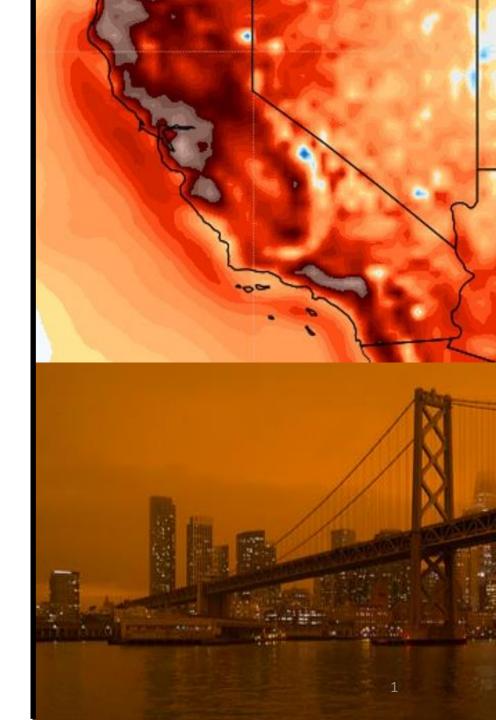
### San Francisco Heat and Air Quality Resilience Project

**All Hands Meeting 13 | 06/05/2025** 

Matt Wolff, SFDPH, Matt.Wolff@sfdph.org
Alex Morrison, ORCP, <u>Alex.Morrison@sfgov.org</u>

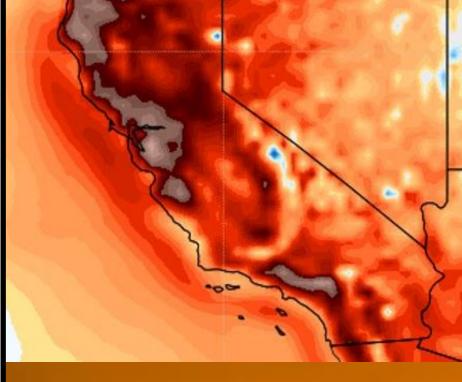


### Agenda

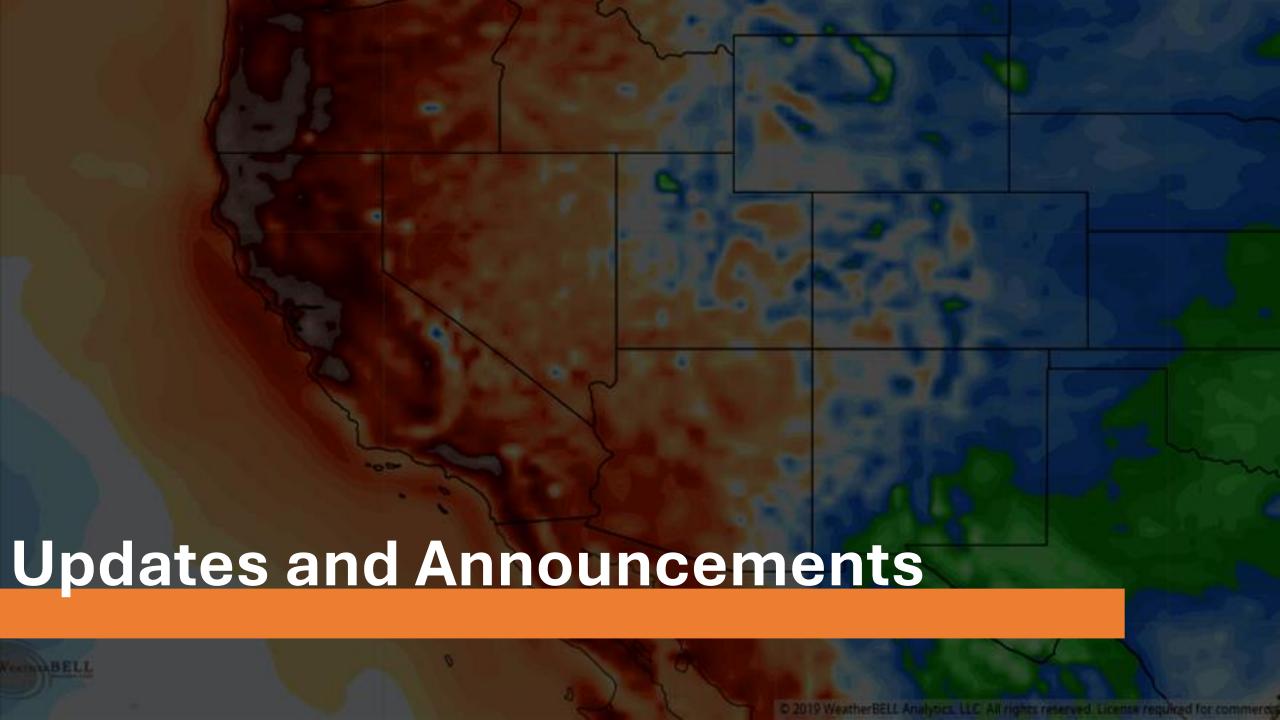
HAQR All-Hands Meeting #12

Date: 06/05/2025 Time: 2pm - 3pm

Introductions	5 Minutes	
Updates and Announcements:	10 Minutes	
<ul> <li>HAQR All-Hands Presentations:</li> <li>"ReadySF: San Francisco's New Emergency Preparedness Hub" - Jackie Thornhill, Communications Manager with the Department of Emergency Management</li> </ul>	15 Minutes	
"Summer Heat Forecast" - Brian Garcia, Warning Coordination Meteorologist for the SF Bay Area/Monterey with the National Weather Service	15 Minutes	
HAQR Evaluation: Please Give Us Feedback!	10 Minutes	
Heat and Air Quality Resources Overview	5 Minutes	







### **Community Updates and Announcements**

### **2025 Heat Information Cheat Sheet**

### Guide to where to go for City heat information, Summer 2025

### 2025 San Francisco Heat Information

06/05/2025

### What is an extreme heat event?

In San Francisco an extreme heat event is officially <u>85F</u> but local emergency response actions are initiated based on many factors including heat wave duration, severity, and health impacts.

The San Francisco Department of Emergency Management and Department of Public Health consistently monitor National Weather Service forecasts and coordinate a citywide response when forecasts show extended heat events. This coordination includes activating the Emergency Operations Center (EOC), initiating public messaging highlighting resources including cooling centers and public pools, and implementing additional life safety protocols across departments as necessary.

### When does the City open cooling centers?

A map of all cooling centers, public pools, and public water fountains in San Francisco with links to operating hours is available <u>year round</u> at sf.gov/heat. During prolonged extreme heat events, the EOC proactively shares this information with the public through traditional and digital media, as well as <u>community based</u> organizations. Cooling centers are opened based on heat wave duration, severity, and magnitude of health impacts.

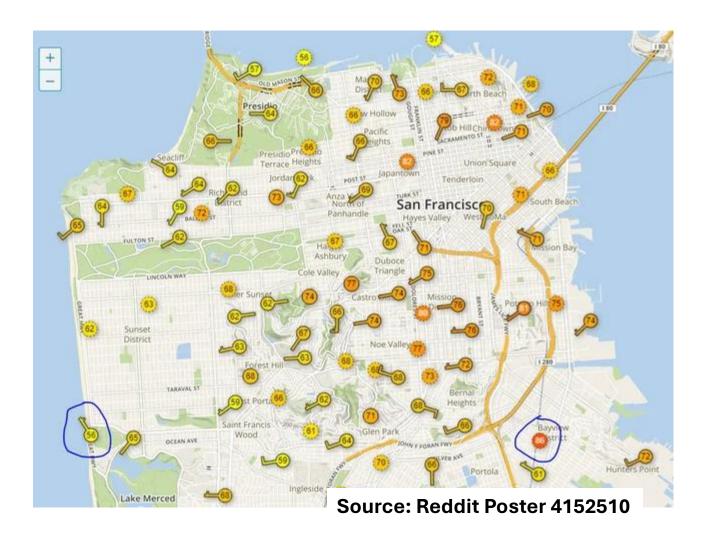
### Where do we go for information?

Source	Description		
AlertSF Text your zip code to 888-777 to sign up for AlertSF or visit AlertSF.org	AlertSF is San Francisco's official emergency text alert system. It will send you official notifications about emergencies like earthquakes, fires, flooding, major power outages, and more. Staying informed during a disaster can save lives.		
ReadySF Sf.gov/readysf or https://www.sf.gov/extreme-heat	The place to find everything you need to know before, during, and after an emergency. The Extreme Heat section includes: (1) best practices to prepare for heat waves, (2) tips to		



### Heat and Air Quality Sensor Deployment

Heat and Air Quality Sensors will be given to libraries and health clinics







### San Francisco Public Works Bureau of Urban Forestry

## URBAN GREENINGFOR TOMORROW



Growing healthier neighborhoods through tree planting and sustainable practices





### MITIGATING THE URBAN HEAT ISLAND EFFECT



The pollution-absorbing benefits trees provide are important everywhere, but especially in neighborhoods such as the Bayview.



Southeastern neighborhoods bear the dual burden of being located near heavy industry and two major freeways that produce harmful exhaust.



The neighborhoods of District 10 are also some of the most heavily paved.



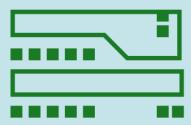
Asphalt and concrete surfaces absorb and reemit heat, contributing to the overall increase in temperature in warmer summer months. Trees provide shade which is increasingly essential as global temperatures rise.



### DID YOU KNOW?

That San Francisco Public Works is responsible for maintaining all 125,000 street tree's in the City's Urban Forest.

Thanks to the 2016 voter-approved initiative **StreetTreeSF**, homeowners and local merchants are no longer responsible for pruning street trees over the span of their lifetime; we also repair sidewalks damaged by street tree roots.



01.

This past May 10, together with the help of volunteers, Public Works planted 79 new street trees in the City's Southeastern neighborhoods.

02.

The new trees planted included western redbud, pink dawn,
Japanese zelkova and bay laurel
– sourced at the Public Works
Street Tree Nursery in the South of Market neighborhood

03.

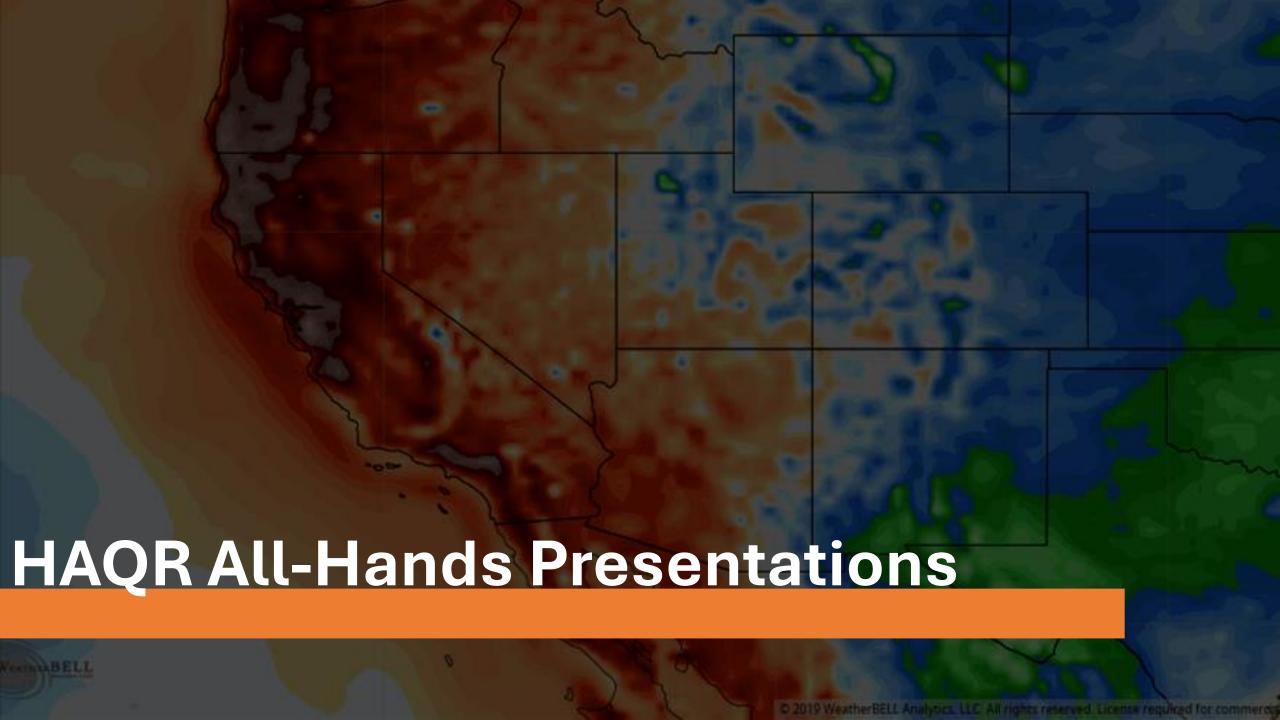
Yet, the Bayview still has one of the smallest tree canopies compared to other San Francisco neighborhoods, at 6.7%, while the City average is 13.7%. We have more work to do!

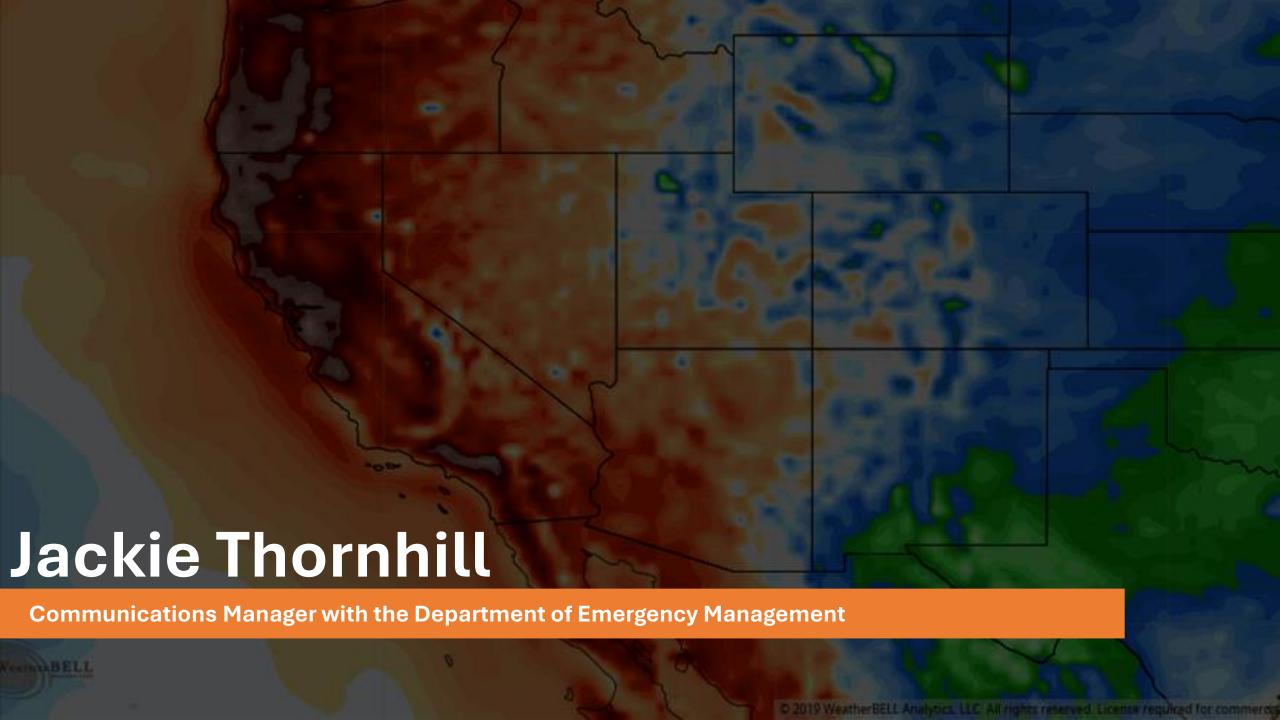
### **Green Infrastructure Project**

Working with Public works, we are working to identify what new or existing landscape architecture projects can be pursued in the previously identified Green Infrastructure Priority Zone

- Reviewing public works landscape architecture project pipeline
- Cross referencing pipeline projects with HAQR Green Infrastructure Priority Zones
- Develop potential projects for submission to the capital budget process by January 2026







### sf.gov/ReadySF

(1) No citywide emergency alerts right now. | Get the latest info during an emergency -> Text your ZIP Code to 888-777 or sign up at alertsf.org





### Earthquake safety

Earthquakes can happen at any time. Take a moment to learn today's best earthquake safety practices.

Learn about earthquake safety

### How to get ready for any emergency

Follow these steps to prepare yourself and your community for any disaster or emergency.





### Resources

Disasters and emergencies in San Francisco

How to get ready for emergencies in San Francisco

 $\rightarrow$ 

### sf.gov/GetReady



### 1. Sign up for AlertSF

The best way to start is to sign up for AlertSF emergency alerts, it's easy! Text your ZIP Code to 888-777, or sign up at alertsf.org.

Learn more about AlertSF



### 4. Get connected

A big part of preparing is building up your community so that you have a network to turn to in times of crisis.

Resources to build connections



### 2. Make a plan

An emergency plan is all about keeping in contact with the people most important to you and deciding on a safe place to meet up. One plan can get you through many emergencies. Start making your plan today.

Make your emergency plan



### 5. Get Trained

Learn more and get even better prepared by signing up for upcoming trainings with ReadySF partners, including SFFD's Neighborhood Emergency Response Teams (NERT).

**Explore training options** 



### 3. Gather supplies

Most of what you'll need in an emergency are everyday household items you already have. The key to being prepared is keeping things in safe, easy-to-reach places and making sure you have essentials like water and food.

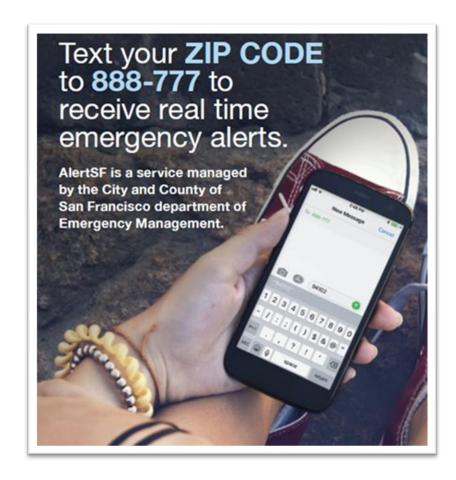
Use the supplies checklist

### You're more prepared than you think!

Taking steps to get ready and stay ready can save your life and protect your loved ones during an emergency or natural disaster. Use the ReadySF resources to help you take action and plan ahead.



### **Emergency Alerts**







### Make a Plan



- ➡ This plan is for
- Our meeting spot
- Emergency contacts
- Out-of-area emergency contact

### **Gather Supplies**



### Go Bag

Your Go Bag holds the things you'll need if you must leave your house in a hurry, like in the event of a fire or tsunami.



Your Go Bag should be something sturdy and easy to carry, like a backpack or small suitcase.





Pack a bag for every member of your family and keep them somewhere easy to access.



Set a reminder on your calendar to refresh your Go Bag once a year around your birthday or other milestone.

### **Essentials**

- Sturdy shoes and a change of warm clothing
- Water purifying tablets or other purification system
- Nonperishable food that is easy to carry (e.g., granola bars)
- Extras of medications you take
- Glasses/contacts or other necessary medical items
- Portable cell phone charger or extra battery (solar powered)
- ☐ First-aid/bleed control kit

- Radio (battery-operated or hand-crank) and extra batteries
- Check KCBS 740 AM / 106.9 FM, KQED 88.5 FM, KALW 91.7 FM, and NOAA Weather Radio 162.400 MHz
- - A copy of your Emergency Plan and Contacts (visit sf.gov/ReadySF for help)
- □ Flas
  - Flashlight or headlamp (for hands-free use)
- - N95 Mask to help filter contaminated air
- Toiletries

- Copies of your important documents in a waterproof container

(e.g., insurance cards, Medicare/Medicaid cards, photo IDs, proof of address, marriage and birth certificates, copies of credit and ATM cards)

- Childcare supplies (diapers, formula, toys, medications)
- Pet care supplies (food, extra water, bowl, leash, cleaning items, medications)
- Cash, in small bills

### Sign up for AlertSF

Get critical emergency updates before, during, and after a disaster. Sign up by texting your ZIP Code to 888-777 or make an account at alertsf.org



For more information visi sf.gov/ReadySF





### Stay Box

Your Stay Box is your home emergency kit. It is for items that will help your household be safe and comfortable when you need to stay in your home after a natural disaster and utilities and services aren't available.





Be prepared for about a week without water or electricity.



You can gather supplies a little at a time until you have enough for everyone in your family to get by.



Remember to check and refresh your Stay Box once a year.



You can use any container to organize supplies. The key is to keep your Stay Box somewhere easy to access and out of direct sunlight like under a bed or in a closet.

### **Essentials**



### Water

Try to have at least one gallon, per

person, per day. Buy cases of water bottles next time you're at the store or consider investing in water storage tanks. Replace the water every six months, or according to the expiration date on sealed bottles.

- Non-perishable food

Keep foods that don't go bad and don't need to be cooked. Choose high-protein foods (like canned fish, beans, vegetables, protein bars) that you like to eat. Make sure cans are pull tops or pack a can opener.



Trash bags and sanitation items

Heavy duty trash bags can be used with a bucket as a toilet if water/sewer service is impacted. Include toilet paper, feminine supplies. hand sanitizer, and soap.

### Flashlight or headlamp + extra batteries

A good flashlight or headlamp (for hands-free use!) is very helpful if power is out. Have extra batteries.

Radio (battery-operated or hand-crank) and extra batteries Check KCBS 740 AM / 106.9 FM, KQED 88.5 FM. KALW 91.7 FM, and NOAA Weather

- Radio 162.400 MHz
- Personal documents

Keep printed copies of your driver's license, passport, leases, titles, contact list, and any other crucial documents in a waterproof container. Organize digital copies too.

### Prescriptions and medical equipment

Keep extras of any medicine you take on a regular basis. If your medical devices require electricity, make a plan for batteryoperated or generator-fueled alternatives.



### **Get Connected & Get Trained**



### sf.gov/Emergencies (or sf.gov/Disasters)



### Earthquakes

Scientists now conclude that there is a 63% probability of at least one magnitude 6.7 or greater quake, capable of causing widespread damage, striking somewhere in the San Francisco Bay region in the next 30 years. Learn how to prepare and what to do when an earthquake hits.





### Severe storms

Severe storms can cause flooding to homes and streets and cause landslides in certain areas. Learn what to do before, during, and after a storm.





### **Urban flooding**

Urban flooding occurs when excessive runoff overwhelms drainage systems in developed areas. This can lead to flooding of homes, streets, and infrastructure, especially in lowlying areas.

Prepare and stay safe in a flood



### **Tsunamis**

A tsunami is a series of ocean waves that can cause dangerous coastal flooding and other damage. Some San Francisco neighborhoods are at more risk than others.

What to do in case of a tsunami



### Fire

San Francisco faces unique fire risks due to its dense urban environment and historic buildings. To learn more about fire risk and how to stay safe, visit the San Francisco Fire Department's webpage, which provides expert guidance on prevention, emergency preparedness, and response.

Fire safety for everyone



### Extreme heat

San Francisco's climate is changing. Extreme heat events are becoming more frequent and more intense. Learn how to prepare and stay safe.



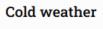
### Air quality

Wildfire smoke, industrial accidents, and other hazards can quickly make the air we breathe unhealthy. Poor air quality can impact everyone, but children, older adults, and people with respiratory conditions are especially vulnerable.



### Power outages

Power outages can happen unexpectedly due to weather, grid issues, or emergencies like earthquakes. Preparing in advance helps you stay safe and minimize disruptions.



Very cold weather can be dangerous, especially for infants, older adults, and those with medical conditions. These tips will help you prepare and stay safe during cold weather emergencies.

Resources for staying warm



### **Tornadoes**

While tornados are rare in San Francisco, it's important to understand how to respond if a tornado warning is issued.

Get info about tornadoes and safety

How to keep cool in extreme heat

How to stay safe if air quality is bad

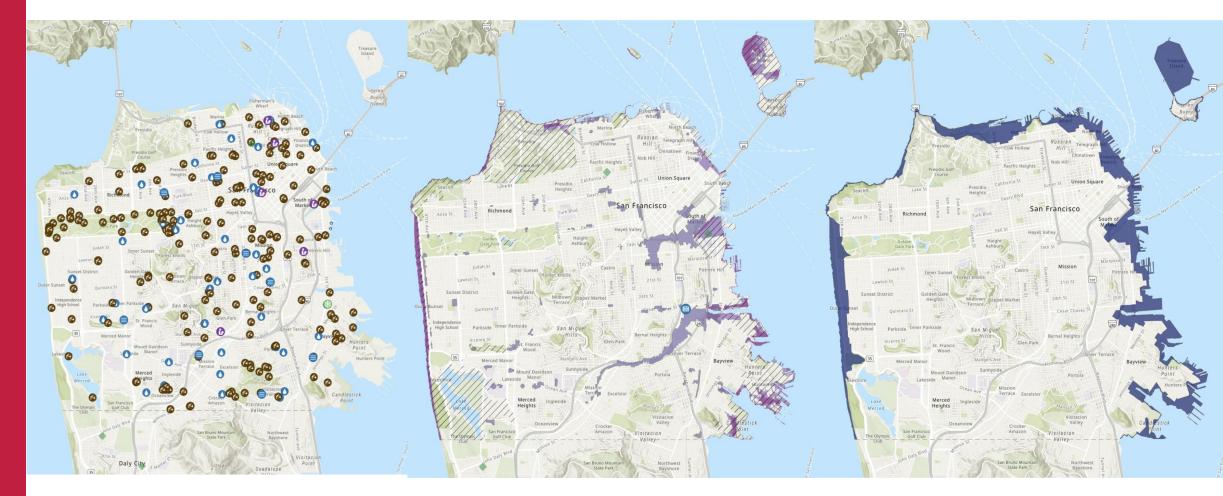
Be ready if there's a power outage

Maps

sf.gov/heat

sf.gov/storms

sf.gov/tsunami





# NWS SF Bay Area 2025 Summer and Fire Season Outlooks





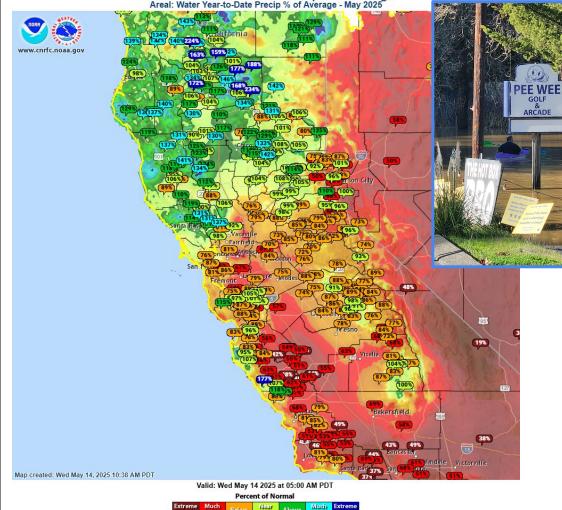


### TOPICS

- Winter Season Precipitation Recap
- Current Conditions
- Temperature Trends
- Summer Outlook
- Fire Season Outlook
- Tool for the toolbox



## 2024/2025 Wintel Season Recp

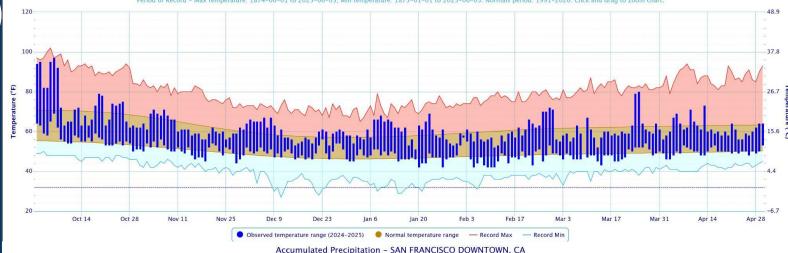


110% 130% 150%



### Daily Temperature Data - SAN FRANCISCO DOWNTOWN, CA



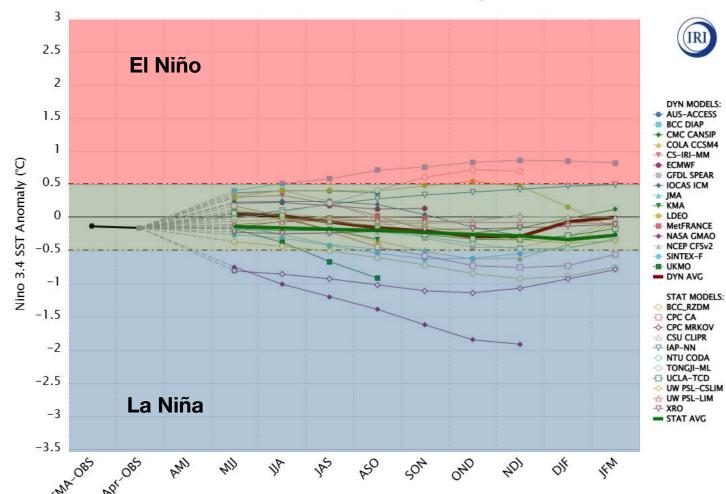


Accumulated Precipitation - SAN FRANCISCO DOWNTOWN, CA





# **Surrent Conditions**

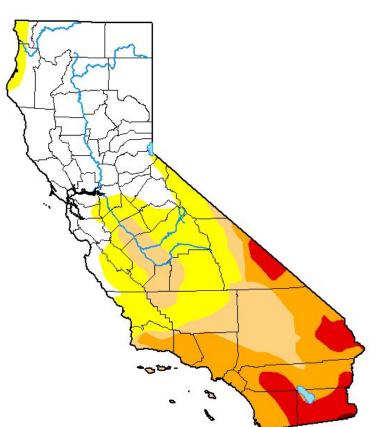




# **Current Conditions**

### U.S. Drought Monitor

### California



### June 3, 2025

(Released Thursday, Jun. 5, 2025) June 4, 2024 Valid 8 a.m. EDT Intensity: None D0 Abnormally Dry D1 Moderate Drought D2 Severe Drought D3 Extreme Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to https://droughtmonitor.unl.edu/About.aspx

D4 Exceptional Drought

### Author:

Brad Pugh CPC/NOAA









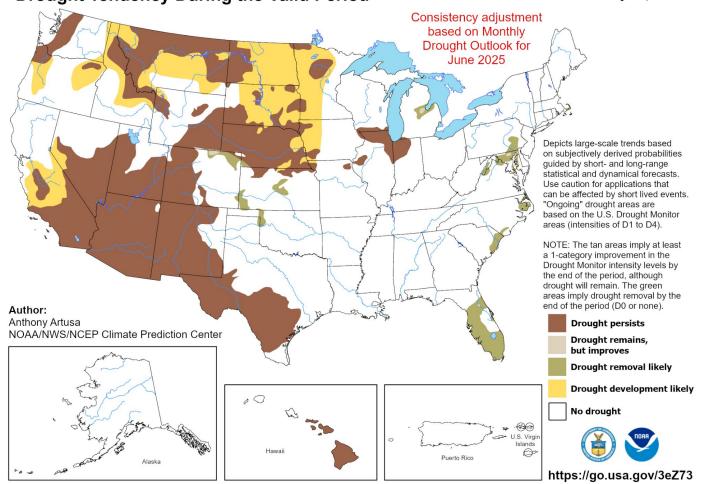
droughtmonitor.unl.edu



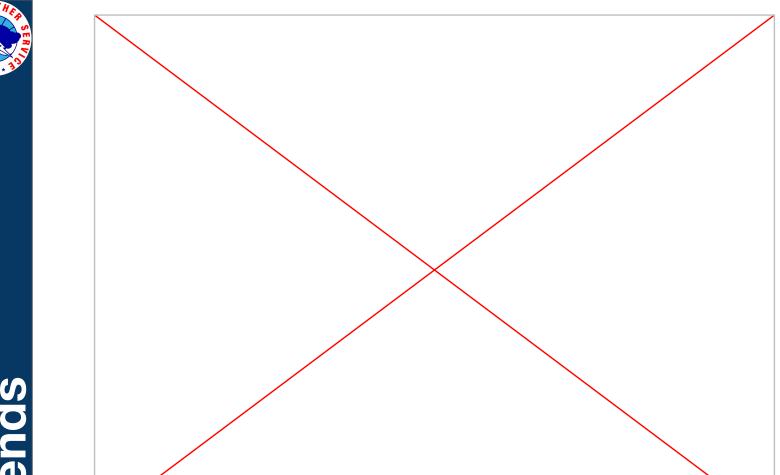
# **Surrent Conditions**

U.S. Seasonal Drought Outlook
Drought Tendency During the Valid Period

Valid for June 1 - August 31, 2025 Released May 31, 2025



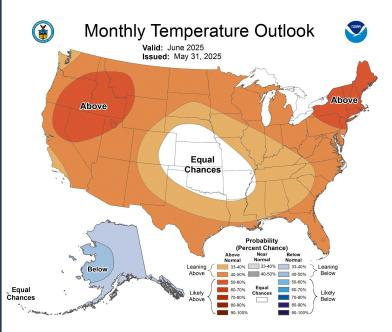
### emp Climate Global T Trends

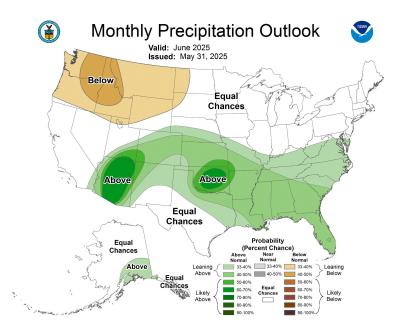






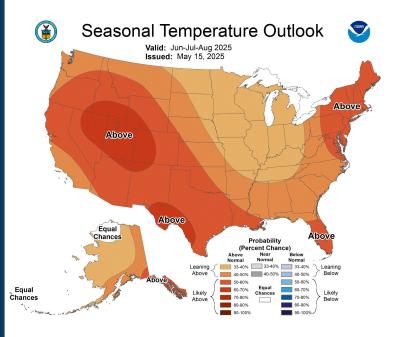
## Outlook Summer

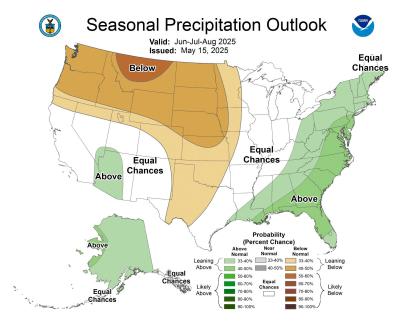






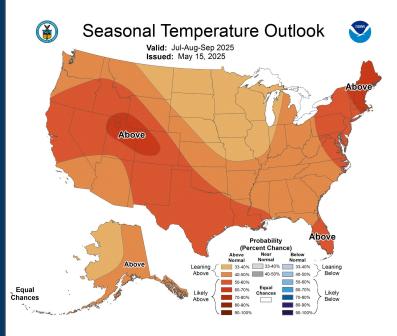
## Outlook Summer

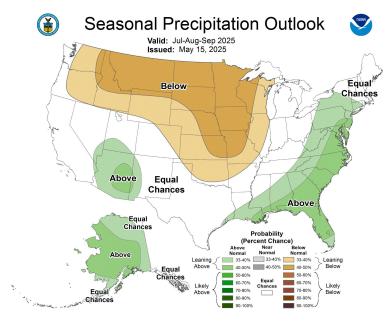






## Outlook Summer





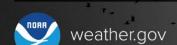


### EXTREME HEAT WATCH

An Extreme Heat Watch is issued when dangerous heat is possible.

Reschedule outdoor activities in the coming days. Make sure that children, the elderly, and pets have a place to cool off during the heat.

Be Prepared.



### EXTREME HEAT WARNING

An Extreme Heat Warning is issued when dangerous heat is happening or about to happen.

Avoid heavy activity & direct sunlight. Stay hydrated, find a cool indoor place, and check on children, elderly & pets.

**Take Action!** 





### National Weather Service

Bookmark Download KML Graphics En español

CDC-NWS

### **NWS HeatRisk**

ntifying Potential Heat Risks in the Seven Day Forecast

Tue	Wed	Thu	Fri	Sat	Sun	Mon
6/3	6/4	6/5	6/6	6/7	6/8	6/9

Click map for potential heat risks and NWS forecast for a location.

The NWS HeatRisk is an experimental color-numeric-based index that provides a forecast risk of heatrelated impacts to occur over a 24-hour period. HeatRisk takes into consideration:

- . How unusual the heat is for the time of the year
- . The duration of the heat including both daytime and nighttime temperatures
- . If those temperatures pose an elevated risk of heat-related impacts based on data from the CDC

This index is supplementary to official NWS heat products and is meant to provide risk guidance for those decision makers and heat-sensitive populations @ who need to take actions at levels that may be below current NWS heat product levels.

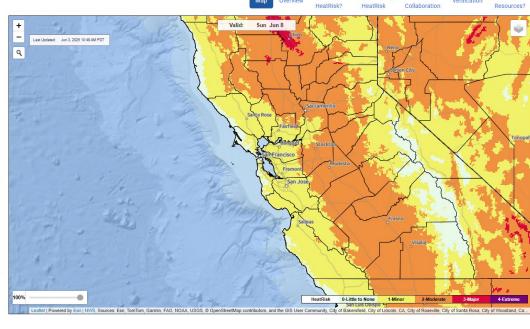
Category	Risk of Heat-Related Impacts
Green 0	Little to no risk from expected heat.
Yellow 1	Minor - This level of heat affects primarily those individuals extremely sensitive to heat, especially when outdoors without effective cooling and/or adequate hydration.
Orange 2	Moderate - This level of heat affects most individuals sensitive to heat, especially those without effective cooling and/or adequate hydration. Impacts possible in some health systems and in heat-sensitive industries.
Red 3	Major - This level of heat affects anyone without effective cooling and/or adequate hydration. Impacts likely in some health systems, heat-sensitive industries and infrastructure.
Magenta 4	Extreme - This level of rare and/or long-duration extreme heat with little to no overnight relief affects anyone without effective cooling and/or adequate hydration. Impacts likely in most health systems, heat-sensitive industries and infrastructure.

Comments? Questions? Please Contact Us.









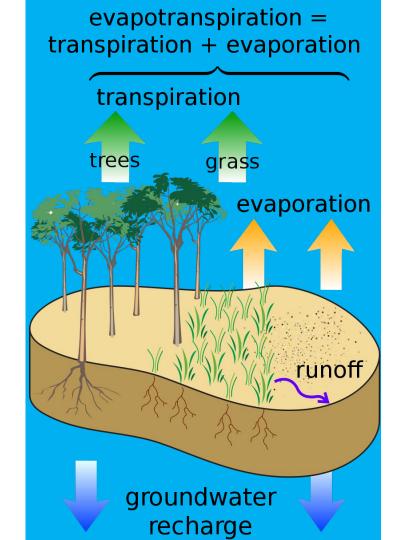
**Heat Advisory** 

**Extreme Heat Warning** 

HeatRisk



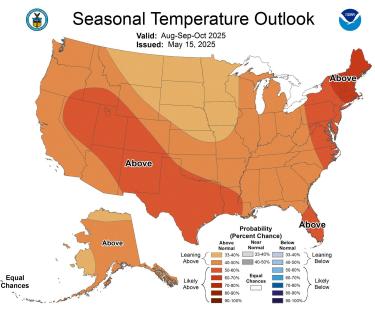


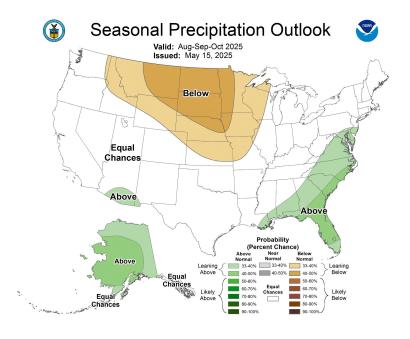






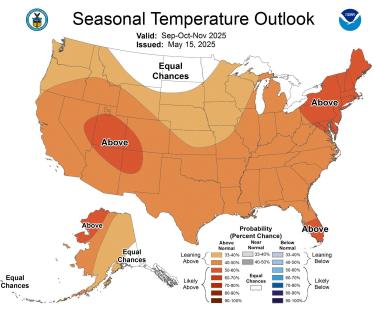
### Fire Season Outlook

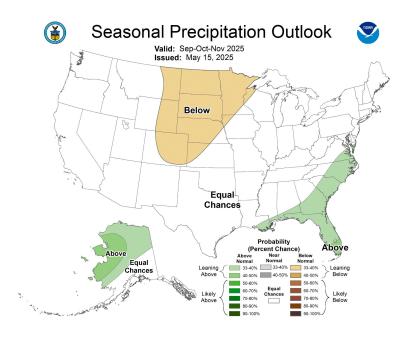






## Fire Season Outlook







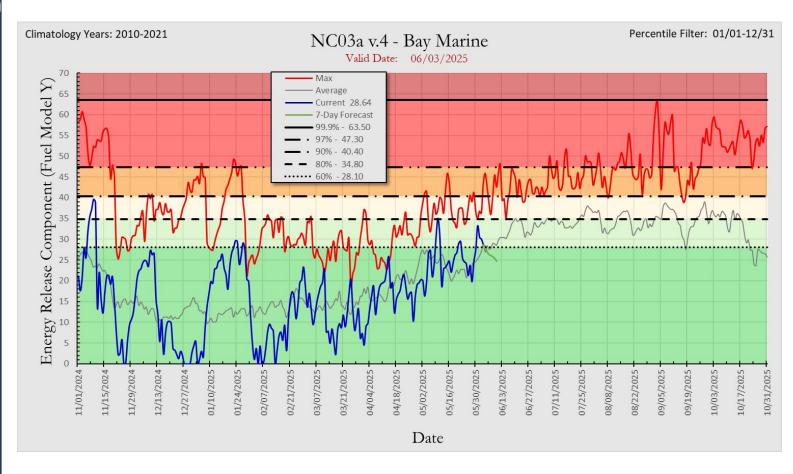
**North Zone Operations** 

**Predictive Service Areas** 





# onditions easor





# onditions easor

### Climatology Years: 2010-2021 Percentile Filter: 01/01-12/31 NC03b v.4 - Diablo / Santa Cruz Mountains Valid Date: 06/03/2025 90 Max Energy Release Component (Fuel Model Y) Average Current 45.31 7-Day Forecast 99.9% - 80.00 97% - 70.16 90% - 61.10 80% - 53.32 60 •••• 60% - 40.44 55 35 04/04/2025 05/16/2025 06/27/2025 07/11/2025 10/17/2025 10/03/2025 11/01/2024 12/27/2024 01/24/2025 02/07/2025 03/07/2025 03/21/2025 04/18/2025 05/02/2025 11/15/2024 11/29/2024 12/13/2024 01/10/2025 02/21/2025 05/30/2025 06/13/2025 07/25/2025 08/08/2025 08/22/2025 09/05/2025 09/19/2025 10/31/2025 Date



Northern Operations

### MONTHLY/SEASONAL OUTLOOKS

ISSUED June 1, 2025 VALID June - September 2025



### June - September 2025 North Ops Highlights

- June weather patterns should generally be warmer than normal with a higher frequency of enhanced breezy periods driving heightened fire potential across the lowlands.
- July through September is expected to be warmer and drier than normal with more Heat and Wind concerns versus Lightning events although impactful lightning periods should trend higher compared to what occurred during 2024.
- Flash drought potential should become heightened during the next 4 months with extended periods of critically dead fuels plus increasing stresses on live fuels.
- Marine influences should take the edge off the heat/dryness closer to the Coast during next few months.
- Significant Fire Potential is projected to be normal for near Coastal Areas while trending above normal for inland areas thru Aug then above normal areawide in Sep.

## Fire Seasor Outlook



Seasor

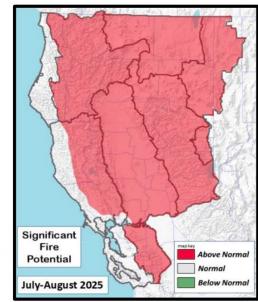
Northern Operations

### MONTHLY/SEASONAL OUTLOOKS

ISSUED June 1, 2025 VALID June - September 2025









\*Significant Fire Potential per Predictive Service Area (PSA)





# Situation Dangerous

### National Weather Service San Francisco Bay Area/Monterey, CA



### Red Flag Warning: Particularly Dangerous Situation (PDS)

**Objective:** Highlight exceptional fire weather conditions (combination of meteorological and fuels) considered rare and/or especially impactful to the firefighting community

PDS language included in the first bullet of the Red Flag Warning
Product (RFWMTR) with NO change to headline

- · Not a new product
- Red Flag criteria unchanged
- Rare event (3 5 year interval of occurrence)
- May cover a portion of the Red Flag Warning area and/or duration
- Exact criteria may vary by region
- May be used by any California Weather Forecast Office

### Diablo/North Wind Event

Criteria (NWS Bay Area) Must coincide for ≥ 8 hours

- Sustained winds 30 mph
- Daytime minimum humidity less than 9% and/or nighttime humidity less than 30%
- 10-hour fuel moisture of less than 6% and no wetting rain (greater than 0.10 inch) has fallen in the past 24 hours.

@NWSBayarea www.weather.gov/bayrea









# easor

**NWS San Francisco Bay Area** 



### Extreme Fire Conditions

Particularly Dangerous Situation

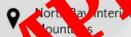
Red Flag Warning through 6:00 PM Friday

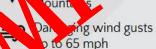
North Bay Interior Mountains

Extreme Risk - Take Action

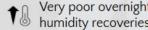
Updated Thursday October 17, 2024

High potential r very rapid fire spread, long range spoal gand life-threatening fire beliavior with my new fire ignitions



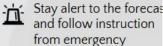




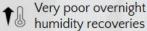




Use extreme caution with any potential ignition sources



officials





@NWSBayArea www.weather.gov/bayarea





major







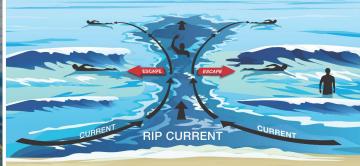
# Beach

## Even when the air is hot, water can be cold! Always wear a life vest Even experienced swimmers can quickly lose muscle control Cold water can kill

### **Summer Water Hazards**

- Cold water
- Rips
- Tidal swings
- Large surf
- Sneaker waves (ex. Stinson)
- Tsunamis

### RIP CURRENTS Know your options



Rip currents are powerful currents of water moving away from shore.

They can sweep even the strongest swimmer away from shore.

If at all possible, swim near a lifeguard.

### IF CAUGHT IN A RIP CURRENT

- Relax, rip currents don't pull you under.
- ♦ Don't swim against the current.
- ♦ Swim out of the current, then to shore.
- ♦ If you can't escape, float or tread water.
- ♦ If you need help, yell or wave for assistance.

### SAFETY

- ♦ Know how to swim.
- ♦ Never swim alone.
- ♦ If in doubt, don't go out.
- ♦ Swim near a lifeguard.

More information about rip currents can be found at the following websites:

weather.gov/safety/ripcurrent/ usla.org









Partner Management Solution https://partnerservices.nws.noaa.gov/registration/



Partner Communication Channels
https://partnerservices.nws.noaa.gov/registration/







Weather Forecast Office San Francisco Bay Area Wednesday, May 28, 2025

### Heat Advisory for the Interior and Elevated Fire Concerns Late This Week

### Good morning partners,

A Heat Advisory remains in effect for interior locations and Santa Cruz Mfs from 11AM to BPM Friday. Moderate HeatRisk is anticipated for these areas Friday and Saturday with localized areas of Major HeatRisk across portions of the North Bay Interior Mountains, East Bay Hills, interior Central Coast. Temperatures are expected to peak Friday, where interior valleys could reach highs from the middle 90s to 106°F and overnight lows in the 60s. Temperatures will remain hot on Saturday with highs in the middle-to-upper 90s and Moderate HeatRisk persisting across the interior. There is also a period of elevated fire weather concerns Friday will be any as the warmest and driest conditions settle in. Daytime RH Friday will be in the teens to low 20s with poor overnight recoveries in the range of 25-40% above 2,000 feet. Winds appear to remain relatively light through the weekend, but we continue with enhanced fire weather messaging considering the dry weather, cured grasses, and recent frequency of grassfires.

### **KEY POINTS**

- . Heat Advisory in effect 11AM 8PM Friday for the interior North Bay, Bay Area, Santa Cruz Mts and Central Coast
- Moderate HeatRisk in the interior Friday and Saturday, temperatures from the mid 90s to near 100
- Localized Major HeatRisk in the North Bay Interior Mountains and East Bay Hills on Friday
- . Elevated fire weather concerns inland, very dry with poor recovery above 2,000 feet

### CHANGES FROM PREVIOUS BRIEFING

- · Fifth Issuance
- · Heat Advisory issued for the interior
- · Santa Cruz Mts added to Heat Advisory
- · No other major changes to forecast

### WEATHER RISK OUTLOOK

Risk levels incorporate potential impacts from weather hazards and likelihood of occurrence for a reasonable worse case scenario.

	Wed 5/28	Thu 5/29	Fri 5/30	Sat 5/31	Sun 6/1	Mon 6/2	Tue 6/3
North Bay Santa Rosa, Napa, San Rafael			Moderate HeatRisk/Low RH Interior	Moderate HeatRisk/Low RH Interior			
San Francisco Downtown SF				i			
SF Peninsula Half Moon Bay, San Mateo, SFO							
East Bay Oakland, Concord, Livermore			Moderate HeatRisk/Low RH Interior	Moderate HeatRisk/Low RH Interior			
South Bay San Jose, Gilroy			Moderate HeatRisk	Moderate Heatfüsk			
Santa Cruz County Santa Cruz, Boulder Creek, Corralitos			Moderate HeatRisk Santa Cruz Mts				
Monterey & San Benito County			Moderate HeatRisk/Low RH Interior	Moderate HeatRisk/Low RH Interior			

Risk Levels Little to None Minor Moderate









@NWSBayArea

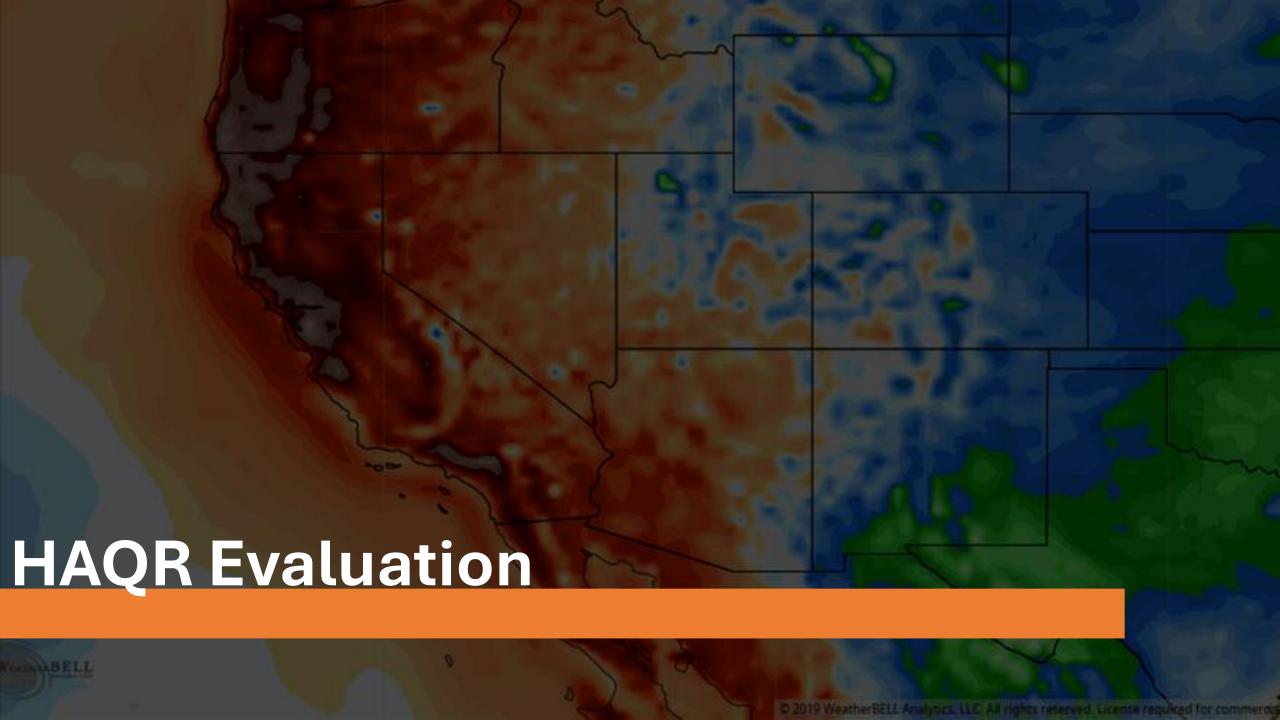


### Other web resources

weather.gov/bayarea
weather.gov/forecastpoints
www.wpc.ncep.noaa.gov/heatrisk/
www.weather.gov/safety/heat-hazards
cpc.ncep.noaa.gov
gacc.nifc.gov/oncc/
svs.gsfc.nasa.gov/5190



Presented by: Warning Coordination Meteorologist - brian.garcia@noaa.gov





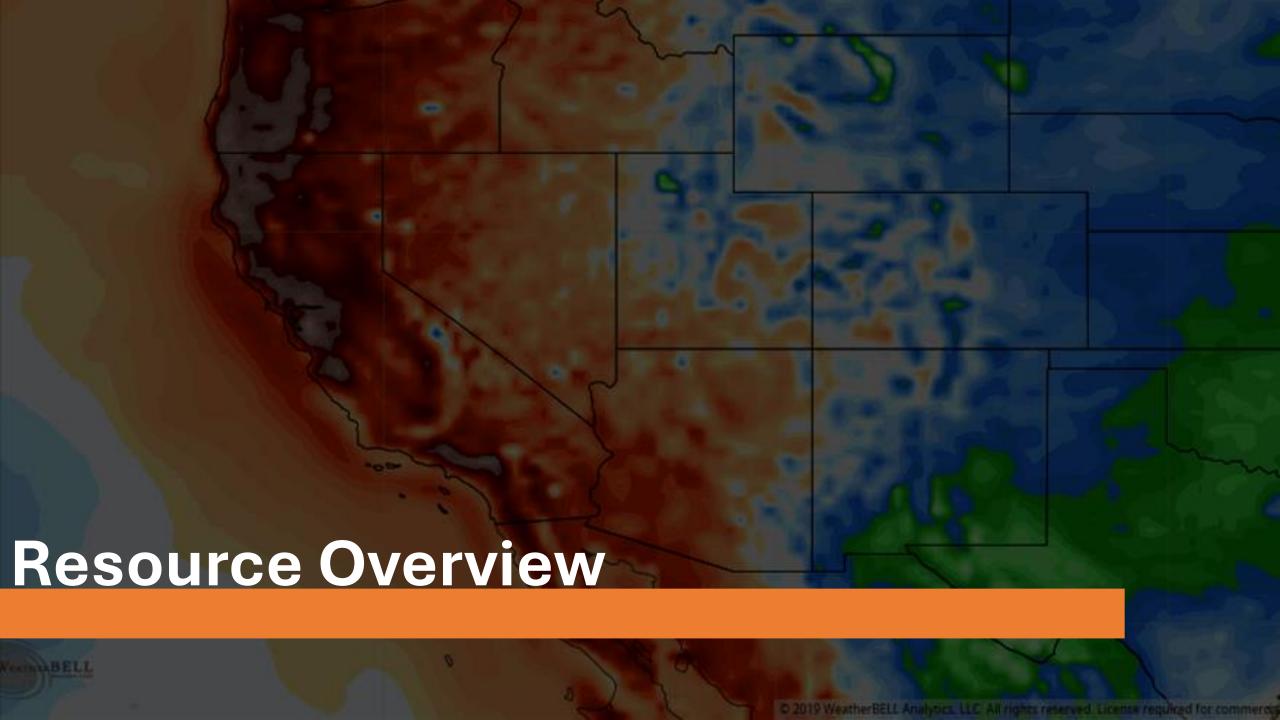
### 2025 HAQR Evalution

We Want to Hear From You!!!

### **Purpose**

Periodically, we aim to evaluate and enhance the Heat and Air Quality Resilience Program by understanding your experience, needs, and recommendations. Your feedback will help shape future sessions and improve overall participant engagement and resource sharing.

Quick Survey to gauge participant experiences





### **Smart Surfaces Study: SFO Airport**

**Full Report** 

**Academic Paper** 

This study supports the SFOs mission of improving the outdoor work environment through the implementation of a smart surface design strategy. By performing a comprehensive analysis of the local climate and surface characteristics of SFO, this work evaluates three scenarios for roof and pavement albedo improvements and tracks the positive effects this has on workplace health as well as SFO's economic operations.

### **Highlights**

- 50% of SFO's surface area is covered in asphalt which retains 95% of incoming sunlight. SFO urban heat island is 2.5- 4°F higher than surrounding area
- High albedo improvement scenario could lower peak summer temperatures by 3.7°F across the campus
- Cool Roof installations to 100% of non-cool roofs would yield a NPV of over \$14 million over 30 years (C/B Ratio: 7.7)
- Cool pavement installations to 75% of existing asphalt would yield an NPV of about \$7 million over 30 years



### Lessons from 2021 Pacific Northwest heat Dome

**Academic Paper** 

This paper distills lessons from 109 listening session participants in Washington states' healthcare sector on the impacts from the 2021 Pacific Northwest Heat dome event and what interventions were effective. It lays out key barriers that are applicable across the broad spectrum of healthcare sector planners, practitioners, and community partners at the intersection of health and emergency preparedness and response.

### **Highlights**

- This event was unprecedented. The heat dome would have been a 1-in-1000-year event between 1850 and 1900, but with just 2°C of global warming—predicted by mid-century—an event of similar magnitude could occur every 5–15 years.
- Barriers to an effective response included limited staff capacity, difficulties obtaining resources, and inadequate interorganizational coordination
- Facilitators included advanced planning, indoor temperature control capabilities (even for small areas), addressing staff needs, strong external partnerships
- <u>"Interorganizational relationships must be formalized and made resilient to changes in staff or</u> leadership"



### **OSHA NIOSH Heat Safety Tool**

### **App Link**

This tool, developed by OSHA and NIOSH, can be used to plan outdoor work activities and ensure that managers/workers are tailoring their operations for the level of heat risk expected that day. The application also includes a variety of useful recommendations to ensure occupational health and safety

### **Highlights**

- Visual indicator of current heat index in your area
- Recommendations specific to the current risk levels
- Hourly forecasts of heat index values, risk levels, and recommendations



