

CLIMATE CHANGE AND PUBLIC HEALTH



October 2023

Contra Costa County Sustainability Team

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Today's Talks

- What is climate change?
- How climate change affects public health
- What's happening in Contra Costa County to address the climate crisis

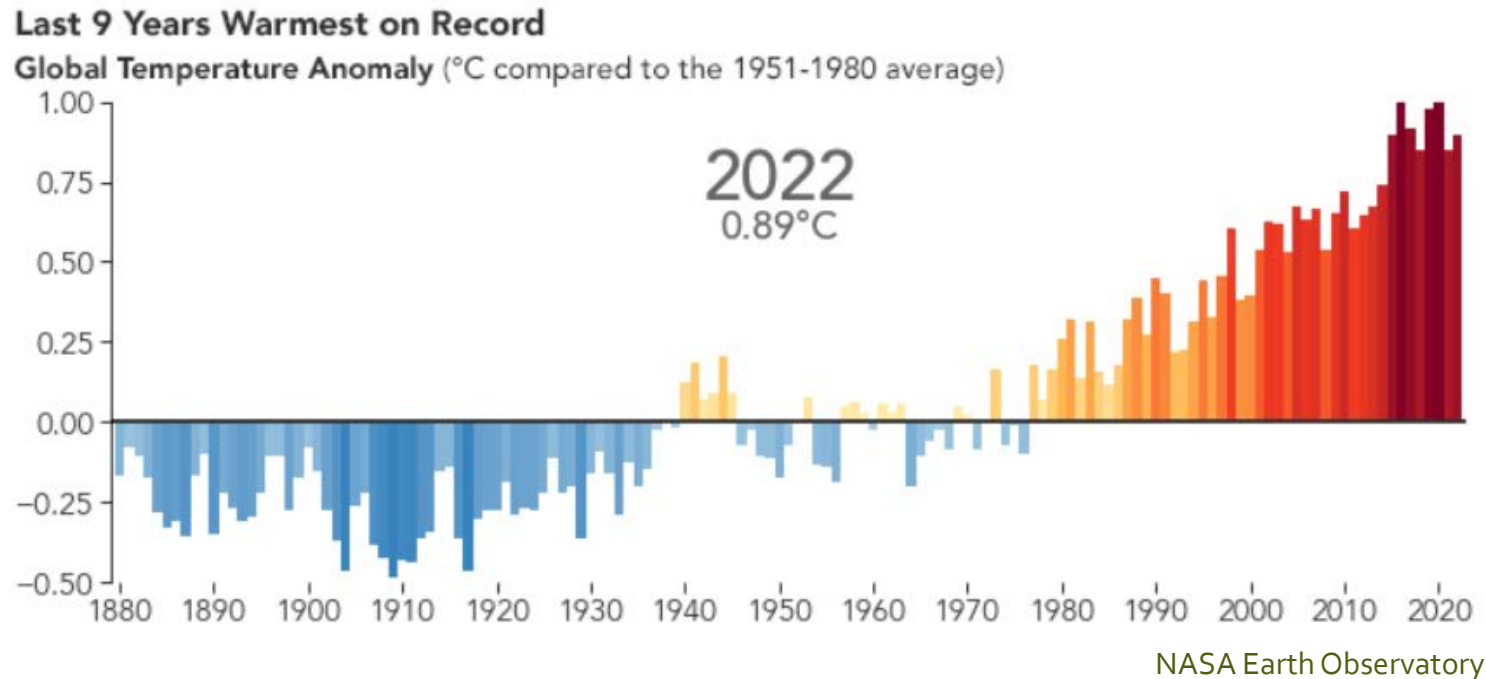


CLIMATE CHANGE EXPLAINED

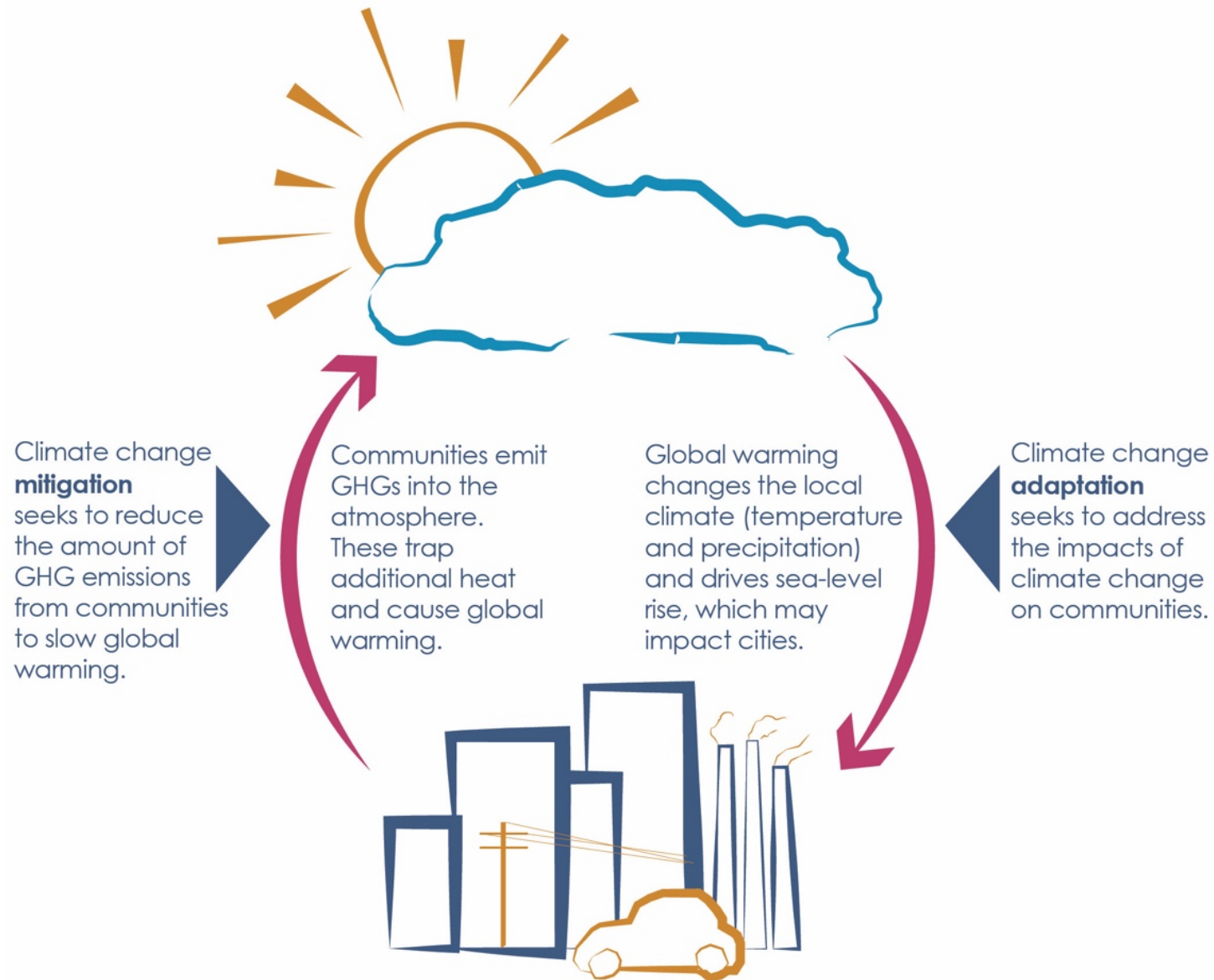
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What is Climate Change?

- Climate Change is the ongoing warming of the planet caused by the build-up of greenhouse gases (GHG) in the atmosphere.
- Human activities that result in GHG emissions are increasing the rate of warming.



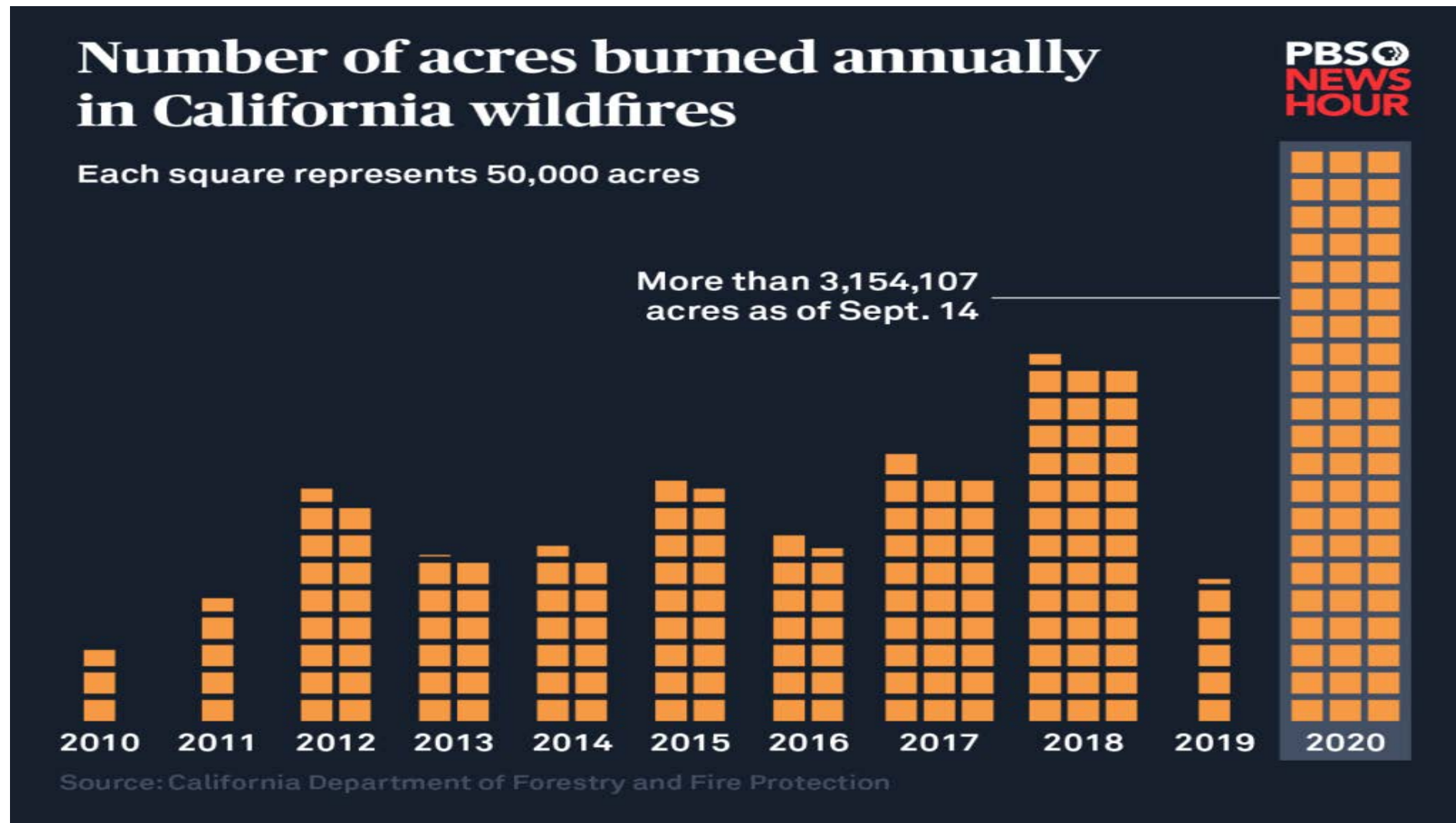
THE SCIENCE OF CLIMATE CHANGE



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Source: California Adaptation Planning Guide, 2020

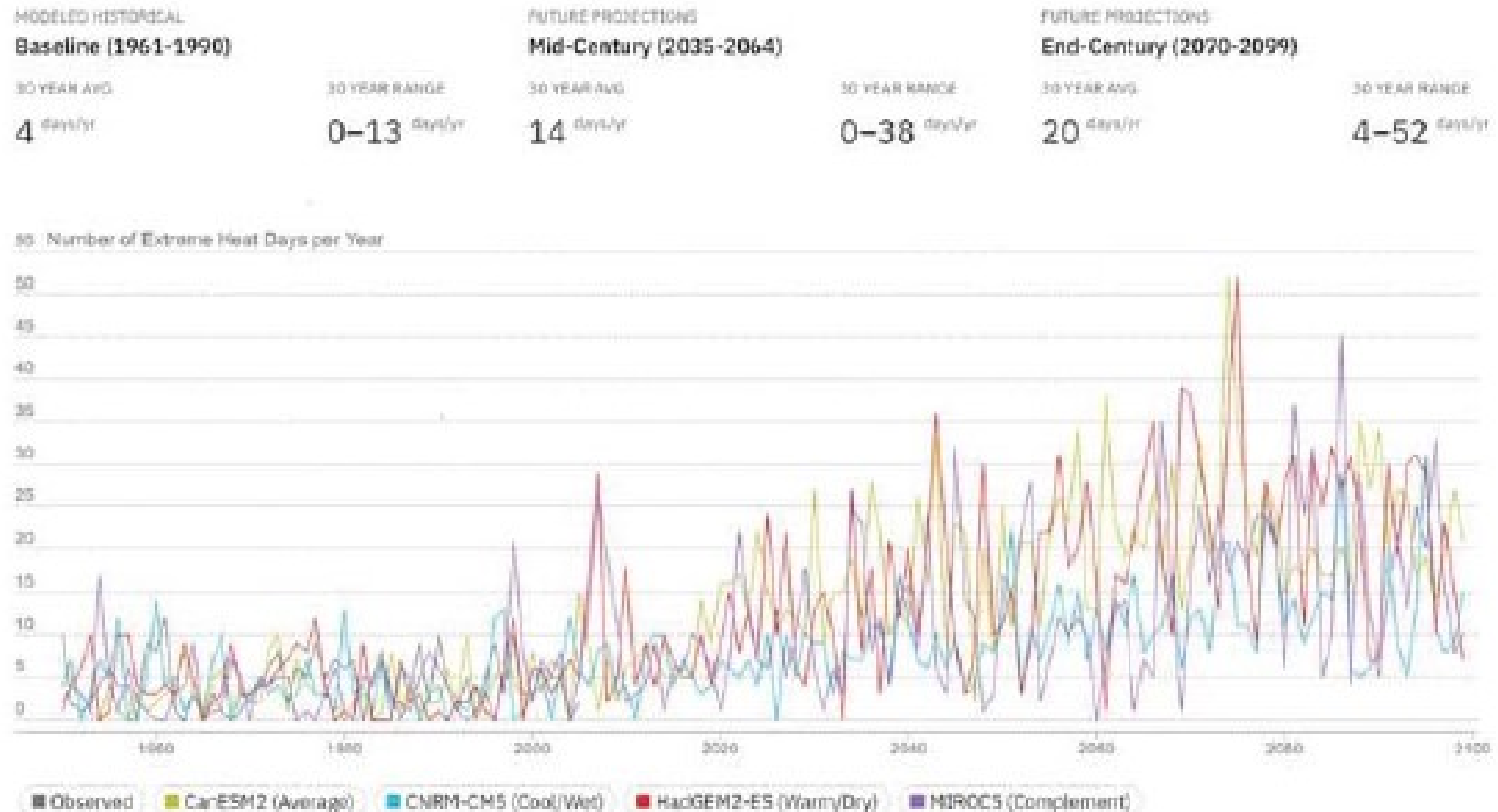
Impacts of the changing climate



EXPECT MORE EXTREME HEAT DAYS IN PITTSBURG

Pittsburg, California

Projected changes in **Number of Extreme Heat Days per Year** when daily maximum temperature is above 100.2 °F under a **Medium Emissions (RCP 4.5) Scenario**.



Source: Cal-Adapt. Data: LOCA Downscaled CMIP5 Climate Projections (Scripps Institution of Oceanography), Gridded Observed Meteorological Data (University of Colorado Boulder), LOCA Derived Products (Geospatial Innovation Facility).

HOW CLIMATE CHANGE AFFECTS HEALTH

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Some Key Impacts of Climate Change



Rising Global
Temperatures



Extreme
Weather



Sea Level Rise
(SLR)

Rising Global Temperatures

Higher Rate of
Hospitalizations

Increased Risk
of Heat Related
Illness

Air Quality
Impacts



Extreme Weather

Drought

- Diminished Fresh Water Availability
- Increase Wildfire Frequency
- Stresses on Agriculture Industry and Food Production

Flooding

- Property/Infrastructure Damage
- Higher Risk of Serious Injury or Loss of Life

Extreme Heat

- Heat Related Illnesses (Short- and Long-term)
- Hospitalization
- Heat Stroke/Loss of Life



Sea Level Rise

Diminishing Coastal Water Quality

- Saltwater intrusion infiltrating surface and groundwater storage

Community Displacement

- Seawater flooding low-lying coastal communities

Coastal Erosion

- Irrevocable change to coastlines
- Loss of land mass



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Declining Air Quality

Increase in Ground-Level Ozone (O₃) and Carbon Dioxide (CO₂)

More Wildfires Cause Higher Concentrations of Particulate Matter in the Air

Shifts in Weather Patterns Lead to Less Air Circulation and more Pollen

Some Public Health Impacts:
Respiratory Illnesses, Asthma, Severe Allergies, Premature Death

Impacts of Climate Change on Community Health

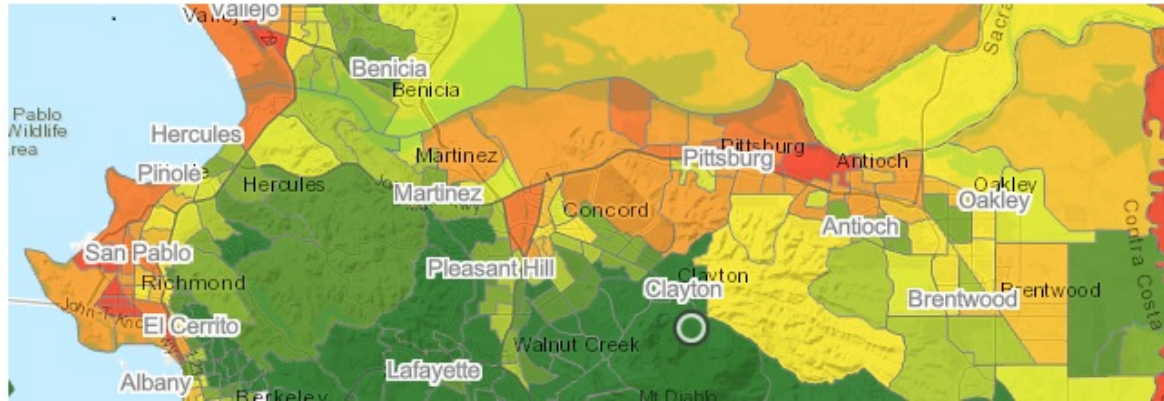
Individual

- Physical Health (Respiratory and Cardiovascular Diseases, Heat Related Illnesses)
- Mental Health
- Premature Death

Community-wide

- Economic Vitality
- Food, Water, Livelihood Security
- Displacement
- Healthcare Infrastructure

"Disadvantaged Communities" from State of California



Contra Costa Communities Most Impacted by Climate Change

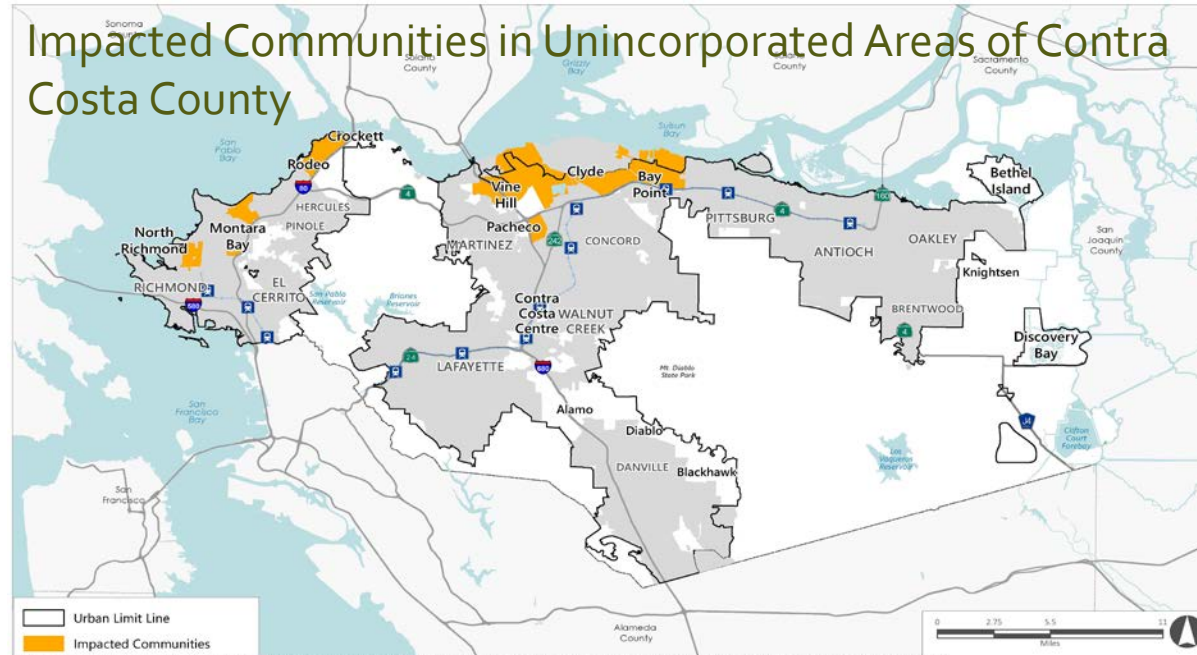
Vulnerable Populations:

- Low-income
- Disadvantaged Communities (DAC)
- Elderly and Children

Disproportionate impacts from climate change due to:

- Limited resources
- Higher vulnerability to health impacts

Impacted Communities in Unincorporated Areas of Contra Costa County



Source: California Office of Environmental Health Hazard Assessment, CalEnviroScreen 4.0, 2021; Public Health Alliance of Southern California, California Healthy Places Index, 2016; Contra Costa County, 2019; PlaceWorks, 2019.

ENVISION
CONTRA COSTA 2040

DRAFT Impacted Communities Map

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COUNTY GOVERNMENT TAKING ACTION

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County Efforts to Address Climate Change

Reducing Greenhouse Gas Emissions

- Climate Action Plan
- All-Electric Ordinance for New Construction
- EV Readiness Blueprint (CCC + CCTA)
- Organic Waste Disposal Reduction Ordinance
- BayREN (CCC + BayREN)

Adaptation

- Adapting to Rising Tides Work (CCC + BCDC)
- Healthy Lands, Healthy People Feasibility Study

Leading By Example

- Clean Energy Procurement – MCE Deep Green
- Green Government Group (G3) Champions



Envision Contra Costa



**General
Plan**



**Climate
Action
Plan**



**Zoning
Ordinance**

Environmental Impact Report

General Plan Themes



Community Health



Environmental Justice



Economic Development



Sustainability



Climate Action Plan

Draft Goals for 2024 update

- **Clean and Efficient Built Environment** *Homes, workplaces, and businesses in Contra Costa County run on clean energy*
- **Resilient Communities and Natural Infrastructure** *Contra Costa County will increase resilience to climate hazards and foster community health*
- **No-Waste Contra Costa** *Contra Costa County generates no more solid waste than 2.25 pounds per person per day (PPD)*
- **Reduce Water Use and Increase Drought Resilience** *Contra Costa County uses less water and communities are prepared for drought*
- **Clean Transportation Network** *Contra Costa County's transportation network provides safe and accessible options for walking, biking, and transit. If residents and workers are driving, they are in electric vehicles.*
- **Climate Equity** *The CAP will mitigate environmental factors leading to health disparities, promote safe and livable communities, and promote investments that improve neighborhood accessibility.*
- **Leadership** *Contra Costa County is a model for how local government can take action on climate issues.*

Climate Action Plan Strategies

Community

- Buildings
 - All-electric for all buildings
- Clean energy
- Resilient Infrastructure (withstand heat, drought, flood, fire)
- Bikes/walking/transit
- Electric vehicles
- Locally grown fresh food

County Operations

- Fleet
- Buildings
 - Energy, water, recycling, composting
- Infrastructure
 - Streets
 - Traffic signals
 - Green Infrastructure
- Purchasing
- Investments

EQUITY IS A THROUGHLINE

CLIMATE EMERGENCY RESOLUTION SEPTEMBER 22, 2020

Action Oriented!

- Create Interdepartmental Climate Action Task Force
- Address Just Transition
- Adopt All-Electric Ordinance for New Buildings



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All-Electric Buildings

- Ordinance requiring new construction to run on clean energy (all-electric) went into effect June 2022
- Sustainability staff participated in 2021-2022 in nine-month Equitable Home Electrification Program
- Now developing a Clean Energy Building Policy Roadmap for all buildings

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THANK YOU!

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