

San Francisco Heat and Air Quality Resilience Project (HAQR)

Board of Supervisors Public Safety and Neighborhood Services Committee

July 23, 2026

Speakers

Brian Strong, Office of Resilience and Capital Planning

Matt Wolff, Department of Public Health

Alex Morrison, Office of Resilience and Capital Planning

Cyndy Comerford, Department of the Environment

Mary Ellen Carroll, Department of Emergency Management



To address the health impacts of extreme heat events, San Francisco city agencies have worked together to do two things at once:

- Design and execute short-term emergency preparedness and response procedures to address short-term health impacts, and;
- Build a more heat resilient San Francisco with medium-to-long-term adaptation strategies.

NWS HeatRisk

Category	Risk of Heat-Related Impacts
Green 0	Little to no risk from expected heat.
Yellow 1	Minor - Primarily affects those who are extremely sensitive to heat and without cooling/hydration.
Orange 2	Moderate - Affects those who are sensitive to heat, especially those without cooling/hydration, and some health systems and industries.
Red 3	Major - Affects anyone without cooling/hydration as well as health systems and industries.
Magenta 4	Extreme - Rare and/or long-duration extreme heat with no overnight relief affecting anyone without cooling/hydration as well as health systems, industries, and infrastructure.

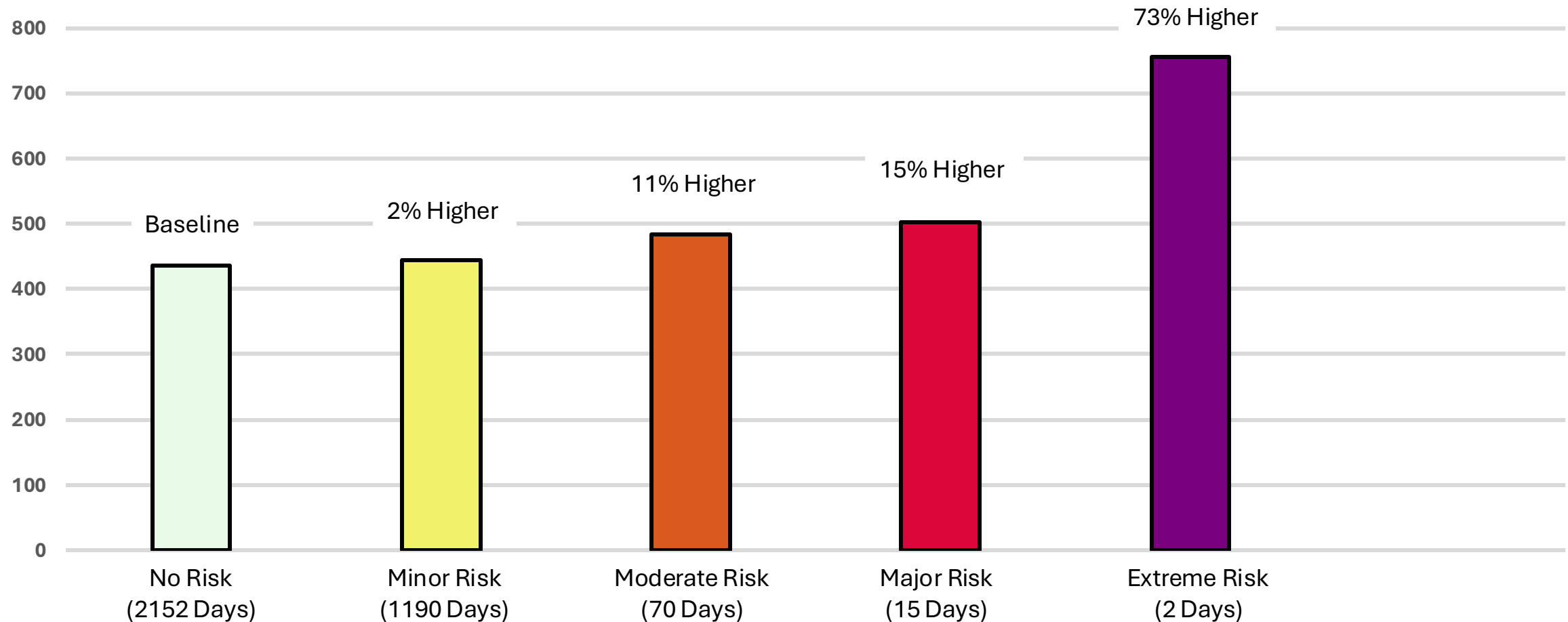
[Comments? Questions? Please Contact Us.](#)



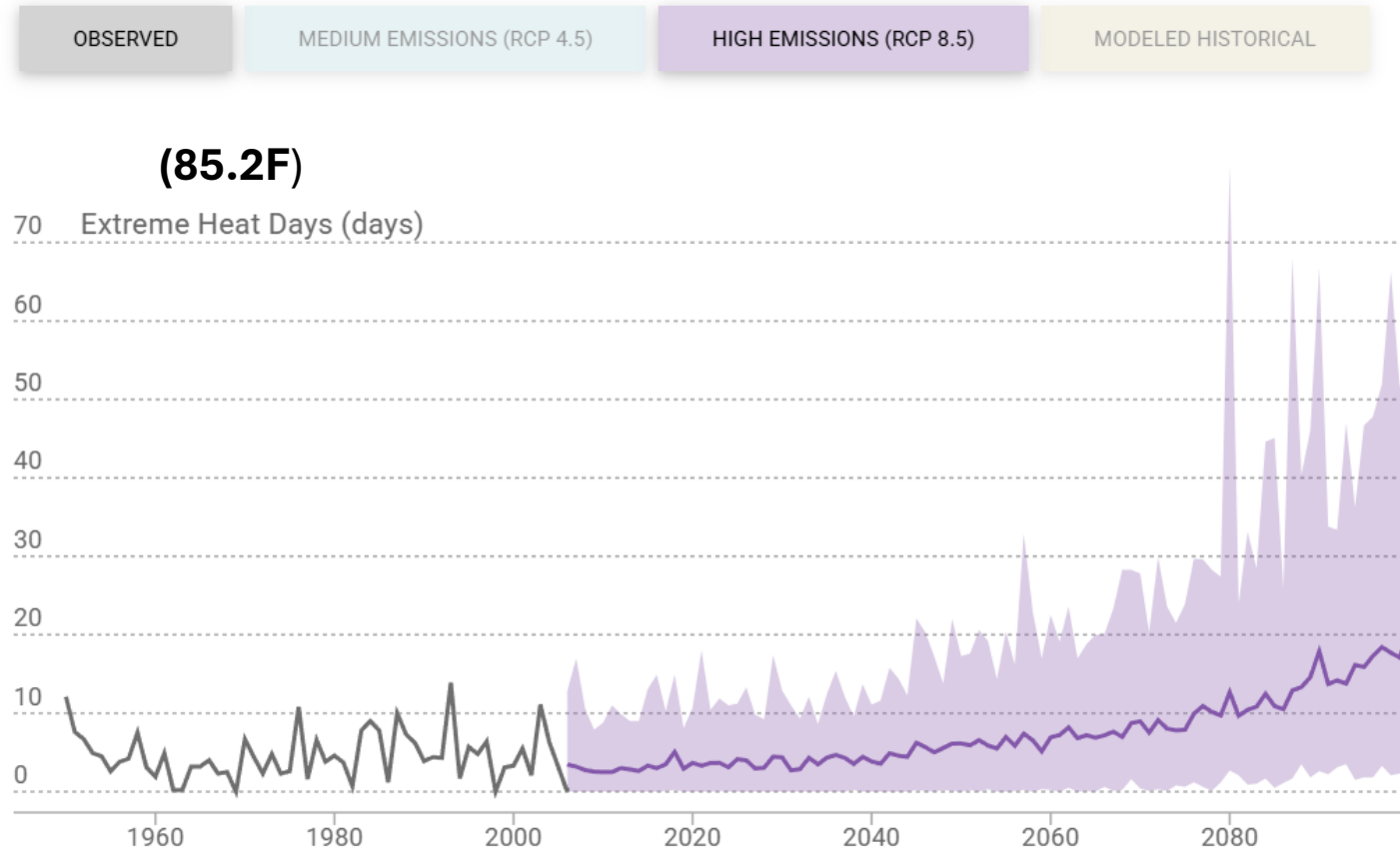
Heat events: lower frequency / higher impact

HeatRisk and Health Impacts 2017 - 2026

EMS Calls



Heat events becoming more frequent and more extreme



<https://cmip5.cal-adapt.org/tools/local-climate-change-snapshot/>

By the end of the Century the model predicts...

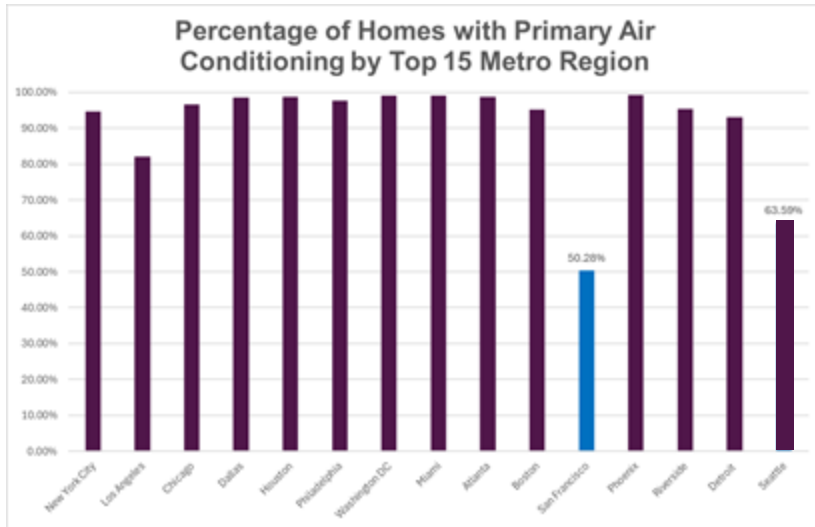
Days Over 85.2F:

Most Likely Range: 6 days – 28 days

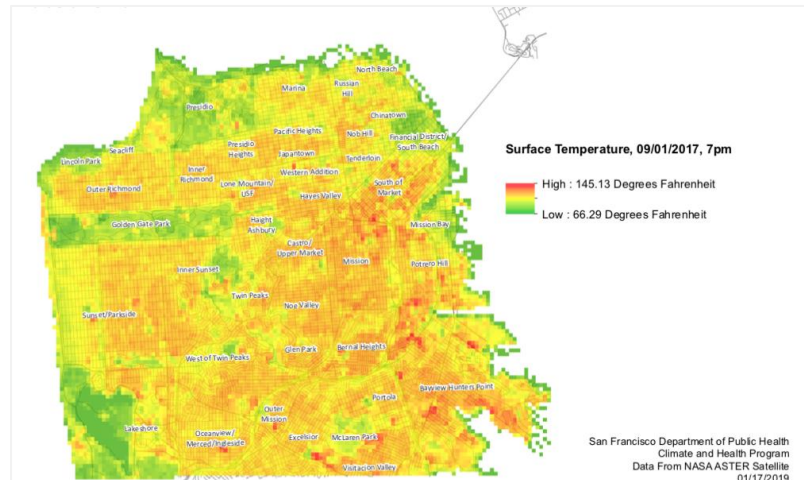
Maximum Possible: 80 days

Why is San Francisco vulnerable to extreme heat?

Little Home Adaptation



Significant Urban Heat Islands



Limited Experience with Heat



Description

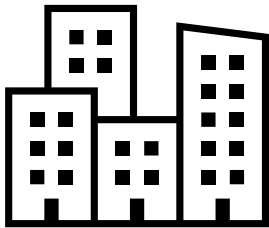
The **Heat and Air Quality Resilience Project (HAQR)** is a cross-sectoral initiative to get the public, private, community, and academic stakeholders together to identify, plan, and implement medium-to-long-term extreme heat and wildfire smoke resilience strategies to support short-term emergency response actions.

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 issues as they emerge.
2. Facilitate the implementation and evaluation of specific extreme heat and air quality strategies.



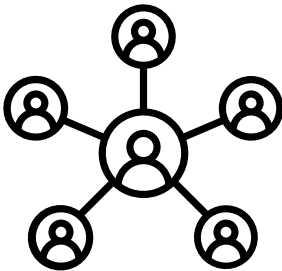
31 medium-to-long-term strategies



Weatherizing Buildings



Cooling Urban Heat Islands

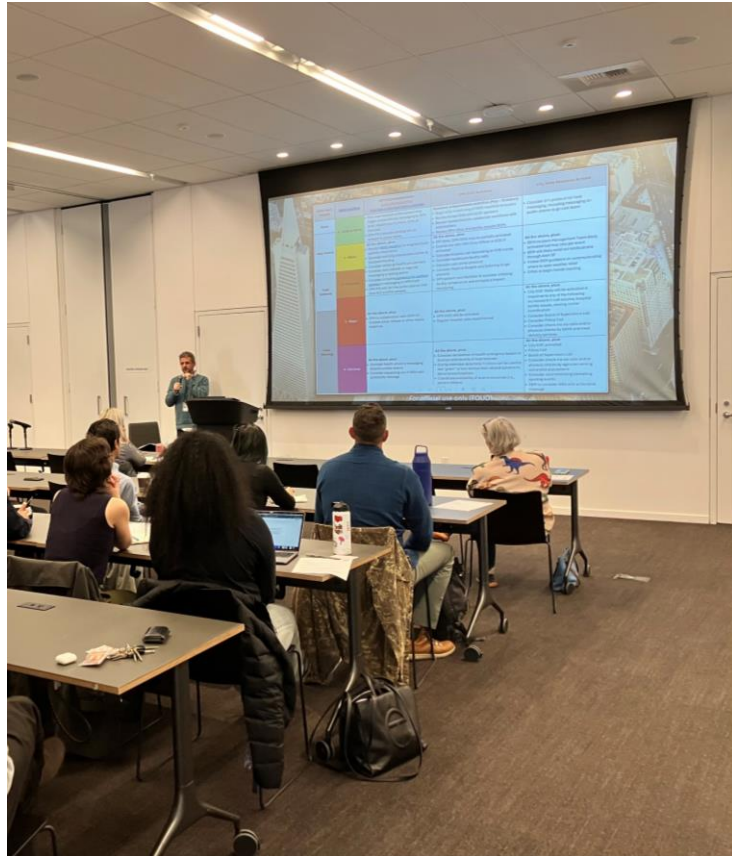


Community Readiness and
Emergency Response



Data, Evaluation, and
Governance

Building capacity across sectors



Example capacity building activities

Knowledge exchange

- Quarterly "All-Hands" Meetings with participation from 19 City agencies, 29 community organizations, and 3 universities

Community engagement

- With UCSF, developed Community Stakeholder Group

Identifying and securing resources

- Applied for 5 grants and won 2; 3 more applications in progress

Data and evaluation

- Impact analysis of urban cooling interventions by neighborhood

Making City facilities more heat resilient



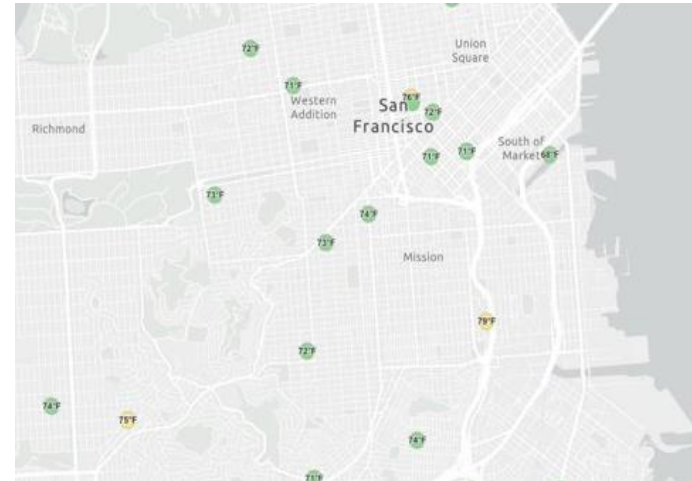
Renovation of Mission Branch Library



Built new Southeast Family Health Center



Renovation of Chinatown Branch Library



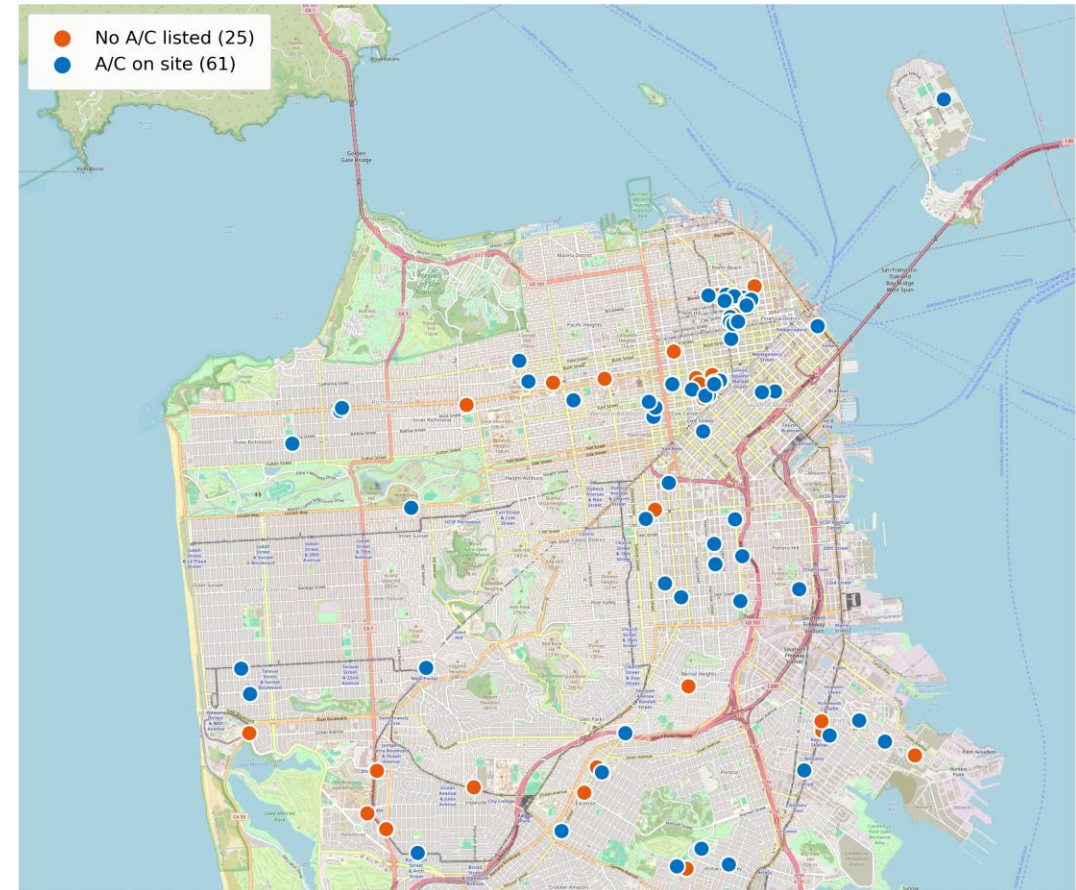
Installed sensors to inform future investment

Building heat resilience in community facilities

Extreme Weather Resilience Program (DEM, 2023): Meeting People Where They Are

- 86 active community-serving locations citywide: a portable air conditioner that can cool a single room (where windows allow), two air purifiers, and five years of filter replacements.
- Nearly 200 locations applied for 90 spots (demand outran the pilot two to one).
- Funded with one-time local, regional, and state sources, including a Bay Area Air Quality Management District grant.
- People go to places they know and trust – this program puts cooling and clean air where residents already are.
- A proof of concept, not a program DEM has capacity to scale.

Extreme Weather Resilience Program (EWRP) Partner Locations - San Francisco



Building resilience in renter-occupied housing



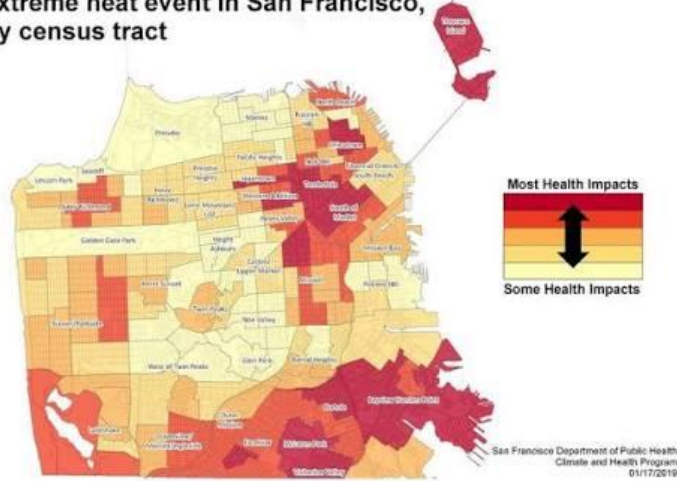
**UCSF PRISE resident survey to
evaluate barriers to heat
adaptation**



Coming soon: renters guide to home cooling

Helping Public Works cool urban heat islands

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



3500
STREET
TREES

“San Francisco is planting 3,500 new street trees in neighborhoods with the least canopy—bringing shade, cleaner air, and greening where it’s needed most.”

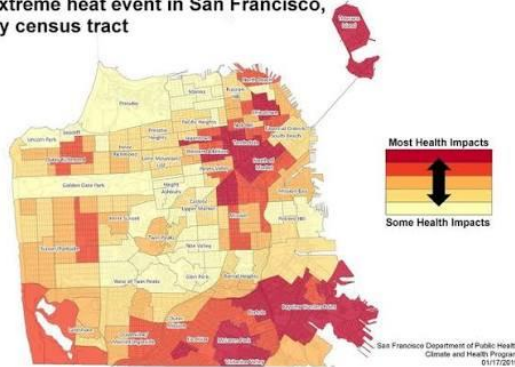
Upcoming projects and next steps



Prop 4. Grant Applications

- Community Resilience Centers
- Green Infrastructure
- Home Weatherization

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



Data and Evaluation

- Updating the Heat Vulnerability Assessment
- Tracking heat related illness to understand impact



Reducing Extreme Heat Risk Through Climate Action

Public Safety and Neighborhood Services Committee

July 23, 2026

Cyndy Comerford, Climate Program Manager

SAN FRANCISCO
ENVIRONMENT
DEPARTMENT

**The San Francisco Environment
Department provides solutions that
advance climate protection and enhance
quality of life for all San Franciscans.**

Mission Statement

**The Environment Department
reduces extreme heat risk by
building long-term climate
resilience before emergencies
occur through advancing
climate action by
decarbonizing homes and
buildings.**





How Building Decarbonization Improves Resilience During Extreme Heat

Provides efficient cooling through heat pumps

Keeps buildings cooler for longer

Reduces long-term energy cost

Improves indoor air quality

Enhances resilience during power outages when paired with solar and storage

Cuts greenhouse gas emissions

Policies & planning to build resilience in homes & buildings



Climate Action Plan



**Municipal Green
Building Code**



**Building Policies for the
Private Sector**

Programs to build resilience in homes & buildings



Climate Equity Hub



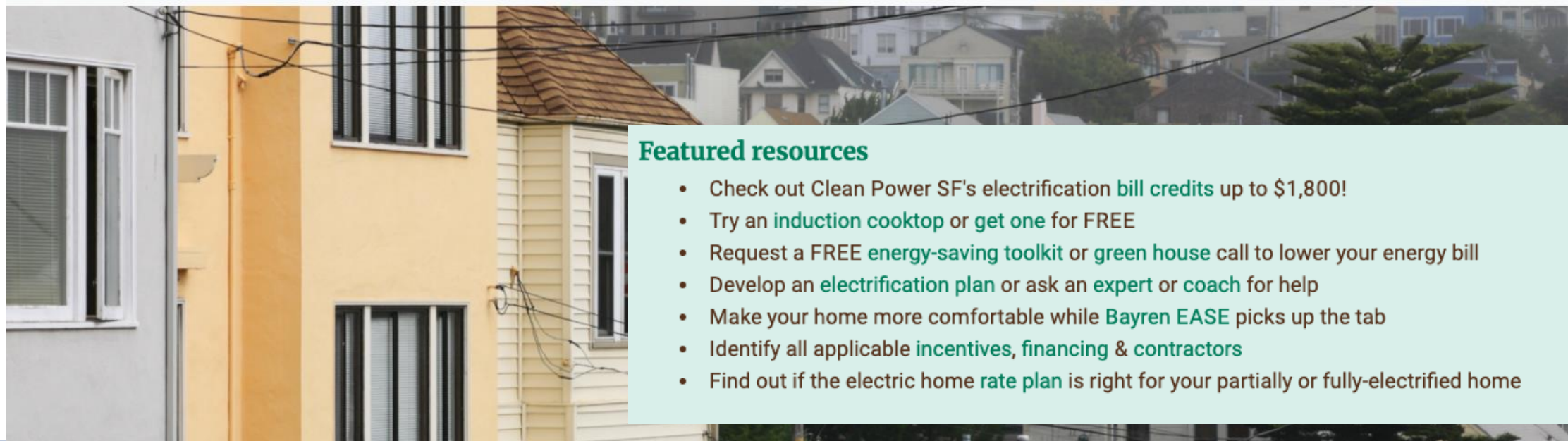
BayREN



**Pilot Projects &
Outreach**



Electrify Your Home



Featured resources

- Check out Clean Power SF's electrification [bill credits](#) up to \$1,800!
- Try an [induction cooktop](#) or [get one](#) for FREE
- Request a FREE [energy-saving toolkit](#) or [green house](#) call to lower your energy bill
- Develop an [electrification plan](#) or ask an [expert](#) or [coach](#) for help
- Make your home more comfortable while [Bayren EASE](#) picks up the tab
- Identify all applicable [incentives](#), [financing](#) & [contractors](#)
- Find out if the electric home [rate plan](#) is right for your partially or fully-electrified home

Life is Better Electric!

<https://www.sfenvironment.org/electrify>

San Francisco's Climate Action Plan goal for buildings

By 2030

Reduce emissions 20% from 2020 by decarbonizing ~ 18,000 buildings

By 2040

All buildings are zero-emission

RESIDENTIAL: Homes to Decarbonize by 2030

Building Type	Total Dwellings	Dwellings with Gas	Dwellings to Decarbonize by 2030	Approximate Number of Buildings this equates to
 Single Family	95,071	91,268	10,039	10,039
 2 to 4 units	83,015	78,864	15,773	3,943
 5 to 9 units	39,321	33,798	7,098	789
 10 to 19 units	39,064	30,044	6,910	364
 20+ units	161,353	124,097	28,542	714
TARGET	417,824	358,071	71,614	15,849

Household Income in San Francisco (Area Median Income - AMI)



COMMERCIAL: Buildings to Decarbonize by 2030



Total Commercial Building Space

186.6M

Square Feet



Square Feet to Decarbonize by 2030

36.7M

Square Feet



Approximate Number of Buildings this equates to

2,862

Buildings

Scale of Building Decarbonization in San Francisco



What are the Challenges and Opportunities ahead?

Key policies must be passed to keep us on target

Incentives are needed to both drive market transformation and support low-income households

Outreach and education is needed to combat misinformation and for residents to understand the benefits of electrification

What does DEM do?

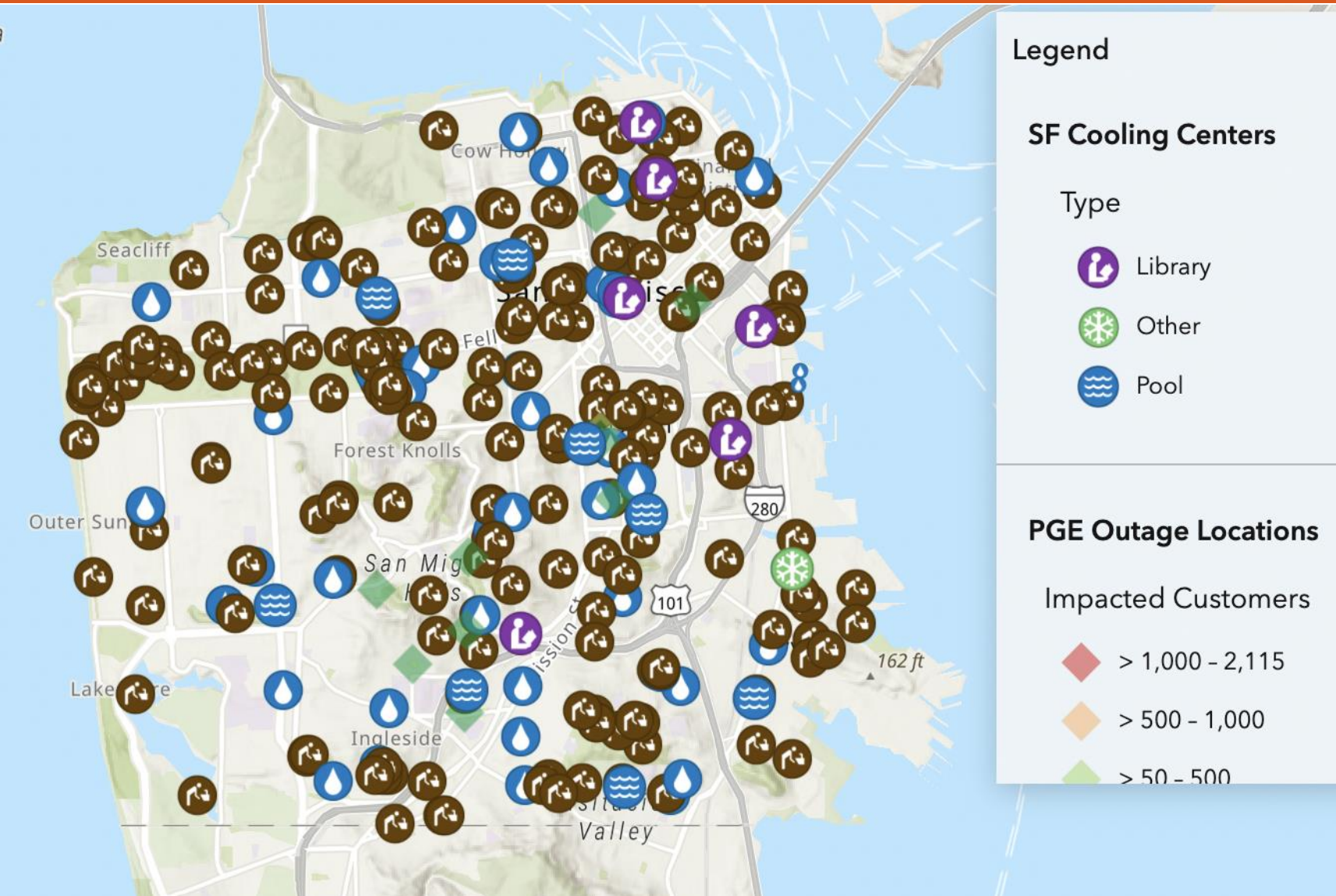
- DEM is the City's coordination layer: we run 911 dispatch, activate and run the Emergency Operations Center (EOC), send the City's emergency alerts, and coordinate public information.
- Coverage is continuous: unified 911 dispatch plus a 24/7/365 on-call team of emergency managers, with the EOC always at standby.
- The tempo is rising: 17 EOC activations in 2017 – the most of any year from 2013 to 2020. Since 2021, an average of 14 per year, with a high of 21 in 2024 – driven largely by more frequent extreme weather.

In a heat emergency, every department has a lane. DEM convenes them so residents get one coordinated response and one clear message.

From forecast to activation

- Continuous monitoring with the National Weather Service – heat triggers are set with Public Health, informed by the NWS HeatRisk scale and other factors rather than a single temperature number.
- A clear escalation path: routine monitoring → department coordination calls → EOC activation → public alerting.
- Pre-scripted, pre-translated alerts in all of San Francisco's threshold languages – accessibility and Language Access Ordinance compliance are never sacrificed for speed.
- Every activation ends with an after-action review – and the plans get better.
- Alerting works at grid scale: Cal OES's September 2022 conservation alert cut statewide demand within minutes, helping avert rolling outages.

Public Information



Legend

SF Cooling Centers

Type

-  Library
-  Other
-  Pool

PGE Outage Locations

Impacted Customers

-  > 1,000 - 2,115
-  > 500 - 1,000
-  > 50 - 500

Extreme heat

San Francisco's climate is changing. Extreme heat events are becoming more frequent and more intense.



Extreme heat is one of the deadliest weather-related hazards, often causing serious health impacts even at less extreme temperatures due to cumulative heat stress. However, heat-related illnesses and deaths are preventable if you take precautions.

Before a heatwave

- **Identify nearby places you can go** during heatwaves to stay cool, such as libraries, community centers, swimming pools, or shopping malls.
- **Check on neighbors**, especially older adults, people with disabilities, and those living alone.
- **Know your energy assistance options:** PG&E offers energy-saving programs to help reduce cooling costs —visit [PG&E's Financial Assistance page](#).

During a heatwave

- **Stay cool** by limiting outdoor activities, especially between 10 AM and 4 PM when temperatures are highest. Seek air-conditioned spaces if possible.
- **Stay hydrated** by drinking plenty of water. Avoid sugary drinks, alcohol, and caffeine.
- **Dress for the heat**, by wearing lightweight, loose-fitting clothes and a hat.
- **Take a cool shower or use wet cloths** to lower body temperature
- **Cool your space**, by keeping blinds or curtains closed during the day and open windows at night if it's cooler. Use fans with caution, as they do not always prevent heat-related illness. Avoid strenuous activities and heavy meals, which generate body heat.

Heat Wave Map

During extreme heat, [stay updated on local conditions with our Heat Wave Map](#).

This interactive map provides real-time information on cooling center locations, public pools, and water fountains around the city. Check it during heat waves to stay safe and find resources near you.

To explore additional layers, click the drop-down menu in the top-right corner.

Did you find what you needed?

Community Preparedness

- DEM and FEMA coordinated a heat and air quality resilience tabletop exercise in March 2024 with participation from community-based organizations.
- Our staff tabled and presented at over 50 community events in FY 25-26 and convened a preparedness summit for community-based organizations.
- ***DEM is committed to building on lessons learned during COVID about the essential role community-based organizations play in preparedness and response.***



Questions?