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Welcome back to the latest installment of The North Coast Observer! In this issue, there are articles on the significant lightning event of May 30th, a history of weather observations in the area, and an exciting announcement about the GraphiCast. As always, a detailed summary of the previous season is included, along with a list of night sky events.

As Northwest California moves into summer, the weather focus shifts from rain and mountain snow to fire weather and thunderstorm concerns. Stay tuned for the latest forecasts, watches, and warnings. If you haven't already, make sure you follow us on social media (*addresses below*). And, make sure you have a safe summer!

Follow Us on Social Media!

Website	weather.gov/eureka
Facebook	facebook.com/NWSEureka
Twitter	twitter.com/NWSEureka
YouTube	youtube.com/NWSEureka



Upcoming Summer Events

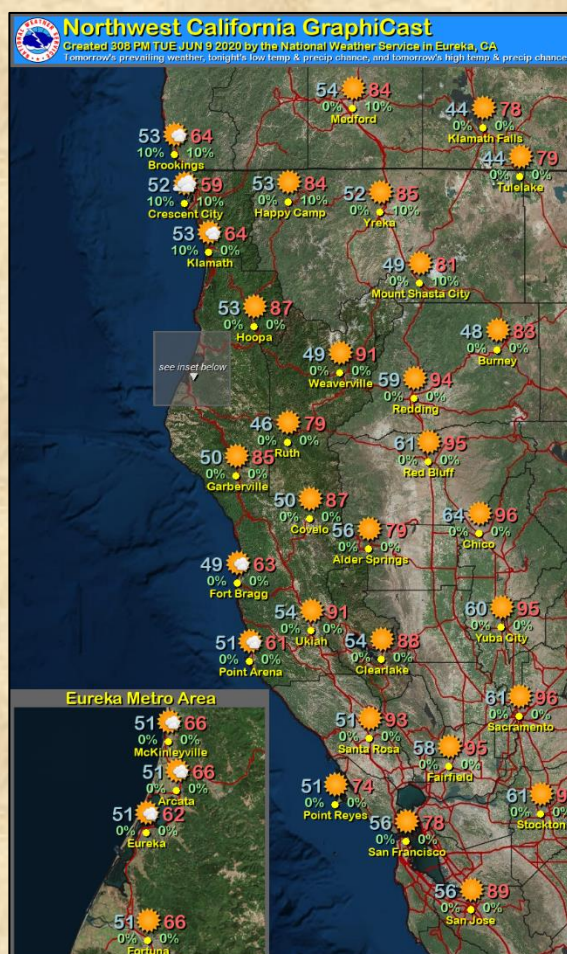
Date	Event
Jun 1	Meteorological summer begins
Jun 20	Summer solstice at 2:43pm
Sep 1	Meteorological fall begins

GraphiCast Now on the Web!

by Scott Carroll

Did you miss a daily posting of the Northwest California GraphiCast on our Facebook page? Well, never fear! This graphic is now also available on our [webpage](#) (link near bottom of page). The images are produced twice a day (around 4am and 4pm). Forecast data displayed is taken from the State Forecast Tables issued by NWS Eureka and our surrounding NWS offices (Medford, Sacramento, and Monterey).

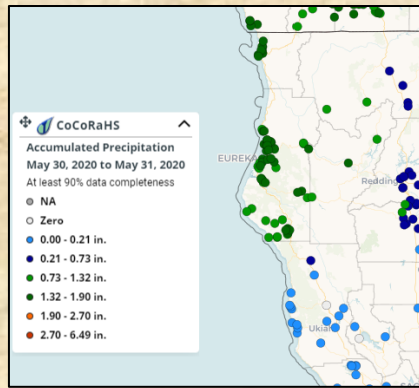
The forecast maps always include the issuance time and data displayed at the top of the image. If you live in the metropolitan area around Eureka, your forecast data is available in the inset at the bottom left hand corner of the image.



May 30th Rain & Lightning Event

by Matthew Kidwell

On May 30th, a weather system moved into Northwest California from the south. This storm system brought heavy rain, hail and thunderstorms to Northwest California in the early morning hours. Moderate to heavy rain fell across the northern counties, but dropped off quickly in Mendocino and Lake counties. Shown to the right is the rainfall measured by volunteer observers with many sites seeing rainfall amounts over an inch. No precipitation records were set in at the sites with long term records in Eureka, Crescent City, or Ukiah. Eureka did see the 7th highest daily rainfall total in May since observations began in 1887. For a detailed look at the precipitation amounts from this event, click [here](#).

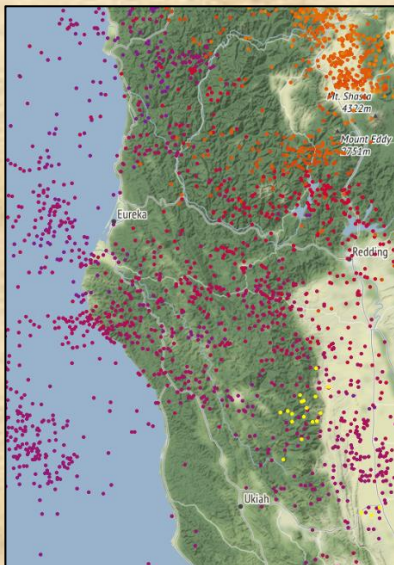


Over 500 lightning strikes were detected across Northwest California. These lightning strikes started several small wildfires in Trinity and Shasta counties. However, these were quickly controlled, likely facilitated by the heavy rains. Also, one home was struck by lightning near Benbow causing a small fire and some damage.



Some of the stronger storms also contained hail. Half inch hail was reported near Arcata. Other storms may have produced hail, but it may not have been observed as it was the middle of the night and many storms were over remote areas.

This was an unseasonably strong storm that brought heavy rain, hail, and numerous lightning strikes. This could have started numerous wildfires if the fuels had been drier or less rain had fallen with it.



Lightning strikes from LightningMaps.org

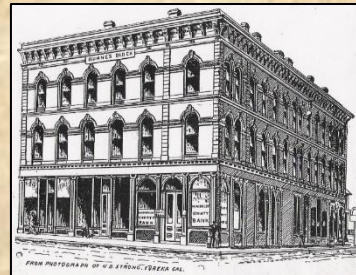
The History of Weather Observations in Eureka

By Matthew Kidwell
adapted from "Climatology of Eureka, CA" by Alan Puffer

Observations have been taken on the northwest coast of California since July 27th, 1882. Initially these were taken at the Cape Mendocino Lighthouse and were part of the U.S. Army



Signal Service (an early version of the National Weather Service). When this started three observations were sent each day to the San Francisco office by telegraph. This station took observations for 4 years and was buffeted by very strong winds. Note the braces on the building. On January 20th, 1886 a wind gust of 144 miles per hour was reported. Over the four years this station existed, wind gusts exceeded 100 mph twelve times. Due to these harsh conditions, it was decided to open a new station in Eureka, CA.



On December 1, 1886, the first Eureka office was established by the US Army Signal Service at the Buhne Building, located just south of Humboldt Bay at Second and G Streets. The first observation at the Buhne Building was taken at 7am, December 1, 1886. This was the start of hourly observations in Eureka.

The Eureka Weather Bureau Office (the Weather Bureau was formed and took over weather observing and forecasting duties from the Army Signal Service in 1891) moved into its second office, on the third floor of the US Post Office and CourtHouse, at 5th and H Streets, on January 1, 1911. The first observation at the Post Office Building was taken at 8am that morning. The removal and re-installation of instruments resulted in only 15 minutes of interrupted data.



On October 16, 1994, the Eureka National Weather Service (the Weather Bureau became the National Weather Service in 1970) Office moved into its present location on Woodley Island, in Humboldt Bay. Hourly observations continue to be taken in this location as they have been in Eureka since December 1st, 1886.



Check out the latest hourly observations from Woodley Island [here](#).

Spring Weather Summary

by Matthew Kidwell

MARCH

March saw a return of some rainfall to the area. Whereas some locations in February saw almost no rain, most areas saw a modest recovery in March. Due to some locally heavy showers, Eureka saw more rain than most other locations and ended the month with 70 percent of normal. Quite a few weather systems moved through the area bringing rain on 12 to 15 days in the month. However, most of these systems were not very strong. On the 14th, a cold weather system moved through the area bringing widespread small hail to many locations and snow to some of the lower elevations. Most areas saw temperatures near normal, although high temperatures in Eureka and Crescent City did average several degrees below normal.

APRIL

The month started off promising with many areas seeing 30 to 50 percent of their monthly normal rainfall in just 24 hours on the 4th and 5th. However, this relief was short lived, and the ridge of high pressure built back over the west coast. This kept areas to the south mainly dry with only some light rain in the north for the remainder of the month. Overall, the area ended the month with 30 to 60 percent of the normal monthly rainfall. A few interior locations (like Middletown) saw some thunderstorms which boosted their rainfall totals.

MAY

Rain returned to the area in May, with most areas seeing the highest monthly rainfall totals since January. The northern portion of the area saw around 200 percent of their normal rainfall while Mendocino and Lake counties were generally closer to normal. The number of rain days in Eureka saw was near normal. However, most of the rain fell during 3 unseasonably strong storms. In between these storm systems, strong high pressure brought hot weather to the inland areas with high temperatures in the upper 90s. No records were set, but temperatures were 15 to 20 degrees above normal.



Tests of NOAA Weather Radio are normally conducted between the hours of 11am and noon each Wednesday, weather permitting.

Spring Climate & Summer Outlook

by Scott Carroll

Spring 2020 Monthly Climate Comparison

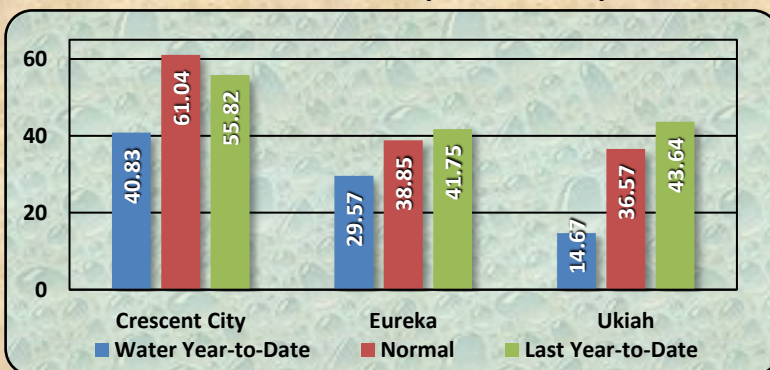
	Crescent City			Eureka			Ukiah		
	Ave Hi	Ave Lo	Total Precip	Ave Hi	Ave Lo	Total Precip	Ave Hi	Ave Lo	Total Precip
Mar	52.9	41.4	2.86	53.8	40.7	3.69	62.9	39.0	1.65
Apr	57.0	44.7	2.26	58.1	45.8	2.05	72.3	46.1	0.84
May	60.1	48.3	4.79	61.9	49.5	4.73	79.1	49.0	1.29

temperatures in °F, rainfall in inches

Spring Record Events

Date	Location	Record	Value	Previous Record
Mar 16	Eureka	Min Temp	32°F	32°F in 1898

Water Year-to-Date Precipitation Comparison



rainfall in inches, data through Jun 10th

Summer Outlook (June-August)

[click images for links](#)

The Climate Prediction Center's summer outlook for northwest California is calling for much better than even chances of above normal temperatures (*figure 1 below*) and slightly better than even chances of below normal precipitation (*figure 2 below*).

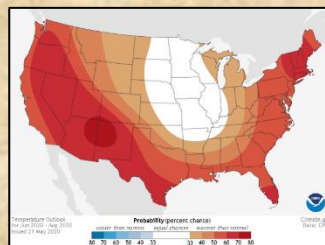


Figure 1 – Temperature Outlook

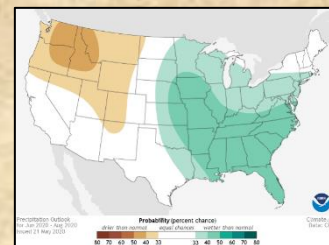


Figure 2 – Precipitation Outlook

More detailed outlook information can be found on the Climate Prediction Center's [website](#). For more detailed local climate information, visit NWS Eureka's [homepage](#), then click on the Climate and Past Weather menu.



There are a couple of meteor showers which reach their maximum during the summer months. The first is the Delta Aquarid shower, which peaks in late July. The second is the Perseid shower, which reaches its maximum in mid-August. Both of these showers occur when the moon is either in the first or last quarter phase, which should improve viewability.

On July 4th, there will be a penumbral lunar eclipse. During a penumbral lunar eclipse, the full moon's face appears dimmer than usual as the moon passes through the penumbra, or earth's diffuse outer shadow.



Jupiter, Saturn, and a nearly full moon will be in close proximity around June 8th after midnight in the southern sky. The last quarter moon and Mars will be closest in the sky on June 12th late in the night in the southeastern sky. The full moon, Jupiter, and Saturn will be very closely bunched together on July 5th-6th, crossing the southern sky all night. Mars and the last quarter moon will be in proximity of each other around July 11th after midnight in the southeastern sky. On July 14th, Jupiter will reach opposition, meaning it is directly opposite of the sun as seen from earth. Saturn will also reach opposition on July 20th. In addition, the moon will be waning through July 20th, leading to a very dark sky. This will be the peak viewing of the year for these two giants, and they will remain close in the southern sky through August.

Around July 17th, Venus and a very thin crescent moon will be in near tandem, rising late in the night in the northeastern sky. Early in the month of August, a nearly full moon will join with Jupiter and Saturn in their nightly dance across the sky. The last quarter moon and Mars will rise together in the eastern sky around midnight around August 9th. And, finally, a thin crescent moon and Venus will rise in the late night northeastern sky around August 15th.

Summer Night Sky Calendar

Date	Event
Jun 8	Moon-Jupiter conjunction Moon-Saturn conjunction
Jun 12	Moon-Mars conjunction
Jun 19	Moon-Venus conjunction
Jul 4	Penumbral lunar eclipse
Jul 5	Moon-Jupiter conjunction
Jul 6	Moon-Saturn conjunction
Jul 11	Moon-Mars conjunction
Jul 14	Jupiter opposition
Jul 17	Moon-Venus conjunction
Jul 20	Saturn opposition
Jul 27	Delta Aquarid meteor shower maximum
Aug 1	Moon-Jupiter conjunction
Aug 2	Moon-Saturn conjunction
Aug 9	Moon-Mars conjunction
Aug 12	Perseid meteor shower maximum
Aug 15	Moon-Venus conjunction
Aug 28	Moon-Jupiter conjunction
Aug 29	Moon-Saturn conjunction

Moon phases and event information courtesy of NASA

Summer Moon Phases

June	July	August
☉ 5 th	☉ 4 th	☉ 3 rd
☾ 12 th	☾ 12 th	☾ 11 th
● 20 th	● 20 th	● 18 th
☾ 28 th	☾ 27 nd	☾ 25 th

Emergency Operations Support Increases

by Ryan Aylward

Recent events have caused emergency management to go into overdrive. Numerous meetings and conference calls have been organized by the counties we serve and our office has stepped up to provide weather support wherever needed. For instance, over the last two months, NWS Eureka has provided over 20 specialized weather briefings to the Mendocino County Emergency Operations Center alone. This has allowed emergency officials to be better prepared for both traditionally "nice" weather and the welcome rainfall that the region so desperately needs. Outdoor facilities like tents and queue lines can quickly become dangerous in high winds, hot temperatures, and lightning. NWS Eureka's goal in fielding these calls is to prepare the emergency management community for whatever the weather has in store, keeping people safe from the elements.



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