



FALL 2016

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Welcome Back to the North Coast Observer!

by Scott Carroll

Welcome back to *The North Coast Observer*, the online newsletter of the National Weather Service (NWS) in Eureka, California. This is the second installment of our quarterly publication. NWS Eureka serves northwest California including the counties of Del Norte, Humboldt, Mendocino, and Trinity. In this newsletter, you will find weather-related articles of local interest, as well as features such as a summary of the past season's weather conditions, an outlook for the next season, upcoming events and activities, and SKYWARN storm spotter information. In addition, you will learn more about what your local NWS office does on a daily basis and how we work to provide you with forecasts and warnings for the northwest California area.

This web-based newsletter will usually be posted on a seasonal basis (by the tenth day of March, June, September, and December). Links to the newsletter will be available on our website as well as on Twitter and Facebook.

As always, we welcome your input as to how we can serve you better. If there is a topic that you would like to see featured in a future edition of *The North Coast Observer*, [let us hear from you!](#)

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Twitter	twitter.com/nwseureka
YouTube	youtube.com/NWSEureka



ISSUE #2

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New Weather Satellite to Launch 11/4

by Karleisa Rogacheski & Mel Nordquist



A new era in satellite technology is upon us since Japan launched the Himiwari-8 satellite on July 7, 2015. The United States will be launching its own version of the Himiwari satellite, which is called GOES-R, on November 4th of this year. These satellites bring a tenfold increase of information and, more importantly, have many features that will help the world of meteorology. With its increased temporal and spatial resolution and decreased data transfer delay, GOES-R will be able to track hurricane paths and intensities better than its predecessors. It will provide critical information to forecasters about thunderstorm intensity which will lead to increased thunderstorm and tornado warning lead times, help improve flight route planning, improve air quality alerts and warnings, and better monitor space weather.

During the period from mid-July to the end of August of this year, NWS Eureka participated with about 20 other NWS forecast offices around the country to test the ground equipment of the GOES-R system. This test was run with simulated data derived from a model to mimic real satellite data. The goal of the test was to exercise the ground communications, storage, and display of the data so as to identify and correct any malfunctions or errors in advance. This process assures the system is fully prepared to handle the data when the real data becomes available.

For detailed and technical information on the new GOES-R satellite, please visit the [project homepage](#).

June

Temperatures were warmer than normal across the area, ranging from 1 to 1.5°F above normal along the coast and almost 3°F above normal across the interior. An unseasonably strong upper trough brought some light rainfall to portions of the area from the 17th to the 18th. However, Eureka only received .02” during this period which was the only measureable rain for the month. This was nearly three quarters of an inch below normal.

July

Temperatures for the month were close to normal. This was due, in part, to the persistent offshore high pressure in the second half of the month, which brought strong northerly winds to the coastal waters. These winds caused upwelling, which brings cool water to the ocean surface. This is in stark contrast to last July, when high and low temperatures both averaged over 3°F above normal. Rainfall was above normal along the Redwood Coast, with most it falling on the 8th and 9th. In Eureka, rainfall of .30” on the 8th broke the old record of .22” set in 1964. In Crescent City, rainfall of .75” on the same day beat the old record of .62”, also set in 1964. Only a trace of rain was reported in Ukiah during this period.

August

High pressure was persistent over the west coast for much of the month, bringing cool weather the coast (1 to 1.5°F below normal) and warm weather inland (around 1°F above normal). Late in the month, an upper level trough moved overhead and broke up the marine layer. As a result, weak offshore flow allowed temperatures to warm several degrees above normal for the first time in the month along the coast. Temperatures peaked at 70°F at Eureka and 69°F at Crescent City, both on the 30th. Due to the high pressure in place over the west coast for much of the month, rainfall was below normal, with only .04” falling for the month at Eureka on the 28th (well below normal the normal of 0.31”). However, it is quite common to have less rain than normal as a few large rain events have driven up the average. Crescent City and Ukiah did not report any rain for the month.

Summer Summary

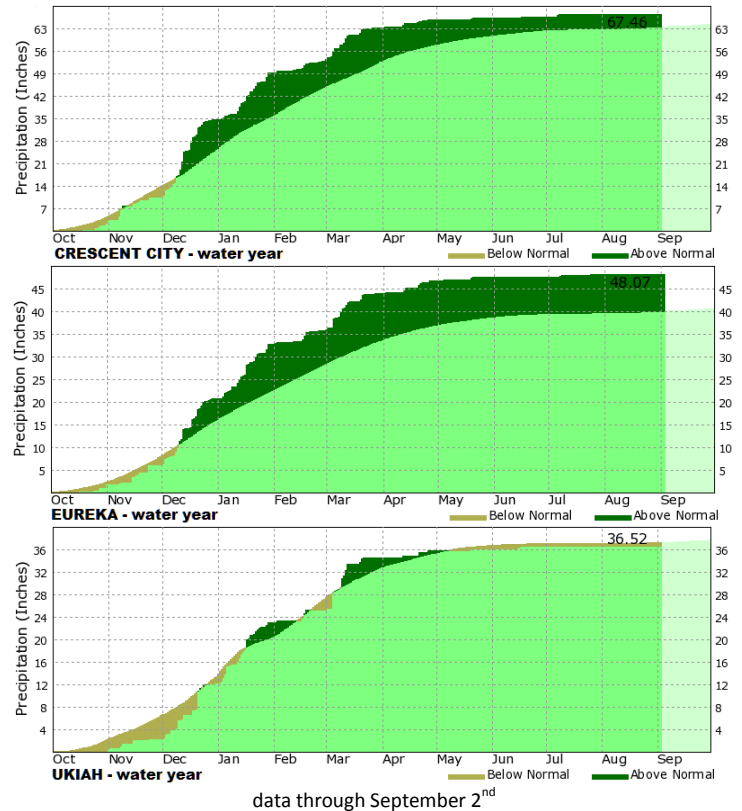
The weather this summer was much closer to normal than last summer, which was one of the warmest periods ever recorded along the Redwood Coast. As usual, the temperatures along the coast are very closely tied to the sea surface temperatures, and they were much cooler this summer than last summer. However, they were still warmer than they were in 2010 and 2012.

Summer Monthly Climate Comparison

	Crescent City			Eureka			Ukiah		
	Ave Hi	Ave Lo	Rain	Ave Hi	Ave Lo	Rain	Ave Hi	Ave Lo	Rain
Jun	62.0	50.4	0.28	63.1	51.5	0.02	88.2	52.9	0.36
Jul	62.6	51.9	1.03	63.2	53.1	0.54	94.0	54.7	Trace
Aug	61.5	50.9	0	62.3	51.5	0.04	93.5	54.1	0

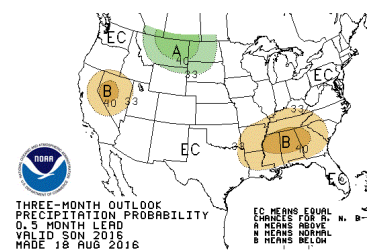
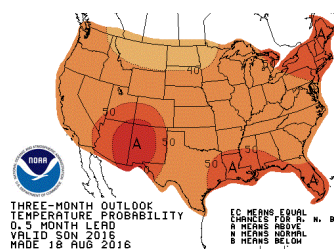
temperatures in °F, rainfall in inches

Water Year-to-Date Comparison [click images for links](#)



Fall Outlook (Sep-Nov 2016) [click images for links](#)

The Climate Prediction Center’s fall outlook for NW California is calling for good chances of above normal temperatures (fig. 1) and nearly equal chances for above or below normal precipitation (fig. 2).





Weather Radio Upgrade September 15th

by Scott Carroll



Testing of the NOAA Weather Radio upgrade, the Broadcast Message Handler, is almost complete! The new radio is scheduled to become operational on September 15th. This is a much needed upgrade which should help us bring even

more reliable forecast and warning broadcasts to the area. **Other than a brief broadcast interruption or two during the day of transition, broadcast services will be unaffected by this change.** Questions about the upgrade? [Contact us!](#)

Area NOAA Weather Transmitters		
Transmitter <small>coverage map</small>	Frequency (MHz)	Coverage Area
Crescent City/Brookings	162.55	Del Norte, S Curry (OR), adjacent waters
Eureka	162.40	Humboldt (w/ waters), Del Norte waters
Pt. Arena	162.55	Mendocino, Sonoma, adjacent waters
Ukiah	162.525	Mendocino (w/ waters), W Lake
Willow Creek/Hoopa	162.45	Humboldt (land areas), W Trinity
Other Nationwide Transmitters		

Area SAME Codes	
County	SAME Code
Curry (OR)	041015
Del Norte	006015
Humboldt	006023
Lake	006033
Mendocino	006045
Sonoma	006097
Trinity	006105
Full Nationwide List	

Tone Alert Test
NWS Eureka conducts tests of the NOAA Weather Radio warning alarm tone on Wednesdays between 11 AM and noon (weather permitting)



Point-and-Click Forecast Tips

by Ryan Aylward & Scott Carroll

Are you looking for a mountain forecast or a forecast for areas in close proximity to steep terrain? Look no further than our Point-and-Click forecasts at weather.gov/eureka. Using the search option in the upper left hand corner of the page, type in a town near the location where you desire a forecast, or you can click on the map. A forecast will appear that looks very similar to the image below. Use this guide to obtain an accurate forecast for the correct elevation.

- ① The current temperature and other observations located at the top of the page are taken from the nearest reliable weather station. **This station could be up to 20 miles away. Be careful to review the name of the station and the station's elevation. Some areas do not have weather stations that are close by and these observations may not be representative.**
- ② This is an iconic representation of the forecast for the specific point that you selected.
- ③ This is the forecast text format.
- ④ This section describes the location and elevation used for the forecast shown along with the last time the forecast was updated.
- ⑤ Each forecast is for a 1.5 square mile area. **Does the elevation represent the location for which you want a forecast? If not, try clicking nearby on the map, and you will likely find a more representative elevation. The map can be zoomed in and out as needed.**



The screenshot shows the NOAA weather forecast for Willow Creek, CA. Callout 1 points to the current conditions (72°F, 22°C). Callout 2 points to the extended forecast grid. Callout 3 points to the detailed forecast text. Callout 4 points to the forecast update information. Callout 5 points to the topographic map for selecting a specific forecast area.

Upcoming Events	
Date	Event
Sep 1	Meteorological fall begins
Sep 15	NOAA Weather Radio upgrade complete
Sep 23	Astronomical fall begins
Oct 1	Water year begins
Oct 16-22	California Flood Safety Awareness Week
Nov 6	Daylight Saving Time ends
Dec 1	Meteorological winter begins



Beach Hazards Statement Coming This Fall

by Kathleen Lewis



Photo Credit: Kathleen Lewis

With the fall season knocking at our door step, we will not only see a change in the weather, but we can also expect a marked change in ocean conditions. This is the time of year when the wind-driven, choppy seas of summer transition to the large, storm-brewed waves of winter. What's left in-between is longer lulls of smaller wave activity, relatively light winds, and beautiful sunsets on the coast. This is autumn for coastal California.

Most surfers would agree that this is the best time of year to surf on the northwest California coast because this marks the beginning of increased northwesterly swell activity. For beachgoers, however, this marks the beginning of sneaker wave season. Storm development across the western Pacific will increase through the coming weeks. These storms generate wave systems that travel across the Pacific Ocean and reach the northwest California coast as *swell*. When the conditions are right, swell can make great waves for surfing, but it also can generate sneaker waves.

Fortunately, NWS Eureka will launch a new product called the **Beach Hazards Statement** to directly highlight sneaker wave threats for the northwest California coast. If there is a sneaker wave threat, the Beach Hazards Statement will be colored turquoise on the hazards map on the NWS Eureka [homepage](#). This information will also be broadcast on NOAA Weather Radio. We will additionally send out sneaker wave information on Facebook and Twitter, but the Beach Hazards Statement will be the best place to look for details. Stay safe on the coast this fall by staying educated. Always check the forecast and observations before venturing out to the coast whether it's to the beach, in the surf, or out in the ocean.



A Chill is in the Air: Frost & Freeze Products

by Ryan Aylward



In no time, we will be back into the fall and winter seasons with the return of cold overnight temperatures and the potential for frost to develop. The National Weather Service in Eureka issues Frost Advisories and Freeze Warnings during locally defined growing seasons. These statements are issued to alert you to the possibility of temperatures that can damage sensitive vegetation and be dangerous for animals left outdoors. Now is the time to think about how you can be prepared and alerted for cold temperatures.

To determine if a statement has been issued for your area, visit weather.gov/eureka, follow us on Facebook or Twitter, download the FEMA app, or sign up to receive alerts through a private company. When a statement is issued, be prepared to cover or move sensitive vegetation and provide pets adequate shelter.

Product Issuance Criteria

A **Frost Advisory** is issued when conditions are favorable for frost to form. This occurs when overnight temperatures fall to between 33°F and 36°F for two or more hours, winds are calm, and skies are clear.

A **Freeze Warning** is issued when overnight temperatures are expected to fall to between 30°F and 32°F for two or more hours.

A **Hard Freeze Warning** is issued when overnight temperatures are expected to fall to 29°F or below for two or more hours.



Fall Weather is Here!
NWS Public Information Statement



As the days get shorter and temperatures fall, a new round of weather hazards will be on the rise. This transitional season often features weather hazards seen during both warm and cold months, including wildfires, strong winds, flooding, droughts, early season snow and more. Get ready for fall weather with preparedness tips from the National Weather Service and stay safe this fall!

Check the Weather Forecast Daily

Start your day with weather.gov, whether it's on a computer, phone or social media. Check the forecast before you leave home so that you'll know what to expect during the day.

Prepare for Weather Hazards

To be weather-ready, it takes more than just knowing the forecast. You must be prepared for it. Get ready with an [emergency supplies kit](#) and a [family communications plan](#). An emergency supplies kit is merely a box containing vital supplies that you may need during an emergency, such as food, water, and medicine. A family communications plan lists alternative ways of getting in touch during an emergency.

Share Your Weather Preparedness Story

You are influential! Take a photo of your emergency supplies kit and share it on Facebook. Tweet about your family communications plan on Twitter, or simply go next door and talk to the neighbors about what to do if a storm strikes. Building a Weather-Ready Nation is a job for all of us. If you're looking for things to share, visit [NOAA's fall weather safety page](#).



Weather Observer's Corner
by Scott Carroll

Storm Spotters & Rain Observers Needed!

At NWS Eureka, we're always looking for people willing to help us improve our forecasts and warnings by becoming Skywarn Storm Spotters and/or precipitation observers. For information on becoming a Eureka Skywarn Storm Spotter, email [Tony Ashford](#). For information on the Community Collaborative Rain, Hail, and Snow Network (CoCoRaHS), click [here](#). **Join our team!**



Night Sky Corner
by Scott Carroll

Across Northwest California, the weather conditions and comparatively low levels of artificial light can make astronomical viewing nearly ideal. However, coastal clouds and periodic weather systems make sky watching tricky at times. Typically, amateur astronomers from the coast make their way inland to locations such as Berry Summit and Kneeland to get above the marine layer and its nighttime clouds and fog. A good source of sky cover forecasts is our [graphical forecast](#). Sky cover and other forecast elements can also be displayed by selecting a point-and-click forecast from the area map on our [homepage](#), then clicking the **Hourly Weather Forecast** graph (near the bottom right part of the page). For example, here are links to the [Berry Summit](#) and [Kneeland](#) forecast graphs.

Night Sky Calendar

Moon Phases					
September		October		November	
●	1 st	☾	8 th	☾	7 th
☾	9 th	☉	15 th	☉	14 th
☉	16 th	☾	22 nd	☾	21 st
☾	23 rd	●	30 th	●	29 th
●	30 th				

Date	Event
Oct 20	Orionid meteor shower maximum
Nov 4	Southern Taurid meteor shower maximum
Nov 17	Leonid meteor shower maximum

moon phase and event information courtesy of NASA



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