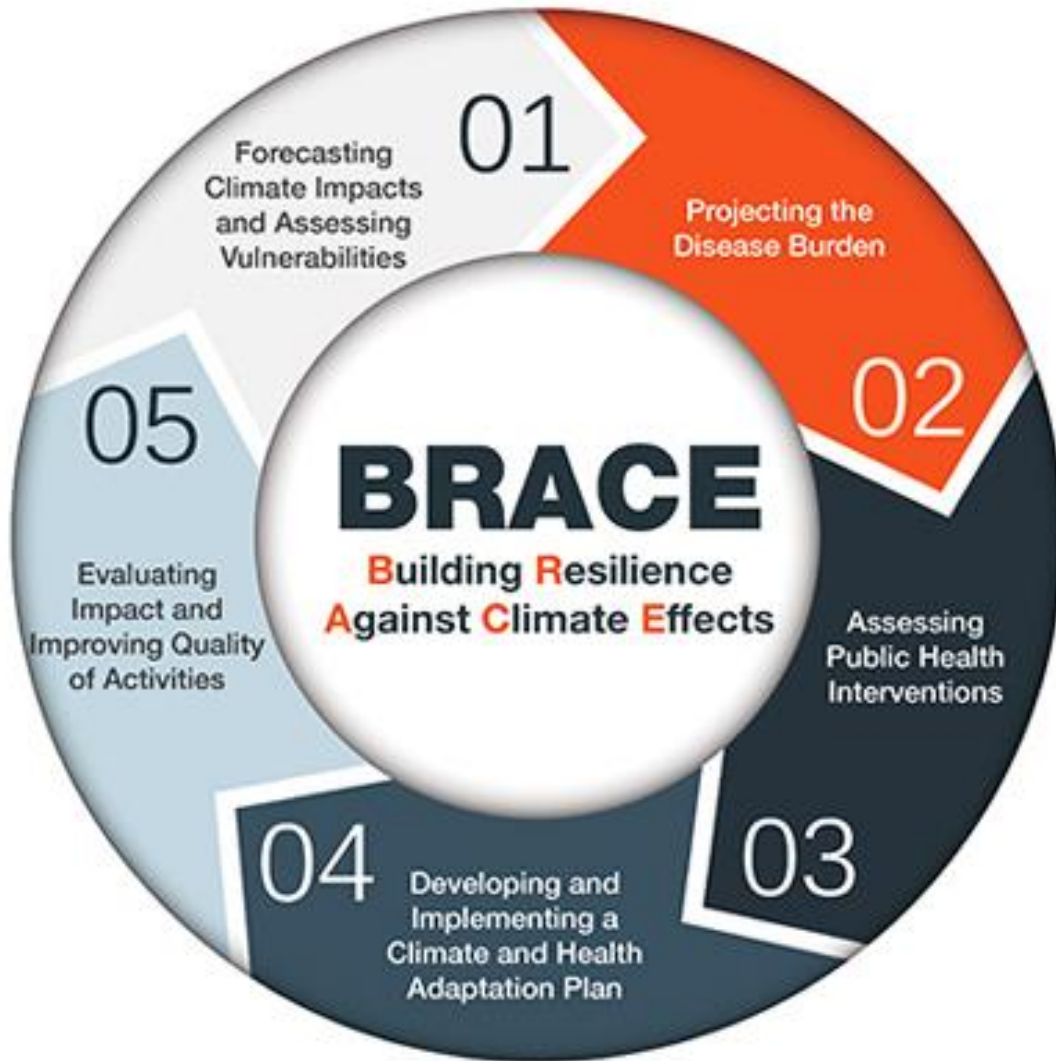
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California Department of Public Health



Climate Change, Public
Health, and Equity

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Introduction to the San Francisco Climate Health Program



Outreach and
Engagement

Research and Data
Analysis

Adaptation of Public
Health Programs and
Services

Interdepartmental
Planning and
Collaboration

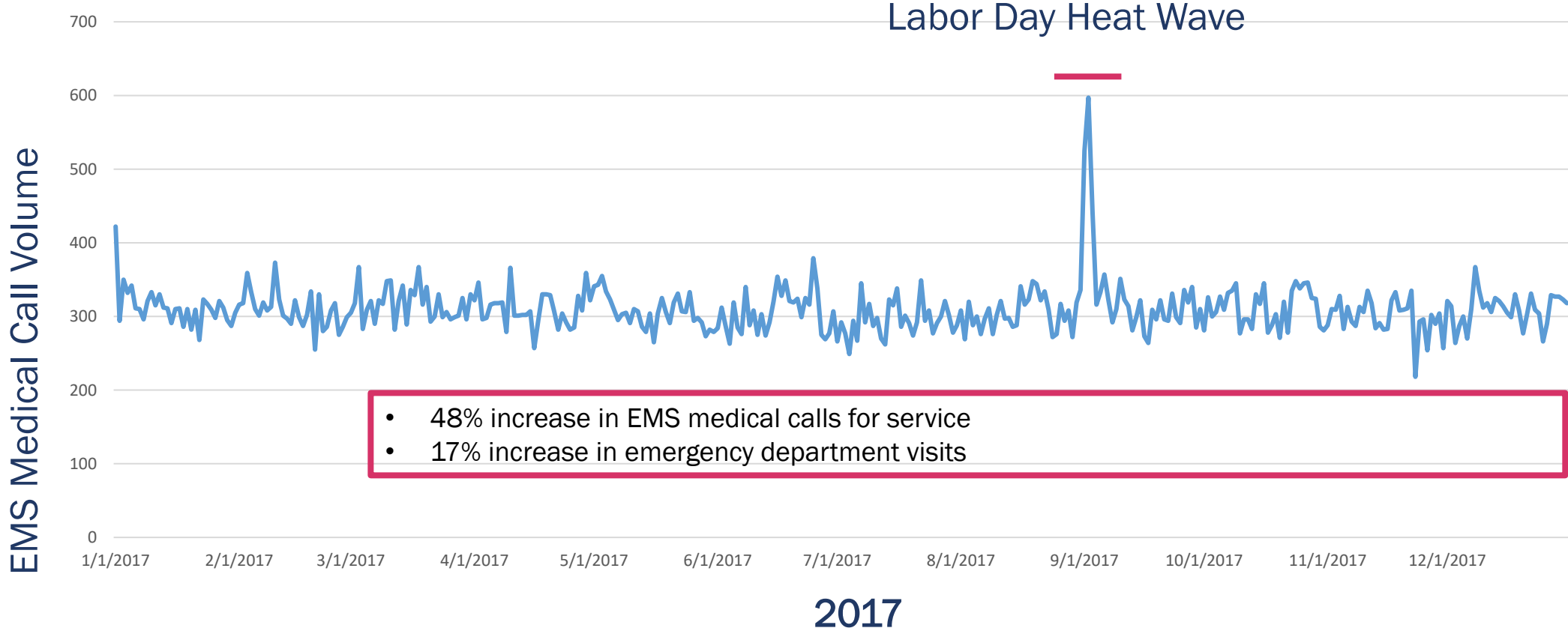
Climate change is making San Francisco's extreme heat events and wildfire smoke events more frequent and more extreme

All Days Over 85F (Extreme Heat)					
Days per Year (1961 – 1990)		Mid-Century Projected Days per Year (2035 – 2064)		End-Century Projected Days per Year (2070 – 2099)	
Average	3	Average	7	Average	15
Maximum	10	Maximum	24	Maximum	51

All Heat Days Over 95F (VERY Extreme Heat)					
Days per Year (1961 – 1990)		Mid-Century Projected Days per Year (2035 – 2064)		End-Century Projected Days per Year (2070 – 2099)	
Average	0	Average	1	Average	2
Maximum	1	Maximum	7	Maximum	10

Source: Cal-Adapt (cal-adapt.org/tools/extreme-heat), PRISM (prism.oregonstate.edu/explorer)

As a traditionally temperate City, San Francisco is uniquely vulnerable to the health impacts of these events



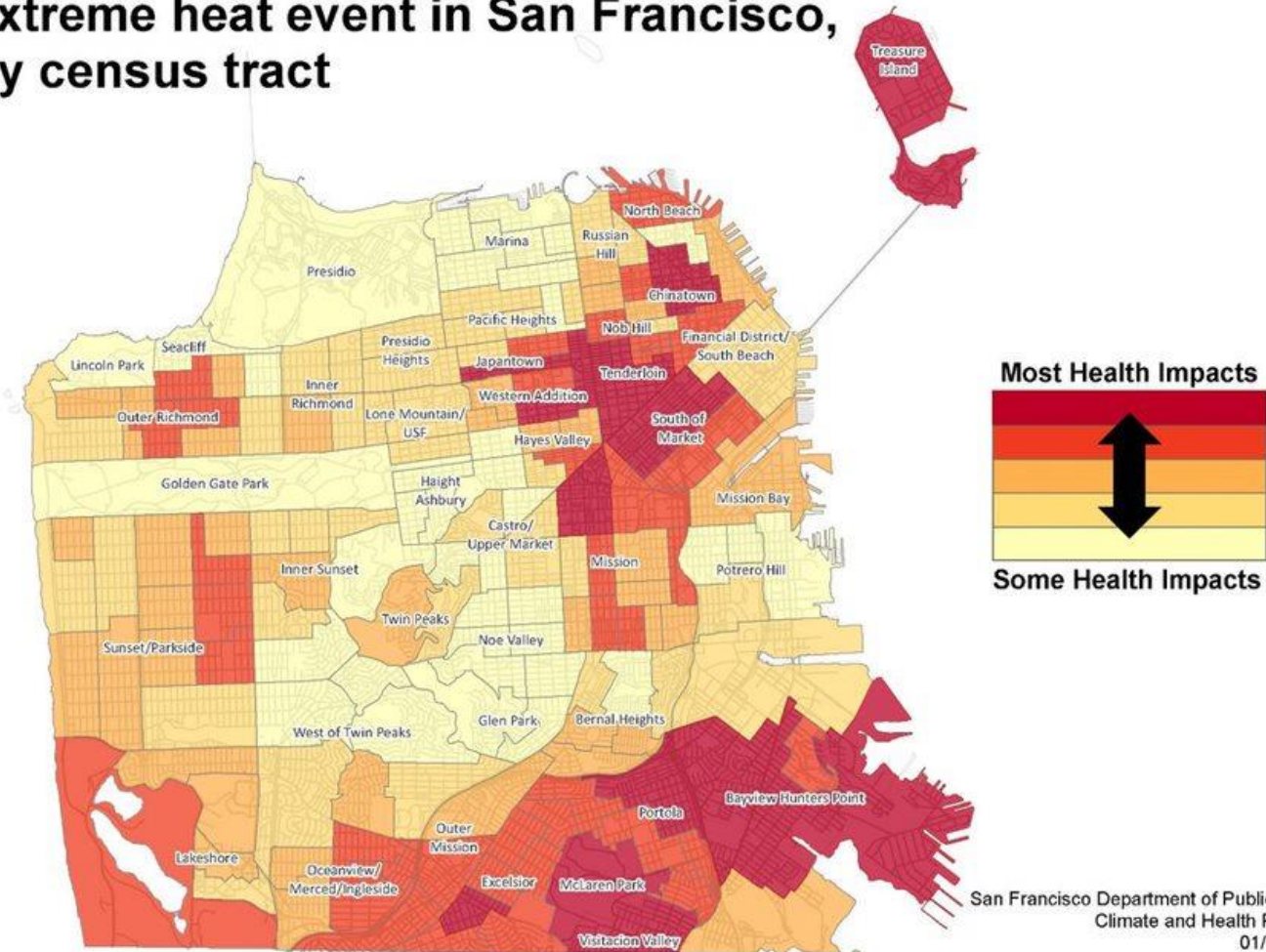
Although climate change impacts everyone, climate change does not impact everyone evenly.

Exposure

Sensitivity

Adaptive Capacity

Predicted distribution of the health impacts of an extreme heat event in San Francisco, by census tract



To design, implement, and evaluation adaptation to protect against the health impacts of extreme heat and wildfire smoke, you must engage across departments and across sectors.

- plan or execute emergency preparedness and response activities,
- build regulate or maintain housing or other facilities,
- plan or manage open space, infrastructure and other public works,
- provide health care and other community services, or
- who represent, engage, or work closely with the communities most vulnerable to the health impacts of these events.

Why it's important to bring an equity framework to climate adaptations

1. Climate change-related health impacts are inequitable

- Exposure
- Sensitivity
- Adaptive Capacity

2. Strategies to prepare-for or respond-to these health impacts are often themselves inequitable or implemented without community input

- Emergency Response Actions
 - Emergency Response Communications
 - Respite Centers | Shelter In Place
 - School Closures
- Resilience Actions
 - Home Weatherization
 - Green Infrastructure

3. There will be opportunities to harness adaptation and mitigation funds and influence future strategies

The Heat and Air Quality Resilience Project

Objectives

1. Centralize extreme heat and air quality resilience planning to foster increased interdepartmental coordination and align objectives, share research, engage stakeholders, identify barriers, and discuss heat and air quality-related issues as they emerge.
2. Facilitate the technical implementation and evaluation of specific extreme heat and air quality-related strategies.

Oversight



Program Management

- SFDPH
- ORCP

Coordination Committee



Implementation Teams



Existing Buildings



Green Infrastructure



Community Readiness

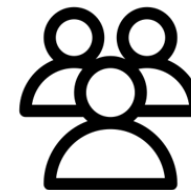


Emergency Response

Data and Research



18+ City Agency Partners



10+ CBO Partners

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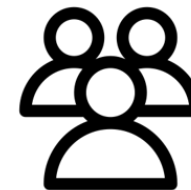


Emergency Response

Data and Research



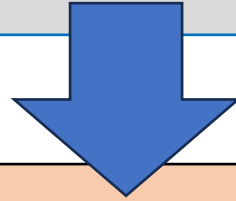
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The Heat and Air Quality Resilience Project

Outcomes	Barriers	Landscape Analysis	Opportunities	Strategies
Where would we like to be?	Why aren't we there now?	What have we done so far?	How can we improve / add to that?	Prioritized list of actions



Political Barriers	“San Francisco seasonal extreme heat and wildfire smoke emergency preparedness and response strategies are often not communicated to community-based organizations enough before extreme heat events and wildfire smoke events for community-based organizations to be empowered to act as partners.”
Social Barriers	“Disconnect between most vulnerable residents (renters, etc) and weatherization services available (homeowners). Many renters have limited ability to advocate for weatherization services.”
Economic Barriers	“Extreme heat and wildfire smoke emergency preparedness and response actions, including respite sites and wellness checks, are resource intensive (space, staff, time), and especially for community-based organizations with already limited capacity”
Technological Barriers	We don't know if our current communications channels are working.

The Heat and Air Quality Resilience Project

Pathway 1: San Francisco's buildings are adapted to reduce exposure to extreme heat and poor air quality

- Cooling and Ventilation (Individual Rooms and Full Buildings)
- Resilient Design
- Connecting Vulnerable Populations to Weatherization Resources

Pathway 2: San Francisco's exterior built and natural environments are adapted to reduce exposure to extreme heat and poor air quality

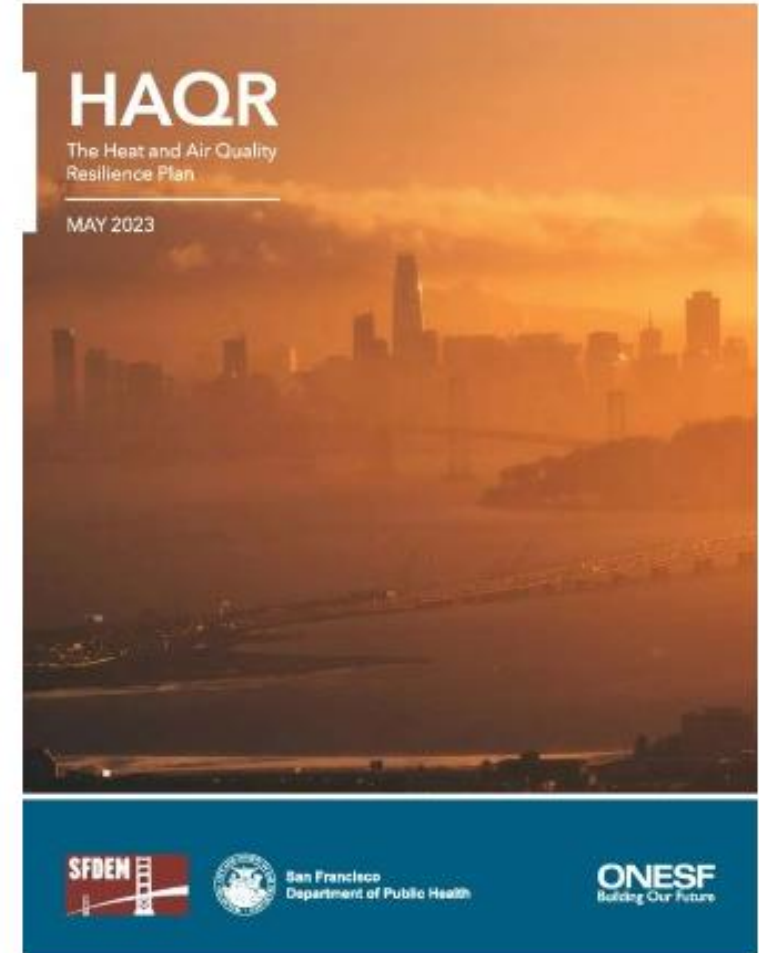
- Tree Coverage
- Cool Pavements
- Shade Structures

Pathway 3: San Francisco is made more resilient to extreme heat and wildfire smoke through equitable emergency preparedness, response, and resilience actions

- Community Outreach, Engagement, and Involvement
- Extreme Weather Respite Centers
- Sheltering In Place
- Emergency Communications

Pathway 4: San Francisco is made more resilient to both current and future extreme heat and wildfire smoke events through City services that can predict and adapt to climate-related stressors

- Research and Data Analysis
- Interdepartmental Coordination and Governance



The Heat and Air Quality Resilience Project

Strategy 5: Establish a Citywide Wellness Check Program

Strategy Status:	Planned
Key Agencies:	Department of Emergency Management Department of Public Health Human Services Authority Mayor's Office on Disability
Key Actions:	<p>Pilot a wellness check program for CBOs and City Departments serving vulnerable populations including homebound seniors, and people with access and functional needs.</p> <ul style="list-style-type: none"> Wellness check program should include a multi-lingual template call script, guidance on activation thresholds, technical support to adapt the call script to a particular community or population, and training to CBO staff. Identify opportunities to collaborate with adjacent counties to identify best practices to accommodate clients that may reside outside of San Francisco. Develop an organizational tool to coordinate wellness checks to prevent duplicate calls. Evaluate effectiveness.

Strategy 8: Develop Weatherization Clearinghouse

Strategy Status:	Needs Resourcing
Key Agencies:	Environment Department Department of Public Health Human Services Agency Public Utilities Commission
Key Actions:	<p>Establish and communicate a public facing online tool that connects residents to local, state, and federal home weatherization and cost-assistance resources.</p> <ul style="list-style-type: none"> Connect heat and air quality mitigation with building sector emissions reductions efforts (i.e. in the CAP). Compile a comprehensive resource that covers all local, state, and federal weatherization subsidies. Develop a website that consolidates this information in a single location. Develop targeted training opportunities for property owners, managers, community-based organizations, and other first points-of-contacts on how to access available resources.

Strategy 1: Develop HAQR Green Infrastructure Priority Projects

Strategy Status:	Ongoing
Key Agencies:	Department of Public Works Office of Resilience and Capital Planning San Francisco Public Utility Commission
Key Actions:	<p>Establish a heat and air quality resilience-focused green infrastructure priority development zones using health, environment, and exposure data.</p> <ul style="list-style-type: none"> Using available information on heat, air quality, environmental justice communities, green infrastructure zones, and environmental information such as impervious surfaces to develop maps that communicate priority zones. Review and augment existing tree planting policies to prioritize plantings in identified areas. Create a menu of options and guidelines for inclusion at these sites, including guidelines for green infrastructure as well as shading structures. Utilize SFO's Smart Surfaces Tool to identify locations with urban heat island mitigations and green infrastructure and select alternative surface materials to increase reflectivity to improve worker health and safety and building longevity.

Strategy 1: Use Data to Identify Risk

Strategy Status:	Ongoing
Key Agencies:	Department of Public Health Office of Resilience and Capital Planning Planning Department
Key Actions:	<p>Work collaboratively to fund and implement research projects to collect qualitative and quantitative data that identify neighborhoods, communities, and populations with highest risk for the health impacts of extreme heat and air quality.</p> <ul style="list-style-type: none"> Maintain public-facing website that articulates drivers of climate-specific health impacts, and offers and neighborhood-by-neighborhood snapshot of those drivers. Research prevalence of workplace exposures to extreme heat and air quality. Investigate opportunities to use temperature and air quality sensors to measure conditions inside and outside buildings. Pursue opportunities to partner with academic institutions and community-based initiatives to collect qualitative data that understands community perceptions of extreme heat and wildfire smoke, how residents are currently responding, and outstanding needs.

RESILIENCE FOR ALL:

Building Health Equity Infrastructure for Climate-Driven Disasters



MELISSA JONES
August 1, 2023

BARHII'S MISSION:

To transform public health practice for the purpose of eliminating health inequities using a broad spectrum of approaches to create healthy communities.

Launch of BARHII National Action Lab

To serve as a **safe space** for equity innovators to:



TEST NEW IDEAS



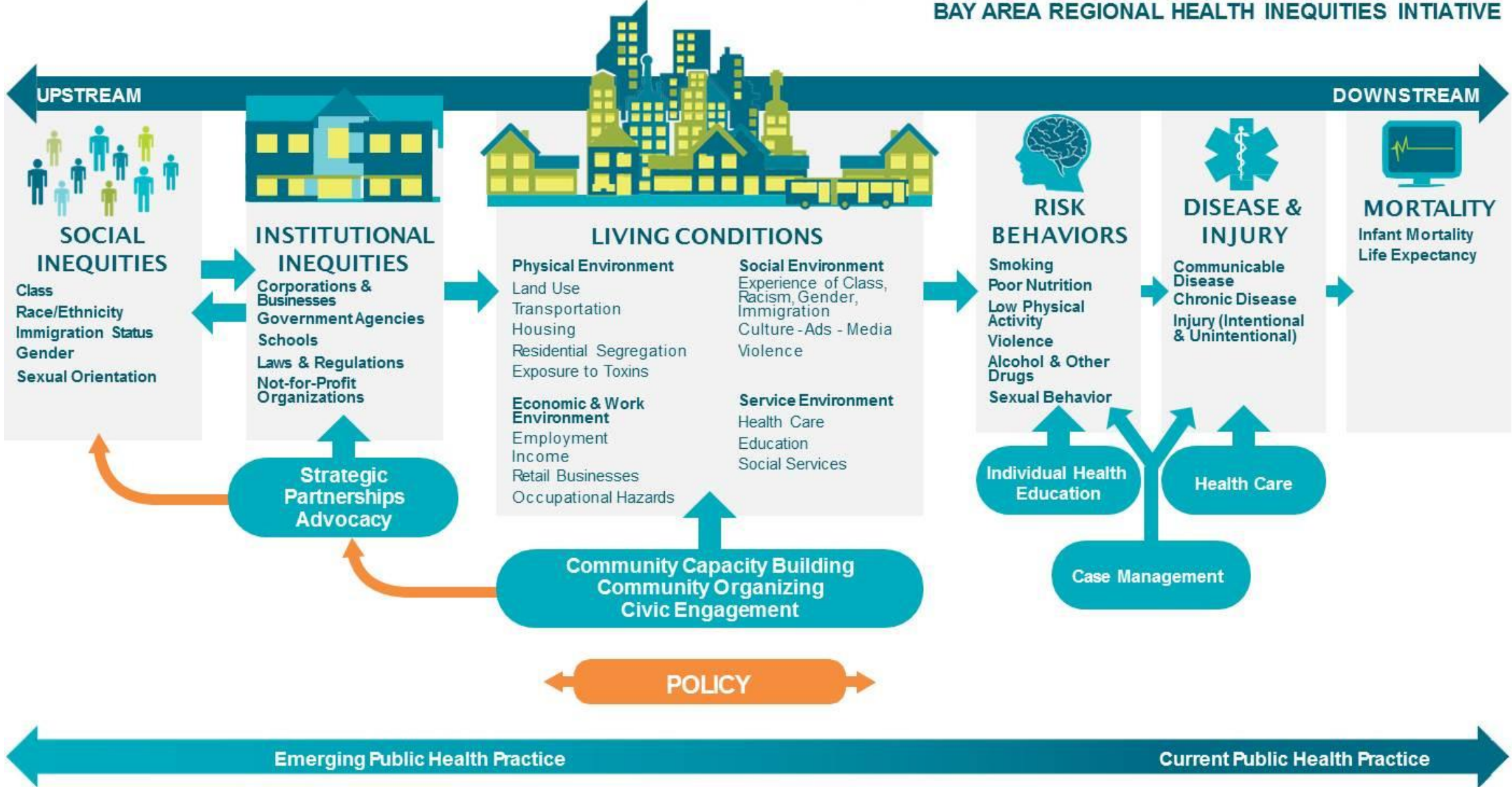
LEARN NEW SKILLS



BUILD THE LEADERSHIP
SUPPORTS THEY NEED TO
SUCCEED

OUR FIRST BIG INNOVATION: THE BARHII FRAMEWORK

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



A NEW ERA OF HEALTH EQUITY INFRASTRUCTURE IN CLIMATE RESILIENCE PLANNING AND CLIMATE-DRIVEN DISASTER MANAGEMENT

Co-occurring disasters (climate-driven, pandemic, housing crisis) magnify community displacement and trauma

Sap government's ability to respond effectively and decimate resources

FARTHER TOGETHER: **Best Practices for** **Engaging** **Communities to** **Create a Healthy,** **Resilient Region for All**



BARHII RAPID RESPONSE AND ROLLING RECOVERY: Building the Equity Officer Model in California



LAUNCH OF BARHII BAY AREA REGIONAL EQUITY OFFICER NETWORK



Alegría De La Cruz | Chief Equity Officer, Sonoma County



Analilia Garcia | Chief Equity & Inclusion Officer, Santa Clara County



Jamillah Jordan | Director, Marin County Office of Equity



Zulma Maciel | Inaugural Director, Office of Racial Equity at City of San José



Shireen Malekafzali | Chief Equity Officer, San Mateo County



Kÿ-Nam Miller | Equity Officer, MTC/ABAG



Shina Robinson | Resilience Hubs Manager, Asian Pacific Environmental Network (APEN)



Gilbert Salinas | Chief Equity Officer, Contra Costa Health Services, Contra Costa County

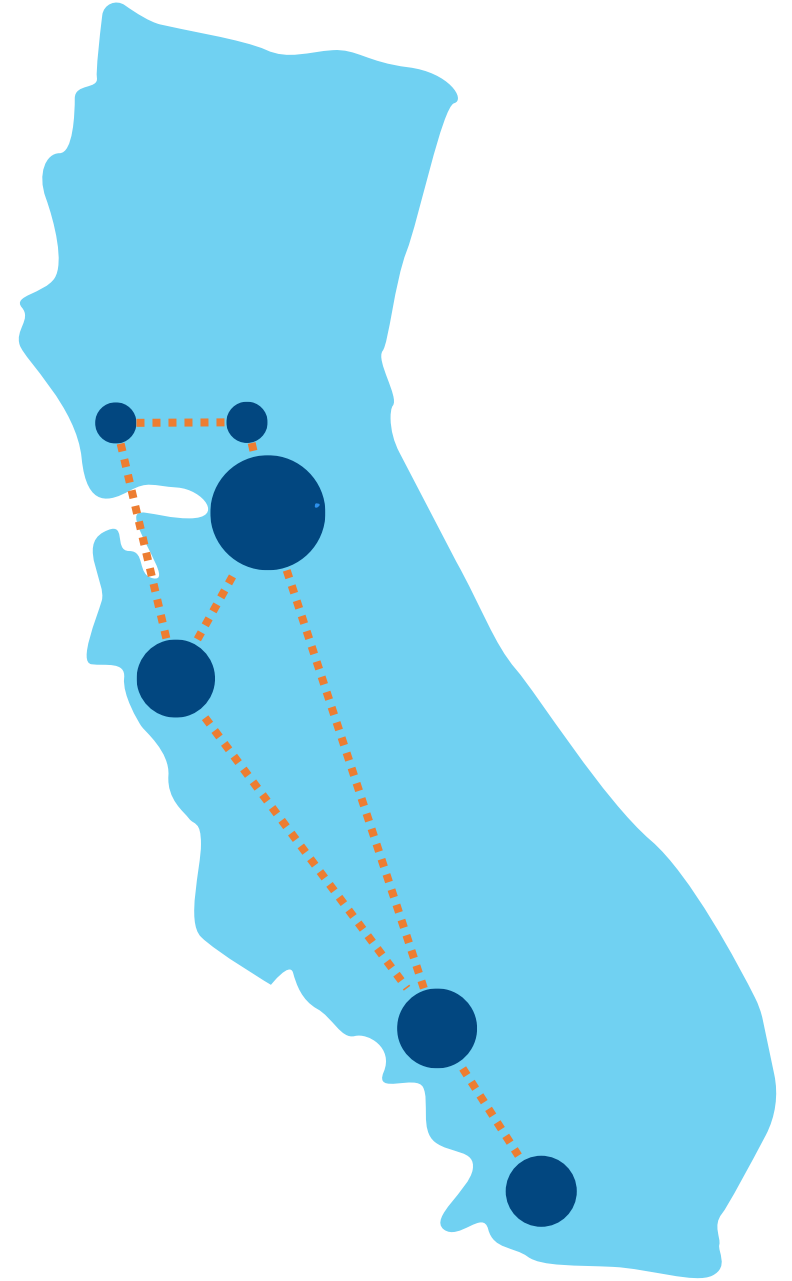


Alvaro S. Sanchez | Vice President of Policy, The Greenlining Institute



Matt Wolff | Climate and Health Program Manager, San Francisco Department of Public Health

REGIONAL NETWORK EFFECT OF EQUITY OFFICER ROLES



CALIFORNIA'S LEADERSHIP IN THE HEALTH EQUITY MOVEMENT

RANCHO



SJV



GREATER SAC



SOUTHERN CA



BAY AREA





137 UNIQUE INDIVIDUALS that have engaged in the series



SHOWCASE WEB EVENTS

Spotlight models and best practices from across California and country



WATER COOLER SESSIONS

Post web events, informal small group discussions that provided customized implementation support on the issues equity leads want to discuss most



DATA VISUALIZATION FOR EQUITY SERIES

Three part training on making data easy to understand



EQUITY PROGRAM DESIGN SPECIAL SESSIONS

Timely sessions on setting up evaluations for your equity efforts and on planning for the needs of small populations

recruiting with equity

OPERATIONALIZING EQUITY

rural approaches

flexible funding

budget equity tools

COMMUNITY-DRIVEN INVESTMENTS

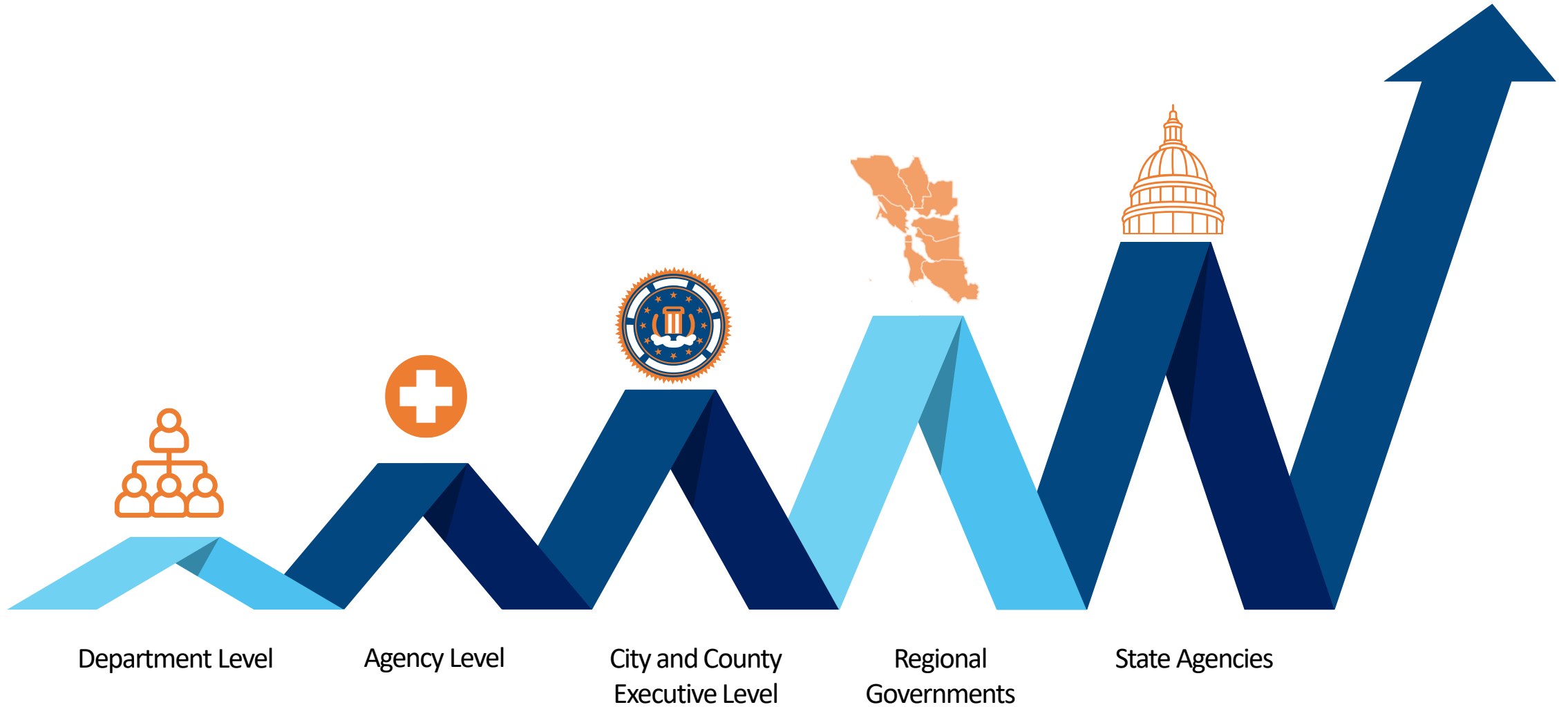
programming for equity

TRANSFORMATIVE COMMUNITY PARTNERSHIPS

BUILDING INTERNAL EQUITY INFRASTRUCTURE

equity-centered workforce

A WHOLE-OF-GOVERNMENT SHIFT





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Thank
you!

