

CALIFORNIA FIRE WEATHER ANNUAL OPERATING PLAN



CALIFORNIA ANNUAL OPERATING PLAN 2016

I. INTRODUCTION

A. The California Fire Weather Annual Operating Plan (AOP) constitutes an agreement between the California Wildfire Coordinating Group (CWCG) comprised of State, local government, and Federal land management agencies charged with the protection of life, property and resources within the State of California from threat of wildfire. The National Weather Service (NWS), the National Oceanic and Atmospheric Administration, and the U.S. Department of Commerce are charged with providing weather forecasts to the Nation for the protection of life and property.

The AOP provides specific procedural and policy information regarding the delivery of meteorological services to the fire management community in California. The NWS, the CWCG, and Predictive Services work closely in all phases of the fire weather forecasts and warning program to resolve concerns and avoid potential inconsistencies in products and services prior to delivery to fire agency customers. The goal of all agencies is to maximize firefighter and public safety through a coordinated delivery of consistent services.

Fire protection within California is made efficient by the statewide exchange among Federal, State, and local agencies of their responsibilities for the protection of certain lands. Non-federal wildland fire management agencies are by agreement protecting Federal lands, and therefore, require NWS fire weather forecasts and warnings. It is essential that all fire protection agencies receive coordinated fire weather and fire danger services.

B. Roles and responsibilities of the NWS and the interagency fire management community are set forth in the following reference documents:

- [Interagency Agreement for Meteorological Services Among the Bureau of Land Management, Bureau of Indian Affairs, U.S. Fish and Wildlife Service, and National Park Service of the U.S. Dept. of Interior, the Forest Service of the U.S. Dept. of Agriculture, and the National Weather Service of the U.S. Dept. of Commerce \(National MOA or National Agreement\);](#)
- [CWCG – NWS California Fire Weather Program Assessment Team Charter](#)
- [National Weather Service NWSI 10-4: Fire Weather Services ;](#)
- [2016 National Mobilization Guide ;](#)
- [National Predictive Services Handbook;](#)
- [NWCG Glossary](#)

C. 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 AND UPDATES FOR 2016

- Beginning January 2016 a permanent staffing reduction has occurred at the North Ops Predictive Services Office in Redding. New staffing will consist of two General Meteorologists and one Supervisory Meteorologist. This is a reduction of one forecaster from previous years. Due to the reduction in staff the North Ops Predictive Services Fire Weather staff will no longer produce spot forecasts. All spot forecasts are now provided by the National Weather Service.
- Weekly fuels charts for South Ops Predictive Services are now updated daily.
- Daily product for South Ops will be changing formats to show fire potential for days 1 and 2.
- In the fall of 2016 the National Weather Service will officially unveil a new internet based Spot Forecast interface. The purpose of the new Spot Webpage is to build upon the functionality of the existing page while incorporating new technology and satisfying recent regional requirements. To provide consistency to all fire weather partners, all California NWS offices (including Reno, Las Vegas, Medford and Phoenix) will transition to the new Spot Forecast webpage on November 1, 2016. The current operational Spot Page will remain active through January 2, 2017. During the transition period the new page can be accessed for testing and trial using the following link:

<http://preview.weather.gov/spot/>

A tutorial for the new page can be found at:

<https://docs.google.com/a/noaa.gov/viewer?a=v&pid=sites&srcid=bm9hYS5nb3Z8aW1ldHxneDoxMGY3YmRIZDBhNTQxZDgz>

NWS Fire Weather Planning Forecasts

NWS Fire Weather Planning Forecasts provide general, information for daily preparedness and planning purposes. Forecasts are subdivided into meteorologically and topographically similar forecast areas called zones. Because of their more generalized information, planning forecasts are never to be used as a spot forecast. The table below outlines issuance times of planning forecasts for each NWS office. The beginning and ending date of high season forecast issuances vary by year, depending on weather and fuel conditions.

Weather Forecast Office	High Season Narrative Forecasts	Morning Narrative Forecast NLT	Afternoon Narrative Forecast NLT	Low Season Narrative Forecasts NLT	NWS Forecast Zones
Extreme Northern California – Medford	<i>Usually by June 1 to October 1 #</i>	7:30 a.m.	3:30 p.m.	Daily 7:30 a.m.	280-282, 284, 285
Northwest California – Eureka	<i>Usually by June 1 to November 1 #</i>	7:30 a.m.	3:30 p.m.	Daily 7:30 a.m.	201-204, 211, 212, 276,277, 283
North Central California – Sacramento	<i>User Driven</i>	7:30 a.m.	3:30 p.m.	Daily 7:00 am.	213-221, 263, 264, 266-269, 279
Extreme Eastern California – Reno	<i>Usually by June 1 to November 1 #</i>	7:30 a.m.	3:30 p.m.	Daily 7:00 a.m.	270-273, 278
Central Coast California – San Francisco Bay Area/Monterey	<i>Usually by June 1 to November 1 #</i>	7:00 a.m.	3:30 p.m.	Daily 3:30 p.m.	006, 505-513, 516-518, 528-530
Central California Interior – San Joaquin Valley/Hanford	<i>Usually May 15 to November 15 #</i>	7:00 a.m.	3:30 p.m.	Daily 3:00 p.m. PST or 3:30 p.m. PDT	289-299
Southwest California – Los Angeles/Oxnard.	<i>Usually May 15 to December 1 #</i>	9:30 a.m.	3:30 p.m.	M-F 3:30 p.m. also M at 9:30 a.m. *	234-241, 244-246, 251-254, 259, 288, 547,548
Extreme Southwest California – San Diego		7:00 a.m.	2:30 p.m.	Daily 7:00 a.m.	552,554,243 248,250, 255-258,260-262,265
Southeast California – Phoenix		7:30 a.m.	3:30 p.m.	Daily 7:30 a.m.	230-232
Southeast California – Las Vegas		7:00 a.m.	3:30 p.m.	Daily 7:00 a.m.	226-229

* excludes Federal holidays

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

Update/Corrected forecasts – Planning Forecasts are updated or corrected upon issuance of a Fire Weather Watch or a Red Flag Warning, when the current forecast does not adequately describe significant weather expected in the future, or when typographical/format errors prevent proper interpretation of the forecast.

Access – Planning Forecasts are widely available from the California Fire Weather Page (<http://www.wrh.noaa.gov/sto/cafw/>), NWS office web sites, and Predictive Services web sites. All NWS fire weather information can also be accessed from the NWS National Fire Weather Page at: www.weather.gov/fire. Forecasts are also available via WIMS.

Content and Format – Forecasts follow the national standard narrative format, per NWS Directive 10-401. Morning forecasts focus on the next 36 hours and afternoon forecasts on the next 48 hours, with general extended outlooks in both cases out to at least five days.

Planning Forecasts begin with pertinent headlines and a non-technical weather discussion. Headlines are included as needed for Red Flag Warnings and Fire Weather Watches. Headlines for critical fire weather conditions that do not meet Red Flag criteria are also included. Discussions should normally be no more than 8 lines in length. A detailed, technical weather discussion is available in the [Area Forecast Discussion \(AFD\)](#) product which can be found on each forecast office website. An optional technical fire weather discussion embedded within the Area Forecast Discussion may be included during critical fire weather periods or when incident meteorologists are assigned within the forecast area.

Short-term forecast for the first 36 or 48 hours - Short-term forecasts emphasize information needed for initial attack and day-to-day fire management. Each forecast zone or zone grouping contains the following elements, listed in the order they appear:

- Headline(s) as appropriate
- Sky/Weather
- Temperature
- Relative Humidity
- Wind – 20-foot, 10 minute average RAWS standard (slope/valley and ridge top, as appropriate)
- Chance of Wetting Rain (CWR)
- Lightning Activity Level (LAL)

Forecasts may include the following optional elements based on local customer requirements:

- Haines Index
- Mixing Level or Mixing Height
- Marine Layer
- Transport Wind
- 10,000-foot Wind
- Ventilation Category (or numeric value)
- 24-hour Trends (of temperature and relative humidity)

Extended Outlook - Beyond 36-48 hours, planning forecasts are used for resource planning. They contain general guidance information, keying on significant changes in temperature, humidity, wind, or weather needed for decision-making purposes.

Spot Forecasts

Note: *In the fall of 2016 the National Weather Service will officially unveil a new internet based Spot Forecast interface. The purpose of the new Spot Webpage is to build upon the functionality of the existing page while incorporating new technology and satisfying recent regional requirements. To provide consistence to all fire weather partners, all California NWS offices (including Reno, Las Vegas, Medford and Phoenix) will transition to the new Spot Forecast webpage on November 1, 2016. The current operational Spot Page will remain active through January 2, 2017. During the transition period the new page can accessed for testing and trial using the following link:*

<http://preview.weather.gov/spot/>

A tutorial for the new page can be found at:

<https://docs.google.com/a/noaa.gov/viewer?a=v&pid=sites&srcid=bm9hYS5nb3Z8aW1ldHxneDoxMGY3YmRIZDBhNTQxZDgz>

Spot Forecasts are detailed site-specific forecasts issued for wildfires, HAZMAT incidents, prescribed burns, search and rescue operations, etc., and are made available upon request at any time. Spot forecasts are available to any federal, state, or municipal agency as described in [NWSI 10-401](#). The Predictive Services Unit in Riverside can provide spot forecasts for prescribed burns when smoke dispersion/smoke management is a concern.

South Ops Only: http://gacc.nifc.gov/oscc/predictive//weather/daily_weather/spot_form.doc

Spot forecast information is perishable. Using up-to-date spot forecasts is important and the requested issuance time for spot forecasts should be within a few hours of when the forecast will be used. NWS Spot forecasts are normally not produced more than 48 hours in advance. More than 48 hours in advance, other planning information is available to fire agencies, including the Fire Weather Planning Forecast and digital planning tools available on NWS web pages. These tools can be used for planning up to seven days out to identify time periods during which weather for a prescribed burn or other project is favorable. Please contact your NWS office for more information.

NWS spot forecasts are normally available within 30-60 minutes of the request, with wildfire and other urgent safety related requests having highest priority. If possible, non-urgent spot forecast requests for prescribed burns and similar projects should be made with as much lead time as possible. Requests made in the afternoon or evening for delivery of a prescribed burn spot forecast the following morning is a recommended practice.

If more than a 4-6 hour project delay occurs – particularly if there is anything in the forecast or in observed conditions which raises concern – the requestor should call their NWS office and discuss the forecast with a meteorologist. It is critical to have a working phone number from the requesting agency so they can be contacted by the NWS if needed.

Requesting a Spot Forecast: Spot forecasts are normally requested and received via the internet from the [California Fire Weather web page](#), the [national NWS Fire Weather web page](#), all NWS forecast office fire weather web pages and both California PSU web pages. If internet access is not available, spot forecasts may be requested and disseminated via phone or fax using the backup spot forecast request form found in the appendix section. Fire agencies will confirm receipt of a spot forecast with a phone call to the issuing NWS forecast office.

At or before the time of a spot request, the requesting agency must provide information about the location, topography, fuel type(s), elevation(s), size, ignition time, and a contact name(s) and telephone number(s) of the responsible land management personnel. Also, quality representative observation(s) at, or near, the site of the planned prescribed burn, or wildfire, should be available to the NWS along with the request for a spot forecast(s).

In the initial attack phase of a new wildfire that presents an immediate threat to firefighters and/or the public (such as an urban interface fire in critical fuels and weather), the NWS may be called directly for a quick verbal briefing prior to a formal spot forecast issuance as time/communications allow.

Upon completion, spot forecasts are posted to the appropriate Fire Weather Page of the NWS forecast office web site that received the request. NWS web sites may be linked from the [Individual Forecast Information Table](#).

Content and Format – National standard content and format for NWS spot forecasts can be found in [NWS Directive 10-401](#). At a minimum, wildfire spot forecasts always include this content: headlines (when RFW in effect or other significant weather is headlined in the planning forecast), discussion, sky/weather, (max/min) temperature, (max/min) relative humidity, and 20-foot wind. Additional elements, such as transport winds, mixing height, LAL, etc., may be included upon request using the check boxes and “Remarks” section of the NWS Spot online form.

The forecast period is based on user request and will contain up to three periods, such as “TODAY”, “TONIGHT”, and “FRIDAY.” If requested and if enough weather information is received to make it feasible, a more specific first period such as “AT 11 A.M. IGNITION” may be used. In these cases, the meteorologist will not just forecast for the planned ignition time, but will include significant changes expected in the forecast parameters for the rest of the usual period, e.g., 11 AM temperature and the expected daytime maximum temperature.

When requested, an outlook for a longer duration will be appended, such as “OUTLOOK FOR WEDNESDAY THROUGH FRIDAY” for a spot requested on Monday.

Spot forecasts are considered one-time requests and are not updated unless the following procedures are used:

Scheduled Spot Forecast Update Requests –

- For wildfires and other high impacts incidents: Scheduled updated spot forecast requests, such as for an upcoming shift briefing, should be submitted to the NWS at least two hours before being needed.
- For prescribed burns and other non-urgent projects: Scheduled updated spot forecast requests should be made with as much lead time as possible. For a long-term project, a spot forecast update schedule provided to the NWS will help that office provide the best spot forecast service.

Unscheduled Spot Forecast Requests –

- Forecasts for unscheduled updates for prescribed burn spots, either due to a specific request based on weather at the site or due to monitoring invoked by the phrase, “Request Priority Monitoring” or similar in the remarks section of the spot forecast request, will be issued as soon as possible and no longer than two hours after it is recognized that an update is desirable. As with all NWS products, spot forecasts are corrected when a typographical or format error prevents correct interpretation of the forecast. Corrected forecasts are delivered to agencies in the same manner as the original spot forecast.

Spot Forecast Feedback - Requesting agencies should always provide fire-line weather observations for the validation of weather forecast accuracy back to the NWS. For further explanation of the Feedback process, please go to [Fire Weather Observations](#).

HYSPLIT Plume Trajectory Assistance – Automated HYSPLIT plume trajectory output is available with any spot forecast request and can be useful as a tool to help with smoke plume forecasting. The HYSPLIT Trajectory model provides automated trajectory guidance for air parcels at a given height above ground level.

To utilize this feature, simply add the phrase, “HYSPLIT to” and your email address into the remarks section of a spot request, such as “HYSPLIT to joe.cool@web.address” (Any email address works).

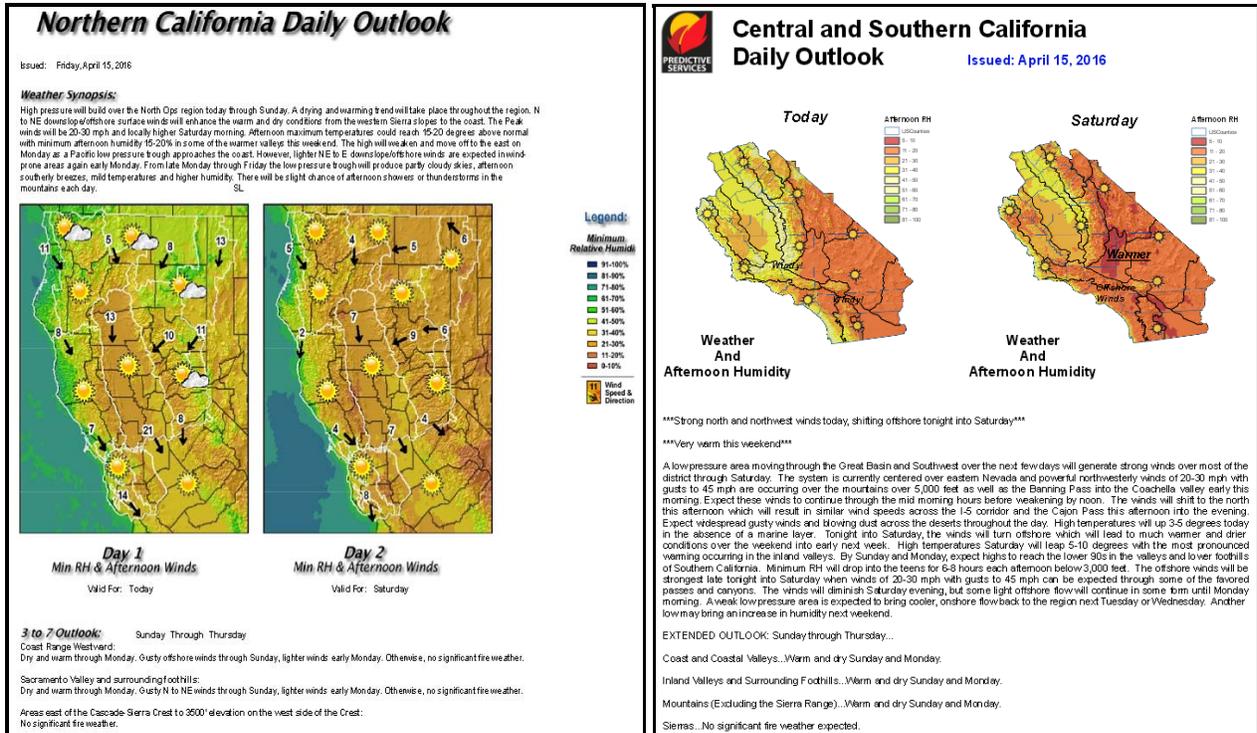
When the run is complete, you will receive an email with output that consists of a table of values, a gif HYSPLIT trajectory map, and a KMZ trajectory map for loading into Google Earth. This email is separate from the actual spot forecast. Please note that automated HYSPLIT output does not take into account information on burn size or fuels and generates air parcel trajectory forecasts for 500, 1500, and 3000 meters AGL and does not incorporate any fire plume height data.

For more information on HYSPLIT and how to interpret the output, please contact your local NWS fire weather program leader.

Daily Outlook

This product serves as a quick-briefing tool for obtaining weather highlights out to two days. The product is comprised of GIS-based graphics from the NWS National Gridded Database (NDFD), showing minimum relative humidity and wind (speed and direction). Daily weather symbols are added by Predictive Services meteorologists. A weather synopsis along with a 3-7 day narrative outlook which highlights any anticipated significant fire weather is also included.

Issuance Schedule: South Ops 0930 Pacific Time, North Ops 1000 Pacific Time. Issued daily during fire season and M-F during low season.



Product Links:

Northern California Daily Outlook:

<http://gacc.nifc.gov/oncc/predictive/weather/DailyOutlook.pdf>

Southern California Daily Outlook:

http://gacc.nifc.gov/oscc/predictive/weather/daily_product/DailyOutlook.pdf

IMET Incident Response

In addition to following direction in the National Mobilization Guide, the following direction is clarification for the Geographic Area Coordination Centers (GACC) in California:

When an IMET is requested for an incident, **the request will be placed to the GACC.** The GACC will notify the National Fire Weather Operations Coordinator (NFWOC) at NIFC at 1-877-323-IMET (4638).

The GACCs will maintain a list of qualified IMETs and trainees in the Resource Ordering and Staffing System (ROSS) by Weather Forecasting Office (WFO) identifier, and provide dispatching services for the NWS in California. This list will be updated annually based on the list that is published in the California Fire Weather Annual Operating Plan. IMETs will be dispatched by the GACCs in California as if they are GACC employees.

When the NFWOC determines who will fill the incident request, the information will be relayed back to the GACC. If the IMET is within the requesting GACC, the IMET will be mobilized using ROSS.

If the IMET is in the California GACC that is not hosting the incident, the request will be placed through Selection Area to the other GACC.

If the identified IMET is not in a California WFO, the IMET request will be edited to add a Name Request and placed up to NICC who will place the request to the appropriate GACC.

The following list designates which California GACC will status and dispatch personnel for the California WFOs. Status can be maintained available/Local until requested to reduce work:

Redding PS

Eureka WFO
Sacramento WFO
San Francisco/Monterey WFO

Riverside PS

Hanford WFO
Los Angeles/Oxnard WFO
San Diego WFO

IMET personnel from 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, Personnel section of the current California Mobilization Guide, and CALFIRE Procedure No. 302.

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.

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

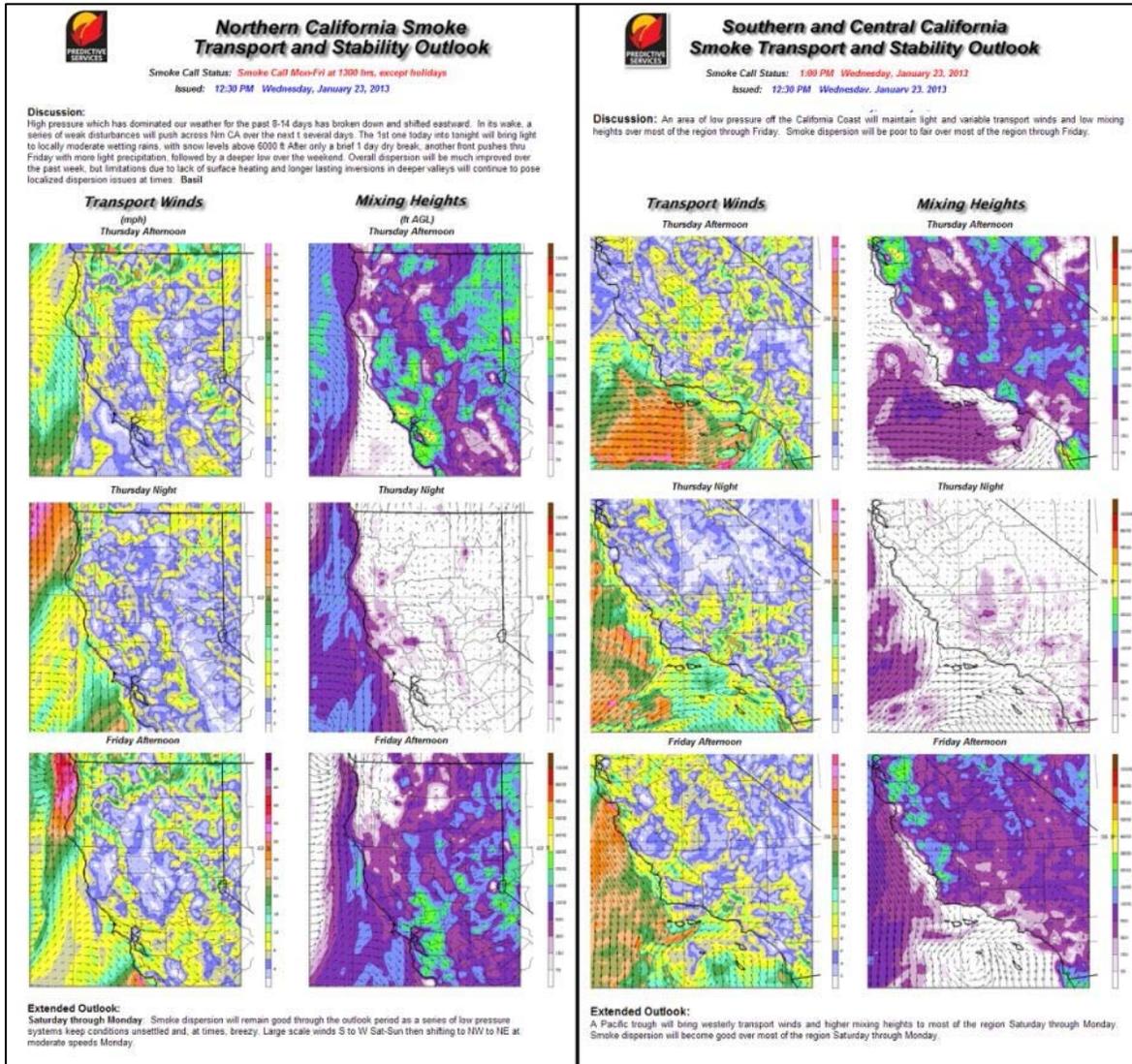
NWS IMETs:

<u>Location</u>	<u>Name</u>	<u>Agency</u>	<u>ROSS Unit ID</u>
Eureka, CA	Jeff Tonkin	NWS	CA-EKAW
Hanford, CA	Dan Harty	NWS	CA-HNXW
	James Dudley	NWS	CA-HNXW
Las Vegas, NV	Andy Gorelow	NWS	NV-VEFW
Medford, OR	Frederic Bunnag	NWS	OR-MFRW
	Shad Keene	NWS	OR-MFRW
Monterey, CA	Ryan Walbrun	NWS	CA-MTRW
	Matt Mehle	NWS	CA-MTRW
Oxnard, CA	Rich Thompson	NWS	CA-LOXW
Phoenix, AZ	Valerie Meyers	NWS	AZ-PSRW
Reno, NV	Alex Hoon	NWS	NV-REWW
	Jim Wallmann	NWS	NV-REWW
Sacramento, CA	Jason Clapp	NWS	CA-STOW
	Mike Smith	NWS	CA-STOW
San Diego, CA	Stefanie Sullivan	NWS	CA-SGXW

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.....Issued 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

and

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

Air Resource Advisor (ARA)

The need for an ARA depends on conditions related to the incident, topography, weather, population, exposure risk, dispersion and area attainment designation. An incident smoke footprint can often span multiple air quality and public health jurisdictions as well as state boundaries. As such, the need for an ARA will be based on coordination between incident, community, state, tribal and air quality administrators.

Resource orders for ARA's will usually be initiated by incidents, agency Administrators, or agency Air Quality Program staff. All will be coordinated as name requests by the WOFAM Smoke Coordinator and submitted through normal overhead resource ordering channels (e.g. ROSS). Orders are authorized to commence upon concurrence of the requesting official. Duty locations order requests will be placed by the appropriate GACC and submitted through the GACC Duty Meteorologists. Order requests will often be initiated by incidents, GACC's, Agency Administrators, or agency Air Quality Program staff. All orders will be coordinated as name requests by the WOFAM Smoke Coordinator. Orders are authorized to commence upon concurrence of the requesting official and the GACC Duty Meteorologists. Duty locations may vary from on-site at Incidents to GACC's depending on the needs of the situation. Air Quality Monitoring equipment can be ordered through agency air quality staff and will be coordinated with the California Air Resources Board Office of Emergency Services, Tribes and respective Air Quality Management Districts.

Red Flag Program

Fire Weather Watches and Red Flag Warnings are issued when the combination of fuels and weather conditions support extreme fire danger and/or fire behavior.

A *Fire Weather Watch* is used to alert agencies to the high potential for development of a Red Flag event in the 18-96 hour time frame. The Watch may be issued for all or selected portions of a fire weather zone or zones.

A *Red Flag Warning* is used to inform agencies of the impending or occurring Red Flag conditions. A Red Flag Warning is issued when there is high confidence that Red Flag criteria will be met within the next 48 hours or less or criteria are already being met. Longer lead times are allowed when confidence is very high or the fire danger situation is critical. The Warning may be issued for all or selected portions of a fire weather zone or zones.

Fire Weather Watch and/or Red Flag Warning headlines are included in all affected forecasts. All NWS fire weather web pages also highlight any watch and/or warning issuances.

Format and Contents - A bullet format text message (RFW) is used for issuing, updating, and cancelling all Fire Weather Watches and Red Flag Warnings. Complete information regarding the format, content and examples of Fire Weather Watches and Red Flag Warnings can be found here: <http://www.nws.noaa.gov/directives/sym/pd01004001curr.pdf>

NWS offices normally call affected dispatch offices when Red Flag Warnings and Fire Weather Watches are issued or updated. Watches and Warnings are also available on the internet via the California Fire Weather web page, the web site(s) of the issuing NWS office(s), the NWS National Fire Weather Page and (www.weather.gov/fire) and from WIMS.

If the issuance of a Red Flag Warning or Fire Weather Watch requires an update of the forecast, the NWS office will verbally notify the Redding and Riverside PSUs as soon as possible. During non-duty hours for the PSUs, a voice mail message should be provided by the NWS.

Fire Weather Watches and/or Red Flag Warnings from NWS offices are normally issued only after, 1) an accurate assessment of fuel conditions has been determined (see "Qualifying Fuels Information" section), and 2) conferring with affected agencies, including the GACC Predictive Services Units. The final authority for the issuance of a watch/warning rests with the NWS forecaster.

Watch/Warning Fuel Requirements:

Live and/or dead fuels are sufficiently receptive (dry) so that fire starts from any cause may become an initial attack problem for fire agencies in the Fire Weather Zone(s) impacted. Fuel dryness/receptiveness should be determined by the following methods, in ranking level of importance:

- The local Fuels Management Officer (FMO) determines fuels are dry enough in the (portions of) Fire Weather Zone(s) to constitute an initial attack problem.
- High to Extreme Fire Danger as determined by the local fire management agency.
- The Fuel Dryness Level of the Geographical Area Coordination Center (GACC):

Northern California - The Fuel Dryness Level 7 Day Fire Potential Matrix in a brown or yellow category for the (portions of) Fire Weather Zone(s) expected to be impacted. If the fuel dryness level in the chart is green, the forecaster must determine if there will be an initial attack concern due to fuel dryness over all or part of the Fire Weather Zone or Zones. In rare cases, fuels may be or, may be becoming, too wet for an imminent large fire concern for the GACC, but are still dry enough, or dry enough for long enough, to be an initial attack concern.

Southern California – In addition to the 7 Day Fire Potential Matrix, the Predictive Services Unit in Riverside produces a written discussion on fuel status across southern California every other Thursday.. This discussion is based on input from the fire community and includes a brief description of the current status of the live and dead fuel moistures, including green-up/curing information, as well as expected fuel conditions over the next seven days. The Fuels Discussion can be found at: http://gacc.nifc.gov/os_cc/predictive/fuels_fire-danger/myfiles/Fuels_Discussion.pdf

- **Non-Desert:** When a fuel condition of “Dry” (yellow) or “Very Dry” (brown) is displayed on the matrix for any Predictive Service Area (PSA), the “fuels switch” will be considered “on” for that day. A RFW is NOT recommended for any PSA designated as “Moist” (green).
- **Desert** (excluding the lower Colorado River Valley): During dry winters and the spring curing season, fuel moistures **over the deserts** may be quite low without initiating serious concerns about the potential for large fire growth. Reasons include light fuel loading and/or discontinuous fuel, or the existence of dry fine fuels when larger live fuels remain relatively green. The Southern California GACC PSU will coordinate with affected WFOs to clearly communicate fuel conditions, and provide updates regarding spatial trends and changes in large fire potential, despite a “Very Dry” (brown) display on the associated PSA matrix.

The NWS should refer to this online document as the primary source of fuels information along with the National Fuel Moisture Database located at:

<http://www.wfas.net/index.php/national-fuel-moisture-database-moisture-drought-103>,

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% areal 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, 201-204, 211-213, 215-221, 263, 264, 266-269, 276, 277, 279-283,
Eastern Sierra, Northeast CA	214, 270-271, 273, 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 (i.e., 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
Lower Colorado River Valley	229, 231
Antelope Valley and SE Kern County Deserts and Central CA Interior	298-299, 259, 289-297
Southern California Excluding the Antelope Valley	234-241, 244-246, 251-254, 288, 547-548
Extreme Southern California	243, 248, 250, 255-258, 260-262, 265, 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, 201-204, 211-213, 215-221, 263- 264, 266-269, 276-277, 279, 283, 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 >= 20 mph. - East winds: RH < 25%, sustained wind >= 15mph with gusts >= 25 mph.or more.

Areal Description	NWS Fire Weather Zones	Criteria
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 ≥ 20 mph. - East winds: RH < 25%, sustained wind ≥ 15mph with gusts ≥ 25 mph.or more.
Eastern Sierra, Northeast CA	214, 270-271, 273, 278	RH ≤ 15% with wind gusts ≥ 30 mph for 3 hours or more.
Northeastern CA excluding Surprise Valley	284, 285, 281	≤ 15% with wind gusts ≥ 30 mph for 3 hours or more. OR Daytime Min RH ≤ 10% with wind gusts ≥ 20 mph for 3 hours or more. (Note: Zone 281 must be 6 hours or longer).
Lake Tahoe Basin	272	Relative Humidity ≤ 20% with wind gusts ≥ 30 mph for 3 hours or more. If fuels are at extreme levels: wind gusts ≥ 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 ≤ 15% and wind gusts ≥ 35 mph for 6 hours or more, assuming fuel conditions are critical.
Lower Colorado River Valley	229, 231	Relative Humidity ≤ 15% with sustained winds ≥ 20 mph or wind gusts ≥ 35 mph for 3 hours or more.
Antelope Valley and SE Kern County Deserts	298, 299, 259	Relative Humidity ≤ 15% and sustained (20-foot) winds ≥ 25 mph for a duration of 8 hours or more.
Central California Interior (WFO Hanford)	289-297	RAWS sustained winds ≥ 25 mph or frequent gusts ≥ 35 mph AND Relative Humidity ≤ 15% for a duration of 6 hours or more. OR Relative Humidity ≤ 10% for a duration of 10 hours or more regardless of wind.
Southern California Excluding the Antelope Valley (WFO Los Angeles)	234-241, 244-246, 251-254	RH ≤ 10% with sustained wind ≥ 15 mph or with gusts ≥ 25 mph for 6 hours or more.
	288, 547,548	RH ≤ 15% with sustained wind ≥ 25 mph or with gusts ≥ 35 mph for 6 hours or more.
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.

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

- Matrix assumes daytime 10-hour fuel moisture (NFDRS obs time) is $\leq 6\%$, 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].
- A 'W' in the matrix indicates that a Watch or Warning should be considered.

Relative Humidity	Sustained Wind 6-11 mph	Sustained Wind 12-20 mph	Sustained Wind 21-29 mph	Sustained Wind 30+
Daytime Minimum RH 29-42% and/or Nighttime Maximum RH 60- 80%				W
Daytime Minimum RH 19-28% and/or Nighttime Maximum RH 46- 60%			W	W
Daytime Minimum RH 9-18% and/or Nighttime Maximum RH 31- 45%		W	W	W
Daytime Minimum RH < 9% and/or Nighttime Maximum RH < 31%	W	W	W	W

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. 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 fire potential discussion, and a resource capability summary as defined in the California Mobilization Guide.

1) 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 if any threat for large fires.
- Yellow (Dry Fuels) – Low threat for large fires when a Significant Weather Trigger is absent.
- Brown (Very Dry Fuels) – Moderate threat for large fires when a Significant Weather Trigger is absent.

2) Significant Weather Triggers

Significant Weather Triggers are weather events that either start new fires (Ignition Trigger), or provide favorable conditions (Burn Environment) for rapid growth to occur on existing fires when combined with “Dry” or “Very Dry” fuel conditions. The following is a list of Significant Weather Triggers used in the product.

- Lightning
- Windy and dry
- Unseasonably hot and dry
- Unstable

3) High Risk Day

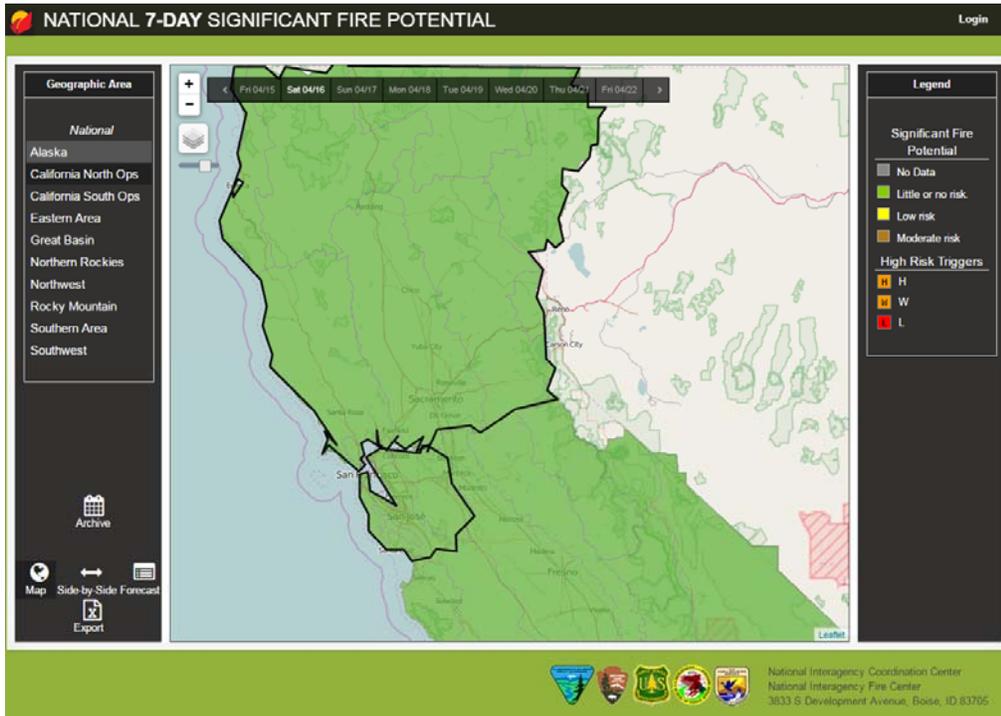
High Risk Days are rare occasions when conditions exist that historically have yielded in a significantly higher than normal chance ($\geq 20\%$) for a new large fire or for significant growth to occur on existing fires. There are two conditions that would lead to the issuance of a High Risk Day: 1) 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) – Burn Environment. Occurs when a “Dry” or “Very Dry” Fuel Dryness category coexists with any of the Significant Weather Triggers other than lightning.

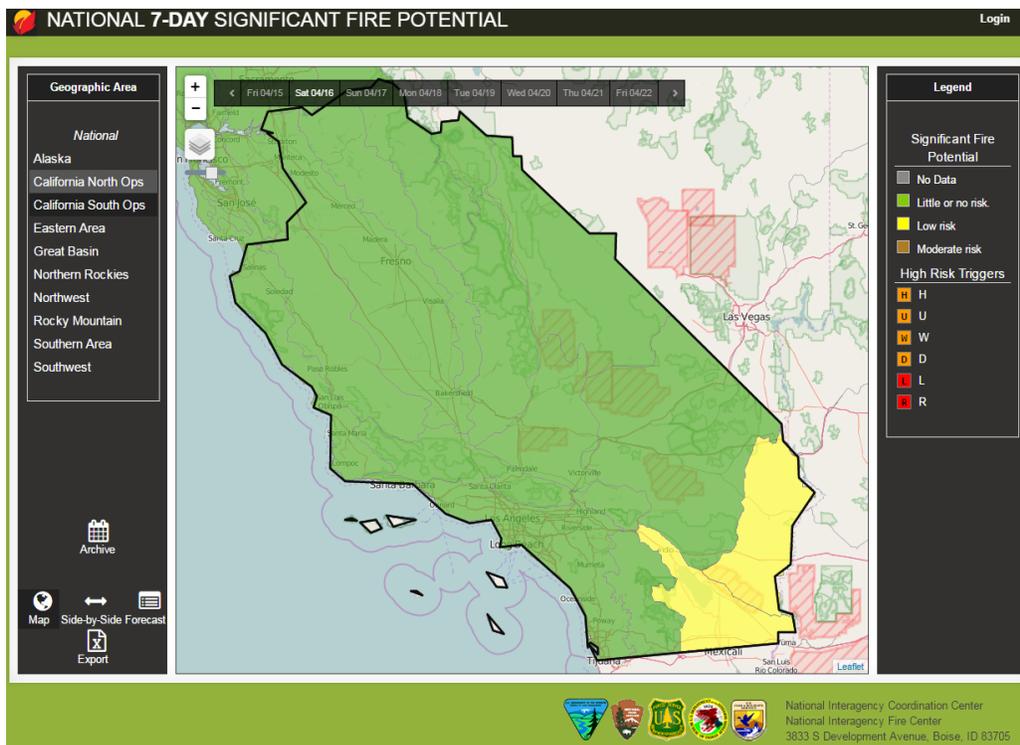
This product is issued by 0845 local time. Predictive Services will notify the appropriate National Weather Service office(s) of the issuance of any High Risk Days.

Webpage location:

North: <http://psgeodata.fs.fed.us/forecast/#/outlooks?state=map&gacclid=4>



South: <http://psgeodata.fs.fed.us/forecast/#/outlooks?state=map&gacclid=8>

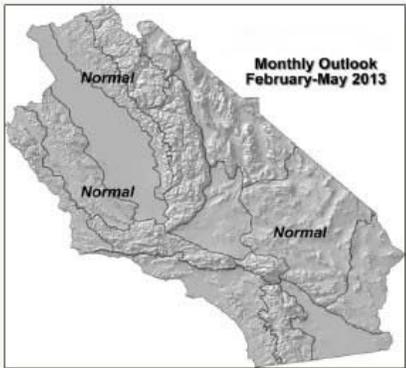


Monthly/Seasonal Outlook

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. For South Ops, only one product is issued and forecast periods are separated by month for the first two months, while the last two months are combined. For North Ops, two Outlooks are issued. The first represents the immediate upcoming month and the second represents months 2-4. 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 start of the new month and posted on the website by the first of each month.

MONTHLY/SEASONAL OUTLOOK

VALID: FEBRUARY THROUGH MAY 2013



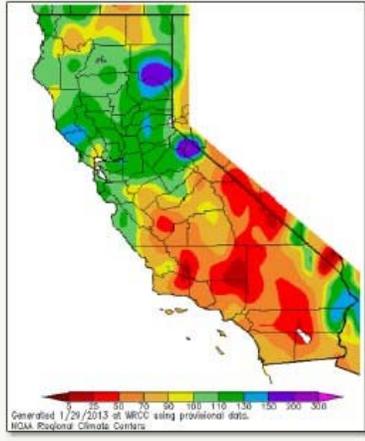
Summary

- Temperatures Near Normal
- Precipitation Near Normal Over Central California, Slightly Below Normal Over Southern California.
- Near Normal Large Fire Activity
- General Fire Activity Will Increase Over The Lower Elevations By May

WEATHER DISCUSSION

So far, this winter has been somewhat warmer and drier than usual over most of the district (See Figure on right). But storm frequency and intensity has been less than usual over the southern part of the state, particularly areas south of Fresno County. The northern part of the state has fared better, largely due to a series of very wet troughs which moved through the state in December. The precipitation deficit is more pronounced across the inland regions where moist low-level southerly flow has been impeded by terrain.

Much of Southern California has yet to experience a strong-cold core storm system this winter. Often, some of the strongest wintertime storms of the season occur closer to the "shoulder seasons" of November and December and March into April. These storms were notably absent in December (most of the precipitation across the northern half of the state during that time was the result of a series of storms as opposed to one strong storm)



Contact: Riverside.FWX@fire.ca.gov Webpage: <http://gacc.nifc.gov/oscc/predictive/weather/index.htm>

Issuance Time: 1st of each month.

North (Monthly): http://gacc.nifc.gov/oncc/predictive/outlooks/monthly_outlook.pdf

North (Seasonal): http://gacc.nifc.gov/oncc/predictive/outlooks/Seasonal_Outlook.pdf

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

Podcast/Webcast



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 10:15 am from North Ops.

Issuance Schedule:

North Ops.....M-W-F, winter
.....Daily, during fire season

South Ops.....M-W-F, winter
.....M-F, fire season

Links:

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

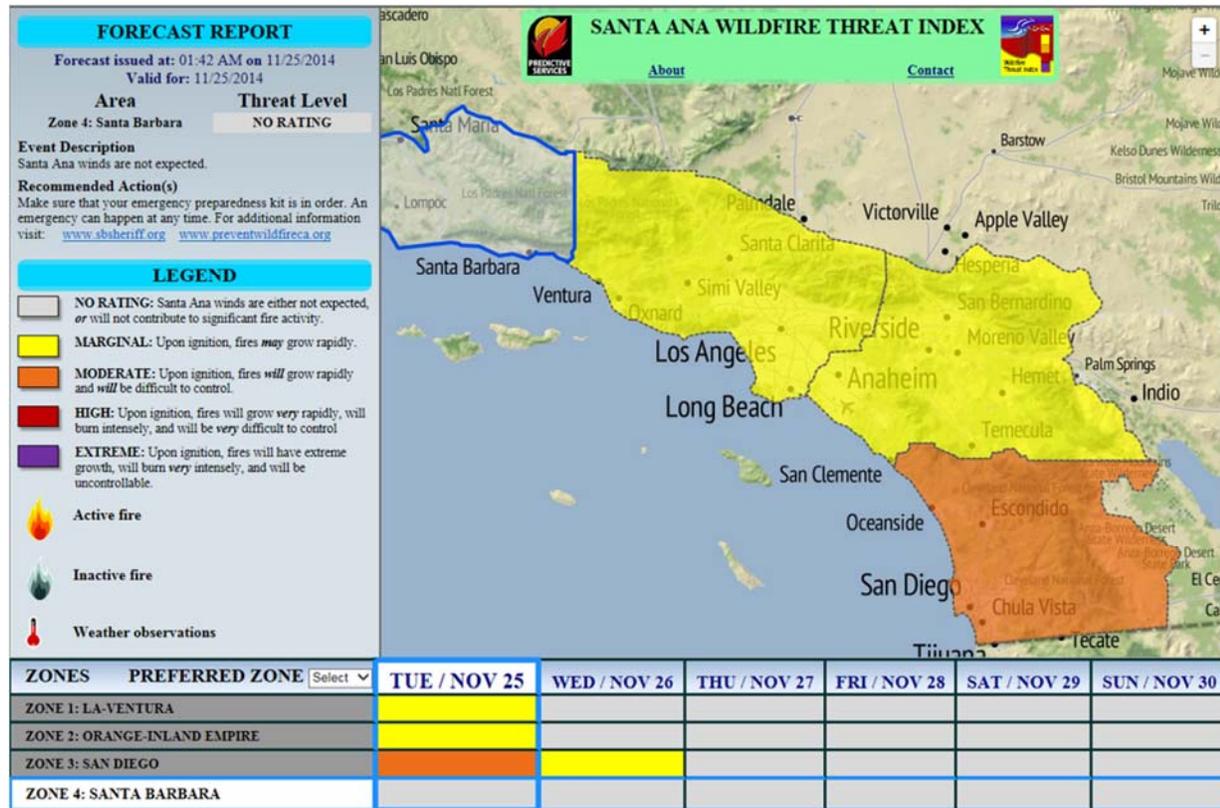
South Ops:
<http://gacc.nifc.gov/oscc/predictive/weather/myfiles/Podcast.html>

South Ops Mobile Version:
http://gacc.nifc.gov/oscc/predictive/weather/myfiles/Mobile_Webcast.m4v

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 6-day 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 6:30 am.



Location: <http://santaanawildfirethreat.com> Also on Twitter@ sawti_forecast

JOINT RESPONSIBILITIES

The National Weather Service (NWS) and the California Wildland Fire Coordination Group (CWCG) use a joint Fire Weather Program Assessment Team (FWPAT) to evaluate fire weather services in California. This team may make recommendations for improvements and/or changes to the program, and they also help ensure fire weather information is coordinated between agencies.

1. California Fire Weather Web Page and the Emergency Communication Center Dispatch Area (ECCDA) Forecast Summaries

An interagency fire weather web page for California is available at: <http://www.wrh.noaa.gov/s to/ca fw/>. This web site serves as a portal for fire weather information for California, including links to fire weather forecasts, SPOT forecasts, current conditions, and much more.

Emergency Communication Center Dispatch Area (ECCDA) Forecast Summaries are also available from this web site. These simplified fire weather summaries are meant to be used for fire agency radio broadcasts while at the same time providing the most essential daily weather information. Any Red Flag Warning or Fire Weather Watch headlines shown in the ECCDA Forecast Summaries are linked to the actual watch or warning product. All forecast segments within an ECCDA are listed at the beginning of the forecast and can be mouse clicked to jump immediately to that segment.

2. Training

Meteorological training can be provided by both NWS and Predictive Services (PS). The NWS forecast offices primarily handle local courses that occur within their area of responsibility. Predictive Services' primary role is with regional and national level courses.

Requests for training from NWS offices should be directed to that office's Fire Weather focal point or the Meteorologist-In-Charge. If the office is not able to provide an instructor for a course, that office will assume the responsibility for finding an instructor. Requests for training from the PS units should be directed to the Training Coordinator or PS program manager. In all cases, sufficient advance notice (\geq six weeks whenever possible) should be given to allow for scheduling and proper preparation.

Costs incurred by NWS in providing training assistance (other than salary costs for a normal non-holiday weekday) will be borne by the requesting agency. Costs incurred by PS instructors are covered in their annual budget, without need for reimbursement.

Below is a table outlining the instructor availability for 2016:

Name Of Office	Instructors qualified to teach S-190, S-290	Other Classes that the listed office has at least one meteorologist qualified to instruct
Redding Predictive Services	Brenda Belongie Steve Leach	S-390, S-490, S-491, RX-410 WIMS, S-144, ECCO, RX-341
Riverside Predictive Services	Tom Rolinski Rob Krohn	S-390, S-490, S-491, WIMS, RX10
Eureka	Jeff Tonkin	S-390, S-490, RX-300
Hanford	Cindy Bean Dan Harty Jim Dudley	S-390, RX-300
Las Vegas	Jim Harrison	S-390
Medford	Frederic Bunnag Brett Lutz Noel Keene Michael Stavish Thomas Wright Ryan Sandler	S-390, S-490
Monterey	Ryan Walbrun Matt Mehle	S-390, S-490, S-590
Oxnard	Rich Thompson Dave Gomberg	S-390, S-490
Phoenix	Valerie Meyers	S-390, S-490
Reno	Alex Hoon Jim Wallmann Edan Weishahn	S-390, S-490
Sacramento	Mike Smith Jason Clapp	S-390, S-490, S-590, RX-300
San Diego	Stefanie Sullivan	S-390

3. Coordination Conference Calls

Coordination conference calls will be conducted, as warranted between the PS units and the WFOs during fire season. **See the document titled “Predictive Services Coordination Calls in the appendix section.**

4. National Fire Danger Rating System (NFDRS) Forecasts.

The NWS provides weather forecasts for parameters that permit the NFDRS software to predict the next day's fire danger indices that the land management agencies utilize for fire management decision support. Criteria for Issuance – NWS will issue daily forecasts for use by the NFDRS during periods determined in consultation with land management agencies. Dates during which these forecasts are needed vary by year and by office. NWS NFDRS trend or point forecasts are usually available to fire agencies by 1500 LST/1600 LDT/2300 Z. The goal of the land management agencies is to provide quality observations in a timeframe that provides the NWS an hour to review the NFDRS observations and publish the forecasts. In order to meet these goals, the daily NFDRS fire weather observations must be made available to the NWS from WIMS in collectives by 1415 LST/1515 LDT/2215Z. NFDRS stations that do not have valid observations available in WIMS on time will not have next day fire danger indices available.

The observation data that the land management agencies utilize for NFDRS outputs is typically available to the agencies between 1300 LST/1400 LDT/ 2100 Z and 1340 LST/1440 LDT/2140 Z. To facilitate timely delivery of the NFDRS observations to the NWS, the agencies must strive to have their local quality control and data entry completed in WIMS by 1345 LST/1445 LDT/2145 Z. Collectives are run at 10-minute intervals beginning at 1330 LST/1430 LDT/ 2130 Z, with the last collective run at 1415 LST/1515 LDT/2215 Z. Depending on local needs, these times can vary. It is important that land management agencies and their supporting WFO discuss and mutually agree to the timeframes that best meet their collective needs.

Users who fail to meet the last collective, and want an NFDRS forecast for the following day, must coordinate with their local WFO to try and arrange for an updated forecast. Solutions to on-going timeliness problems should be coordinated between the local user, WFO and GACC Predictive Services Unit. NWS forecasters should contact the USFS Fire & Aviation Management Helpdesk (24/7) (1-866-224-7677) for assistance in dealing with WIMS issues.

Procedures – For every NFDRS observation received from WIMS at the 1415 LST (1515 LDT) collective, forecast weather parameters for 1300 LST (1400 LDT) the next day will be produced. This will occur through zone trend, station trend, or station specific (point) forecasts. Regardless of the forecast methodology, forecast values for NFDRS stations should not unduly deviate from historical possibility for those stations. All NFDRS observation stations are assigned a six-digit station identification number for use in WIMS. The Northern California or Southern California PS units must be contacted for assignment of a six-digit number for any new station, or for any changes in location made to existing stations that already have a WIMS ID number. The PS units will notify the NWS of any new or relocated NFDRS stations.

NWS forecasters should contact the USFS Fire and Aviation Management help desk at 1-866-224-7677 for assistance in WIMS issues.

NFDRS Collective and Bulletin Times (local variations allowed depending on need)

<i>WFO</i>	<i>GATEWAY Routine</i>	<i>Header</i>	<i>1st OBS Collective</i>	<i>2nd OBS Collective</i>	<i>Forecast Obs</i>	<i>GATEWAY Routine</i>	<i>Header</i>	<i>Observed NFDRS Indices Bulletin #1</i>	<i>Observed NFDRS Indices Bulletin #2</i>	<i>Forecast NFDRS Indices Bulletin #1</i>	<i>Forecast NFDRS Indices Bulletin #2</i>
<i>Eureka</i>	<i>SENDOBS</i>	<i>SHUS66</i>	<i>2145</i>	<i>2215</i>	<i>2245</i>	<i>SENDNFDR</i>	<i>FNUS46</i>	<i>2145</i>	<i>2215</i>	<i>2245</i>	<i>none</i>
<i>Hanford</i>	<i>SENDOBS</i>	<i>SHUS66</i>	<i>2145</i>	<i>2215</i>	<i>2245</i>	<i>SENDNFDR</i>	<i>FNUS46</i>	<i>2145</i>	<i>2215</i>	<i>2245</i>	<i>none</i>
<i>Las Vegas</i>	<i>SENDOBS</i>	<i>SHUS65</i>	<i>2115</i>	<i>2230</i>	<i>2245</i>	<i>SENDNFDR</i>	<i>FNUS45</i>	<i>2115</i>	<i>2230</i>	<i>2245</i>	<i>2245</i>
<i>Los Angeles</i>	<i>SENDOBS</i>	<i>SHUS66</i>	<i>2145</i>	<i>2200</i>	<i>2245</i>	<i>SENDNFDR</i>	<i>FNUS46</i>	<i>2145</i>	<i>2200</i>	<i>2245</i>	<i>none</i>
<i>Medford</i>	<i>SENDOBS</i>	<i>SHUS66</i>	<i>2155</i>	<i>2215</i>	<i>2305</i>	<i>SENDNFDR</i>	<i>FNUS46</i>	<i>2200</i>	<i>2215</i>	<i>2305</i>	<i>none</i>
<i>Monterey</i>	<i>SENDOBS</i>	<i>SHUS66</i>	<i>2145</i>	<i>2200</i>	<i>2245</i>	<i>SENDNFDR</i>	<i>FNUS46</i>	<i>2145</i>	<i>2200</i>	<i>2245</i>	<i>none</i>
<i>Phoenix</i>	<i>SENDOBS</i>	<i>SHUS65</i>	<i>2115</i>	<i>2200</i>	<i>2245</i>	<i>SENDNFDR</i>	<i>FNUS45</i>	<i>2115</i>	<i>2200</i>	<i>2245</i>	<i>none</i>
<i>Reno</i>	<i>SENDOBS</i>	<i>SHUS65</i>	<i>2145</i>	<i>2200</i>	<i>2255</i>	<i>SENDNFDR</i>	<i>FNUS45</i>	<i>2150</i>	<i>2205</i>	<i>2245</i>	<i>none</i>
<i>Sacramento</i>	<i>SENDOBS</i>	<i>SHUS66</i>	<i>2145</i>	<i>2205</i>	<i>2301</i>	<i>SENDNFDR</i>	<i>FNUS46</i>	<i>2145</i>	<i>2205</i>	<i>2245</i>	<i>none</i>
<i>San Diego</i>	<i>SENDOBS</i>	<i>SHUS66</i>	<i>2145</i>	<i>2200</i>	<i>2245</i>	<i>SENDNFDR</i>	<i>FNUS46</i>	<i>2145</i>	<i>2200</i>	<i>2245</i>	<i>none</i>

Contact Information

Office

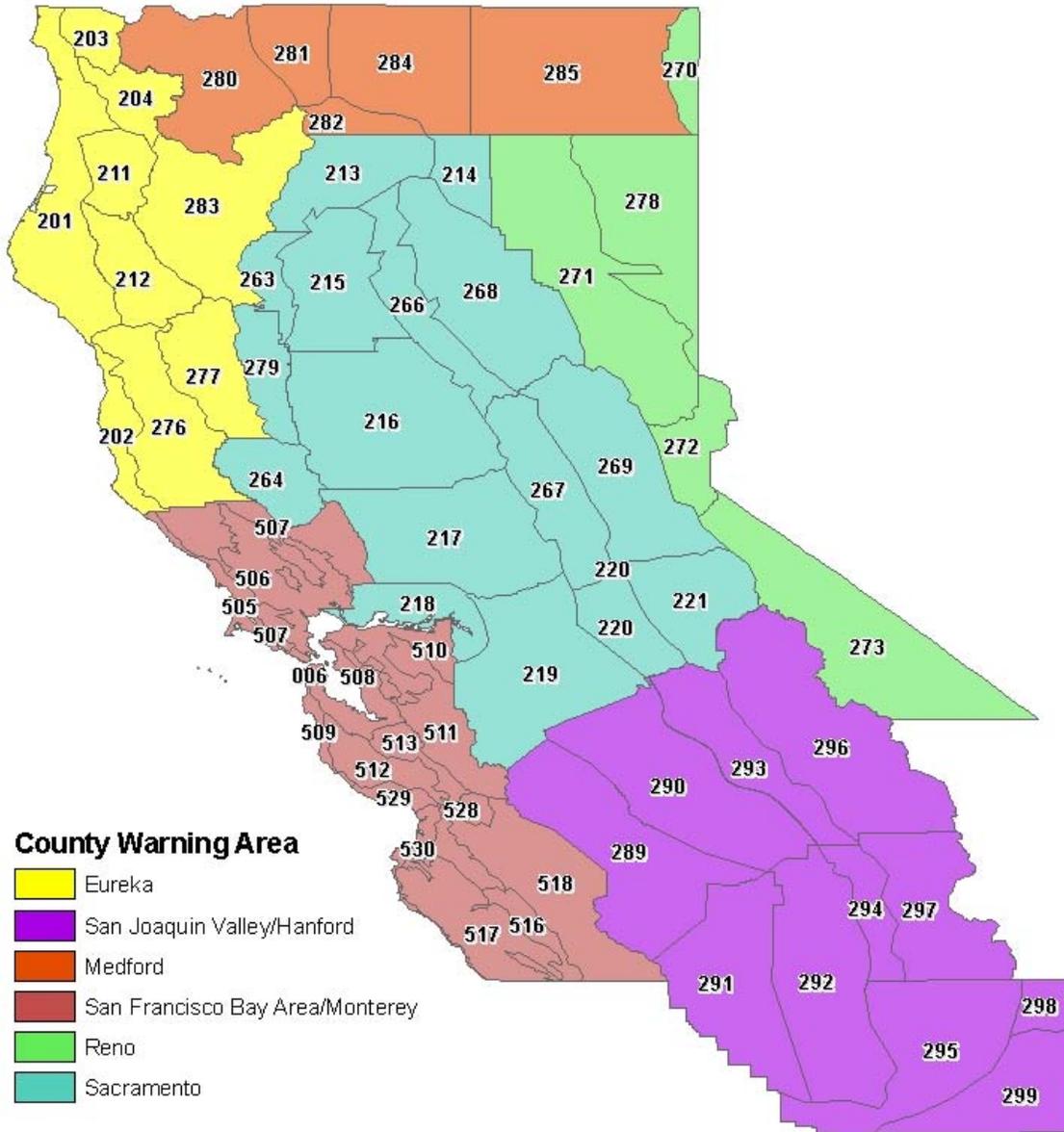
Name

Position

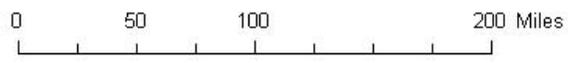
<p>Northern California PSU 6101 Airport Road, Redding, CA 96002 FAX Number: (530) 226-2742 WEB: http://gacc.nifc.gov/oncc/predictive/weather/index.htm Office Email: redning.fwx@fire.ca.gov Hours: Fire Season 7am-5pm daily, Low Season 7am-5pm M-F</p>	<p>Vacant Cathy Johnson Russ Gripp Brenda Belongie Steve Leach Vacant</p>	<p>PSU Manager Fire Intelligence Coordinator NFDRS/WIMS/RAWS Lead USFS GACC Meteorologist BLM GACC Meteorologist Intelligence Officer</p>
<p>Southern California PSU 2524 Mulberry St. Riverside, CA 92501-2200 FAX Number: (951) 276-6439 WEB: http://gacc.nifc.gov/oscc/predictive/weather/index.htm Office Email: riverside.fwx@fire.ca.gov Hours: Fire Season 7am-5pm daily, Low Season 7am-5pm M-F</p>	<p>Tom Rolinski Matt Shameson Rob Krohn Bruce Risher Vacant</p>	<p>USFS GACC Meteorologist/ PS Mgr. USFS GACC Meteorologist USFS GACC Meteorologist Intelligence Coordinator Intelligence Officer</p>
<p>NWS Eureka Forecast Office 300 Startare Dr. Eureka, CA 95501-6000 FAX Number: (707) 443-6195 WEB: http://www.weather.gov/eureka Backup Offices: WFO Monterey and WFO Medford</p>	<p>Troy Nicolini Jeff Tonkin Vacant</p>	<p>Meteorologist In Charge Fire Weather Program Mgr / IMET Warning Coordination Meteorologist</p>
<p>NWS Hanford Forecast Office 900 Foggy Bottom Rd. Hanford, CA 93230-5236 FAX Number: (559) 584-1152 WEB: http://www.weather.gov/hanford Backup Office: WFO Sacramento</p>	<p>Kevin Lynott Cindy Bean Dan Harty Jim Dudley Jerald Meadows</p>	<p>Meteorologist In Charge Fire Weather Program Mgr. IMET IMET Warning Coordination Meteorologist</p>

NWS Las Vegas Forecast Office 7851 Dean Martin Dr. Las Vegas, NV 89139-6628 FAX Number: (702) 263-9759 WEB: http://www.weather.gov/lasvegas Backup Offices: WFO Reno and WFO Elko	Todd Lericos Jim Harrison Andy Gorelow Daniel Berc	Meteorologist In Charge Fire Weather Program Mgr. IMET Warning Coordination Meteorologist
NWS Los Angeles/Oxnard Forecast Office 520 N. Elevar St. Oxnard, CA 93030 FAX Number: (805) 988-6613 WEB: http://www.weather.gov/losangeles Backup Offices: WFO San Diego	Mark Jackson Dave Gomberg Rich Thompson Eric Boldt	Meteorologist In Charge Fire Weather Program Mgr. IMET Warning Coordination Meteorologist
NWS Medford Forecast Office 4003 Cirrus Dr. Medford, OR 97504 FAX Number: (541) 776-4333 WEB: http://www.weather.gov/medford Backup Offices: WFO Eureka	John Lovegrove Brett Lutz Frederic Bunnag Shad Keene Ryan Sandler	Meteorologist In Charge Fire Weather Program Mgr. IMET IMET Warning Coordination Meteorologist
NWS Phoenix Forecast Office PAB 500, PO Box 52025, Phoenix, AZ 85072-2025 FAX Number: (602) 267-8051 WEB: http://www.weather.gov/phoenix Backup Offices: WFO Tucson	Jeril Estukian Valerie Meyers Ken Waters	Meteorologist In Charge Fire Weather Program Mgr / IMET Warning Coordination Meteorologist
NWS Reno Forecast Office 2350 Raggio Parkway, Reno, NV 89512-3900 FAX Number: (775) 673-8110 WEB: http://www.weather.gov/reno Backup Offices: WFO Elko	Jon Mittelstadt Alex Hoon Edan Weishahn James Wallmann Chris Smallcomb	Meteorologist In Charge Fire Weather Program Mgr. / IMET Asst. Fire Weather Program Mgr. IMET Warning Coordination Meteorologist
NWS Sacramento Forecast Office 3310 El Camino Ave. Room 228 Sacramento, CA 089512-3900 FAX Number: (916) 979-3052 WEB: http://www.weather.gov/sacramento Backup Offices: WFO Hanford	Dan Keeton Jason Clapp Courtney Obergfell Mike Smith Michelle Mead	Meteorologist In Charge Fire Weather Program Mgr. / IMET Asst. Fire Weather Program Mgr. IMET Warning Coordination Meteorologist
NWS San Diego Forecast Office 11440 W. Bernardo Ct. Ste. 230, San Diego, CA 92127 FAX Number: (858) 675-8717 or 8712 WEB: http://www.weather.gov/sandiego Backup Offices: WFO Los Angeles	Roger Pierce Stefanie Sullivan Alex Tardy	Meteorologist In Charge Fire Weather Program Mgr / IMET Warning Coordination Meteorologist
NWS San Francisco Bay Area Forecast Office 21 Grace Hopper Ave., Stop 5, Monterey, CA 93943 FAX Number: (831) 656-1747 WEB: http://www.weather.gov/sanfrancisco Backup Offices: WFO Los Angeles	Jesse Haro Ryan Walbrun Matt Mehle Brian Garcia	Meteorologist In Charge Fire Weather Program Mgr. / IMET IMET Warning Coordination Meteorologist

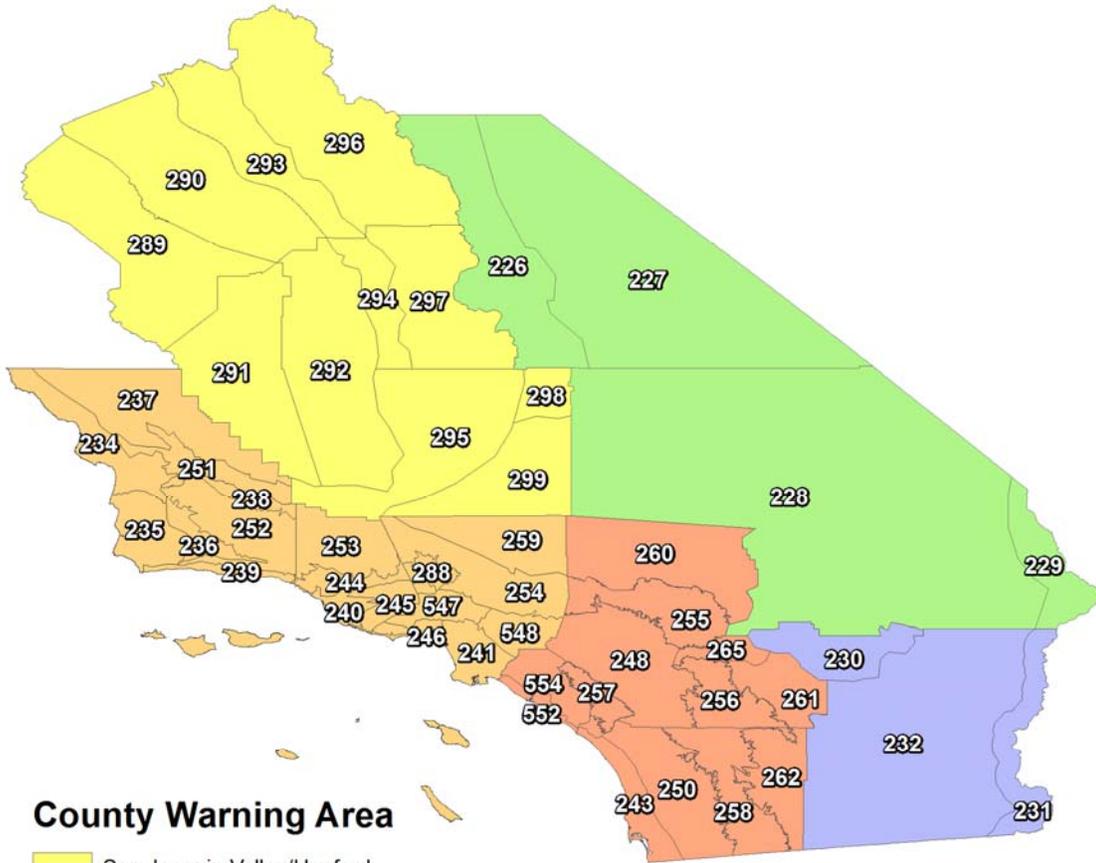
Northern California Fire Weather Zones



- County Warning Area**
- Eureka
 - San Joaquin Valley/Hanford
 - Medford
 - San Francisco Bay Area/Monterey
 - Reno
 - Sacramento

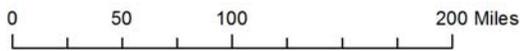


Southern California Fire Weather Zones



County Warning Area

- San Joaquin Valley/Hanford
- Los Angeles/Oxnard
- Phoenix
- San Diego
- Las Vegas



NWS Eureka								
STATION NAME WIMS	WIMS ID	AGENCY	UNIT	FCST ZONE	LAT	LON	ELEV	Remarks
ALDERPOINT	40423	State	HUU	556	40.186111	-123.590277	923	
BACKBONE	40518	FS	SHF	591	40.888766	-123.142022	4504	
BIG BAR	40501	FS	SHF	591	40.742150	-123.249108	1722	
BOONVILLE	41001	State	MEU	557	38.987639	-123.347528	618	
BRUSH MTN L.O.	40404	FS	SRF	555	40.913962	123.668741	3941	
CAMP SIX LOOKOUT	40101	FS	SRF	556	41.830489	-123.876806	3778	
EEL RIVER (MNF)	41005	FS	MNF	557	39.825000	-123.083333	1500	
EEL RIVER CAMP	40421	State	HUU	556	40.138389	-123.823749	446	
FIVE CENT	40520	FS	SHF	591	40.751111	-122.917777	2613	
FRIEND MTN	40512	FS	SHF	591	40.505000	-123.343000	4396	
GASQUET 2	40102	FS	KNF	556	41.837892	-123.945201	433	Renamed and changed location in 2015
HAYFORK	40503	FS	SHF	591	40.548000	-123.165000	2340	
HOOPA	40408	BIA	HIA	555	41.048223	-123.670961	365	
KNEELAND	40429	State	HUU	560	40.7199443	-123.9282776	2724	
LAYTONVILLE	41019	State	MEU	557	39.702361	-123.484944	1838	
MADRIVER	40507	FS	SRF	555	40.462999	-123.523309	2775	
MCGUIRES	41017	State	MEU	557	39.352667	-123.601167	400	
MENDOCINOPASS	41018	FS	MNF	557	39.807098	-122.945883	5328	
PATTYMOCUS	40812	FS	SHF	594	40.2883333	-122.869999	3889	
RODEO VALLEY	41015	State	MEU	557	39.668028	-123.321194	2428	
RUTH STATION	40508	FS	SRF	555	40.2505853	-123.3186645	2732	
SCHOOLHOUSE	40425	NPS	RNP	560	41.1383333	-123.9055555	2640	
SCORPION	40517	FS	SHF	591	41.1116667	-122.0113889	4400	
SHIP MTN L.O.	40105	FS	SRF	556	41.727800	-123.794200	5300	
SLATE CREEK	40430	FS	SRF	555	41.341247	-123.658994	4170	
SODA CREEK	41406	FS	MNF	557	39.4252777	-122.9772222	1773	
TRINITY CAMP	40516	State	SHU	591	40.786444	-122.804472	3308	
UNDERWOOD	40519	FS	SRF	555	40.722222	-123.495277	2560	
WESTSIDE	40428	NPS	RNP	560	41.2233333	-124.0008333	1291	
YOLLABOLLA	40511	FS	SHF	594	40.338000	-123.065000	4786	

NWS Las Vegas								
STATION NAME WIMS	WIMS ID	AGENCY	UNIT	FCST ZONE	LAT	LON	ELEV	Remarks
HORSE THIEF SPRING	45129	BLM	CDD	543	35.770555	-115.909166	5000	
HUNTERMOUNTAIN	44809	NPS	DVL	543	36.550000	-117.473611	6880	
LOST HORSE	45614	NPS	JOT	543	34.002222	-116.183888	4100	
MIDHILLS	45128	BLM	CDD	543	35.166111	-115.415277	5413	
OAK CREEK	44804	FS	INF	517	36.833333	-118.252222	4280	
OPAL MOUNTAIN	45127	BLM	CDD	543	35.156944	-117.176944	3240	
OWENS VALLEY	44803	State	BDU	517	37.391000	-118.552555	4640	
PANAMINT	44806	BLM	CDD	543	36.116666	-117.083333	6880	Currently out of Service. Scheduled to be moved 2016.

NWS Oxnard (Los Angeles)								
STATION NAME WIMS	WIMS ID	AGENCY	UNIT	FCST ZONE	LAT	LON	ELEV	Remarks
ACTON	45438	L Gov	LAC	506	34.4458333	-118.200000	2600	
ARROYO GRANDE	44915	State	SLU	500	35.179056	-120.391833	1048	
BEVERLY HILLS	45442	L Gov	LAC	501	34.125000	-118.420277	1260	
BIG PINES	45401	FS	ANF	507	34.3788889	-117.691944	6917	
BRANCH MOUNTAIN	44901	FS	LPF	525	35.183889	-120.083333	3773	
CAMP 9	45441	L Gov	LAC	506	34.353056	-118.418333	4000	
CARRIZO	44916	BLM	BBD	525	35.0963889	-119.0127778	2490	
CASITAS	45308	FS	LPF	504	34.498175	-119.371245	645	
CHEESEBORO	45313	NPS	SAMO	505	34.186575	-118.719561	1650	
CHILAO	45436	FS	ANF	507	34.330000	-118.036667	5450	
CHUCHUPATE	45302	FS	LPF	503	34.806367	-119.013625	5283	
CLAREMONT	45443	L Gov	LAC	501	34.138611	-117.711944	1645	

CLEAR CREEK	45405	FS	ANF	506	34.273333	-118.158333	3648	
DEL VALLE	45445	L Gov	LAC	505	34.4311111	-118.665833	1278	
FIGUEROA	45201	FS	LPF	500	34.734442	-120.006572	3179	
GRASSMOUNTAIN	45449	FS	ANF	506	34.6408333	-118.414167	4626	
HENNINGER FLATS	45439	L Gov	LAC	509	34.1930555	-118.0869444	2800	
LAPANZA	44914	State	SLU	525	35.380694	-120.188111	1633	
LAKEPALMDALE	45450	L Gov	LAC	519	34.537200	-118.101400	2980	
LASTABLAS	44904	State	SLU	520	35.656472	-120.924139	994	
LEOCARRILLO	45447	L Gov	LAC	501	34.0455556	-118.935833	50	
LOSPRIETOS	45203	FS	LPF	500	34.544458	-119.791131	977	
MALIBU	45433	L Gov	LAC	505	34.058333	-118.633333	1575	
MALIBUCANYON	45452	L Gov	LAC	505	34.083889	-118.703333	610	
MILL CREEK	45435	FS	ANF	507	34.3883333	-118.089999	4999	
MONTECITO	45218	FS	LPF	501	34.461397	-119.649014	1617	
MONTECITY CITY	45221	L Gov	MTC	501	34.445	-119.626	285	
NEWHALLPASS	45454	L Gov	LAC	505	34.3369444	-118.520278	2135	
OZENA	45303	FS	LPF	503	34.681778	-119.353731	3690	
POPPYPARK	45440	L Gov	LAC	519	34.732500	-118.383333	2760	
ROSE VALLEY II	45314	FS	LPF	503	34.543386	-119.184931	3328	
SADDLEBACK BUTTE	45444	L Gov	LAC	519	34.668333	-117.820833	2590	
SAN RAFAEL HILLS	45451	L Gov	LAC	505	34.194444	-118.212528	1770	
SANTA CRUZ ISLAND	45216	NPS	CNP	501	33.994200	-119.717253	292	
SANTA FE	45437	L Gov	LAC	501	34.1208333	-117.945833	500	
SANTA ROSA ISLAND	45217	NPS	CNP	501	33.978883	-120.078800	1284	
SAUGUS	45412	L Gov	LAC	505	34.425000	-118.525000	1450	
TANBARK	45421	FS	ANF	509	34.200000	-117.756666	2730	
TEMESCAL	45307	FS	LPF	505	34.473944	-118.761564	1122	
TONNERCANYON	45453	L Gov	LAC	501	33.947500	-117.822222	1340	
TOPANGA	45456	L Gov	LAC	505	34.136358	-118.605022	1525	
VANDENBERG	45220	FS	LPF	500	34.758647	-120.485969	1019	
WARM SPRINGS L.O.	45426	FS	ANF	506	34.595000	-118.576667	4930	
WHITAKER	45448	L Gov	LAC	506	34.5686111	-118.740278	4120	
WHITTIER HILLS PARK	45446	L Gov	WIT	501	33.984444	-118.007500	950	

NWS Medford								Remarks
STATION NAME WIMS	WIMS ID	AGENCY	UNIT	FCSTZONE	LAT	LON	ELEV	
ASH CREEK	40244	FS	SHF	584	41.2760	-121.979000	3700	
BLUE RIDGE (KNF)	40203	FS	KNF	586	41.269083	-123.189003	5885	
BOLAM	40247	FS	SHF	584	41.534125	-122.209767	4483	
BRAZZI RANCH	40242	State	SKU	588	41.675917	-122.598777	3090	
CALLAHAN#2	40245	FS	KNF	587	41.299764	-122.825535	3911	
COLD SPRINGS	40314	FS	MDF	590	41.7816666	-120.3183333	6313	
COLLINS BALDY LO	40237	FS	KNF	587	41.775166	-122.951929	5493	
DEVIL'S GARDEN	40309	State	LMU	590	41.528528	-120.671472	5049	
DUTCH-INDY	40246	FS	KNF	587	41.6438888	-123.443888	2310	
INDIAN WELL	40233	NPS	BNP	590	41.734722	-121.544176	5049	
JUANITA	40240	FS	KNF	589	41.801986	-122.109853	5176	
LOWER KLAMATH	40310	FWS	KBR	589	41.9991667	-121.0116667	4098	
MT SHASTA	40217	FS	SHF	584	41.315554	-122.316571	3591	
OAKKNOLL	40218	FS	KNF	587	41.838364	-122.850128	1954	
QUARTZ HILL	40239	State	SKU	587	41.599111	-122.933666	4225	
ROUND MOUNTAIN	40221	FS	MDF	590	41.419999	-121.458333	5258	
RUSH CREEK	40312	FS	MDF	590	41.294444	-120.869444	4720	
SAWYERS BAR	40222	FS	KNF	586	41.301100	-123.129700	2514	
SLATER BUTTE	40225	FS	KNF	585	41.858340	-123.353761	4612	
SOMES BAR	40231	FS	SRF	586	41.390361	-123.492210	904	
TIMBER MOUNTAIN	40306	FS	MDF	590	41.634722	-121.300833	5140	
VAN BREMMER	40243	FS	KNF	589	41.642972	-121.794772	5310	

WEED	40228	State	SKU	588	41.478917	-122.454611	2929	
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NWS Phoneix

STATION NAME WIMS	WIMS ID	AGENCY	UNIT	FCSTZONE	LAT	LON	ELEV	Remarks
FISH CREEK MTN.	45802	BLM	CDD	310	32.983055	-116.057499	760	
RICE VALLEY	45620	BLM	CDD	232	34.062500	-114.707222	820	
SQUAW LAKE	45801	BLM	CCD	310	32.908333	-114.494444	400	

NWS Reno

STATION NAME WIMS	WIMS ID	AGENCY	UNIT	FCSTZONE	LAT	LON	ELEV	Remarks
ASH VALLEY	40726	BLM	SUD	572	41.0519444	-120.686111	5100	
BARON	42616	FS	TMU	542	38.854167	-120.024167	6247	
BEAR FLAT	40313	FS	MDF	590	41.2952778	-120.313889	6828	
BENTON	43708	FS	INF	518	37.8430556	-118.483889	5377	
BLACK MTN 2	40731	FS	LNF	598	40.724566	-121.178956	5725	New NFDRS station
BLUE DOOR	40725	BLM	NOD	572	41.0547222	-120.337499	5615	
BOGARD	40703	FS	LNF	598	40.592066	-121.077927	5666	
BRIDGEPORT	43702	FS	HTF	576	38.248388	-119.219722	6560	
BULL FLAT	40728	BLM	NOD	572	40.4808333	-120.113888	4395	
COYOTE	49902	FS	PNF	598	39.9877777	-120.476666	5548	
CRESTVIEW	43709	FS	INF	518	37.737431	-118.996605	7561	
DENTEN CREEK	40921	FS	PNF	598	39.779475	-120.594494	5149	Active NFDRS station since 2015
DEXTER	43711	FS	INF	518	37.838916	-118.771682	7982	
DOG VALLEY	41302	FS	TYF	450	39.571666	-120.038333	5880	
DOYLE	40724	BLM	NOD	450	40.49166	-120.093611	4240	
GORDON	40730	FS	LNF	598	40.7586111	-120.896111	6200	
GRASSHOPPER	40721	State	LMU	598	40.781694	-120.784361	6058	
HIDDEN VALLEY	40732	BLM	NOD	598	40.441905	-120.626957	4440	New NFDRS station
HOMEWOOD	41909	County	TMU	542	39.083515	-120.171314	7192	New NFDRS station
HORSE LAKE	40727	BLM	NOD	572	40.630000	-120.502000	5100	
JUNIPER CREEK	40308	BLM	NOD	572	41.3322222	-120.472500	4372	
LADDER BUTTE	40723	FS	LNF	598	40.8072222	-121.296667	5644	Moved from STO(597) to REV(598)
LAUFMAN	40709	FS	PNF	599	40.1416667	-120.353333	4800	
MARKLEEVILLE	42802	FS	TOF	576	38.684999	-119.768333	5501	
PIERCE	40915	FS	PNF	598	40.2461111	-120.642222	5811	
RAVENDALE	40714	BLM	NOD	572	40.754166	-120.333333	5491	
RICE CANYON	41311	FS	TNF	542	39.525013	-120.328839	6943	Active NFDRS station since 2015
ROCK CREEK	43710	FS	INF	518	37.559836	-118.678408	7095	
STAMPEDE	41310	FS	TNF	541	39.4833333	-120.075000	6600	
WALKER	43707	FS	TYF	576	38.570000	-119.455000	5680	
WESTWOOD	40719	State	LMU	598	40.306000	-120.902250	6155	Moved from STO(597) to REV(598)

NWS Sacramento

STATION NAME WIMS	WIMS ID	AGENCY	UNIT	FCSTZONE	LAT	LON	ELEV	Remarks
ALDERS SPRINGS	41101	FS	MNF	595	39.651749	-122.724150	4500	
ARBUCKLE BASIN	40632	State	SHU	595	40.437972	-122.829805	2452	
BALD MOUNTAIN	42603	FS	ENF	538	38.900833	-120.685555	4613	
BANGOR	41201	State	BTU	596	39.380777	-121.386194	803	
BANNER ROAD	43211	State	TCU	539	38.284416	-120.489750	2803	Active NFDRS Station
BEAVER	42601	FS	ENF	538	38.519444	-120.327777	5700	
BEN BOLT	42612	State	AEU	552	38.590833	-120.933611	905	
BROOKS	42202	State	LNU	558	38.738389	-122.14475	354	
BUCK MEADOWS	43603	FS	STF	539	37.823333	-120.097500	3200	
CARPENTER RIDGE	41213	State	BTU	597	40.0686111	-121.562694	4812	
CASHMAN	40916	FS	PNF	599	40.001944	-120.915000	4448	
CHESTER	40904	FS	LNF	597	40.296999	-121.243950	4530	
COHASSET	41211	State	BTU	596	39.871833	-121.768972	1733	
COLBY MOUNTAIN	40801	FS	LNF	597	40.145903	-121.522522	6004	Converted to RAWs - Active NFDRS Station

CORNING	40814	State	TGU	595	39.939083	-122.168666	289	
COTTAGE	43210	FS	STF	539	38.3460361	-120.229300	6058	
COUNTYLINE	41410	BLM	NOD	557	39.0188889	-122.411944	2085	
DUNCANPEAK	41901	FS	TNF	536	39.1438889	-120.508889	7182	
EAGLEPEAK	40802	FS	MNF	595	39.9277778	-122.640278	3713	
GREENSPRING	43613	State	TCU	539	37.834194	-120.503027	1108	
HELL HOLE	42608	FS	ENF	538	39.0716667	-120.421666	5240	
HIGH GLADE LOOKOUT	41402	FS	MNF	595	39.2083333	-122.808333	4840	
HUMBUG SUMMIT	40918	FS	LNF	596	40.1095360	-121.386776	6730	Active NFDRS Station
JARBOGAP	41214	State	BTU	599	39.735944	-121.488944	2485	
KONOCTI	41411	State	LNU	558	38.911917	-122.706444	2163	
LADDERBUTTE	40723	FS	LNF	597	40.8072222	-121.296667	5644	
LASSEN LODGE	40815	State	TGU	597	40.344139	-121.713722	4159	
LINCOLN	41907	State	NEU	554	38.882499	-121.268305	200	
MANZANITALAKE	40609	FS	LNF	597	40.540114	-121.580164	5725	
MOUNT ZION	42701	State	AEU	552	38.390055	-120.652388	2967	
MT ELIZ	43605	FS	STF	539	38.063055	-120.246944	4938	
MULEMOUNTAIN	43637	NPS	WNP	595	40.566330	-122.504390	2064	
OAK MTN	40635	FS	SHF	593	41.006000	-121.9830000	2670	
OPENSHAW	41215	State	BTU	596	39.5839833	-121.6351670	268	Active NFDRS Station
OWENS CAMP	42611	FS	ENF	538	8.7333333	-120.250000	5240	
PANTHER SPRINGS	40805	FS	LNF	596	40.2419832	-121.775972	3343	Active NFDRS Station
PIKE CNTY LO	41701	FS	PNF	599	39.475000	-121.202500	3714	
PILOT HILL	42609	State	AEU	552	38.831666	-121.009250	1249	
PINECREST #2	43615	FS	STF	540	38.186289	-120.010106	5698	
QUINCY	40910	FS	PNF	599	39.9733333	-120.941944	3652	
READER RANCH	41809	State	NEU	535	39.303555	-121.117249	1968	
REDDING	40611	FS/State	SHU	595	40.515792	-122.292175	499	
SACRAMENTO NWR	41102	FWS	MNF	595	39.366666	-122.150000	95	
SADDLEBACK	41304	FS	TNF	536	39.637500	-120.86389	6690	
SECRET TOWN	41808	State	NEU	535	39.183777	-120.884639	2826	
SEEDORCHARD	41908	FS	TNF	536	39.091561	-120.731934	4355	
SIMS	40618	FS	SHF	593	41.073333	-122.373333	2580	
SMITH PEAK LOOKOUT	44115	FS	STF	539	37.800561	-120.10091	3870	
SOLDIER MTN	40630	State	SHU	593	40.926472	-121.584583	3704	
STEELY FORK	42615	FS	ENF	538	38.626139	-120.527811	4006	
STONYFORD	41503	FS	MNF	595	39.367286	-122.572889	1263	
SUGARLOAF (SHF)	40614	FS	SHF	592	40.916000	-122.438000	3214	
SWAIN	40920	FS	LNF	597	40.445269	-121.104099	6099	Active NFDRS Station
THOMESCREEK	40816	State	TGU	595	39.854277	-122.609944	1129	
WESTWOOD	40719	State	LMU	597	40.306000	-120.902250	6155	
WHISKEYTOWNHQ2	40629	NPS	WNP	595	40.610514	-122.527314	1332	
WHITECLOUD	41806	FS	TNF	536	39.319464	-120.842974	4320	
WHITMORE	40615	State	SHU	596	40.619500	-121.899555	245	

NWS San Diego								Remarks
STATIONNAME WIMS	WIMS ID	AGENCY	UNIT	FCSTZONE	LAT	LOX	ELEV	
ANZA	45616	State	RRU	513	33.555861	-116.674528	3939	
APPLE VALLEY #2	45134	BLM	CDD	514	34.592586	-117.168303	3159	
BEAUMONT	45617	State	RRU	510	33.930499	-116.949917	2604	
BELL CANYON	45735	L Gov	ORC	509	33.551803	-117.572966	764	
BIG PINE FLAT	45102	FS	BDF	511	34.320000	-117.013800	6861	
BURNS CANYON	45125	BLM	CDD	516	34.2083333	-116.620833	6000	
CAMERON FIRE STA	45704	FS	CNF	513	32.721189	-116.464669	3264	
CAMP ELLIOTT	45741	DOD	MFD	508	32.859250	-117.105694	539	
CLARK TRN CTR	45624	State	RRU	509	33.877166	-117.304111	1637	
CONVERSE	45105	FS	BDF	511	34.194059	-116.913112	5618	
CRANSTON	45603	FS	BDF	512	33.737458	-116.838158	1930	

DESCANSO FIRE STA	45707	FS	CNF	513	32.857389	-116.622392	3563	
DEVORE	45113	State	BDU	510	34.221083	-117.404333	2057	
EL CARISO FIRE STA	45619	FS	CNF	509	33.663753	-117.411988	2727	
FAWNSKIN	45101	FS	BDF	511	34.266358	-116.899027	6936	
FREMONT CANYON	45736	L Gov	ORC	509	33.811142	-117.708347	1782	
GOOSE VALLEY FIRE	45724	FS	CNF	509	33.073531	-116.844858	1539	Updated L&L/Elev based on 2010 site visit
HEAPS PEAK	45133	FS	BDF	511	34.234192	-117.140058	6394	
JULIAN	45708	State	MVU	513	33.075639	-116.591750	4238	
KEENWILD	45604	FS	BDF	513	33.708325	-116.716939	4706	
KENWORTHY	45605	FS	BDF	513	33.617125	-116.621714	4562	Portable RAWs at site
LITTLETUJUNGA	45411	FS	ANF	509	34.301388	-118.368333	1390	
LYTLE CREEK	45108	FS	BDF	510	34.234153	-117.480142	2719	
MILL CREEK	45109	FS	BDF	510	34.079832	-117.046761	2511	
MORMON ROCKS	45114	FS	BDF	511	34.316944	-117.503888	3300	
MT LAGUNA	45709	FS	CNF	513	32.881133	-116.428900	5730	
OAK GROVE FIRE STA	45710	FS	CNF	513	33.386169	-116.791450	2767	
PALOMAR	45740	FS	CNF	513	33.352042	-116.862736	5480	
PINE HILLS FIRE STA	45711	FS	CNF	513	33.016642	-116.635401	3647	
POTRERO	45730	State	MVU	513	32.605861	-116.608833	2345	
RANCHITA	45729	State	MVU	513	33.222277	-116.497444	4415	
ROCK CAMP	45111	FS	BDF	511	34.288888	-117.212500	4900	
SAN MIGUEL	45737	FWS	TSR	509	32.686000	-116.978000	425	
SANTAROSA PLATEAU	45623	State	RRU	513	33.518166	-117.229111	1987	
TEMESCAL FIRE STA	45611	FS	CNF	509	33.762803	-117.483656	1123	
VALLEY CENTER	45734	State	MVU	509	33.237083	-117.008555	1483	
VALYERMO	45423	FS	ANF	514	34.446666	-117.845000	3700	
VISTA GRANDE	45612	FS	BDF	513	33.836092	-116.811248	4906	
YUCCA VALLEY	45112	State	BDU	516	34.124055	-116.408000	3246	

NWS Monterey

STATION NAME WIMS	WIMS ID	AGENCY	UNIT	FCST_ZONE	LAT	LON	ELEV	Remarks
ALTAMONT	43407	State	SCU	511	37.693028	-121.609333	1436	
ARROYO SECO	44301	FS	LPF	522	36.235481	-121.479881	879	
ATLAS PEAK	42108	State	LNU	507	38.474872	-122.264800	1934	
BARNABY	42308	L Gov	MRN	559	38.027777	-122.706944	820	
BEN LOMOND	43809	State	CZU	549	37.131994	-122.170000	2630	
BIG ROCK	42310	L Gov	MRN	559	38.048333	-122.622222	1500	
BIG SUR	44302	FS	LPF	521	36.234244	-121.780150	354	
BLACK DIAMOND	43008	L Gov	EBY	547	37.950000	-121.884444	1600	
BRADLEY	44303	State	BEU	523	35.864389	-120.802972	537	
BRIONES	43010	L Gov	EBY	547	37.9341667	-122.129444	1450	
CALAVERAS RD	43405	L Gov	SCU	547	37.553056	-121.844167	1230	
CORDOZA RIDGE	43916	State	SCU	547	37.168342	-121.528453	2331	
CORRALITOS	43802	State	CZU	550	36.990861	-121.805389	327	
DIABLO GRANDE	43502	State	SCU	546	37.329305	-121.295472	1850	
HASTINGS	44319	State	BEU	522	36.388538	-121.551611	1885	
HAWKEYE	42010	State	LNU	559	38.735111	-122.837083	2024	
HERNANDEZ	44409	State	BEU	524	36.382583	-120.855833	3733	
HOLLISTER	44406	State	BEU	523	36.842222	-121.362166	404	
HUNTERLIGGET	44317	FS	LPF	522	36.011811	-121.241728	1120	
LA HONDA	43304	State	CZU	549	37.305222	-122.255306	872	
LAS TRAMPAS	43009	L Gov	EBY	547	37.833889	-122.066944	1760	
LOS ALTOS	43912	L Gov	SCU	549	37.355000	-122.141944	539	
LOS GATOS	43913	L Gov	SCU	549	37.204166	-121.950833	1842	
LOS VAQUEROS	43013	L Gov	SCU	547	37.7883333	-121.736666	1120	
MALLORY RIDGE	43011	L Gov	SCU	547	37.8172222	-121.778888	2040	
MIDDLE PEAK	42312	L Gov	MRN	507	37.927777	-122.587222	2339	
OAKLAND NORTH	43402	L Gov	EBY	550	37.865193	-122.220900	1495	

OAKLANDSOUTH	43403	L Gov	EBY	550	37.786242	-122.144756	1197	
PANOCH	44514	State	FKU	524	36.727055	-120.765861	595	
PARKFIELD	44310	State	BEU	524	35.898417	-120.432389	1507	
PINNACLES	44410	NPS	PIP	524	36.4708333	-121.147222	1322	
POVERTY	43914	L Gov	SCU	550	37.4430556	-121.770833	2067	
PULGAS	43309	L Gov	CZU	549	37.475000	-122.286111	644	
ROSEPEAK	43404	L Gov	EBY	547	37.5019444	-121.735556	3060	
SAN JOSE	43915	L Gov	SCU	511	37.398547	-121.807019	726	
SANTARITA	44408	BLM	BBD	524	36.347778	-120.597778	5000	
SANTAROSA	42009	State	LNU	559	38.478499	-122.711833	576	
SPRING VALLEY	43308	L Gov	CZU	549	37.561666	-122.435555	1075	
WOODACRE 2	42309	L Gov	MRN	559	37.9905556	-122.644722	1400	

NWS Hanford (San Joaquin Valley)								
STATION NAME WIMS	WIMS ID	AGENCY	UNIT	FCSTZONE	LAT	LON	ELEV	Remarks
ASHMOUNTAIN	44701	NPS	KNP	529	36.491666	-118.824166	1700	
BATTERSON	44207	FS	SNF	528	37.378611	-119.628888	3100	
BEARPEAK	44730	BLM	BBD	530	35.884166	-118.051666	8228	
BLACKROCK	44722	FS	SQF	534	36.093055	-118.260277	8200	
BRECKENRIDGE	45009	FS	SQF	534	35.450556	-118.583888	7548	
CAMPOSECO	43209	State	TCU	539	38.2236111	-120.866388	399	
CASEMOUNTAIN	44733	BLM	BBD	529	36.410833	-118.809166	6450	
CATHEYS VALLEY	44114	State	MMU	528	37.380250	-120.076972	1234	
CEDAR GROVE	44719	NPS	KNP	534	36.790833	-118.660000	4720	
CRANE	44102	NPS	YNP	531	37.7594694	-119.8205611	6634	
DEMOCRAT	45002	FS	SQF	530	35.531667	-118.630277	2356	
DINKEY	44521	FS	SNF	533	37.066666	-119.166666	5668	
FANCHER CREEK	44516	State	FKU	528	36.883722	-119.475722	916	
FENCE MDW	44503	FS	SNF	532	36.966666	-119.183333	5256	
FOUNTAIN SPRINGS	44731	State	TUU	529	35.8911665	-118.915611	794	
HIGHSIERRA	44520	FS	SNF	533	37.3147222	-119.039166	7400	
HURLEY	44517	State	FKU	529	37.015194	-119.567833	1201	
INDIAN WELLS CANYON	45015	FS/BLM	CDD	530	35.684999	-117.889444	4000	
JAWBONE	45013	FS/BLM	CDD	530	35.294722	-118.226389	4300	
JERSEYDALE	44105	FS	SNF	528	37.544722	-119.835000	3600	
JOHNSONDALE	44707	FS	SQF	534	35.971666	-118.545000	4700	
KETTLEMANHILLS	44602	BLM	BBD	526	36.0333333	-120.056944	801	
LOS BANOS	44003	State	MMU	526	37.054805	-121.053111	302	
MARIPOSA	44106	State	MMU	528	37.504070	-119.986860	2227	
METCALF GAP	44209	State	MMU	528	37.409417	-119.767944	3077	
MIAMI	44110	FS	SNF	532	37.419444	-119.744166	4327	
MILO	44708	State	TUU	529	36.231333	-118.869000	1965	
MINARETS	44203	FS	SNF	532	37.409722	-119.348611	5180	
MT TOM	44511	FS	SNF	533	37.381666	-119.169444	9018	
MTREST	44505	FS	SNF	529	37.053611	-119.371667	4100	
NORTH FORK	44204	FS	SNF	528	37.233333	-119.506389	2733	
OAK OPENING	44717	FS	SQF	529	36.175277	-118.701666	3240	
PARKRIDGE	44713	NPS	KNP	532	36.7241667	-118.942500	7540	
PEPPERMINT	44726	FS	SQF	534	36.072777	-118.534722	7167	
PINEHURST	44508	FS	SQF	529	36.685277	-119.000000	4060	
PIUTE	45017	FS	SQF	534	35.4455556	-118.278333	6400	
RATTLESNAKE	44728	NPS	KNP	534	36.411666	-118.425000	8600	
RIVERKERN	45016	FS	SQF	530	35.777499	-118.433611	3040	
SHADE QUARTER	44724	State	TUU	534	36.567028	-118.959617	4360	
SHAVER	44522	State	FKU	528	37.136972	-119.260694	5614	
SUGARLOAF	44729	NPS	KNP	534	36.726667	-118.675000	8120	
TRIMMER	44510	FS	SNF	529	36.900000	-119.300000	1540	
TUOLME	43611	NPS	YNP	531	37.8683333	-119.319166	9200	

UHL/HOTSPRINGS	44712	FS	SQF	529	35.888900	-118.633300	3764	
WALKERPASS	45014	BLM	BBD	530	35.664722	-118.056944	5572	
WAWONA	44109	NPS	YNP	531	37.540000	-119.651666	3960	
WOLVERTON	44732	NPS	KNP	534	36.440277	-118.701944	5240	
WWOLF	43612	NPS	YNP	531	37.850000	-119.650000	8000	

NFDRS

From Appendix F of AOP

RAWS Ownership

Agency



BLM



BIA



DOD



FS



State



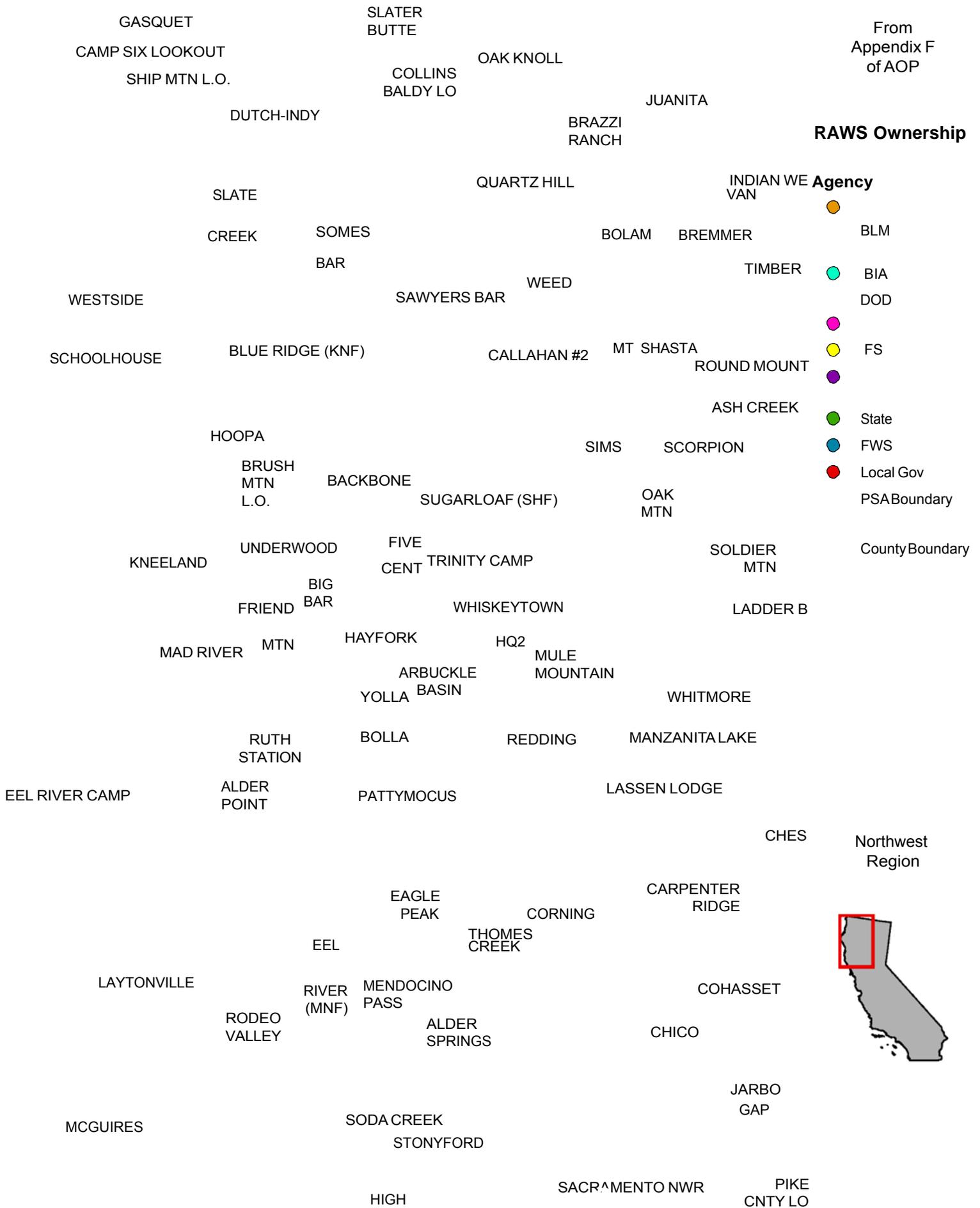
FWS

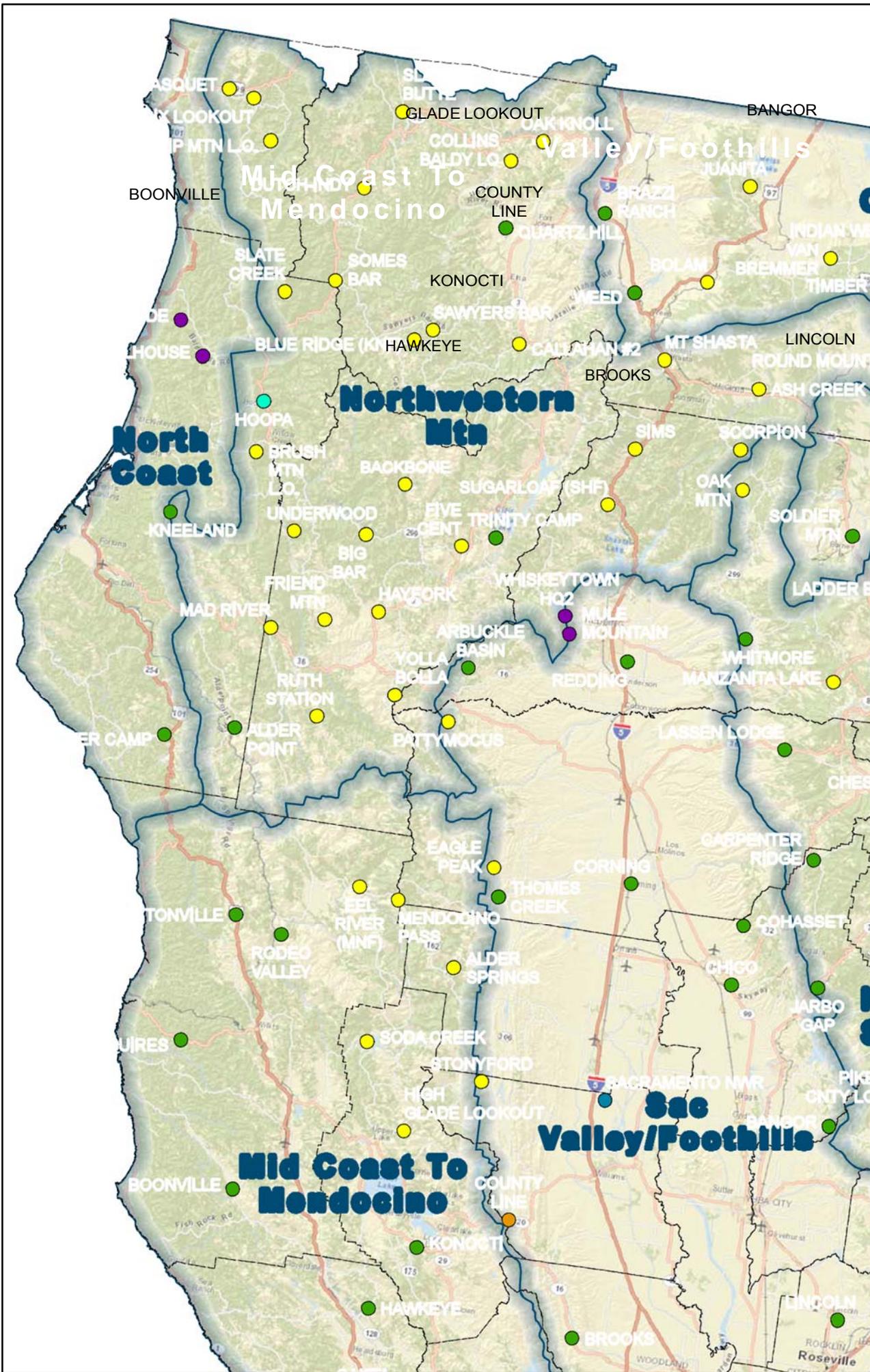


Local Gov

PSABoundary

CountyBoundary





NFDRS RAWS

From
Appendix F
of AOP

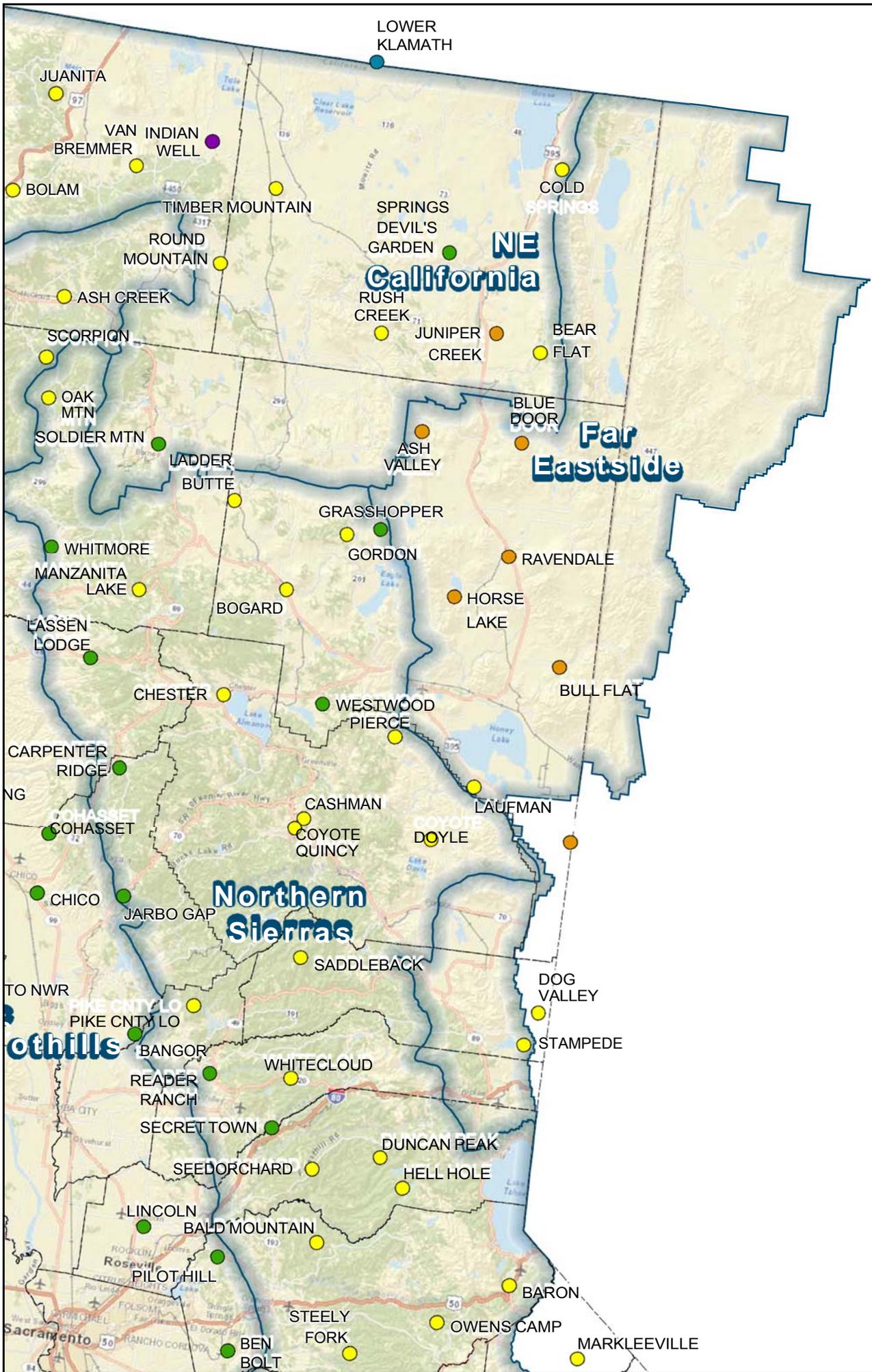
RAWS Ownership

Agency

- BLM
- BIA
- DOD
- FS
- NPS
- State
- FWS
- Local Gov

PSA Boundary

County Boundary



Northeast
Region



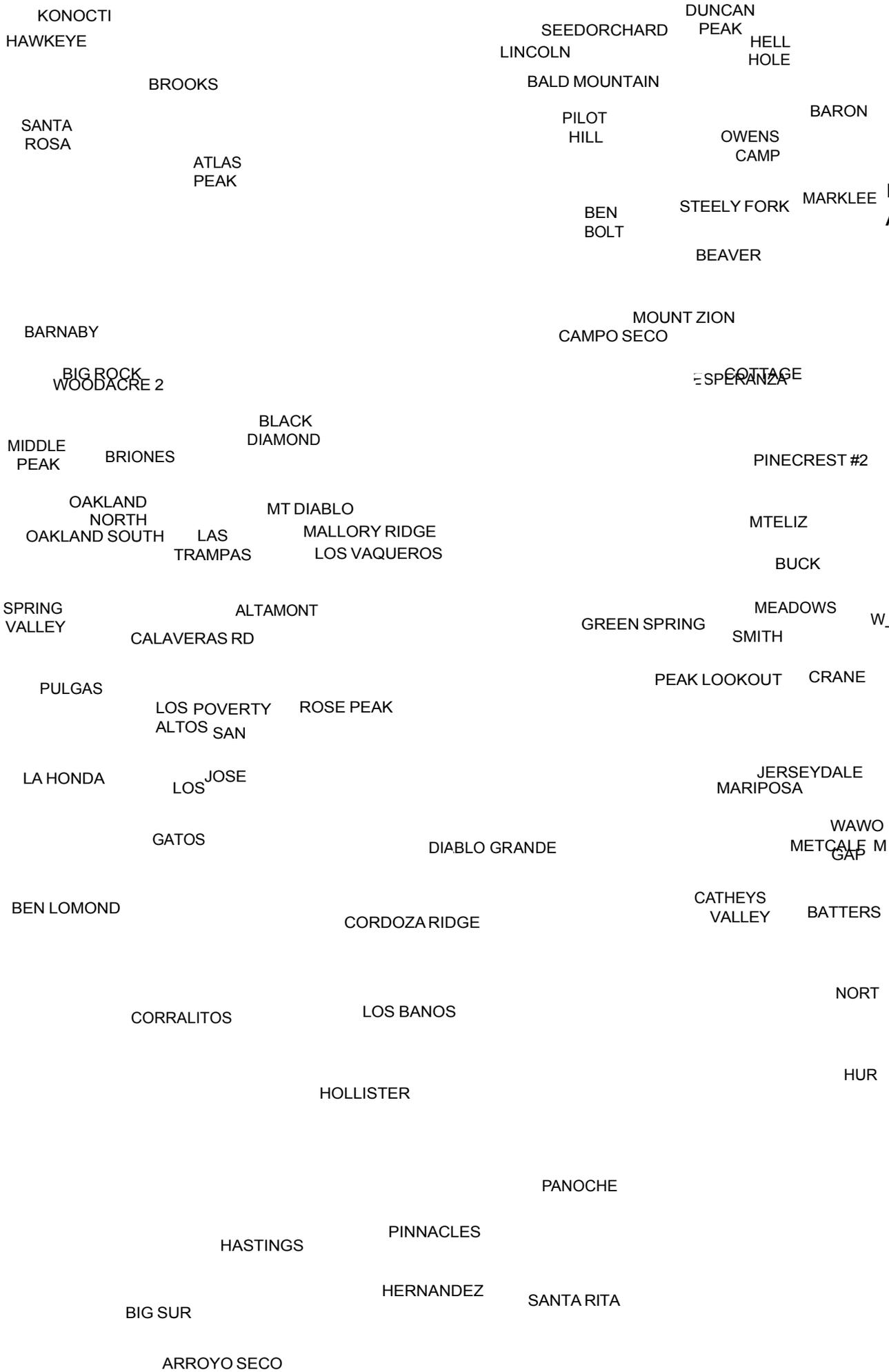
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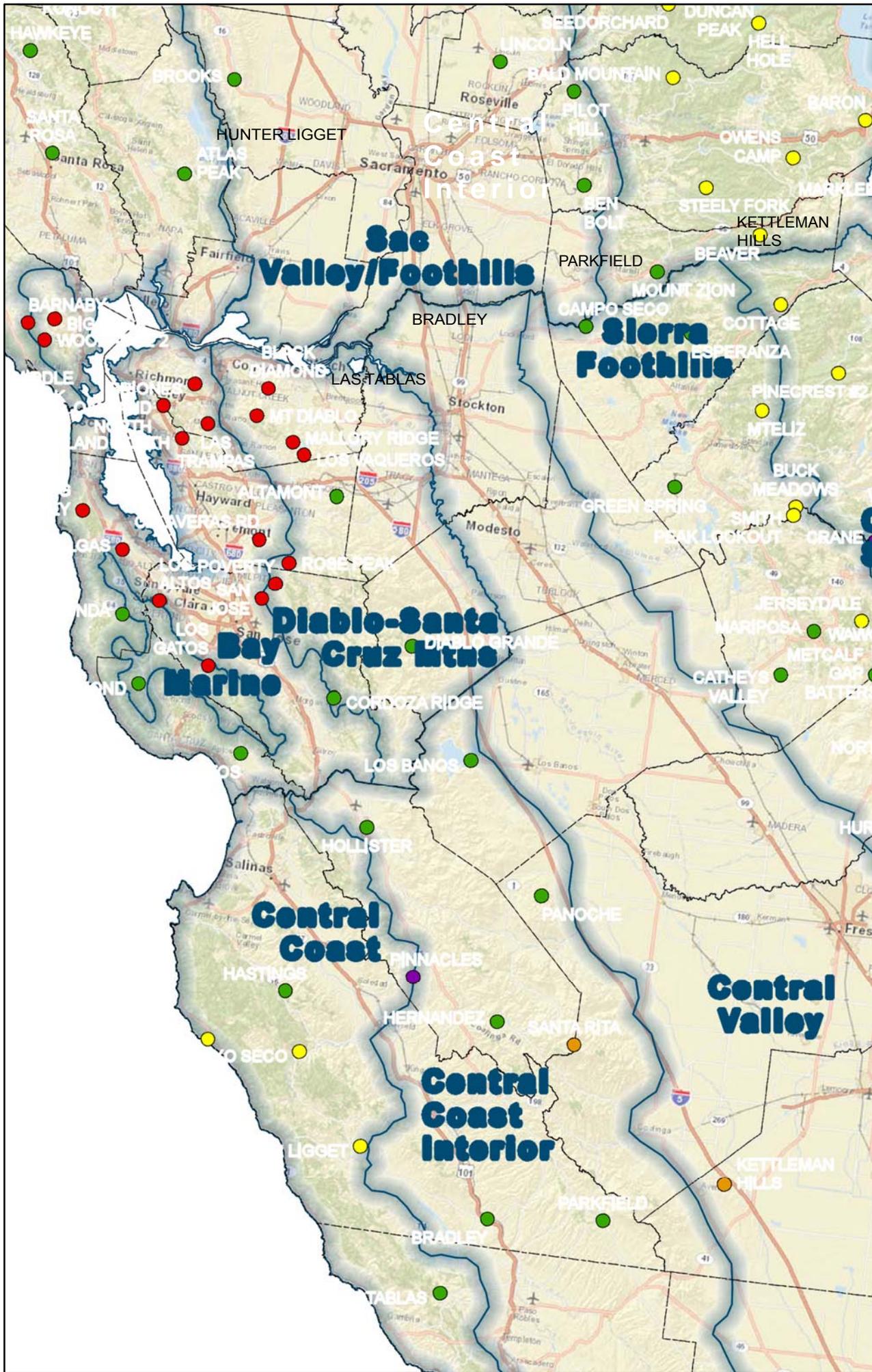
Appendix F
of AOP

RAWS Ownership Agency

- BLM
- BIA
- DOD
- FS
- FS
- NPS State
- FWS
- FWS
- Local Gov

W _____ PSA Boundary
County Boundary





NFDRS

RAWS

From Appendix F of AOP

RAWS Ownership

Agency

● BLM

● BIA

● DOD

●

● NPS

● State

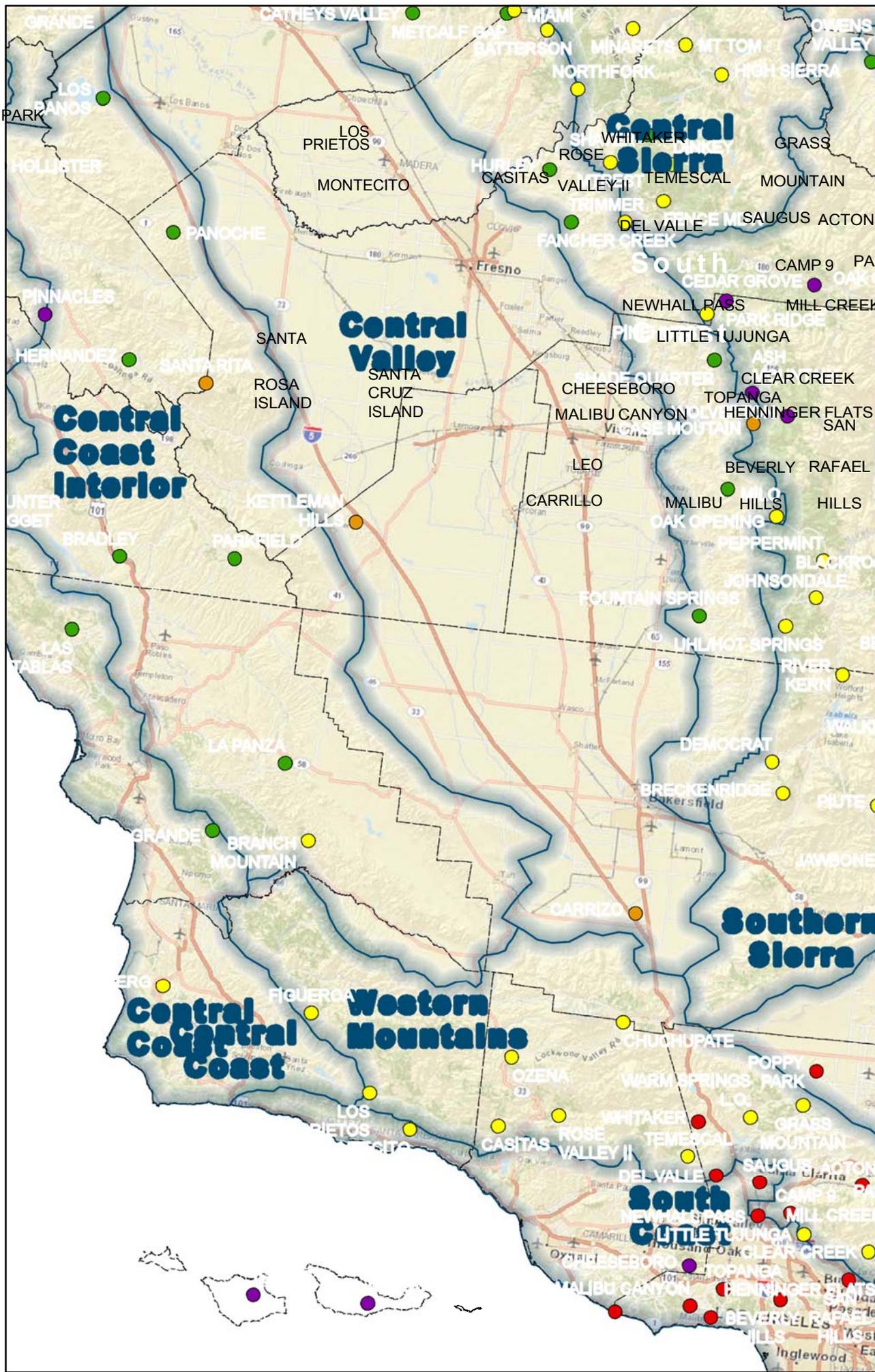
● FWS

● Local Gov

— PSA Boundary

— County Boundary





NFDRS RAWS

From
Appendix F
of AOP

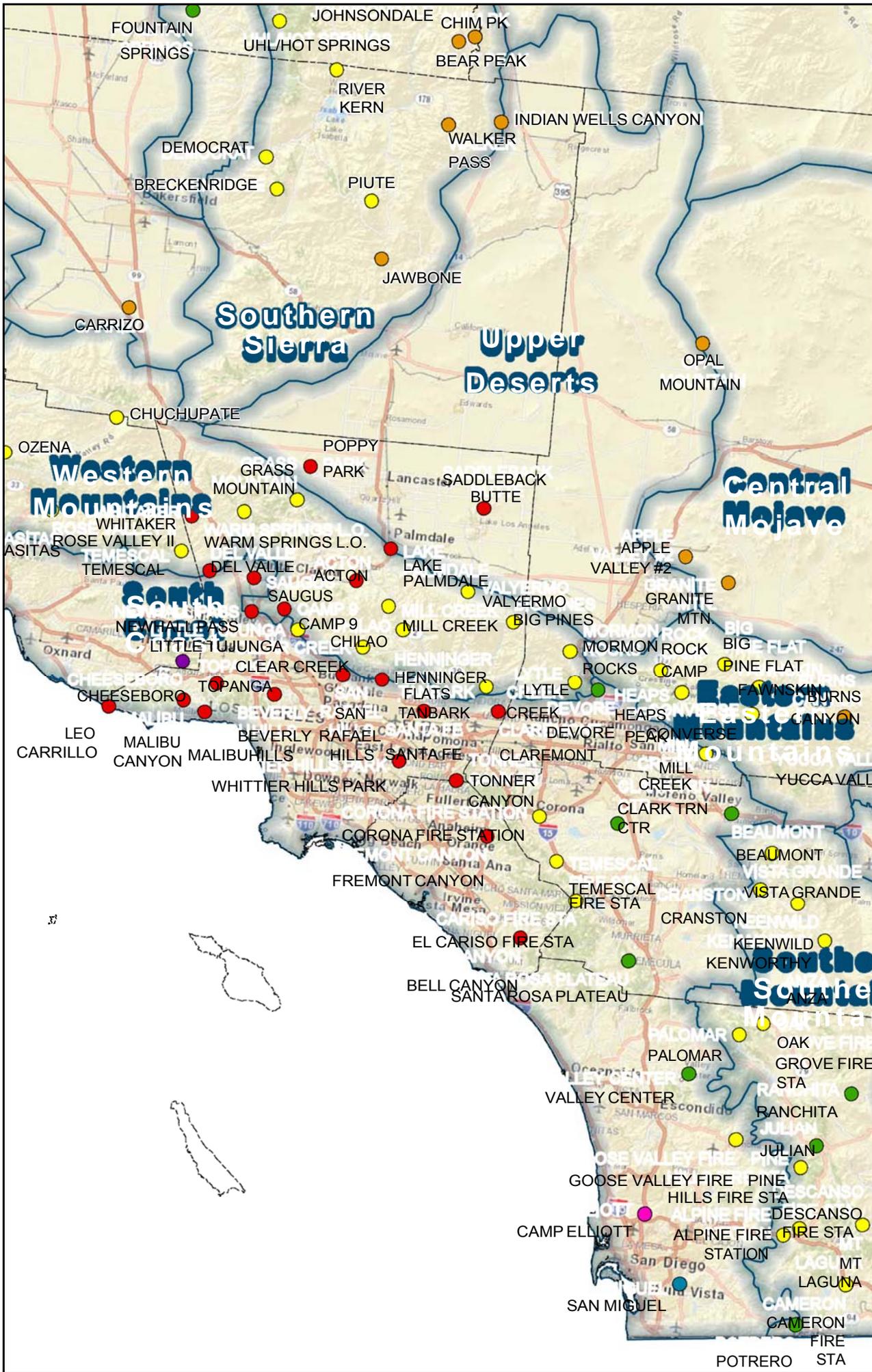
RAWS Ownership

Agency

- BLM
- BIA
- DOD
- FS
- NPS
- State
- FWS
- Local Gov

PSA Boundary

County Boundary



South Coast
Region



NFDRS RAWS

From
Appendix F
of AOP

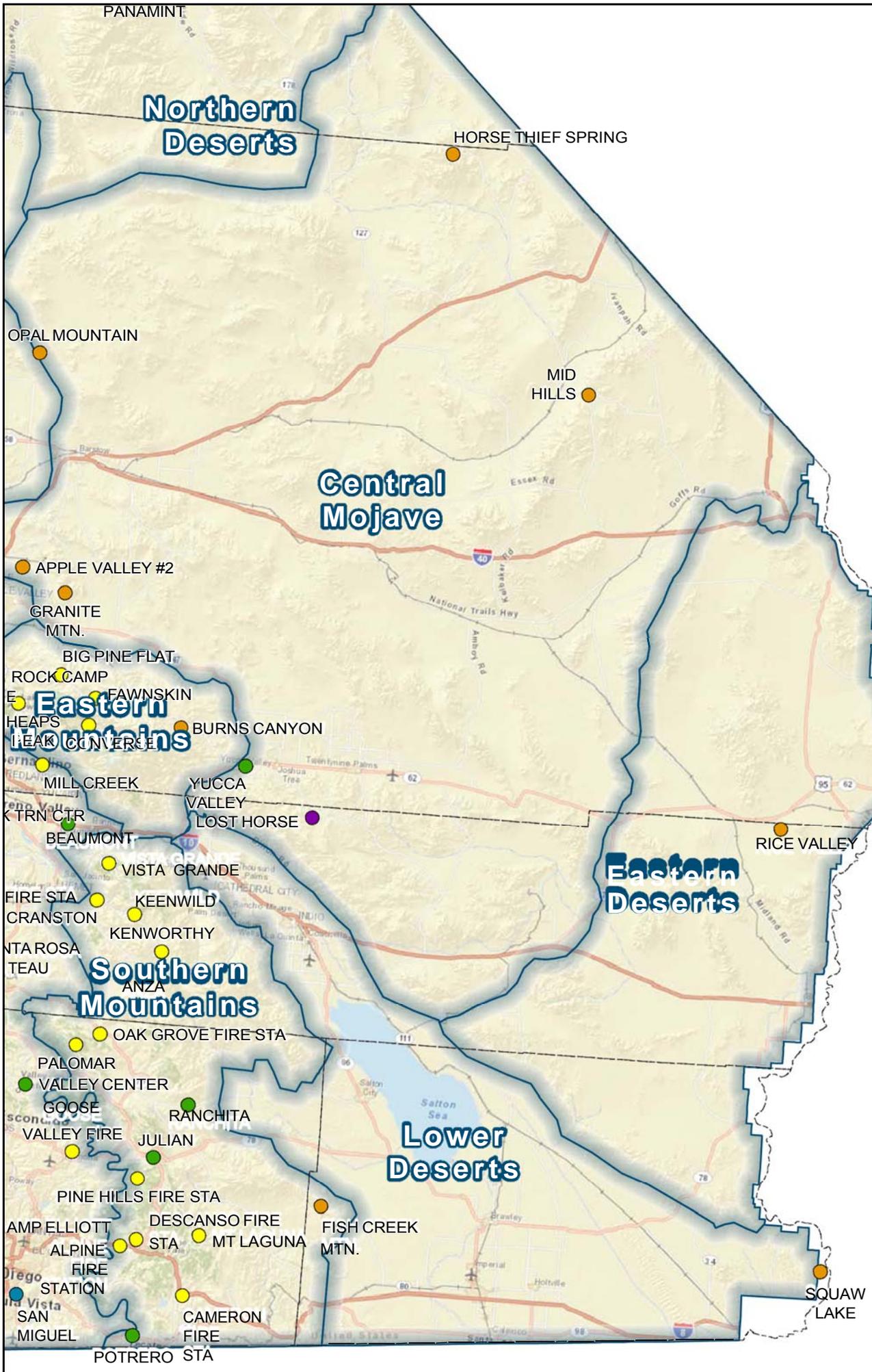
RAWS Ownership

Agency

- BLM
- BIA
- DOD
- FS
- NPS
- State
- FWS
- Local Gov

PSA Boundary

County Boundary



South Desert
Region



