

CALIFORNIA FIRE WEATHER ANNUAL OPERATING PLAN 2026

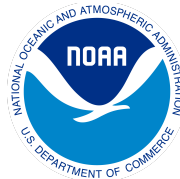


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CALIFORNIA ANNUAL OPERATING PLAN 2026

INTRODUCTION

The California Fire Weather Annual Operating Plan (AOP) formalizes an agreement between two key entities:

1. **The California Wildfire Coordinating Group (CWCG):** This group is composed of State, local, and Federal land management agencies responsible for protecting life, property, and resources in California from wildfire.
2. **The National Weather Service (NWS):** A bureau within the National Oceanic and Atmospheric Administration (NOAA), U.S. Department of Commerce, tasked with providing weather forecasts nationwide to protect life and property.

The AOP specifically outlines the procedures and policies for delivering meteorological services to the California fire management community.

A central goal for the NWS, CWCG, and Predictive Service Units (PSU) is to maximize firefighter and public safety. This is achieved through coordinated efforts in all phases of the fire weather forecasts and warning program, ensuring the consistent delivery of services and resolving any potential issues before products reach fire agency customers.

California's fire protection system is highly integrated, relying on statewide agreements for Federal, State, and local agencies to exchange responsibility for protecting specific lands. Consequently, non-federal wildland fire management agencies protecting federal lands also require NWS fire weather forecasts and warnings. Therefore, it is critical that all fire protection agencies receive coordinated fire weather and fire danger services.

The roles and responsibilities of both the NWS and the interagency fire management community are further detailed in the following reference documents:

- A. Roles and responsibilities of the NWS and the interagency fire management community are set forth in the following reference documents:
 - [California Wildland Fire Coordinating Group documents](#)
 - [National Weather Service NWSI 10-401: Fire Weather Services](#)
 - [2025 National Mobilization Guide](#)
 - [California Mobilization Guide – Chapter 60; focus on Predictive Services](#)
 - [NWCG Glossary](#)
- B. Participating agencies include the following:
 - Federal, State, and local fire agencies comprising the California Wildfire Coordinating Group (CWCG) and Predictive Services
 - The NOAA/National Weather Service offices serving California
 - Representatives from independent city/county fire agencies

Changes of Note for 2026

- [New Public and Fireweather Zones](#) for STO go live April 16, 2026
- [New Fireweather Zones](#) for EKA go live April 16, 2026
- Removed NFDRS section and RAWs station list. Replaced with FEMS link

NWS Fire Weather Planning Forecasts

NWS Fire Weather Planning Forecasts offer general information for daily planning and preparedness. These forecasts are organized into zones, which are areas with similar meteorological and topographical characteristics. **Crucially, these planning forecasts are not to be used as spot forecasts due to their generalized nature.** The table below indicates the issuance times for these planning forecasts for each NWS office. Note that the specific start and end dates for the high season forecast issuances may change annually, based on current weather and fuel conditions.

Weather Forecast Office	High Season Narrative Forecasts	Morning Forecast NLT	Afternoon Forecast NLT	Low Season Forecast NLT	NWS Fire Zones
Extreme Northern CA - Medford (MFR)	Year-Round	7:30 AM	3:30 PM	Daily 7:30 AM	280-282, 284, 285
Northwest CA - Eureka (EKA)	Year-Round	12:00 AM	12:00 PM	Daily 12:00 AM	401-421
Northern Central CA - Sacramento (STO)	Year-Round	3:30 AM	3:30 PM	Daily 3:30 PM	121-164
Extreme Eastern CA - Reno (REV)	Usually May 15 to November 1 #	7:30 AM	3:30 PM	Daily 7:00 AM	270-272, 274, 278, 421
Bay Area / Central Coast CA - Monterey (MTR)	Usually June 1 to November 1 #	7:00 AM	3:30 PM	Daily 3:30 PM	006, 502-515, 516-518, 528-530
Interior Central CA - Hanford (HNX)	Year-Round	7:00 AM	3:30 PM	Daily 3:30 PM	298-299, 579, 580, 590-597
Southwest CA - LA/Oxnard (LOX)	Usually May 15 to December 1 #	9:30 AM	3:30 PM	M-F 3:30 PM	238, 288, 340-353, 354-358, 362, 366-370, 372-383, 548
Southwest CA - San Diego (SGX)	Year-Round	6:00 AM	2:30 PM	Daily 6:00 AM	552, 554, 243, 248, 250, 255-258, 260-262, 265
Southeast CA - Phoenix (PSR)	Year-Round	7:30 AM	3:30 PM	Daily 7:30 AM	230-232
Southeast CA - Las Vegas (VEF)	Usually mid-April to December 1 #	7:00 AM	3:30 PM	Daily 7:00 AM	226-229

Customer coordinated depending on weather/fuels: two weeks notice preferred for NWS WFOs

Fire Weather Planning Forecasts: Content, Format, and Access

Forecast Content and Standard Format:

Forecasts adhere to the national standard narrative format, as detailed in [NWS Directive NWSI 10-401](#).

- **Timing:** Morning forecasts cover the next 36 hours, and afternoon forecasts cover the next 48 hours. Both include general extended outlooks for at least five days.
- **Example:** See [Appendix C](#) for an example of the product.

Forecast Updates and Corrections:

Planning Forecasts are updated or corrected when any of the following occur:

- A Fire Weather Watch or a Red Flag Warning is issued.
- The current forecast does not adequately describe significant expected weather.
- Typographical or format errors prevent proper interpretation.

Access to Forecasts and Information:

- **California Fire Weather Web Page:** The interagency California fire weather web page (<https://www.weather.gov/wrh/CAFW>) acts as a portal, providing links to fire weather forecasts, SPOT forecasts, current conditions, and more.
- **NWS National Fire Weather Page:** All NWS fire weather information is available on the national page at www.weather.gov/fire.
- **WIMS:** Forecasts are also accessible via WIMS.

Emergency Communication Center Dispatch Area (ECCDA) Forecast Summaries:

These simplified summaries are available on the web site and are designed for fire agency radio broadcasts, providing the most essential daily weather information.

- **Headlines:** Red Flag Warning or Fire Weather Watch headlines are linked to the actual watch or warning product.
- **Navigation:** All forecast segments within an ECCDA are listed at the beginning and can be clicked to jump immediately to the relevant segment.

Spot Forecasts

The National Spot page can be found here: <https://spot.weather.gov/>

Spot Forecasts are detailed, site-specific forecasts provided upon request for various incidents, including wildfires, HAZMAT events, prescribed burns, and search and rescue operations. These forecasts are available at any time to federal, state, or municipal agencies, as outlined in [NWSI 10-401](#). The National Spot page is located at <https://spot.weather.gov/>.

Requesting a Spot Forecast Standard Requests

Spot forecasts are typically requested and received through the internet via the national NWS Fire Weather

web page, the national spot page, or individual NWS forecast office fire weather web pages. If internet access is unavailable, requests may be made by phone.

When submitting a request, the agency must provide the following details:

- Location, topography, and elevation(s)
- Fuel type(s) and size of the incident
- Ignition time (if applicable)
- Contact name(s) and telephone number(s) for the responsible land management personnel

The NWS also requires high-quality, representative weather observations from or near the location, along with go/no-go weather elements. This information is crucial for ensuring the accuracy of the forecast request and the data communicated to decision-makers.

Initial Attack Wildfire Briefings

For new wildfires in the initial attack phase that pose an immediate threat to firefighters and/or the public (e.g., an urban interface fire with critical fuels and weather), the NWS may be contacted directly for a rapid verbal briefing before the formal spot forecast is issued, provided time and communications allows.

Content and Updates

The national standard content and format for NWS spot forecasts are detailed in [NWS Directive 10-401](#).

Spot forecasts are considered a one-time request and are not updated unless specific procedures are followed.

Scheduled Updates

- **For Wildfires and Other High Impact Incidents:** Requests for scheduled spot forecast updates, such as those needed for an upcoming shift briefing, should be submitted to the NWS at least two hours in advance of the required time.
- **For Prescribed Burns and Non-Urgent Projects:** Scheduled updated requests should be made with as much lead time as possible. For long-term projects, providing the NWS with a spot forecast update schedule will help ensure the best service.

Unscheduled Updates

Updates for prescribed burn spots, when requested unscheduled (either based on site weather or if the original request included a phrase like "Request Priority Monitoring" in the remarks), will be issued as quickly as possible, and no later than two hours after the need for an update is recognized.

Corrections

Like all NWS products, spot forecasts are corrected if a typographical or format error prevents accurate interpretation. Corrected forecasts are delivered to agencies using the same method as the original forecast.

Feedback

Requesting agencies should always provide fire-line weather observations back to the NWS to validate the accuracy of the weather forecast.

Smoke Trajectory Forecasts

The automated HYSPLIT trajectory output is a valuable tool for smoke trajectory forecasting, available with every spot forecast request. This model provides guidance on the trajectory of air parcels at specified heights above ground level (AGL).

To Receive Automated HYSPLIT Trajectory Output:

- On the spot request form, simply check "YES" for the "NOAA Hysplit Model" option.
- Once the run is complete, you will receive a separate email from the spot forecast. This email contains a table of values, a GIF HYSPLIT trajectory map, and a KMZ trajectory map for use in Google Earth.

Important Note on Automated HYSPLIT Trajectory Output:

This is automated output:

- Does not account for information on burn size or fuels.
- Generates air parcel trajectory forecasts for 500, 1500, and 3000 meters AGL.
- Does not incorporate any fire plume height data.

Requesting HYSPLIT Dispersion Forecasts:

- For a HYSPLIT **plume dispersion model run**, you **must contact the associated NWS office** to provide the necessary request information.
- A NWS forecaster will then run the model and share the results (typically via a link that expires in 48 hours).
- This is a different product from the automated trajectory output obtained by selecting "YES" on the spot request form.

For more details on HYSPLIT and interpreting the output, please reach out to your local NWS fire weather program leader.

Red Flag Program

Fire Weather Watches and Red Flag Warnings

Purpose: These alerts are issued when fuel and weather conditions align to support extreme fire danger or behavior. Weather criteria vary by NWS office. Please see Appendix B - NWS Red Flag Warning Criteria

Fire Weather Watch

- **Goal:** To notify agencies of the *potential* for a Red Flag event.
- **Timing:** Issued for the 18–96 hour timeframe.
- **Confidence:** Requires at least 50% confidence.
- **Scope:** May cover all or selected portions of one or more fire weather zones.

Red Flag Warning

- **Goal:** To inform agencies of impending or current Red Flag conditions.
- **Timing:** Issued when there is high confidence criteria will be met within 48 hours or less, or if criteria are already being met. Longer lead times are acceptable if confidence is very high or the fire danger is critical.
- **Scope:** May cover all or selected portions of one or more fire weather zones.

Notification and Availability:

- Watch and/or Warning headlines are integrated into all affected forecasts.
- All NWS fire weather webpages prominently feature any watches or warnings.
- The issuance, update, or cancellation of these alerts uses a bullet-formatted text message (RFW).
- **Complete format and content details** are available at:
https://www.weather.gov/media/directives/010_pdfs/pd01004001curr.pdf
- NWS offices typically contact affected dispatch offices, agencies, and their respective GACCs when issuing or updating alerts.
- Alerts are accessible online via the California Fire Weather web page, the issuing NWS office website(s), the NWS National Fire Weather Page, www.weather.gov/fire, and WIMS.

Forecast Updates:

- If a Warning or Watch necessitates a forecast update, the NWS office must verbally notify the Redding and Riverside PSUs as soon as possible.
- During PSU non-duty hours, the Fire Weather Duty Officer can be reached via the 24-hour phone line listed in the contact section of this document. The NWS should leave a voicemail if unable to make direct contact.

Issuance Criteria (General):

- Alerts are normally issued after an accurate assessment of fuel conditions (see “Qualifying Fuels Information”) and after conferring with one or more affected agencies, including the GACC Predictive Services Units.

Red Flag Warning Particularly Dangerous Situation (PDS)

- **Option:** NWS Weather Forecast Offices in California may use the “Particularly Dangerous Situation” (PDS) phrase within the **headline and body** of an existing Red Flag Warning product. **This is not a new product type.**
- **Objective:** To emphasize exceptional fire weather conditions (combined meteorological and fuels) that are rare or highly impactful to the public and firefighting community.
- **Coordination:** Inclusion of PDS language should be coordinated between adjacent NWS offices prior to issuance and messaging.
- **Alignment:** Coordination with SPC is encouraged so that PDS RFW and SPC’s “Extreme Critical” description align when feasible.
- **Example:** See [Appendix C](#) for an example product.

Watch/Warning Fuel Requirements

Live and/or dead fuels must be sufficiently receptive (dry) to the extent that fire starts could pose an initial attack problem for fire agencies in the impacted Fire Weather Zone(s).

Fuel dryness and receptiveness can be determined using the following sources:

1. The Fuel Dryness Level as indicated in the 7-Day Significant Fire Potential Matrix published by the associated GACC Predictive Services Unit.
2. Consultation with a Local Fuels Specialist to confirm that fuels are dry enough in the area(s) of concern to constitute an initial attack problem.
3. Confirmation of High to Extreme Fire Danger as determined by the local Fire Agency.

Data from the Field Sample Database within the Fire Environment Mapping System (FEMS), located at: <https://fems.fs2c.usda.gov/ui>

Qualifying Fuels Information

Fuel Dryness and the 7-Day Significant Fire Potential Matrix

The Fuel Dryness Level, produced by GACC Predictive Services, is a core component of the 7-Day Significant Fire Potential Matrix. Typically, the dryness level must be in the **Yellow (Dry)** or **Brown (Very Dry)** category, or carry a **High Risk** rating, for the affected Fire Weather Zones to warrant a Red Flag Warning (RFW). A **Green (Moist)** rating indicates fuels are currently too wet for imminent large fire concerns.

NWS forecasters should verify if these broad dryness levels apply to specific zones. If a discrepancy is suspected, forecasters should consult a local Fuels Specialist to determine if fuels are dry enough to pose an initial attack concern.

High Risk Designations A “High Risk” forecast (Orange or Red) indicates weather and fuel conditions conducive to a significantly higher-than-normal chance ($\geq 20\%$) of new large fires or significant growth on existing fires. While RFW issuances may not always align with every High Risk day, forecasters should prioritize RFW consideration during these periods.

- **Non-Desert Areas:** The “fuels switch” is considered **ON** when conditions are Yellow (Dry), Brown (Very Dry), or High Risk. RFWs are generally not recommended when a PSA is designated as Green (Moist).
- **Desert Areas (Excluding Lower Colorado River Valley):** Due to light fuel loading and discontinuous fuels, low fuel moisture in deserts does not always equate to large fire potential.
 - An RFW **may** be issued for desert PSAs designated as **Brown (Very Dry)**.
 - An RFW is **not recommended** for desert PSAs designated as **Yellow (Dry)**.
- **Fuels and Fire Behavior Advisories:** If shifting spatial trends or fuel loading creates a heightened risk (especially in deserts during winter/spring), GACC Predictive Services may issue a [Fuels and Fire Behavior Advisory](#) to provide NWS offices with formal notification.

Specialized NWS Decision Support Services

NWS offices in California offer specialized support to the fire community through various communication channels:

- **Briefings & Webinars:** Scheduled and event-driven sessions covering critical weather trends.
- **Direct Notifications:** Targeted emails and conference calls for rapid coordination.
- **Operational Collaboration:** Opportunities for fire agencies to discuss local fuel conditions directly with forecasters.
- **Satellite Monitoring:** Use of GOES imagery for rapid hotspot discovery and partner notification (refer to [Appendix D](#)).

To access these services or join distribution lists, contact the Fire Weather Program Manager for the relevant NWS office.

IMET Incident Response

Detailed procedures for requesting, dispatching, and mobilizing IMETs—including Name Requests and equipment standards—adhere to the protocols established in the [National Mobilization Guide](#) and the California Mobilization Guide. Please refer to these documents for full resource ordering and administrative procedures.

The following direction is clarification for the Geographic Area Coordination Centers (GACC) in California for NWS and Partner Agency IMETS:

When an IMET is requested for an incident, the request will be placed to the GACC. If the Northern or Southern California GACCs are unable to fulfill the request with a local IMET, then they will go through the regular ordering process where GACC will notify the National Fire Weather Operations Coordinator (NFWOC) at NIFC at 1-877-323-IMET (4638) to secure a National Weather Service IMET from another region.

GACC Dispatch Alignment

The following table identifies which GACC (Redding or Riverside) manages dispatch services for specific WFOs:

North Ops (Redding)	South Ops (Riverside)
Eureka (EKA)	Hanford (HNX)
Sacramento (STO)	Los Angeles/Oxnard (LOX)
	San Diego (SGX)
	San Francisco/Monterey (MTR)

NOTE: IMET personnel from NWS Offices Medford WFO, Reno WFO, Phoenix WFO and Las Vegas WFO shall be requested through NICC to their respective GACC using a Name Request.

The procedures for requesting IMETs will follow the guidelines outlined in the National Interagency Agreement, Administrative Procedures section of the current National Mobilization Guide, and Personnel section of the current California Mobilization Guide.

The following information will be provided to the requested IMET:

- Name of fire
- Location of fire
- Name of Incident Commander, Plans Chief, and Fire Behavior Analyst, if available.
- Directions to Incident Command Post where the IMET is to report.
- Resource Order number for IMET

Additionally, the user agency is responsible for providing adequate shelter to allow the equipment and fire weather meteorologist to function efficiently. This would include a location that is free of excessive dust, heat and moisture, protection from wind and other elements, table, and chair. Transportation and shelter arrangements should be made at the time of request; 120 volt AC power is desirable. IMETs may be asked to email their incident matrix to partner agencies.

The following is a list of IMETs, and All-hazard Meteorological Response System (AMRS) in the Northern and Southern California Area:

Northern and Southern California Area IMETs

(T) designates a trainee

NWS IMETs:

Weather Forecast Office	Name	Agency	IROC Unit ID
Eureka, CA	James White	NWS	CA-EKAW
Hanford, CA	None	NWS	None
Las Vegas, NV	Andy Gorelow	NWS	NV-VEFW
Medford, OR	Thomas Wright Brian Nieuwenhuis Joseph Guerrero (T)	NWS	OR-MFRW
Monterey, CA	Ryan Walbrun Matt Mehle Dylan Flynn (T)	NWS	CA-MTRW
Oxnard, CA	Rich Thompson Kristan Lund (T) Rose Schoenfeld (T)	NWS	CA-LOXW
Phoenix, AZ	None	NWS	None
Reno, NV	Tony Fuentes Colin McKellar	NWS	NV-REWW
Sacramento, CA	Eric Kurth Katrina Hand	NWS	CA-STOW
San Diego, CA	David Munyan (T)	NWS	CA-SGXW

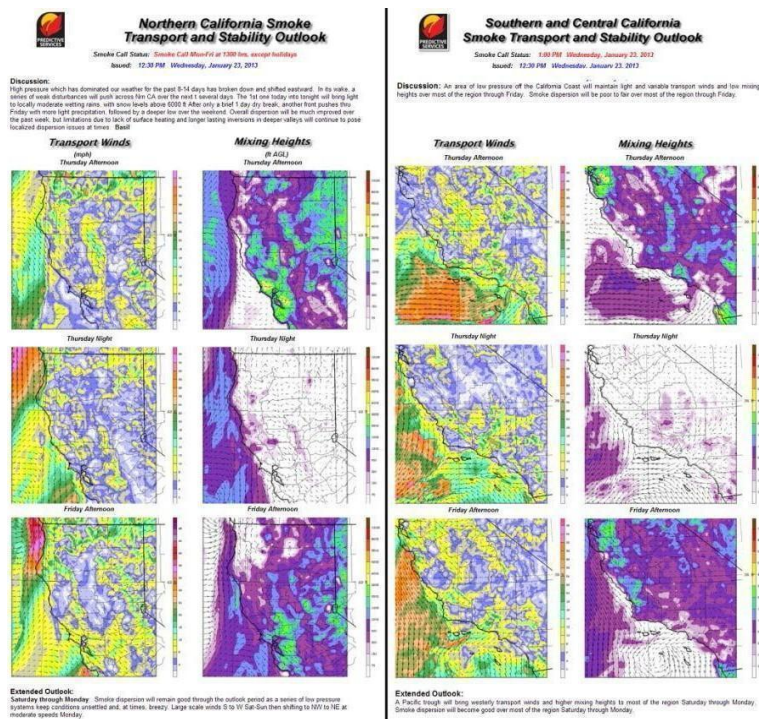
Partner Agency IMETs:

Location	Name	Agency	IROC Unit ID
North Ops	Brent Wachter	USFS	CA-R05
North Ops	Julia Ruthford	USFS	CA-R05
North Ops	Brett Lutz	BLM	CA-CSO
Orange County	Pete Curran	BFA	CA-BFA
South Ops	Jonathan O'Brien	USFS	CA-R05

Smoke Management

The [Smoke Transport and Stability Product](#) provides burners, and all other interested parties with a high resolution graphical display of *Transport Winds* (horizontal dispersion) and *Mixing Heights* (vertical dispersion), as well as an overall narrative describing general weather patterns, with an emphasis on smoke dispersion. An extended forecast describes expected large scale weather conditions for the 3-5 day period, again with an emphasis on smoke dispersion. At the top in red font is the Smoke Call Status, listing the next **Daily Smoke Call**. This is a conference call hosted by Predictive Services and the California Air Resource Board, along with various participants on the federal, state, and local level interested in discussing burning conditions and air quality based burn allowances across the state.

Issuance Schedule: Issued 1230 pm PT, daily during fire season and M-F during low season.



Product Links:

Northern California Smoke Transport and Stability Outlook:

http://gacc.nifc.gov/oncc/predictive/weather/daily_smoke/Smoke.html

http://gacc.nifc.gov/oncc/predictive/weather/daily_smoke/Smoke.pdf

Southern California Smoke Transport and Stability Outlook:

http://gacc.nifc.gov/oscc/predictive/weather/daily_smoke/Smoke.pdf

US Forest Service AirFire: <https://portal.airfire.org/>

When requested, the National Weather Service provides mixing height, transport wind, and HYSPLIT output on spot forecasts. See the "[SPOT Forecast](#)" section to determine how to request a spot forecast and HYSPLIT smoke trajectory.

Air Resource Advisor (ARA)

Air Resource Advisor (ARA) Ordering and Coordination

ARA utilization depends on factors like incident conditions, weather, population risk, and air quality designation. Since wildfire smoke often crosses jurisdictions, coordinating ARA needs requires collaboration among incident command, stakeholders, state/tribal agencies, and air quality administrators. ARA ordering details are in the [NIFC Mobilization Guide, page 28](#).

Ordering Process:

- **Initiation:** Incident/Agency Administrators typically initiate ARA requests, supported by the Regional Air Program and coordinated with the WO FAM Smoke Coordinator.
- **Prioritization:** The WO FAM Smoke Coordinator and Regional Air Program representative coordinate regional prioritization and national availability before formal ordering.
- **Submission:** The WO FAM Smoke Coordinator submits the approved request as a "name request" via standard overhead channels (e.g., IROC).
- **Duty Location:** The ARA's duty location (on-site or GACC) varies based on incident needs.

Air Quality Monitoring and Coordination:

- **Equipment:** Air Quality Monitoring equipment is ordered through the Regional Air Program representative.
- **Coordination Lead:** The Regional Air Program representative leads ARA coordination with key partners, including the California Air Resources Board Office of Emergency Services, Tribes, Air Quality Management Districts, and the Forest Service national cache.

Facilitation: GACC Duty Meteorologists and/or the Regional Air Program Leader can assist if dispatch issues arise.

Location	Name	Agency	Unit ID
North Ops	Brent Wachter Brett Lutz (T)	USFS	CA-R05
South Ops	Kristen Allison	USFS	CA-R05

7-Day Significant Fire Potential Product

The 7-Day Significant Fire Potential product is a forecast of potential significant fire activity across the Geographic Area through the next seven days based on expected weather and fuel conditions and historical fire occurrence in similar conditions. A “Significant” or “Large” Fire” is defined by size, generally ranging from 50-500 acres, depending on the Predictive Service Area. The product contains a table displaying fuel dryness and, when appropriate, significant weather triggers. The product also contains a narrative section consisting of a weather synopsis, a fuels and fire potential discussion, and a resource capability summary as defined in the California Mobilization Guide.

Fuel Conditions or Fuel Dryness

Fuel Dryness is a function of the Energy Release Component (ERC) combined with either the ten hour (F10) or the one hundred hour (F100) dead fuel moisture. These indices have been correlated to historical fire activity to form three categories of Fuel Dryness, displayed by the following colors in the product:

Green (Moist Fuels) – Little to no risk of large fires.

Yellow (Dry Fuels) – Low risk of large fires when a Significant Weather Trigger is absent.

Brown (Very Dry Fuels) – Moderate risk of large fires when a Significant Weather Trigger is absent.

Significant Weather Triggers

Significant Weather Triggers are weather events that are expected to either provide moderate to heavy initial attack or provide favorable conditions for significant fire growth on new or existing fires when combined with "Dry" or "Very Dry" fuel conditions. The following is a list of Significant Weather Triggers and corresponding symbology used in the product.

- Lightning (Red “L”)
- Windy and low RH (Orange “W”)
- Critical Burn Environment (Orange “B”)

High Risk Day

High Risk Days are rare occasions when conditions exist that historically have yielded a significantly higher than normal chance (20% or higher) for a new large fire or for significant growth to occur on

existing fires.

There are two types of conditions that would lead to the issuance of a High Risk Day: 1) Ignition Trigger or, 2) A Critical Burn Environment.

(Red) - Ignition Trigger. Occurs when a "Dry" or "Very Dry" Fuel Dryness category coexists with lightning.

(Orange) - Critical Burn Environment. Occurs when a "Dry" or "Very Dry" Fuel Dryness category coexists with any of the Significant Weather Triggers other than lightning. This encompasses both the "W" (Windy and low RH) trigger and the "B" (Critical Burn Environment) trigger.

This product is issued by 0800 local time daily during fire season. Predictive Services will notify the appropriate NWS office(s) about the issuance or potential issuance of any High Risk areas via chat, phone, or conference call. While High Risk areas may not always be coincident with NWS RFW areas and vice versa, RFW issuances from the NWS are communicated to GACC PS Units, and PS Units strongly consider High Risk issuance in areas where the NWS has (a) RFW(s).

Webpage URL:

North: <https://fsapps.nwcg.gov/psp/npsg/forecast#/outlooks?state=map&gacclid=4>

South: <https://fsapps.nwcg.gov/psp/npsg/forecast#/outlooks?state=map&gacclid=8>

Monthly/Seasonal Outlook

This product combines all available meteorological, climate, fuels, and fire danger information to produce an outlook of large fire potential for the next 4 months. Current and future trends of weather, fuel, and drought conditions are discussed to give context to the large fire potential outlook. When appropriate, areas of large fire potential and resource utilization, relative to normal will be overlaid on maps showing the Geographical Area. This product is issued year round, prepared a few days prior to the start of the new month and posted on the website by the first of each month.

North: http://gacc.nifc.gov/oncc/predictive/outlooks/Outlook_NOps.pdf

South: <http://gacc.nifc.gov/oscc/predictive/outlooks/myfiles/assessment.pdf>

Predictive Services Podcast

Predictive Services produces a 3-6 minute audio/visual briefing describing weather, fuels, and fire potential information for the Geographic Area for the next 5 to 7 days. The audio/visual briefing is generally available by 9 am from South Ops and 9:30 am from North Ops.

Issuance Schedule:

North Ops: Monday and Thursday during off season; daily during fire season

South Ops: M-W-F in winter, daily during fire season

Links:

North Ops: https://gacc.nifc.gov/oncc/predictive/weather/brief_files/brief.mp4

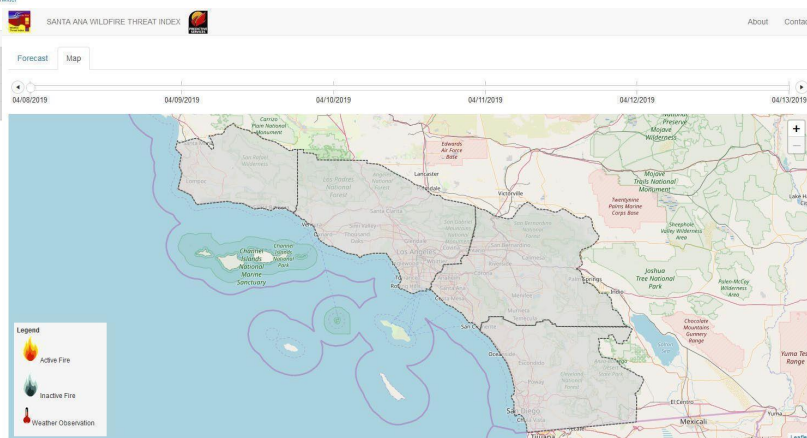
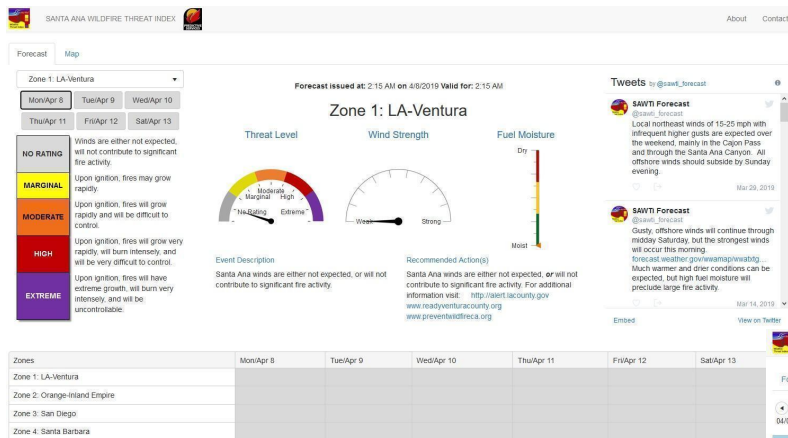
South Ops: <https://gacc.nifc.gov/oscc/predictive/weather/myfiles/Webcast.html>

Santa Ana Wildfire Threat Index (South Ops Only)

The Santa Ana Wildfire Threat Index (SAWTI) categorizes Santa Ana winds based on anticipated fire potential. The index uses a comprehensive, state-of-the-art predictive model that includes dead fuel moisture, live fuel moisture, and the greenness of annual grasses to create a detailed daily assessment of the fuel conditions across Southern California. This information is coupled with calibrated weather model output (comprised of wind speed and atmospheric moisture), to generate a forecast of Large Fire Potential. The Large Fire Potential output is then compared to climatological data and historical fire occurrence to establish the index rating, which has **four categories** ranging from Marginal to Extreme

Issuance Time: By 7:30 am.

Location: <https://fsapps.nwcg.gov/psp/sawti>. Also on X @sawti_forecast



Joint Responsibilities

California Fire Weather Program Overview and Training

The National Weather Service (NWS) and the California Wildland Fire Coordination Group Operations Committee have established a joint Fire Weather Program Assessment Team (FWPAT). The FWPAT is chartered to evaluate California's fire weather services, recommend program improvements or changes, and ensure effective coordination of fire weather information among agencies.

Training Support

Both NWS and Predictive Services (PS) offer meteorological training.

- **NWS Training:** NWS forecast offices are primarily responsible for local training courses within their service areas. Requests for NWS training should be directed to the office's Fire Weather focal point or the Meteorologist-In-Charge (MIC). If the NWS office cannot provide an instructor, they will be responsible for securing one. The requesting agency must cover any costs incurred by NWS for providing training assistance (excluding NWS staff salary costs for a normal non-holiday weekday).
- **Predictive Services (PS) Training:** PS primarily handles regional and national-level courses. Requests for PS training should be directed to the Training Coordinator or PS program manager. Costs for PS instructors are covered by their annual budget and do not require reimbursement.

General Training Requirements

All requests for training must provide sufficient advance notice, ideally six weeks or more, to allow for proper scheduling and preparation.

Below is a table outlining the availability of the instructors based on qualifications for 2026:

Name of Office	Instructors Qualified To Teach S-190, S-290, & RT-130	Other Classes That Have at least 1 Instructor Qualified
Redding Predictive Services	Brent Wachter Julia Ruthford Brett Lutz	S-390, S-490, S-491, S-144, ECCO, RX-300, S-244, S-495, S-590
Riverside Predictive Services	Jonathan O'Brien Kristen Stewart Matthew Shameson	S-390, S-490
Eureka	James White	S-390
Hanford	Vacant	None
Las Vegas	Andy Gorelow Dan Berc	S-390
Medford	Tom Wright	S-390
Monterey	Ryan Walbrun Matt Mehle	S-390, S-490, S-590
Oxnard	Dave Gomberg Rich Thompson Carol Smith Kristen Lund Rose Schoenfeld	S-390, S-490 S-290 only S-290 only
Phoenix	Matt Salerno	S-390
Reno	Tony Fuentes Colin McKellar	S-390, S-490, RX-410
Sacramento	Eric Kurth Katrina Hand	S-390
San Diego	Stefanie Sullivan David Munyan	S-390
Orange County	Pete Curran - CA State Fire Instructor	S-290, S-390

Coordination Conference Calls

During high fire season, GACC Predictive Service Units, NWS Weather Forecast Offices (WFOs), and deployed IMETs coordinate via conference calls. WFOs must monitor the daily status of these calls, which continue until Predictive Services deems them unnecessary. WFOs should contact their PS unit for call details.

PS Unit	Notification page
North Ops	https://gacc.nifc.gov/oncc/predictive/weather/conf_call.html
South Ops	https://gacc.nifc.gov/oscc/predictive/weather/daily_weather/conf_call.txt

NWSChat on Slack is also a coordination tool. Dispatched IMETs can contact the GACC administrators, North Ops (redding.fwx@fire.ca.gov) and South Ops (sm.fs.osc_ps@usda.gov), to be added to private coordination channels upon deployment.

Wildfire Forecast and Threat Intelligence Integration Center (WFTIIC)

- A California-led initiative established by Senate Bill 209 (2019-2020) and operational since 2022.
- Serves as an integrated hub for wildfire forecasting, weather data, threat intelligence, decision support, and information dissemination.
- Jointly managed by the California Governor's Office of Emergency Services (Cal OES) and the California Department of Forestry and Fire Protection (CAL FIRE).
- Aggregates data from federal/state agencies, utilities, and academia.
- Its products complement those from the Predictive Services Units at each California Geographic Area Coordination Center (GACC).
- The National Weather Service (NWS) is a participating federal agency with a dedicated liaison embedded at the WFTIIC offices at Cal OES Headquarters in Mather, CA.
- Website: <https://www.wftiic.ca.gov/>

Contact Information

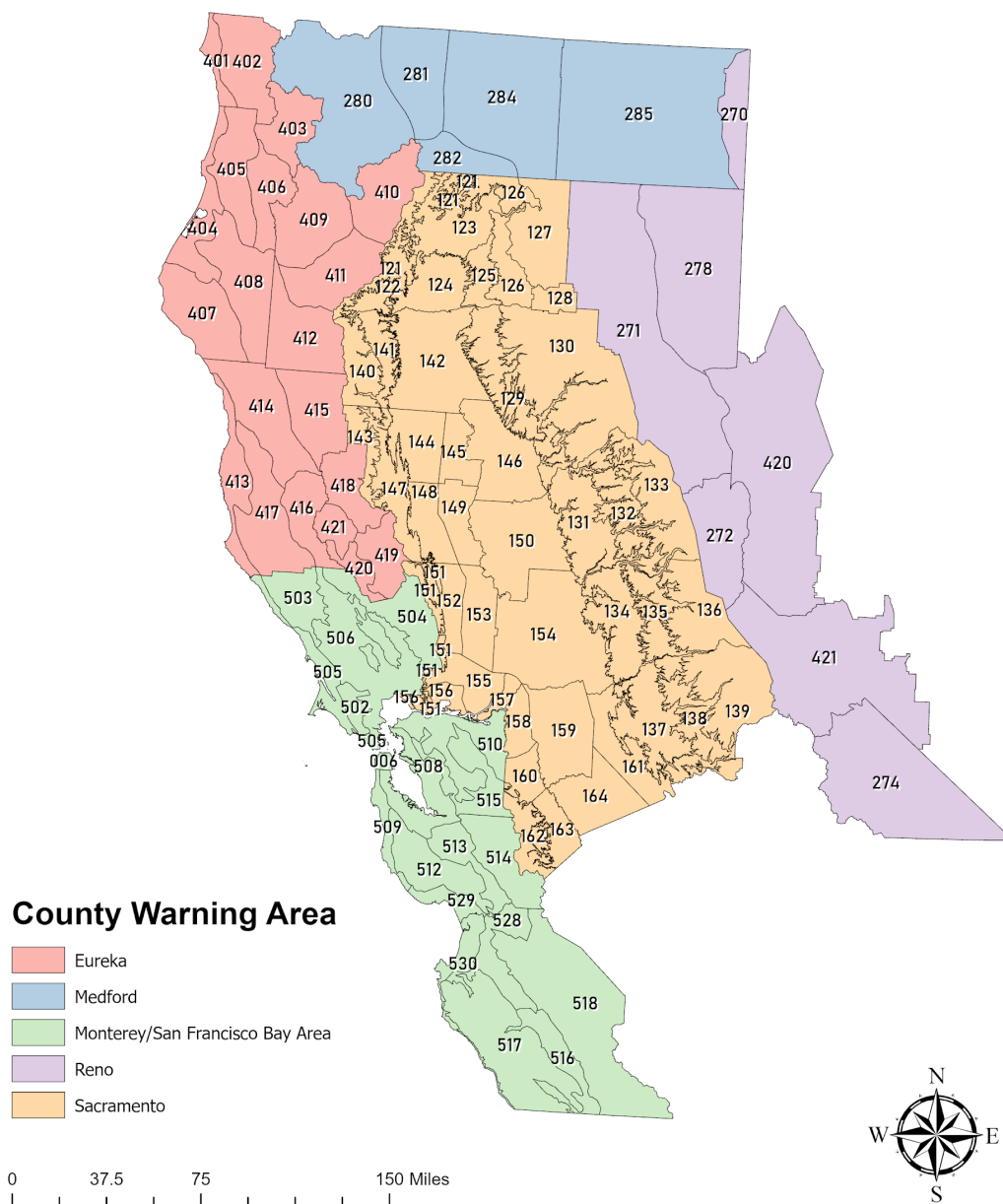
Office	Name	Position
Northern CA Predictive Services 6101 Airport Road, Redding, CA 96002 24hr Duty Chief: 530 226-2873 Office: 530-226-2730 WEB: https://gacc.nifc.gov/oncc/predictive/weather/index.htm Email: redding.fwx@fire.ca.gov Fire Season: 6am-430pm daily, Low Season: 7am-5pm M-F	Billy Gardunio Julia Ruthford Brent Wachter Brett Lutz Vacant Vacant	USFS PS Program Lead/Fire Analyst USFS GACC Meteorologist (IMET) USFS GACC Meteorologist BLM GACC Meteorologist (IMET) USFS GACC Meteorologist USFS Fire Analyst

Southern CA Predictive Services 23300 Castle Street, Riverside, CA 92518 24hr Weather Duty Officer: (951) 214-6923 WEB: https://gacc.nifc.gov/oscc/predictive/weather/index.htm Email: sm.fs.osc_ps@usda.gov Hours: Daily 6-4	Kristen Allison Matt Shameson Jonathan O'Brien Kristen Stewart Vacant Vacant	USFS PS Program Lead/Fire Analyst USFS GACC Meteorologist USFS GACC Meteorologist/IMET USFS GACC Meteorologist BLM GACC Meteorologist USFS Fire Analyst
NWS Eureka Forecast Office 300 Startare Dr. Eureka, CA 95501-6000 WEB: https://www.weather.gov/eureka Backup Offices: WFO Monterey & WFO Medford	Vacant James White Ryan Aylward	Meteorologist In Charge Fire Weather Program Manager/IMET Warning Coordination Meteorologist
NWS Hanford Forecast Office 900 Foggy Bottom Rd. Hanford, CA 93230-5236 WEB: https://www.weather.gov/hanford Backup Office: WFO Sacramento & WFO Oxnard	Vacant Stephen McCoy Vacant	Meteorologist In Charge Fire Weather Program Manager Warning Coordination Meteorologist
NWS Las Vegas Forecast Office 7851 Dean Martin Dr. Las Vegas, NV 89139-6628 WEB: https://www.weather.gov/lasvegas Backup Offices: WFO Flagstaff & WFO Reno	Marcus Austin Andy Gorelow Julie Phillipson Daniel Berc	Meteorologist In Charge Fire Weather Program Manager/IMET Asst Fire Weather Program Manager Warning Coordination Meteorologist
NWS LA/Oxnard Forecast Office 520 N. Elevar St. Oxnard, CA 93030 WEB: https://www.weather.gov/losangeles Backup Offices: WFO San Diego & WFO Monterey	Ariel Cohen Dave Gomberg Rich Thompson Todd Hall	Meteorologist In Charge Fire Weather Program Manager IMET Warning Coordination Meteorologist
NWS Medford Forecast Office 4003 Cirrus Dr. Medford, OR 97504 WEB: https://www.weather.gov/medford Backup Offices: WFO Eureka & WFO Portland	Bradley Schaaf Charles Smith Vacant Tom Wright Joseph Guerrero Brian Nieuwenhuis	Meteorologist In Charge Fire Weather Program Manager Warning Coordination Meteorologist IMET IMET (Trainee) IMET
NWS Phoenix Forecast Office 1500 N. Mill Ave, PAB 1TA, Tempe AZ 85281 Mailing Address: 1667 N Priest Dr. Tempe AZ 85288 WEB: https://www.weather.gov/phoenix Backup Offices: WFO Tucson & WFO Las Vegas	Jeral Estupinan Matt Salerno Tom Frieders	Meteorologist In Charge Fire Weather Program Manager Warning Coordination Meteorologist
NWS Reno Forecast Office 2350 Raggio Parkway, Reno, NV 89512-3900 WEB: https://www.weather.gov/reno Backup Offices: WFO Elko	Chris Smallcomb Tony Fuentes Dawn Johnson Colin McKellar	Meteorologist In Charge Fire Weather Program Manager/IMET Warning Coordination Meteorologist IMET
NWS Sacramento Forecast Office 3310 El Camino Ave. Ste 228 Sacramento, CA 95821 WEB: http://www.weather.gov/sacramento Backup Offices: WFO Hanford & WFO Reno	Michelle Mead Eric Kurth Courtney Carpenter Katrina Hand	Meteorologist In Charge Fire Weather Program Manager/IMET Warning Coordination Meteorologist IMET
NWS San Diego Forecast Office 11440 W. Bernardo Ct. Ste. 230, San Diego, CA 92127 WEB: http://www.weather.gov/sandiego Backup Offices: WFO Los Angeles	Jonathan Suk Stefanie Sullivan Felix Castro David Munyan	Meteorologist In Charge Fire Weather Program Manager Warning Coordination Meteorologist IMET (Trainee)

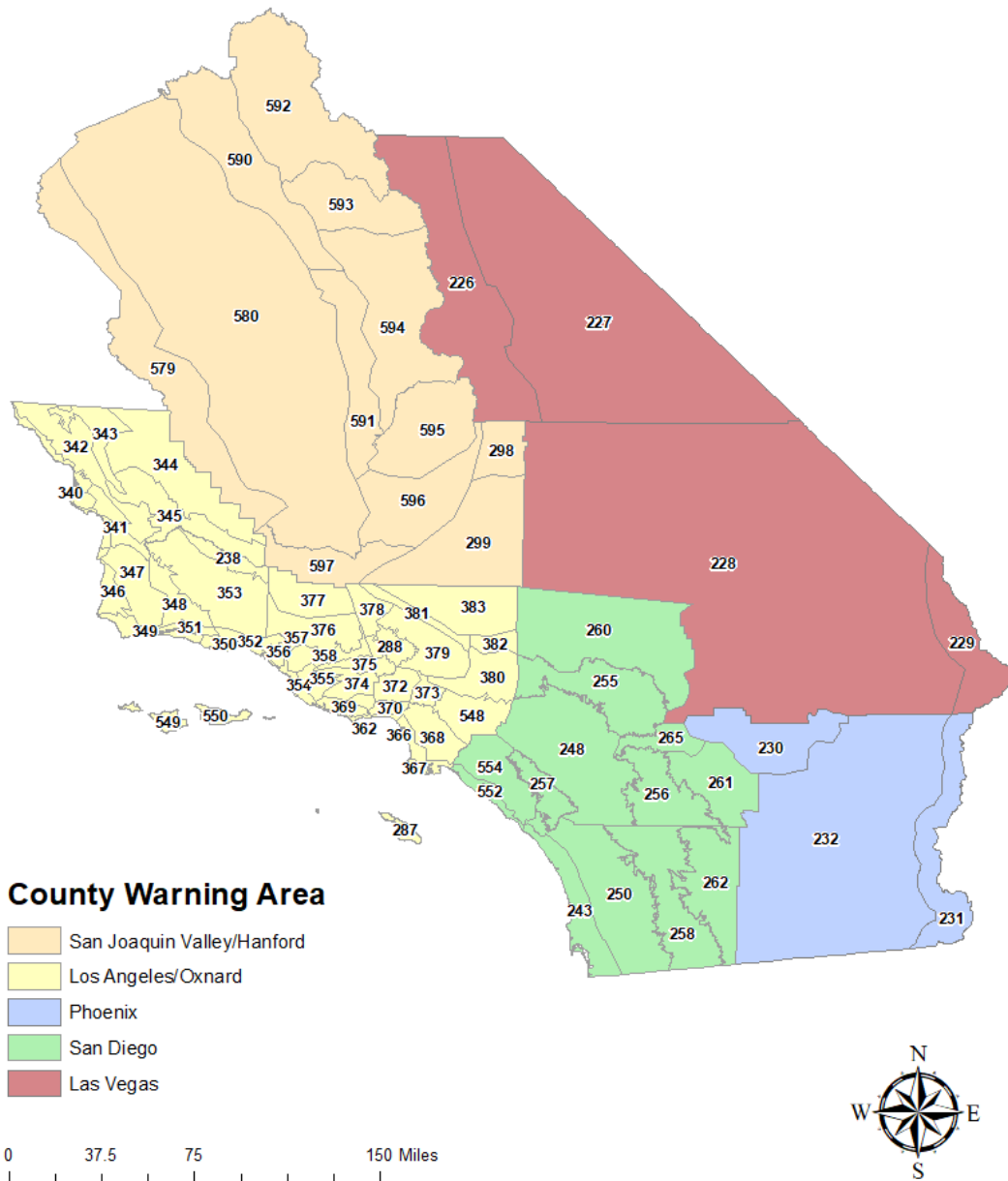
NWS San Francisco/Bay Area Forecast Office 21 Grace Hopper Ave., Stop 5, Monterey, CA 93943 Mailing Address: PO Box 3060, Monterey, CA 93942 WEB: http://www.weather.gov/sanfrancisco Backup Offices: WFO Los Angeles & WFO Eureka	Cynthia Palmer Ryan Walbrun Brian Garcia Matt Mehle	Meteorologist In Charge Fire Weather Program Manager/IMET Warning Coordination Meteorologist IMET
Wildfire Forecast & Threat Intelligence Integration Center (WFTIIC) CalOES HQ - Mather, CA Main line (24 hours): 916-328-7700 NWS liaison: 916-328-7855 WEB: https://www.wftiic.ca.gov/	Ken Kempter Jeff Fuentes Jessica Chiari	Deputy Chief - Cal OES Deputy Chief - CAL FIRE Liaison - NWS

Appendix A - NWS Fire Weather Zones

Northern California Fire Weather Zones



Southern California Fire Weather Zones



Appendix B - NWS Red Flag Warning Criteria

Watch/Warning Criteria for Abundant or Dry Lightning

Northern California Zones:

Abundant lightning (scattered [25%] areal thunderstorm coverage or greater) in conjunction with sufficiently dry fuels. Fuels must remain dry or critically dry during and immediately following a lightning event. Warnings may be issued for isolated events (< 25% aerial coverage) when little or no precipitation is expected to reach the ground.

Areal Description	NWS Fire Weather Zones
Northern California West of the Cascade / Sierra Crest	006, 121-164, 280-282, 401-421, 505-513, 516-518, 528-530
Eastern Sierra, Northeast CA	214, 270-271, 274, 278, 284-285
Lake Tahoe Basin	272

Southern California Zones:

A lightning event that is not accompanied by enough precipitation to significantly wet fuels that have been identified as critically dry. Significant precipitation is defined as ranging from 0.05 inches for grass or brush to 0.15 inches for closed-canopy timber and heavy fuels. Fire Weather Watches and Red Flag Warnings will be issued for high impact lightning events in receptive fuels. Isolated events or events of short duration (e.g., events which start dry but become wet within 1-2 hours) do not need warnings but may be headlined in the forecast.

Areal Description	NWS Fire Weather Zones
Southern California desert area excluding the Lower Colorado River Valley	226-228, 230, 232, 260-262, 265
Lower Colorado River Valley	229, 231
Antelope Valley and SE Kern County Deserts and Central CA Interior	298-299, 381-383, 579, 580, 590-597
Southern California Excluding the Antelope Valley	238, 288, 340-353, 354-358, 362, 366-370, 372-380, 548
Extreme Southern California	243, 248, 250, 255-258, 552, 554

Watch/Warning Criteria for Wind and/or Low Relative Humidity

Northern California Zones:

Areal Description	NWS Fire Weather Zones	Criteria
Northern California West of the Cascade / Sierra Crest	006, 121-164, 401-421, 505-513, 516-518, 528-530	Refer to Wind/RH RFW Decision Matrix on next page.
Northern California West of the Cascade / Sierra Crest	280- 282 (WFO Medford Zones)	4 or more hours: For dry cold fronts: RH < 15%, sustained wind >= 10mph with

		gusts $\geq$ 20 mph. - East winds: RH $<$ 25%, sustained wind $\geq$ 15mph with gusts $\geq$ 25 mph
Eastern Sierra, Northeast CA	214, 270-271, 274, 278, 281, 284-285,	RH $\leq$ 15% with wind gusts $\geq$ 30 mph for 3 hours or more (except 6 hours or more in 281).
Lake Tahoe Basin	272	Relative Humidity $\leq$ 20% with wind gusts $\geq$ 30 mph for 3 hours or more. If fuels are at extreme levels: wind gusts $\geq$ 30 mph for 3 hours or more, regardless of humidity.

Southern California Zones:

Area Description	NWS Fire Weather Zones	Criteria
Southern California desert area excluding the Lower Colorado River Valley	226-228, 230, 232, 260-262	Relative Humidity $\leq$ 15% and wind gusts $\geq$ 35 mph for 6 hours or more, assuming fuel conditions are critical.
Lower Colorado River Valley	229, 231	Relative Humidity $\leq$ 15% with sustained winds $\geq$ 20 mph or wind gusts $\geq$ 35 mph for 3 hours or more.
Antelope Valley and SE Kern County Deserts	298, 299, 381-383	(Kern Desert zones) Relative Humidity $\leq$ 10% and sustained (20-foot) winds $\geq$ 25 mph for a duration of 8 hours or more.
Central California Interior except Kern County (WFO Hanford)	579, 580, 590-594	RAWS sustained winds $\geq$ 25 mph or frequent gusts $\geq$ 35 mph AND Relative Humidity $\leq$ 15% for a duration of 6 hours or more.
Southern California Excluding the Antelope Valley (WFO Los Angeles)	238, 288, 340-353, 354-358, 362, 366-370, 372-380, 548	RH $\leq$ 10% with sustained wind $\geq$ 15 mph or with gusts $\geq$ 25 mph for 6 hours or more. RH $\leq$ 15% with sustained wind $\geq$ 25 mph or with gusts $\geq$ 35 mph for 6 hours or more. Extreme temperatures/winds/fuels that favor rapid fire spread/large fire growth that fall outside RH/Wind thresholds above. These rare events will always be coordinated with local fire agencies and the GACC. (e.g. significant heat waves favoring large plume dominated fires, extreme winds with elevated RH)

Kern County Mountains	595-597	RH ≤ 15% with sustained wind ≥ 25 mph or with gusts ≥ 35 mph for 6 hours or more. OR Winds ≥ 15 mph sustained or ≥ 25 mph gusts & ≤ 10% relative humidity for six hours.
Extreme Southern California (WFO San Diego)	243, 248, 250, 255-258, 260-262, 265, 552, 554	RH ≤ 15% with sustained wind ≥ 25 mph or with gusts ≥ 35 mph for 6 hours or more.

PDS Criteria for WFO Los Angeles/Oxnard for Santa Ana & Sundowner Wind Events:

Criteria must coincide for 3 hours or more

- Sustained winds 35 mph or greater and/or gusts 60 mph or greater
- Relative Humidity 10% or less
- Live Fuel Moisture levels around critical 60% threshold; dead fuel moisture less than 7%

PDS Criteria for WFO San Diego:

Criteria must coincide for 3 hours or more

- Wind gusts 50 mph or greater
- Relative Humidity 10% or less
- Live Fuel Moisture levels less than critical 60% threshold

Wind/RH Decision Matrix for Northern California West of the Cascade/Sierra Crest

The matrix assumes daytime 10-hour fuel moisture (NFDRS observation time) is ≤ 6%, annual grasses have cured, and no wetting rain (greater than 0.10 inch) has fallen in the past 24 hours. The sustained wind refers to the standard 20-foot, 10 minute average fire weather wind speed. The wind event should be expected to last for at least 8 hours to qualify for a Red Flag warning (this guidance was developed for Foehn wind events, which normally exceed 12 hours duration, and may last as long as 3-5 days).

Red Flag Weather Matrix		Sustained Winds				
		<6 mph	6-11 mph	12-20 mph	21-29 mph	30+ mph
H u m i d i t y	Daytime Min <29-42% and/or Night Max 60-80%					RFW
	Daytime Min <19-28% and/or Night Max 46-60%				RFW	RFW
	Daytime Min <9-18% and/or Night Max 31-45%			RFW	RFW	RFW
	Daytime Min <9% and/or Night Max <31%		RFW	RFW	RFW	PDS RFW

Low	Medium	High	Very High	Extreme
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Wind/RH Decision Matrix for Northern California East of the Sierra Crest

For Western NV and the eastern Sierra Red Flag Weather Matrix Dry Fuels with (Low RH + Winds) for at least 3 hours						
	RH < 35%	RH < 30%	RH < 25%	RH < 20%	RH < 15%	RH < 10%
Wind Gusts > 20 MPH						
Wind Gusts > 30 MPH					RFW	RFW
Wind Gusts > 40 MPH				RFW	RFW	PDS
Wind Gusts > 50 MPH			RFW	RFW	PDS	PDS

Special Situation (No RH Consideration)	
For Tahoe Basin: Critically Low Fuels	Wind Gusts > 30 MPH
RECORD DRY FUELS	RH < 20-30% Wind Gusts > 50 MPH

No worries	Low	Marginal - Headline	Red Flag Warning	PDS Red Flag Warning
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Appendix C - NWS Product Examples

Fire Weather Planning Forecast (FWF)

FNUS5i KNNN DDHHMM

FWFNNN

Fire weather planning forecast for name of area

National Weather Service city state

Time-date (example: 900 AM MDT Fri Jul 9 2017)

...HEADLINE... (REQUIRED for Red Flag Warnings and Fire Weather Watches....significant feature(s) at other times recommended)

.DISCUSSION...(concise, clear, non-technical explanation of the current/forecasted fire weather)

SSZXXX-XXX>XXX-DDHHMM- (UGC/FIPS CODING)

GEOGRAPHICAL DESCRIPTORS

TIME-DATE

...RED FLAG WARNING/FIRE WEATHER WATCH HEADLINE (as needed in each appropriate zone grouping)...

.Today...

Sky/Weather.....

Max Temperature.....

24 Hr Trend..... (Optional)

Min Humidity.....

24 Hr Trend..... (Optional)

20 Ft Wind..... (Optional – Include Sub-Descriptors)

Local Optional Elements...(Transport Winds, Mixing Heights, CWR, Etc.)

.Tonight...
Sky/Weather.....
Min Temperature.....
 24 Hr Trend..... (Optional)
Max Humidity.....
 24 Hr Trend..... (Optional)
20 Ft Wind....
Local Optional Elements...

.Tomorrow...
Sky/Weather.....
Max Temperature.....
Min Humidity.....
20 Ft Wind....
Local Optional Elements...

(.FORECAST DAYS 3 THROUGH 7 may optionally be provided for each zone segment)

PDS Red Flag Warning (RFW)

...RED FLAG WARNING REMAINS IN EFFECT UNTIL 8 PM PDT WEDNESDAY
FOR GUSTY WINDS AND LOW HUMIDITY FOR WESTERN NEVADA SIERRA FRONT
INCLUDING THE DAVIS FIRE...

- * This is a Particularly Dangerous Situation for Wednesday starting at 11 AM.
- * CHANGES...Upgraded Wednesday to a Particularly Dangerous Situation for the Western Nevada Sierra Front.
- * Affected Area...Fire Weather Zone 420 Northern Sierra Front including Carson City, Douglas, Storey, Southern Washoe, Western Lyon and and Far Southern Lassen Counties.
- * Winds...Today, southwest winds 15 to 25 with gusts to 30 mph. On Wednesday, west to southwest winds 15 to 30 mph with gusts of 40 mph or more.
- * Humidity...Today, 12-18%. On Wednesday, 12-25%.
- * Duration...Today, 3 to 5 hours with decreasing winds overnight. On Wednesday, winds may start as early as 9 AM with 6 or more hours of critical conditions.
- * Impacts...The combination of gusty winds and low humidity can cause fire to rapidly grow in size and intensity before first responders can contain them.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

This is a particularly dangerous situation with high winds and dry conditions. New and existing fires will grow rapidly out of control, in some cases people may not be able to evacuate safely in time.

Appendix D - GOES Hotspot Notifications

The GOES East and West satellites allow forecasters to quickly discover new wildfire starts. NWS San Diego utilizes this satellite information and distributes the information via text, phone, and/or email notification to fire partners. These notices are intended to alert them to new potential fire starts and can be provided upon request.

Appendix F - Other Useful Links

Alert Wildfire Cameras: <https://www.alertwildfire.org/>

Alert California Cameras: <https://ops.alertcalifornia.org/>

Wildfire Forecast Threat Intelligence Integration Center: <https://www.wftiic.ca.gov/>

NOAA GSL Fire Weather Testbed: <https://gsl.noaa.gov/fire-wx/fire-weather-testbed>

NASA FIRMS: <https://firms.modaps.eosdis.nasa.gov/usfs/map/>

FEMS website: <https://fems.fs2c.usda.gov/>

AGENCY SIGNATURES / EFFECTIVE DATES OF THE AOP

This AOP shall be effective on the date the last signature is placed on this page and will remain in effect until the date of the last signature is placed on this page the following year. Updates of amendments may be added in the interim upon agreement of all signatories.

Agency Signatures:

John Goss, Wildland Fire Service CWCG Chair	Date
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Michelle Mead, Meteorologist in Charge, NWS Sacramento NWS State Liaison Official - Northern California	Date
--	------

Ariel Cohen, Meteorologist in Charge, NWS Los Angeles/Oxnard NWS State Liaison Official - Southern California	Date
--	------