

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.