

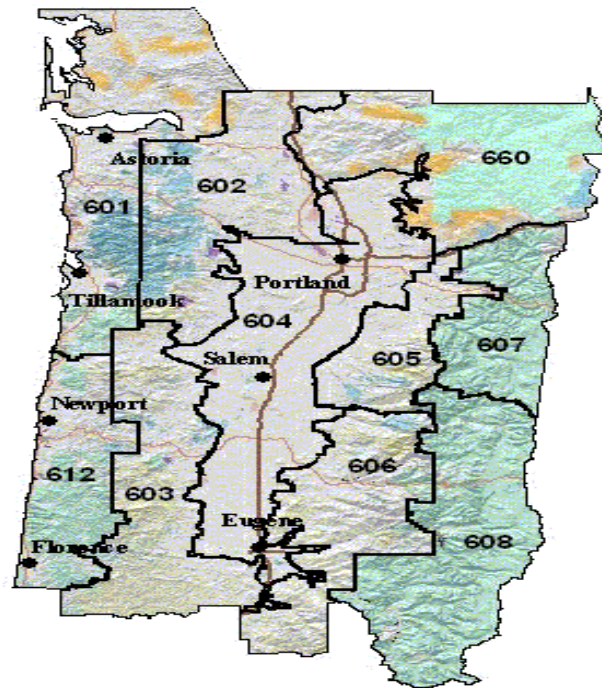
## Fire Weather Products

WFO Portland produces fire weather forecasts, watches, and Red Flag warnings for Northwest Oregon and Southwest Washington. WFO Portland also provides fire weather spot forecasts for prescribed burns or wildfires.

Fire Weather Forecasts are prepared twice a day during fire weather season, for land managers from agencies such as the United States Forest Service (USFS), Bureau of Land Management (BLM), Bureau of Indian Affairs, and the Oregon Department of Forestry. The forecasts provide meteorological information that is critical to fire behavior and that may indicate where potential fire starts may occur. Specific items included in the forecast are relative humidity, temperature, winds, Haines index, and possible lightning activity. Haines index, based on instability and dry air, is used to indicate the potential for large fire growth.

Weather conditions that create high to extreme fire danger and pose a danger to the public or fire fighting crews prompt special watches and warnings. The watches and warnings address the potential for wild fires across Northwest Oregon and Southwest Washington. Fuels are critically dry and fire danger high before a watch or warning is issued. Watches and warnings are issued when the following conditions are expected to occur: critically dry and unstable air mass present in the area; dry lightning occurrences; and zone specific combinations of strong winds and low relative humidity levels.

## Fire Weather Zones



## Fire Weather Watch and Warning Criteria

Fuels are critically dry and fire danger high before a watch or warning is issued. Watches and warnings are issued when the following conditions are expected to occur: critically dry and unstable air mass present in the area; dry lightning occurrences; and zone specific combinations of strong winds and low relative humidity levels.

<b>BASELINE RED FLAG WATCH/WARNING CRITERIA</b>	
<p><b>Daytime Criteria</b></p> <p><b>*Wind:</b> 10 mph, and <b>Relative Humidity</b>...25% or less Conditions occurring for at least 4 hours</p>	<p><b>Nighttime Criteria</b></p> <p><b>*Wind:</b> 10-15 mph, and <b>Relative Humidity</b>...35% or less Conditions occurring for at least 4 hours</p>
<b>ADDITIONAL CRITERIA PROMPTING A RED FLAG WARNING</b>	
<p><b>Dry and Unstable Air Mass</b></p> <p><b>Relative Humidity</b> &lt;26% &amp; <b>Critically dry fuels</b></p>	<p><b>Scattered Thunderstorms</b></p> <p><b>Critically dry fuels</b> &amp; <b>No appreciable fuel moisture change</b> after event</p>

*\* Wind speed is a 10 minute average speed*

A **Fire Weather Watch** will be issued if any of the criteria in the preceding charts is expected to occur within 24 to 72 hours.

A **Red Flag Warning** will be issued if any of the criteria in the preceding charts is expected to occur within 24 hours.

# Routine Fire Weather Products

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FNUS56 KPQR 232132
FWFPQR

FIRE WEATHER PLANNING FORECAST FOR NW OREGON AND SW WASHINGTON
NATIONAL WEATHER SERVICE PORTLAND OREGON
245 PM PDT MON AUG 23 2004

.DISCUSSION...
COOL AND WET FALL LIKE CONDITIONS CONTINUE ACROSS THE FORECAST
DISTRICT THIS AFTERNOON. THESE SHOWERS WILL CONTINUE TONIGHT AND
TUESDAY BEFORE A MUCH MORE POTENT SYSTEM ARRIVES TUESDAY NIGHT AND
WEDNESDAY. THIS SYSTEM...LIKE THE ONE OVER THE WEEKEND...WILL HAVE
TROPICAL MOISTURE FOR OVER 0.5 INCHES OF RAIN IN THE WILLAMETTE
VALLEY AND OVER AN INCH POSSIBLE AT MOST COAST RANGE AND CASCADE
RAWS

CHANCE OF WETTING RAIN (CWR) 0.25 INCHES OR GREATER.
FORECAST WINDS ARE 10 MINUTE AVERAGES 20 FT ABOVE VEGETATION.
THUNDERSTORMS IMPLY GUSTY AND ERRATIC WINDS.

ORZ601-612-WAZ601-241545-
AREA 1A...COASTAL ZONES 601 612
245 PM PDT MON AUG 23 2004

.TONIGHT...
SKY/WEATHER.....SHOWERS LIKELY.
MIN TEMPERATURE.....52-57.
 24 HR TREND.....LITTLE CHANGE.
MAX HUMIDITY.....95-100 PERCENT.
 24 HR TREND.....LITTLE CHANGE.
20-FOOT WINDS.....
  COASTAL STRIP.....SOUTHWEST 3 TO 6 MPH...EASING TO 2 TO 4 MPH.
  VALLEYS/LWR SLOPES...SOUTHWEST 3 TO 5 MPH...BECOMING LIGHT.
  RIDGES/UPR SLOPES...SOUTHWEST 4 TO 7 MPH.
CHC OF WETTING RAIN.50 PERCENT.
HAINES INDEX.....2 (VERY LOW).
LAL.....1.

.TUESDAY...
SKY/WEATHER.....MOSTLY CLOUDY. SHOWERS LIKELY.
MAX TEMPERATURE.....63-68.
 24 HR TREND.....LITTLE CHANGE.
MIN HUMIDITY.....72-77 PERCENT.
 24 HR TREND.....LITTLE CHANGE.
20-FOOT WINDS.....
  COASTAL STRIP.....SOUTHWEST 2 TO 4 MPH...BECOMING SOUTH 4 TO
  6 MPH IN THE AFTERNOON.
  VALLEYS/LWR SLOPES...SOUTHWEST 2 TO 5 MPH.
  RIDGES/UPR SLOPES...SOUTHWEST 4 TO 7 MPH.
CHC OF WETTING RAIN.50 PERCENT.
HAINES INDEX.....2 (VERY LOW).
LAL.....1.

.TUESDAY NIGHT...
SKY/WEATHER.....RAIN DEVELOPING. CHANCE OF THUNDERSTORMS AFTER
MIDNIGHT.
MIN TEMPERATURE.....53-57.
 24 HR TREND.....LITTLE CHANGE.
MAX HUMIDITY.....95-100 PERCENT.
 24 HR TREND.....LITTLE CHANGE.
20-FOOT WINDS.....
  COASTAL STRIP.....SOUTH 4 TO 8 MPH...BECOMING SOUTHWEST 3 TO 6
  MPH LATE.
  VALLEYS/LWR SLOPES...SOUTH 3 TO 6 MPH.
  RIDGES/UPR SLOPES...SOUTHWEST 6 TO 10 MPH WITH GUSTS TO 25 MPH.
CHC OF WETTING RAIN.80 PERCENT.
HAINES INDEX.....2 (VERY LOW).
LAL.....1 UNTIL 2400...THEN LAL BECOMING 2.

          TEMPERATURE          /          HUMIDITY
HUCKLEBRY          55  67  56  67 / 95  77  90  84
CANNIBAL          54  65  56  65 / 100  81  100  88
DUNES          57  66  57  65 / 100  77  100  84
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.EXTENDED...
.THURSDAY...MOSTLY CLOUDY. CHANCE OF SHOWERS. HIGHS IN THE MID 60S
TO LOWER 70S. LOWS IN THE MID 50S. MINIMUM RELATIVE HUMIDITY 70-80
PERCENT. SOUTHWEST WINDS AROUND 5 MPH. LAL 1.
.FRIDAY AND SATURDAY...MOSTLY CLOUDY. HIGHS IN THE MID 60S TO LOWER
70S. LOWS IN THE LOWER 50S. MINIMUM RELATIVE HUMIDITY 60-70 PERCENT.
WEST WINDS AROUND 5 MPH. LAL 1.
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## Fire Weather Planning Forecast (FWF FNUS56):

The Fire Weather Planning Forecast is a pre-suppression forecast issued twice a day.

The forecast consists of the following:

- Watch/Warning headlines as necessary
- Discussion
- Forecast of winds, temperature, and relative humidity and trends
- Haines Index
- Chance of Wetting Rain
- Lightning Activity Level
- 3-5 day extended forecast

For brevity, only one set of zones is included in this example.

## Non-Routine Fire Weather Products

FNUS86 KPQR 082215  
FWMPQR

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ZONE,601,040809,13,0,-1,3,1,1,-2,,,,,0,0,N
ZONE,602,040809,13,0,-1,3,1,1,-2,,,,,0,0,N
ZONE,603,040809,13,0,1,6,1,1,-3,,,,,0,0,N
ZONE,605,040809,13,0,1,3,1,1,-5,,,,,0,0,N
ZONE,606,040809,13,0,1,3,1,1,-2,,,,,0,0,N
ZONE,607,040809,13,0,4,-1,1,1,-3,,,,,0,0,N
ZONE,608,040809,13,0,0,-1,1,1,-2,,,,,0,0,N
ZONE,612,040809,13,1,-2,10,1,1,-2,,,,,0,0,N
ZONE,660,040809,13,0,4,-1,1,1,-3,,,,,0,0,N
ZONE,352547,040809,13,0,0,6,1,1,-2,,,,,0,0,N
ZONE,352554,040809,13,0,0,-2,1,1,-4,,,,,0,0,N
ZONE,352557,040809,13,0,0,0,1,1,-1,,,,,0,0,N
    
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### National Fire Danger Rating System Forecast (FWM, FNUS86)

The National Fire Danger Rating System (NFDRS) forecast is a product issued once daily during the fire season giving forecasts for a variety of important parameters in fire weather. It is issued for different zones and is given in an abbreviated format as shown below:

ZONE, NO, YYMMDD, 13, WX, TEMP, RH, LAL1, LAL2, WSPD, 10HR, TX, TN, RHx, RHn, PD1, PD2, WETFLAG

<b>ZONE/FCST</b>	Indicates whether forecast is for an NFDRS zone or individual station. Zone average trends are forecast when enough observations are available for the zone area. Individual site forecasts are done where only a few observations are available	
<b>NO</b>	NFDRS Zone Number (or individual NFDRS site number)	
<b>YYMMDD</b>	Year, month, and day valid forecast time.	
<b>13</b>	Always 1300 LST	
<b>WX</b>	Weather valid at 1300 LST tomorrow. (Categories 5, 6, or 7 sets NFDRS index to 0). Valid entries are:	
	<ul style="list-style-type: none"> <li>1. clear</li> <li>2. scattered clouds (1/8 to 4/8)</li> <li>3. broken clouds (5/8 to 7/8)</li> <li>4. foggy</li> <li>5. drizzle</li> </ul>	<ul style="list-style-type: none"> <li>6. raining</li> <li>7. snowing or sleeting</li> <li>8. showers (in sight or at the station)</li> <li>9. thunderstorm</li> </ul>
<b>TEMP</b>	Temperature in deg F valid at 13 LST (or temperature trend + or -).	
<b>RH</b>	Relative humidity in percent valid at 13 LST (or RH trend + or -)	
<b>LAL1</b>	Lightning Activity Level from 1400 LST to 2300 LST today.	
<b>LAL2</b>	Lightning Activity Level from 2300 LST to 2300 LST tomorrow	
<b>WDIR</b>	Use only for point forecast version. The direction is based on a sixteen point compass (N,NNE, NE, ENE, etc.) valid at 1300 LST and is a ten minute average at 20 feet.	
<b>WSPD</b>	Wind speed in mph valid at 1300 LST (or wind speed trend + or -) and is a ten minute average at 20 feet.	
<b>10HR</b>	Ten hour time lag fuel moisture in percent valid at 1300 LST (or trend + or -).	
<b>Tx</b>	Max temperature from 1300 LST to 1300 LST tomorrow.	
<b>Tn</b>	Min temperature from 1300 LST to 1300 LST tomorrow.	
<b>RHx</b>	Max relative humidity from 1300 LST to 1300 LST tomorrow.	
<b>RHn</b>	Min relative humidity from 1300 LST to 1300 LST tomorrow.	
<b>PD1</b>	Precipitation duration in hours 1300 LST to 0500 LST.	
<b>PD2</b>	Precipitation duration in hours 0500 LST to 1300 LST.	
<b>WETFLAG</b>	Y or N. Indicates whether liquid water will be on the fuels at 1300 LST.	

If an element is not forecast, it is represented by a blank space between two consecutive commas.

## Non-Routine Fire Weather Products

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FNUS76 KPQR 082317
FWSFQR

SPOT FORECAST FOR MCDONALD FIRE#5...USFS GPNF
NATIONAL WEATHER SERVICE PORTLAND OR
404 PM PDT SUN AUG 8 2004

IF CONDITIONS BECOME UNREPRESENTATIVE, CONTACT THE NATIONAL WEATHER
SERVICE.

.DISCUSSION...HIGH PRESSURE ALOFT IS BUILDING OVER THE FIRE AREA FOR
A WARMING AND DRING TREND WITH DECREASING NIGHT TIME RH RECOVERY
TONIGHT. SURFACE HIGH PRESSURE WILL REMAIN EAST OF THE CASCADES WITH
THERMAL LOW PRESSURE ALONG COAST OVERNIGHT AND MONDAY MOVING INLAND
NEAR THE FIRE AREA MONDAY AFTENNOON. SURFACE WINDS WILL BE OFFSHORE IN
THIS PATTERN UNTIL MONDAY AFTERNOON AND THEN WILL BECOME MORE
VARIABLE.

.THIS EVENING...
SKY/WEATHER.....SUNNY.
MAX TEMPERATURE.....78.
MIN HUMIDITY.....25 PERCENT.
WIND (EYE LEVEL).....
SLOPE/VALLEY.....NORTHEAST TO SOUTHEAST 3-5 GUSTS 10 MPH INCREASING
TO 5-9 MPH
                WITH GUSTS 20 TO 25 MPH.
LAL.....1.
CWR.....ZERO.

.TONIGHT...
SKY/WEATHER.....CLEAR.
MIN TEMPERATURE.....50-58.
MAX HUMIDITY.....50-60 PERCENT.
WIND (EYE LEVEL).....
SLOPE/VALLEY.....NORTHEAST TO SOUTHEAST 5-9 MPH WITH GUSTS 20 TO
25 MPH AND
                VARYING TO SOUTHWEST AT TIMES IN THE EVENING THEN
                BECOMING EAST TO NORTHEAST 2 TO 4 MPH.
LAL.....1.
CWR.....ZERO.

.MONDAY...
SKY/WEATHER.....SUNNY.
MAX TEMPERATURE.....82-87.
MIN HUMIDITY.....15-20 PERCENT.
WIND (EYE LEVEL).....
SLOPE/VALLEY.....NORTHEAST TO EAST WINDS 2-3 MPH TURNING SOUTHEAST
TO SOUTH
                WEST 3 TO 6 MPH.
LAL.....1.
CWR.....ZERO.

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FORECASTER...DW
REQUESTED BY...ERIN JORDAN
REASON FOR REQUEST...WILDFIRE
.INFO 041/W/61/200408082258/75
.TAG 20040808.MCDON.02/PQR

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### Spot Fire Forecast (FWS, FNUS76):

The Spot Fire Forecast is used for prescribed fires and wild fires. It is used at anytime during the year and consists of the same parameters as the fire weather planning forecast.

Additional details, as requested by the user, may be included, such as relative humidity, wind or temperatures in two-hourly increments.

Spot requests may be made online at the following URL:

<http://www.weather.gov/portland/fire.php>

## Non-Routine Fire Weather Products

WWUS86 KPQR 081805  
RFPQR

FIRE WEATHER WATCH  
NATIONAL WEATHER SERVICE PORTLAND OR  
953 AM PST MON MAR 8 2005

ORZ601-602-604-605-607-WAZ660-091130-  
/O.NEW.KPQR.FW.A.0012.050308T2300Z-050310T0200Z

...A FIRE WEATHER WATCH IS IN EFFECT FROM 300 PM TODAY THROUGH 600 PM  
TUES FOR STRONG EAST WIND AND LOW HUMIDITY FOR THE NORTH OREGON AND  
SOUTH WASHINGTON COAST...THE NORTH OREGON COAST RANGE...THE NORTH  
WILLAMETTE VALLEY AND THE SOUTH WASHINGTON AND NORTH OREGON CASCADES  
AND FOOTHILLS...

FIRE WEATHER ZONES INCLUDED IN THIS WATCH ARE:

ZONE 601...ZONE 602...NORTH HALF OF ZONE 604...ZONE 605...ZONE 607  
AND ZONE 660

DISCUSSION: THE NATIONAL WEATHER SERVICE HAS ISSUED A FIRE WEATHER  
WATCH TONIGHT THROUGH TUESDAY MORNING FOR THE NORTH OREGON AND  
SOUTH WASHINGTON COAST...THE NORTH OREGON COAST RANGE...THE NORTH  
WILLAMETTE VALLEY AND THE NORTH OREGON AND SOUTH WASHINGTON CASCADES  
AND FOOTHILLS. THE POTENTIAL EXISTS FOR CRITICAL FIRE DANGER IN THE  
WATCH AREA TONIGHT AND TUESDAY MORNING DUE TO THE COMBINATION OF LOW  
HUMIDITY...STRONG WIND AND CRITICALLY DRY FUELS.

EAST WIND OF 20 TO 30 MPH WITH GUSTS TO 50 MPH WILL DEVELOP OVER THE  
WATCH AREA TONIGHT AND PERSIST INTO TUESDAY MORNING. THE STRONGEST  
WIND SHOULD BE AFTER MIDNIGHT UNTIL SUNRISE TUESDAY. OVERNIGHT  
HUMIDITY VALUES ARE EXPECTED TO BE 25 TO 35%. CONDITIONS WILL ABATE  
TUESDAY AFTERNOON AS MARINE AIR SPREADS INTO NORTHWEST OREGON AND  
SOUTHWEST WASHINGTON.

PLEASE ADVISE THE APPROPRIATE OFFICIALS OR FIRE CREWS IN THE FIELD OF  
THIS FIRE WEATHER WATCH.

FOR ADDITIONAL FIRE WEATHER INFORMATION...CHECK OUR WEB SITE AT  
<http://www.weather.gov/portland/fire.php> (LOWER CASE).

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### Fire Weather Watch (RFW, WWUS86):

A Fire Weather Watch is issued when set  
criteria are met or expected to occur  
within a 24-72 hour time period.

WWUS86 KPQR 081822  
RFPQR

RED FLAG WARNING  
NATIONAL WEATHER SERVICE PORTLAND OR  
1018 AM PST MON MAR 8 2004

ORZ601-602-604-605-607-WAZ660-091600-  
/O.NEW.KPQR.FW.W.0005.050309T0300Z-050309T1800Z

...A RED FLAG WARNING IS IN EFFECT FROM 8 PM THIS EVENING TO 10 AM  
EST TUESDAY FOR STRONG EAST WIND...CRITICALLY LOW HUMIDITY AND  
CRITICAL FUEL INDICES FOR THE NORTH OREGON AND SOUTH WASHINGTON  
COAST...THE NORTH OREGON COAST RANGE...THE NORTH WILLAMETTE  
VALLEY...AND THE NORTH OREGON AND SOUTH WASHINGTON CASCADES AND  
FOOTHILLS...

FIRE WEATHER ZONES INCLUDED IN THIS WARNING ARE:  
ZONE 601...ZONE 602...ZONE 604...ZONE 605...ZONE 607 AND ZONE 660

DISCUSSION: THE NATIONAL WEATHER SERVICE HAS ISSUED A RED FLAG  
WARNING FOR TONIGHT THROUGH TUESDAY MORNING FOR THE NORTH OREGON AND  
SOUTH WASHINGTON COAST...THE NORTH OREGON COAST RANGE...THE NORTH  
WILLAMETTE VALLEY AND THE NORTH OREGON AND SOUTH WASHINGTON CASCADES  
AND FOOTHILLS. CRITICAL FIRE DANGER IS EXPECTED IN THE WARNING AREA  
TONIGHT AND TUESDAY MORNING DUE TO THE COMBINATION OF LOW  
HUMIDITY...STRONG WIND AND CRITICALLY DRY FUELS.

OFFSHORE PRESSURE GRADIENTS WILL INCREASE THIS EVENING AND TONIGHT  
DUE TO STRONG HIGH PRESSURE OVER NORTHEAST WASHINGTON AND SURFACE LOW  
PRESSURE JUST OFF THE OREGON COAST. EAST WIND OF 25 TO 35 MPH WITH  
GUSTS TO 60 MPH WILL DEVELOP OVER THE WARNING AREA TONIGHT AND  
PERSIST INTO TUESDAY MORNING. THE STRONGEST WIND WILL BE AFTER  
MIDNIGHT UNTIL SUNRISE TUESDAY. OVERNIGHT HUMIDITY VALUES ARE  
EXPECTED TO BE 25 TO 35%. CONDITIONS WILL ABATE TUESDAY AFTERNOON AS  
MARINE AIR SPREADS INTO NORTHWEST OREGON AND SOUTHWEST WASHINGTON.

PLEASE ADVISE THE APPROPRIATE OFFICIALS OR FIRE CREWS IN THE FIELD OF  
THIS RED FLAG WARNING.

FOR ADDITIONAL FIRE WEATHER INFORMATION...CHECK OUR WEB SITE AT  
<http://www.weather.gov/portland/fire.php> (LOWER CASE).

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### Red Flag Warning (RFW, WWUS86):

A Red Flag Warning is issued when set  
criteria are met or expected to occur  
within the next 24 hours.